FedEx Ground Distribution Center
18795 Northeast 73rd Street, Redmond, WA

Additional Remedial Investigation Report

Prepared for: Franklin-Kennewick, LLC

December 2017

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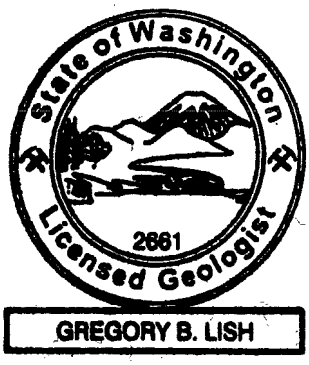
FedEx Ground Distribution Center
18795 Northeast 73rd Street
Redmond, Washington 98052

This document has been prepared by SLR International Corporation (SLR). The material and data in this report were prepared under the supervision and direction of the undersigned.



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ACRONYMS

APS	Applied Professional Services, Inc.
bgs	below ground surface
cPAH	carcinogenic polycyclic aromatic hydrocarbons
DRO	diesel-range organics
Ecology	Washington State Department of Ecology
ESA	Environmental Site Assessment
GRO	gasoline-range organics
HO	heavy oil-range organics
Holocene	Holocene Drilling
mg/kg	milligrams per kilogram
MTCA	Model Toxics Control Act
NFA	No Further Action
OnSite	OnSite Environmental, Inc.
PID	photoionization detector
PQL	practical quantitation limit
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
SLR	SLR International Corporation
TEE	Terrestrial Ecological Evaluation
TPH	total petroleum hydrocarbons
µg/L	micrograms per liter
USCS	Unified Soils Classification System
VCP	Voluntary Cleanup Program
VOC	volatile organic compound
WAC	Washington Administrative Code

1. INTRODUCTION

SLR has prepared this report for Franklin-Kennewick, LLC to present the results of additional remedial investigation (RI) activities that were conducted at the FedEx Ground Distribution Facility located at 18795 NE 73rd St in Redmond, Washington (the Subject Property; see Figure 1).

1.1 PURPOSE AND OBJECTIVES

The overall objective of this work is to obtain a "no further action" (NFA) opinion for the Subject Property from the Washington State Department of Ecology (Ecology). The primary objectives of the individual tasks are to: 1) complete the characterization of soil and groundwater conditions at the Subject Property to sufficiently demonstrate that residual petroleum hydrocarbons and chromium are not present at the Subject Property at concentrations that exceed applicable Ecology Model Toxics Control Act (MTCA) cleanup levels, and 2) demonstrate that a NFA is warranted for the Subject Property.

This additional RI assessment was conducted to address Ecology's comments and/or requests presented in previous opinion letters to others (see Section 2.1) and subsequent communications with SLR following submittal of the *Remedial Investigation Work Plan* (Work Plan; SLR, 2017). The Work Plan presented a proposed scope of work to address Ecology's comments and requests. The table below depicts work completed or proposed by SLR to address Ecology's comments and/or requests.

Ecology's Requests/Comments	SLR Tasks
Prepare a Conceptual Site Model	A Conceptual Site Model was presented in the Work Plan.
Prepare Geologic Cross Sections	Cross sections were provided in the Work Plan. Updated cross sections are presented in this Additional RI Report.
Prepare a Terrestrial Ecological Evaluation (TEE)	A completed TEE was presented in the Work Plan.
Collect representative soil samples below the vertical extent of contamination at borings PB-2 and PB-3 and their associated AOC-6 and AOC-7 excavations (discussed below).	As discussed in the Work Plan, SLR proposed to collect representative soil samples below the vertical extent of the AOC-6 and AOC-7 excavations, and submit the samples for analysis of diesel-range organics (DRO), heavy oil-range organics (HO), and polycyclic aromatic hydrocarbons (PAHs).
Total chromium was detected in a single groundwater sample at 50.2 micrograms per liter (µg/L), which exceeds the MTCA Method A Cleanup level (50 µg/L). Additional groundwater monitoring wells are needed to assess groundwater conditions and establish flow direction.	As discussed in the Work Plan, SLR proposed to install and sample additional monitoring wells to assess groundwater conditions in the regional shallow aquifer present beneath the Subject Property.

Ecology's Requests/Comments (cont.)	SLR Tasks (cont.)
If perched groundwater is observed, additional sampling will be necessary to characterize the perched groundwater.	As discussed in communications with Ecology, if perched groundwater is identified during the additional RI activities, the scope of work will be modified to include additional shallow groundwater sampling to characterize the perched groundwater.
Analyze groundwater samples for chromium VI as well as total chromium.	As discussed in communications with Ecology, groundwater samples collected during the additional RI activities were analyzed for both chromium VI and total chromium.
Enter the site data into Ecology's Environmental Information Management (EIM) database.	As discussed in communication with Ecology, the historical data and data collected during the additional RI activities were entered into the EIMS database.
The property is zoned Manufacturing Park; residential use is not allowed. MTCA Method A Industrial cleanup levels for soil may be appropriate; however, an environmental covenant must be placed on the property restricting future use to industrial and manufacturing uses only.	Following receipt of confirmation from Ecology that characterization of the Subject Property is complete, and that no further investigation or remedial activities are required, an environmental covenant will be placed on the property.

2. SITE DISCRIPTION AND BACKGROUND

The Subject Property is located southwest of the intersection of 188th Avenue Northeast and Northeast 73rd Street in Redmond, Washington. The property is identified as King County Tax Parcel No. 0725069129, Lots 5, 6, and 7, and the southern portion of Lot 4 (Figure 1). The Subject Property is approximately 24 acres in size and is bounded by the Northeast 73rd Street right-of-way and a Microsoft Connector bus maintenance facility to the north, by the Redmond East Business Campus industrial park to the west, by Genie Industries distribution warehouses to the south, and by the 188th Avenue Northeast right-of-way and Cadman Gravel Company (Cadman) to the east. The general surrounding area is occupied by a number of properties that have been developed for industrial and commercial purposes and by a residential neighborhood to the southeast.

A review of previous reports indicates that Cadman purchased the Subject Property in 1950 and mined the southeast corner of the property between at least 1961 and 1970. The entire property was mined for gravel by Cadman between approximately the early 1980s and 1990. By the early 1990s, the mine was reclaimed with fill from a variety of undocumented sources, but was primarily from the I-90 area. Importers of fill soils were reportedly required to sign documentation stating the fill was not contaminated, and the fill's appearance was monitored to avoid contaminated soil from being deposited. Contaminated soil was reportedly brought to the Subject Property at one point, but was immediately removed (The Riley Group, 2012a).

The Subject Property is situated on the western edge of a generally north- to south-oriented topographic high (ie. ridge). Following reclamation and redevelopment of the Subject Property, the topography of the property currently slopes moderately to the north and northwest, with elevations generally ranging from approximately 120 to 125 feet NAVD88 in the southern portion of the Subject Property, approximately 100 to 105 feet NAVD near the western property boundary, and approximately 95 to 100 feet NAVD88 in the northern portion of the Subject Property. The western property boundary slopes very steeply to the west, where the west-adjacent property is situated at an elevation ranging from approximately 65 to 69 feet NAVD88.

The Subject Property was redeveloped in 2013, and is currently used as a FedEx Ground Distribution Center and is improved with an approximately 212,000 square feet (sf) office and warehouse building and associated asphalt-paved loading and parking areas.

Cadman currently operates a large aggregate and ready-mix operation located northeast- and east-adjacent to the Subject Property. The adjacent Cadman operations cover an approximate 90-acre area that includes aggregate stockpile areas, a concrete and asphalt recycling yard, a sand and gravel crusher plant, a concrete ready-mix plant, maintenance shop and office, and several settling and/or infiltration ponds. A large settling/infiltration pond approximately 13-acres in area is located immediately to the east of the Subject Property. A site plan of the Cadman facility is included in Appendix A.

The Cadman facility operates under an Ecology Sand and Gravel General Permit (no. WAG503111) for discharges related to process water and stormwater associated with sand and gravel operations. The

permit stipulates certain monitoring requirements and effluent limits for discharges along with periodic submittal of discharge monitoring reports (DMRs) to Ecology.

2.1 PREVIOUS ENVIRONMENTAL INVESTIGATIONS AND REMEDIATION ACTIVITES

The Watershed Company conducted a wetland evaluation study at the Subject Property during March 2007 and February 2012 to document the presence or absence of wetlands based upon the vegetation, soil, and hydrologic characteristics of the Subject Property. The study identified several surface water features, such as ponds and ditches, which showed characteristics which met the physical and biological definitions of wetland. However, the study determined that these features had been manipulated during mining operations and were intentionally created components of the mining operation. The Watershed Company prepared a Critical Areas Report to document the results of this study. This report concluded that the surface water features were intentionally created from non-wetland areas in a legally-permitted manner and thus were not regulated by the City of Redmond Critical Areas Ordinance (Watershed Company, 2012).

A geotechnical engineering investigation was conducted by The Riley Group, Inc. (RGI) in March 2012 to evaluate subsurface conditions at the Subject Property. The investigation included the excavation of 30 test pits to maximum depths of 18 feet below ground surface (bgs) and the advancement of 10 soil borings to depths ranging from 15 to 50 feet bgs. RGI prepared a Geotechnical Engineering Report to document the results of this investigation. This report concluded that the Subject Property was backfilled with soils that included silty sand/sandy silt with varying amounts of gravel, with localized areas of silty and/or sandy gravel, gravelly sand with silt, and silt, and that these fill materials were placed at depths ranging up to 35.5 feet in depth. The fill materials were characterized by their disturbed appearance and by trace amounts of concrete, asphalt, wood, plastic, glass, and organic debris. The report described the native soils beneath the fill materials as sand with silt, silty sand, and silt. The report also indicated that groundwater was observed at variable depths ranging from 1.5 feet to 50 feet bgs at the Subject Property (RGI, 2012b).

RGI conducted a Phase I Environmental Site Assessment (ESA) in April 2012. At the time of the Phase I ESA, the Subject Property was occupied by four different companies: Schnitzer Steel Industries used the eastern portion of the Subject Property as a staging and storage area for empty debris containers; Waste Management used the western portion of the Subject Property for staging and storage of refuse containers; Trepus Demolition used the central portion of the Subject Property and a portion near one of the southern boundaries as storage areas for demolition debris containers and concrete vaults for storage of concrete slurry; and Red-E Topsoil used the northern portion of the Subject Property to store topsoil stockpiles (RGI, 2012a). The Phase I ESA identified the following Recognized Environmental Conditions (RECs) at the Subject Property:

- The Subject Property was reclaimed with fill from unknown sources. RGI identified this as a "potential REC."
- A petroleum sheen was observed in a vegetated drainage ditch in the central portion of the Subject Property. RGI identified this as a "potential REC."

- A white sheen/residue of unknown origin was observed on surface water near Schnitzer Steel Industries debris containers. RGI identified this as a "potential REC."
- Numerous unlabeled, uncovered 55-gallon drums were observed in the area of the Subject Property occupied by Trepus demolition. The drums were observed to contain concrete slurry, rainwater, debris, and oil. RGI identified these drums as a Business Environmental Risk (BER) (RGI, 2012b).

RGI conducted a Preliminary Phase II Subsurface Investigation in April 2012 to evaluate soil and groundwater conditions in the areas where "potential RECs" were identified in the April 2012 Phase I ESA. The investigation included the excavation of 12 test pits (designated TP-1 through TP-10, Geo-TP-10, and Geo-TP11) to depths ranging from approximately 2 to 16 feet bgs and the advancement of 10 soil borings (designated B1 through B10) to depths ranging from 16 to 52 feet bgs. The locations of the test pits and borings are shown on Figure 2.

RGI collected soil samples from each test pit and soil boring, and collected one groundwater sample from a temporary groundwater monitoring well that was installed in one of the soil borings (RGI, 2012c and 2012d). The groundwater sample was not selected by RGI for laboratory analysis. The soil samples were analyzed for one or more of the following contaminants of concern (COCs):

- Total Petroleum Hydrocarbon (TPH) identification by Ecology Method NWTPH-HCID;
- Diesel- and heavy oil-range organics (DRO and HO, respectively) by Ecology Method NWTPH-Dx;
- Gasoline-range organics (GRO) by Ecology Method NWTPH-Gx;
- Volatile organic compounds (VOCs) by EPA Method 8260B;
- Carcinogenic polycyclic aromatic hydrocarbons (cPAHs) by EPA Method 8270D-SIM;
- Model Toxics Control Act (MTCA) metals (lead, arsenic, cadmium, chromium, and mercury) by EPA Methods 200.8 and 1631E.

The soil sample analytical results are summarized in Tables 1 through 3. Based on the soil sample analytical results, RGI's Preliminary Phase II ESA Report provided the following conclusions:

- Soil samples from the vicinity of the petroleum sheen that was observed in the drainage ditch in the central portion of the Subject Property did not contain detectable concentrations of COCs;
- Two surface soil samples from the vicinity of the white sheen/residue that was observed on surface water near the Schnitzer Steel Industries debris containers were found to contain HO concentrations that exceeded the MTCA Method A cleanup level [2,000 milligrams per kilogram (mg/kg)];
- Soil samples collected from the other locations throughout the Subject Property either did not contain detectable concentrations of COCs or contained concentrations of COCs that were below their respective Method A Cleanup Levels, with the exception of one soil sample (B7-5) which contained a toxicity equivalent concentration of cPAHs (2.887 mg/kg) that exceeded the MTCA Method A cleanup level for industrial properties (2.0 mg/kg); and

- Petroleum odors were observed in two of the test pits. However, soil samples from these test pits did not contain detectable concentrations of COCs or contained concentrations of COCs that were below their respective Method A cleanup levels (RGI, 2012c and 2012d).

RGI conducted a Supplemental Phase II ESA in May 2012 to further delineate the soil conditions associated with the fill material in the northern, central, and southern portions of the Subject Property. The Supplemental Phase II ESA included the excavation of 17 additional test pits (designated TP-11 through TP-27) to depths ranging from 1.5 to 6.5 feet bgs, the advancement of ten direct-push soil borings (designated PB1 through PB3, and PB7 through PB13) to depths ranging from 4 to 24 feet bgs, and the installation and sampling of two groundwater monitoring wells (designated MW-1 and MW-2) at depths of 62 and 65 feet bgs, respectively. The locations of the test pits, borings, and monitoring wells are shown on Figure 2.

RGI collected soil samples from each test pit and soil boring, and collected a groundwater sample from well MW-1 [Langan Engineering & Environmental Services, Inc. (Langan), 2012]. A groundwater sample was not submitted for analysis from well MW-2. The soil samples were analyzed for one or more of the following COCs:

- DRO and HO by Ecology Method NWTPH-Dx
- PAHs by EPA Method 8270D
- Naphthalene by EPA Method 8270D-SIM.

The groundwater sample from MW-1 was analyzed for the following COCs:

- DRO and HO by Ecology Method NWTPH-Dx
- VOCs by EPA Method 8260B
- PAHs and naphthalene by EPA Method 8270D-SIM
- Total and dissolved metals (lead, arsenic, cadmium, chromium, and mercury) by EPA Methods 200.8 and 1631E.

The soil and groundwater sample analytical results are summarized in Tables 1 through 5. Based on the soil and groundwater sample analytical results, RGI's Supplemental Phase II ESA provided the following conclusions as reported in the subsequent Level One and Level Two Hydrogeologic Assessment Report prepared by Langan:

- Subsurface soils consisted of undocumented fill materials including gravel, silt, sand, and asphalt fragments to a maximum depth of approximately 35.5 feet.
- HO and cPAH concentrations exceeding Method A cleanup levels for industrial properties were present only in surficial soils and there was no ongoing release of petroleum hydrocarbons at the Subject Property. The source of HO and cPAH concentrations were likely attributable to historic site operations and concentrations that were present in materials transported to the Subject Property to be used as fill (Langan, 2012).

During review of the analytical results from RGI's Supplemental Phase II ESA, SLR noted that the groundwater sample collected from MW-1 contained total chromium at a concentration [50.2 µg/L] that just slightly exceeded the MTCA Method A groundwater cleanup level (50 µg/L); however the dissolved chromium concentration (2.2 µg/L) from the same sample was well below the Method A cleanup level, indicating that the sampling result was likely due to sediment entrained in the sample from the newly installed well, and therefore was likely not representative of the groundwater conditions at the Subject Property.

Langan prepared a Level One and Level Two Hydrogeologic Assessment in June 2012 that presented a mitigation plan for contaminated soils at the Subject Property for implementation during site development activities. The mitigation plan was subsequently approved by the City of Redmond in a letter dated July 12, 2012 (Langan, 2012).

Langan prepared a Soil Management Completion Report in July 2013 to describe the results of petroleum hydrocarbon- and cPAH-impacted soil removal and sampling activities that were conducted during the development of the Subject Property as the current FedEx Ground Distribution Center. Langan identified nine Areas of Concern (designated AOC 1 through AOC 9), based upon the results of the previous environmental investigations at the Subject Property, that contained soil with concentrations of HO and/or cPAHs above Method A cleanup levels for industrial properties or were within Ecology's Category IV soil reuse criteria. The locations of the AOCs are shown on Figure 2.

Soil removal from these areas was performed prior to mass construction excavation and grading activities. The excavation contractor excavated these AOCs to total depths ranging up to seven feet bgs during site development, and Langan collected soil samples from the final extents of the excavated areas for laboratory analysis. Soils excavated from the nine AOCs which contained COCs exceeding MTCA cleanup levels or within Ecology's Category IV reuse criteria for petroleum contaminated soil (PCS) were disposed offsite. Soils which contained COCs within the Ecology Category II and Category III reuse criteria for PCS and soils containing Recycled Asphalt Pavement were blended with Portland cement and used as a paving base material at the Subject Property. A total of approximately 21,337 cubic yards of Category II and Category III soils was placed in the paved portions of the Subject Property. The soil sample analytical results are summarized in Tables 1 through 3. Langan concluded that no further mitigation activities were necessary with respect to the environmental conditions at the Subject Property (Treadwell & Rollo, 2013).

During review of the analytical results from the 2013 Soil Management Completion Report, SLR noted that the confirmation sample from the east sidewall of AOC 8 (sample AOC8-E-5) contained dibenzo(a,h)anthracene [D(a,h)A] at a concentration (0.180 mg/kg) that exceeded the MTCA Method B direct contact soil cleanup level (0.137 mg/kg). The eastern extent of the D(a,h)A exceedance was delineated by two soil samples collected at a test pit (TP-18) located immediately to the east of AOC 8. The soil samples collected from TP-18 (TP-18-3 and TP-18-5) either contained [D(a,h)A] at a concentration below the Method B soil cleanup level, or did not contain a concentration above the laboratory's detection limit (see Table 2).

Langan submitted the 2012 Level One and Level Two Hydrogeologic Assessment Report and the 2013 Soil Management Completion Report to Ecology for review and comment. Following review of the

reports, Ecology provided an opinion letter (Ecology, 2013). A summary of Ecology's comments is provided below:

- Trace amounts of concrete, asphalt, wood, plastic, metallic debris, and glass were observed in fill material throughout the Subject Property. The thickness of the fill varies throughout the Subject Property with a maximum thickness of approximately 35.5 feet. Geologic cross-sections illustrating the extent and thickness of the fill should be prepared.
- Soil samples from locations PB-2 and PB-3 are both composite samples which are not representative of soil conditions at a discrete depth. Therefore, the maximum petroleum hydrocarbon concentration at these two locations is unknown. Soil samples are needed from just below the vertical extent of each associated excavation to confirm impacted soil is below cleanup levels.
- Total chromium was detected at 50.2 µg/L in the groundwater sample collected from monitoring well MW-1, which exceeds the MTCA Method A cleanup level (50 µg/L). This exceedance may be indicative of Subject Property contaminants leaching to groundwater, and one sampling point is not sufficient to define conditions through the 24-acre property. A sufficient number of additional wells are needed to assess groundwater conditions and establish flow direction. A cross-sectional view should be provided showing the maximum depth of the soil contamination in relation to groundwater depth, and groundwater samples should be collected from beneath the area of the Subject Property where fill is thickest to illustrate fill debris is not leaching contaminants to groundwater.
- The property is in an area zoned Manufacturing Park, the purpose of which is manufacturing and industrial uses; residential use is not allowed. Method A Industrial cleanup levels for soil may be appropriate for the Subject Property. A Terrestrial Ecological Evaluation (TEE) will need to be conducted before it can be determined that the appropriate cleanup levels are being applied. If Method A Industrial cleanup levels are determined to be appropriate for the Subject Property, an environmental covenant must be placed on the property restricting future use to industrial and manufacturing uses only.

Langan prepared and submitted a Work Plan that presented a proposed scope of work to address comments received in Ecology's 2013 Opinion Letter (Langan, 2014). The Work Plan described the following proposed scope of work:

- Preparation of geologic cross sections to depict the extent and thickness of the fill material at the Subject Property.
- Installation of one groundwater monitoring well in the area where the thickest fill material is anticipated to ascertain groundwater conditions under the fill.
- Measure groundwater levels and sample groundwater from the newly installed well and the two existing monitoring wells (MW-1 and MW-2) to assess groundwater conditions and establish a groundwater flow direction beneath the Subject Property (Langan, 2014).

Following review of Langan's 2014 Work Plan, Ecology provided an additional opinion letter (Ecology, 2014). A summary of Ecology's comments on Langan's Work Plan is provided below:

- Ecology agreed with the planned installation of an additional monitoring well in the area with the thickest fill material, and that the preparation of geologic cross sections would determine the appropriate location.
- Groundwater monitoring wells MW-1 and MW-2 are not sufficient to characterize groundwater at the Subject Property. Both wells are screened at similar depths, however, depth to groundwater encountered at MW-1 was approximately 26.5 feet bgs, and at MW-2 depth to groundwater was approximately 60 feet bgs, indicating that the wells are most likely screened in different hydrostatigraphic zones. One additional well will not be sufficient to characterize groundwater at the Subject Property. Perched groundwater bearing zones must also be characterized. Ecology recommends a minimum of one upgradient well and three downgradient wells to assess groundwater conditions within the perched and deeper aquifers at the Subject Property.
- A conceptual site model has not been submitted to Ecology nor have any cross sections. Ecology recommends preparing these prior to siting monitoring well locations.
- Soil samples from locations PB-2 and PB-3 are both composite soil samples which are not representative of soil conditions at a discrete depth. Representative soil samples are needed from below the vertical extent of contamination of each associated excavation to confirm petroleum hydrocarbon-contaminated soil has been remediated to below cleanup levels.
- A TEE may be required unless it is determined the Subject Property qualifies for an exclusion.

Following receipt of the Ecology's comments, Langan did not perform the additional work presented in their 2014 Work Plan.

On February 15, 2017, SLR visited the Subject Property to confirm the locations of wells MW-1 and MW-2 and to collect depth to groundwater measurements from each of the wells. SLR performed a thorough visual examination of the areas of the Subject Property where historic figures prepared by others indicated the wells were previously located. SLR was unable to locate the wells, and it appears that the wells were likely destroyed during the redevelopment activities performed at the Subject Property in 2013. Based on SLR's experience, additional methods (GPR, geophysical locating) are generally not effective, and extensive exploration (excavation) is not feasible. SLR also reviewed Ecology's well log database where we found the original monitoring well reports for the construction of the wells. However, we were not able to locate the monitoring well reports for the decommissioning of wells MW-1 and MW-2, nor do the previous consultants document in any of their reports that the wells were properly abandoned. The Subject Property was unpaved prior to the 2013 redevelopment and extensive earthwork (i.e. cut and grade) and paving occurred in the areas of the wells during redevelopment. There was no evidence observed that the wells currently exist at the Subject Property, and the above information likely indicates that the wells were destroyed during the 2013 development.

SLR prepared and submitted a Work Plan to Ecology that presented a proposed scope of work to further characterize soil and groundwater conditions at the Subject Property, to address comments received in Ecology's 2014 Opinion Letter, and to obtain an opinion from Ecology that the proposed scope of work was sufficient to complete characterization of the Subject Property (SLR, 2017). The Work Plan included the following:

- A description of previous environmental investigations and remediation activities
- A preliminary conceptual site model
- Proposed preliminary cleanup levels and a TEE
- A statistical analysis to demonstrate that the remaining D(a,h)A concentration identified in soil sample AOC8-E-5 is in compliance with the Method B direct contact soil cleanup level.
- Geologic cross-sections that depict the extent and thickness of the fill material at the Subject Property.
- A discussion of regional groundwater elevation data received from the city of Redmond, indicating that the regional shallow aquifer located in the vicinity of the Subject Property ranges from approximately 40- to 45-feet relative to the NAVD 88 datum (NAVD88), and generally flows to the west to southwest.
- A proposed scope of work that included:
    - Drilling and sampling two soil borings to collect representative soil samples at the location of soil borings PB2 and PB3 (excavations AOC-6 and AOC-7, respectively) to delineate the vertical extent of HO-impacted soil at these locations.
    - Drilling and installation of four deep monitoring wells (designated as MW-3 through MW-6) to facilitate the: 1) characterization of the regional shallow aquifer present beneath the Site at an elevation of approximately 40- to 45-feet NAVD88, and 2) to determine the groundwater flow direction at the Subject Property.
    - Collecting groundwater samples from each of the newly installed wells for analysis of DRO, HO, and dissolved RCRA 8 metals. If any sample contained detectable DRO or HO concentration, the sample also would have been analyzed for PAHs.
    - Preparation of a report that describes the field activities, presents the soil and groundwater analytical results, and details SLRs conclusions regarding the current soil and groundwater conditions at the Subject Property.
    - Entering soil and groundwater data from previous and future environmental investigation activities into Ecology's EIM database.

Following review of SLRs 2017 Work Plan, Ecology provided the following comments via email (Ecology, 2017a and 2017b).

- If perched groundwater is found, additional sampling will be necessary to characterize the perched groundwater.
- Consider analyzing groundwater for chromium III and chromium VI as well as total chromium.
- The site data has not yet been entered into Ecology's EIM database. It is Ecology's policy that when a document is submitted to Ecology, the site soil and groundwater data from that document should simultaneously be entered into the EIM database. A draft opinion letter may not proceed to peer review until the site data has been entered into the EIM database.

- The proposed scope of work appears sufficient to complete characterization of the Subject Property.

2.2 SITE GEOLOGY AND HYDROGEOLOGY

2.2.1 GEOLOGY

The Subject Property is located in Redmond, Washington, in the east-central portion of the Puget Lowland physiographic province. The Puget Lowland is a north-south oriented basin that has experienced repeated deposition, erosion, and reworking of geologic sediments during glacial and interglacial periods. The repeated glacial advances and retreats covered the area with layered, unconsolidated glacial and non-glacial deposits. The most recent glacial advance and retreat into the area of the Subject Property occurred approximately 13,500 to 15,000 years ago and is known as the Frasier Glaciation.

Material used to backfill the Subject Property generally consists of unconsolidated laterally discontinuous zones of sand with silt, silty sand, sandy silt, and clay with varying amounts of gravel to maximum depths of up to approximately 37.5 feet bgs. On-site native soils were encountered beneath the fill material and were observed to include dense glacial till or outwash likely deposited during the most recent glaciation, and are generally composed of unconsolidated and laterally discontinuous interbedded sand, sand with silty fines, silty sand, sandy silt, and silt with varying degrees of gravel that extend to at least 100 feet below ground surface (bgs), the deepest exploration completed at the Subject Property. The soils encountered during this assessment appear to be generally consistent with soils described in previous boring logs produced by others.

2.2.2 HYDROGEOLOGY

Based on groundwater elevation maps obtained from the City of Redmond (see Appendix B), depth to groundwater within the topographic ridge in the vicinity of the Subject Property ranges from approximately 45 to 70 feet bgs (depending upon ground surface elevation), with corresponding seasonal groundwater elevations in the vicinity of the Subject Property generally ranging from 40 to 45 feet relative to the NAVD 88 datum (NAVD88). Depth to groundwater on the west-adjacent property (situated approximately 30 to 35 feet lower in elevation), ranges from approximately 22 to 28 feet bgs, with corresponding seasonal groundwater elevations ranging from approximately 40 to 45 feet relative to NAVD88. Groundwater flow in the vicinity of the Subject Property generally flows to the west to southwest.

This groundwater elevation data generally corresponds with the depth to water (approximately 60 feet bgs) and groundwater elevation (approximately 40 feet) observed in monitoring well MW-2 in 2012. The former well MW-1 was constructed with a screened interval (approximately 48 to 63 feet bgs) similar to well MW-2; however the depth to water previously observed during drilling (approximately 58 feet bgs) and subsequently measured in MW-1 (approximately 26.5 feet bgs) appears to be an indication of laterally discontinuous confined groundwater conditions that were encountered during drilling. As discussed below, additional data collected in 2017 support the observation that laterally discontinuous confined groundwater conditions are present beneath portions of the Subject Property.

SLR documented the presence of shallow perched groundwater underlying the eastern and southern portions of the Subject Property. The perched groundwater encountered in various portions of the Subject Property appears to be laterally discontinuous and may be highly influenced by the historic Subject Property filling and grading activities. Although the majority of the soils underlying the Subject Property are largely surfaced with asphalt pavement or covered by the on-site building, creating a generally impervious site, small stormwater retention ponds are located on the northern portion of the Subject Property and on the south-adjacent property that may provide a recharge source for these shallow perched-zone groundwater. Additionally, as mentioned above, the Cadman facility that operates on the east-adjacent property, has a large (approximately 13-acre) settling and infiltration pond for stormwater and process water that is located immediately to the east and northeast of the Subject Property. This large pond on the Cadman facility likely provides a zone of recharge over a large area to the shallow perched-zone groundwater. Shallow perched groundwater was encountered on the Subject Property at depths ranging from approximately 11 to 19 feet bgs (near MW-5), and approximately 37 to 60 feet bgs (near MW-6), underlying the eastern and southern portions of the Site, respectively. It should be noted that shallow perched groundwater zones are particularly susceptible to seasonal variations due to variations in precipitation and other factors.

Based on the depth to groundwater (approximately 55 [MW-5] to 95 feet [MW-6] bgs) observed during drilling and well installation activities, and the measured groundwater levels (ranging from approximately 35 [MW-4] to 59 feet [MW-6] bgs) subsequently collected after the groundwater had sufficient time to equilibrate to static conditions, it appears that laterally discontinuous confined groundwater conditions are present in some portions of the Subject Property. Based on the elevations of the potentiometric surface measured at MW-4 through MW-6, confined groundwater flow at the Subject Property appears to generally be toward the southeast.

However, this data does not appear to be representative of regional groundwater flow, as regional groundwater flow in the vicinity of the Subject Property has consistently been documented by the city of Redmond to be toward the west to southwest (as discussed above). Based on the topography of the Subject Property and surrounding areas, there is not an area that is topographically higher in elevation to the west/northwest that would provide a zone of recharge and a resulting area of higher hydraulic head pressure that would cause an apparent localized groundwater flow direction to the southeast. Therefore, for the purposes of this assessment, data provided by the city of Redmond (see Appendix B) for regional groundwater flow direction in the vicinity of the Subject Property will be used to assess general groundwater flow direction.

3. CONCEPTUAL SITE MODEL

This section of the Work Plan summarizes the data collected during the previous investigations into a conceptual site model of COCs occurrence, movement, and potential exposures.

The following environmental media have, or may have, become contaminated and could be acting as sources of exposure for humans or terrestrial biota:

- Surface soil
- Subsurface soil
- Groundwater

Potential exposure pathways associated with these media are discussed below.

3.1 FATE AND TRANSPORT OF CONTAMINANTS

This section provides a narrative of potential transport mechanisms for COCs at the Subject Property. After any releases at the Subject Property, the contaminants would initially have been located in surface soils (surface spills) or subsurface soils (e.g., placement of fill).

As rain falls on the ground surface and infiltrates the subsurface, contaminants in surface soils and subsurface soils can dissolve in the rainwater and infiltrate through the subsurface soils (leaching). Some of the contaminant mass remains in the subsurface soils and some of the contaminant mass may reach shallow groundwater. After the property was developed in 2013, pavement or structures over the majority of the Subject Property has significantly minimized rainwater infiltration across the property, reducing the leaching of contaminants from soil to groundwater. A stormwater retention pond and landscaped area occupies the northern portion of the property, and infiltration is likely to be greater in that portion of the property.

Stormwater sheet flow at the Subject Property is limited to the asphalt- or concrete-paved surfaces that cover the majority of the Subject Property. It is highly unlikely that contaminants in surface soil are transported directly to surface water through sheet flow. Stormwater across the Subject Property is directed into catch basins which discharge to the stormwater retention pond in the northern portion of the Subject Property.

There is no evidence to indicate the presence of COCs (i.e., petroleum hydrocarbons) below the groundwater table; however, potential COCs below the groundwater table would exist primarily in two phases: a dissolved phase and sorbed to the soil particles in the water-bearing zone.

Terrestrial biota that may have accumulated contaminants could also act as exposure media for humans and wildlife. Based on a TEE conducted by SLR for the Subject Property (see below), the Subject Property does not qualify for an exclusion from further evaluation; however, the results of a simplified TEE performed for the Subject Property showed that further evaluation was not required.

There have not been any volatile COCs identified at the Subject Property; therefore, volatile contaminants are not expected to be present in surface and subsurface soil, or soil vapor that may pose a potential ambient air, indoor air, or vapor intrusion risk.

Non-volatile COCs present in surface soil may be transported to ambient air in the form of suspended particulates (i.e., dust). However, due to the majority of the Subject Property being covered by asphalt or concrete pavement, limited use of the unpaved portion of the Subject Property (the stormwater retention pond in the northern portion of the property) and the typically wet climate of the region, dust generation is expected to be minimal.

3.2 POTENTIAL RECEPTORS

Most of the Subject Property is used to sort and distribute freight, stage and park semi-trailers and delivery vehicles, and for administrative offices. Delivery drivers are present on the property for only a few hours a day, before and after driving their routes, and are primarily in the warehouse or offices when on the property. Distribution center and administrative workers are present on the property for up to approximately 8 hours a day, and are primarily in the warehouse or offices when on the property. Property visitors, such as truck drivers, may also be present occasionally for short periods of time. Currently, trespassers are unlikely to enter the property due to the presence of a fence and locking gates that prevent unauthorized access to the majority of the property.

Since the property is zoned as industrial and is located in an industrial-zoned area, future property uses can be expected to be industrial in nature. Construction workers and site visitors may also be present on the property in the future.

With the exception of the northern part of property (stormwater retention pond), the majority of the property is capped with asphalt- or concrete- pavement. The unpaved portion of the property is covered with a stormwater retention pond or limited vegetation (e.g., trees, shrubs, manicured lawn). The freight distribution operations at the Subject Property, and the industrial operations at surrounding properties, present a constant human disturbance. At present, the Subject Property offers limited, disturbed terrestrial habitat. Wildlife present at the property likely includes common, non-endangered species such as perching birds and small mammals such as rodents. Ongoing disturbance by human activity makes nesting and breeding at the property unlikely.

3.3 POTENTIAL EXPOSURES

The human receptors currently present at the property include industrial workers that are assumed to be on the property 5 days a week for standard 8-hour workdays, and delivery drivers that are assumed to be on the property 5 days a week for a few hours per day. Property visitors are also on the property for short periods of time and on an irregular basis.

The property is mostly covered with asphalt or concrete pavement, and the portion that is not paved is used for a stormwater retention pond and manicured landscaping. Therefore, although unlikely, human receptors currently present on the property may be exposed to soils through dermal contact or incidental ingestion. Exposure through inhalation of windblown dust is unlikely for this property since small amount of unpaved property is covered with manicured landscaping and vegetation (e.g., trees, shrubs, lawn). Direct soil contact and inhalation of particulates, therefore, represent potentially

complete exposure pathways for current human receptors at the property, although exposures are not expected to be significant.

Volatile COCs were not identified in the soil at the property. Therefore, accumulation of VOCs for both indoor and outdoor air is not expected. Indoor and outdoor vapor inhalation, therefore, may be incomplete exposure pathways for all receptors, but will be fully evaluated during the RI/FS.

Groundwater beneath the northern portion of the property is located within the City of Redmond Critical Aquifer Recharge Area (CARA) Wellhead Protection Zone 3 (10 year time of travel). No drinking water wells are present on the property, and drinking water is supplied by the City of Redmond. The nearest municipal well (Well 5) is located approximately 2,500 feet west of the Subject Property. Based on existing data, groundwater at the down-gradient extent of the property does not appear to be impacted with any COCs that exceed applicable cleanup levels. Consumption of groundwater does not appear to be a complete pathway for human receptors at the property.

4. PROPOSED CLEANUP LEVELS

Based on the areas of previous petroleum hydrocarbon- and chromium-impacted soil and/or groundwater at the Subject Property, the impacted soil and groundwater were likely due to historic site operations and/or concentrations that were present in materials transported to the Subject Property to be used as fill. As described in Section 2.1, sources of the contamination were removed during cleanup activities that were conducted during site redevelopment in 2013. The results of previous investigations and the cleanup activities indicate that there are no other current or historic contaminant source areas located at the Subject Property, and with the exception of dissolved arsenic in groundwater (see discussion in Section 7.1), there are also no known contaminant releases at hydraulically upgradient properties beyond the Subject Property that are impacting the Subject Property.

Based on the results of investigation activities performed at the Subject Property, the soil COCs at the site are DRO, HO, and cPAHs, and the groundwater COCs include DRO, HO, cPAHs, chromium, and arsenic. Benzene, toluene, and ethylbenzene were not detected in any of the soil or groundwater samples from the previous investigations or cleanup activities, and the detected total xylenes, arsenic, and lead concentrations were low and below applicable Method A soil cleanup levels (up to 0.067, 6.42, and 71.9 mg/kg, respectively; see Tables 1 and 2).

The detected total chromium concentration (50.2 μg/L) in the groundwater sample from well MW-1 during the 2012 investigation was only slightly above the MTCA Method A cleanup level (50 μg/L); however the dissolved chromium concentration (2.2 μg/L) from the same sample was well below the Method A cleanup level, indicating that the sampling result was likely due to sediment entrained in the sample from the newly installed well, and therefore was likely not representative of the groundwater conditions. The groundwater sample (MW-1) collected during previous investigation activities near the down-gradient boundary of the Subject Property contained low concentrations of total arsenic and lead (4.55 and 5.24 μg/L, respectively; see Table 4) that were below applicable Method A groundwater cleanup levels. However, groundwater samples collected during the additional RI activities contained dissolved arsenic (up to 86 μg/L at the up-gradient boundary of the Subject Property), that were above the Method A groundwater cleanup level.

The COCs have low volatility and the former hydrocarbon-impacted soil above applicable cleanup levels were removed during the 2012 remedial activities, which minimizes any potential hydrocarbon vapor migration pathway into the building. The Subject Property and the neighboring properties are currently zoned “industrial”, and are used for industrial operations. The ground surfaces of the Subject Property are paved with asphalt, concrete, or are covered by buildings, except for narrow planters and a storm water retention pond in the northern portion of the Subject Property.

There is a small parcel of undeveloped industrial land to the north of the Subject Property that was previously part of a larger sand and gravel mine and later used by Red-E Topsoil to store topsoil stockpiles. The western portion of this parcel was recently developed as a Microsoft Connector bus storage and maintenance facility.

As discussed in the Work Plan, under WAC 173-340-7491 and -7492, the Subject Property does not qualify for an exclusion from a TEE; therefore, SLR conducted a simplified TEE. The results of the simplified TEE showed that further evaluation was not required based on the following: 1) Following the

2012 remedial activities, the total area of soil contamination at the Subject Property is not more than 350 square feet [WAC 173-340-7492 (2)(a)(i)], 2) industrial land use at the Subject Property and surrounding area make substantial wildlife exposure unlikely [WAC 173-340-7492 (2)(a)(ii)], and 3) concentrations of Subject Property COCs are well below the concentrations for priority chemicals of ecological concern at industrial properties (WAC 173-340, Table 749-2); therefore, the potential exposure pathway analysis is considered incomplete [WAC 173-340-7492 (2)(b)]. The completed simplified TEE spreadsheet is presented in Appendix C.

Based on the zoning and current uses of the Subject Property, the low potential for vapor intrusion into the Subject Property building, and the limited risks to terrestrial ecological receptors at the site, MTCA Method A Soil Cleanup Levels for Industrial Properties (MTCA Table 745-1) or Method B soil cleanup levels are appropriate for the petroleum hydrocarbon-impacted soil at the Subject Property. Method A groundwater cleanup levels based on protection of drinking water are appropriate for the potentially petroleum hydrocarbon-, chromium-, or arsenic-impacted groundwater at the Subject Property.

5. SITE INVESTIGATION ACTIVITIES

SLR's subsurface investigation activities included drilling three soil borings (designated MW-4 through MW-6) to maximum depths of approximately 75, 80, and 100 feet bgs, respectively, and completing the borings as groundwater monitoring wells. Two shallow soil borings (designated SB-1 and SB-2) were also advanced to maximum depths of approximately 15 feet bgs. Groundwater samples were collected from the newly installed wells, along with reconnaissance groundwater samples collected from zones of perched groundwater encountered during drilling.

The subsurface investigation activities were completed in general accordance with the 2017 Work Plan prepared by SLR; with the exception of the elimination of proposed well MW-3 from the planned scope of work after well MW-2 was found on the Subject Property. The locations of the borings and monitoring wells are shown on Figure 2.

5.1 BORING ADVANCEMENT AND SOIL SAMPLE COLLECTION

Prior to drilling, the locations of the underground utilities in the vicinity of the proposed borings were identified by using both the public one-call locating service and Applied Professional Services, Inc. (APS) of North Bend, Washington, a private utility locating company.

On August 16 through 18, 2017, Holocene Drilling (Holocene) drilled and sampled three soil borings by using hollow-stem auger methods under the direction of an SLR geologist. The three soil borings (designated MW-4, MW-5, and MW-6) were advanced to total approximate depths of 75, 80, and 100 feet below ground surface (bgs), respectively, where the regional shallow aquifer was encountered.

During drilling of the borings, soil samples were generally collected at 10-foot intervals, and at 5-foot intervals in some zones when thought to be approaching groundwater, using split-spoon samplers. Each sample was transferred from the sampler to a plastic Ziploc® bag and logged in accordance with the Unified Soils Classification System (USCS). SLR screened each soil sample for the potential presence petroleum hydrocarbons and other contaminants by using visual appearance, odors, and/or photoionization detector (PID) readings. The soil lithology, field screening results, and moisture content were recorded on soil boring logs, and copies of the logs are included in Appendix D. Based on the field screening results, no evidence of a potential presence of petroleum hydrocarbons or other contaminants were observed, therefore, soil samples were collected from the soil sample interval collected immediately above the observed regional groundwater levels. Soil samples were collected from depths of approximately 60, 55, and 80 feet bgs (approximately 48, 54, and 45 feet relative to the NAVD 88, respectively) from soil borings MW-4, MW-5, and MW-6, respectively. All soil samples were submited for analysis to OnSite Environmental, Inc. (OnSite) in Redmond, Washington, for analysis of DRO and HO by Ecology Method NWTPH-Dx (after silica gel cleanup), and PAHs by EPA Method 8270D SIM.

On August 21, 2017, Holocene drilled and sampled two shallow soil borings (designated SB-1 and SB-2) by utilizing a hydraulic push-probe rig, at the locations of previous excavation areas AOC 6 and AOC 7, respectively, to collect representative samples and demonstrate that soil from the base of each

excavation did not contain petroleum hydrocarbons or PAHs at concentrations above regulatory concern. The drilling and sampling activities were conducted under the direction of an SLR geologist. The bottoms of the AOC 6 and AOC 7 excavations were reportedly at depths of approximately 6 and 7 feet bgs, respectively; therefore, each boring was advanced to depths of approximately 15 feet bgs to assess the current soil conditions below the bottoms of these excavations. Groundwater was not encountered during the advancement of SB-1 or SB-2. The soil borings logs are presented in Appendix D.

During drilling, soil samples were collected on a continuous basis by using an acetate liner within the 5-foot drill rods. SLR field personnel field screened each soil sample for the potential presence of petroleum hydrocarbons by using visual appearance, odor, and PID readings. One soil sample was collected from each boring for laboratory analysis at depths immediately beneath the former excavations. The vertical extents of the previous excavations were identified based on former environmental reports completed by others and the disturbed appearance of the soil within the excavation limits. The bottoms of AOC 6 and AOC 7 appeared to be approximately 8 feet below the existing grade. Field screening techniques did not reveal any significant evidence of petroleum hydrocarbons impacts in the soil immediately below the limits of the past excavations. Soil samples from borings SB-1 and SB-2 were collected for analysis at depths of 8 to 9 feet bgs and were submitted to Onsite for analysis of DRO and HO by Ecology Method NWTPH-Dx (after silica gel cleanup), and for PAHs by EPA Method 8270D SIM.

5.2 MONITORING WELL INSTALLATION AND GROUNDWATER CHARACTERIZATION

Soil borings MW-4 through MW-6 were converted into groundwater monitoring wells (designated MW-4 through MW-6) with total approximate depths of 70, 71, and 100, feet bgs, respectively, to further characterize potential groundwater impacts, if any, to the shallow regional aquifer from fill material that had historically been used at the Subject Property. Additionally, SLR was able to locate the existing monitoring well designated MW-2, completed by RGI in May of 2011. SLR confirmed the integrity of MW-2 and found the location and total depth of the well was consistent with the total installed depth disclosed in the RGI well log of approximately 65 feet bgs. Therefore, SLR did not drill and install well MW-3 (as originally proposed in the Work Plan). Following an additional search, SLR was unable to locate the former monitoring well designated MW-1. As discussed above, it appears that MW-1 was destroyed during the redevelopment activities performed at the Subject Property in 2013. Approximate locations of the former and existing monitoring wells are shown on Figure 2.

Holocene completed each soil boring as a groundwater monitoring well with 2-inch-diameter Schedule 40 polyvinyl chloride (PVC) casing with 15-feet of 0.010-inch-wide slotted screen (MW-4), or 20-feet of 0.010-slotted screen (MW-5 and MW-6) that spanned the depths at which the shallow regional aquifer was first observed (between approximately 55 and 95 feet bgs). A filter pack consisting of 10x20 Colorado® silica sand was placed around the screens from the bottom of each boring to approximately 2 to 3 feet above the uppermost screen slot. A hydrated bentonite seal was installed above the filter pack, and a flush-grade, traffic-rated monument was installed in concrete to protect each well. It should be noted that the PVC well casing in MW-5 was pulled up approximately 4 feet during the extraction of the auger flights during construction of the well, and was not able to be driven back to its original

installation depth. Therefore, the uppermost 1 foot of well screen is located within the bentonite seal. SLR does not believe that this issue significantly affects the analytical results or the overall conclusion of this report. The construction details of the newly installed monitoring wells are presented on the well logs in Appendix D.

Holocene and SLR developed each of the new wells (MW-4 through MW-6) by agitating water within the well and pumping it to remove suspended sediments and ensure hydraulic continuity between the well screen and formation materials.

During the drilling activities and the installation of MW-5 and MW-6, SLR identified the presence of laterally discontinuous zones of perched groundwater underlying portions of the Subject Property. During the advancement of MW-5, saturated soil was observed on the drill rods and in the auger cuttings at a depth of approximately 19 feet bgs. Drilling activities were temporarily halted to allow perched groundwater to equilibrate to static levels. The static groundwater level equilibrated to a depth of approximately 11 feet bgs, indicating that the perched zone in the vicinity of MW-5 is likely present under some degree of confining hydraulic head. SLR collected a grab groundwater sample (MW-5-0817a) through the down-hole auger flights using a low-flow peristatic pump and new polyethylene tubing with an intake depth (approximately 15 feet bgs) located approximately in the center of the water column.

During the advancement of MW-6, moist to wet soil was observed in the auger cuttings at an approximate depth of 37 feet bgs and wet soils were recovered at a depth of 50 feet bgs. Drilling activities were temporarily halted to allow perched groundwater to equilibrate to static levels. The static groundwater level equilibrated to a depth of approximately 21 feet bgs, indicating that the perched zone in the vicinity of the MW-6 is likely present under some degree of confining hydraulic head. SLR collected a grab groundwater sample (MW-6-0817a) through the down-hole auger flights using a disposable polyethylene bailer, which was lowered to a depth of approximately 35.0 feet bgs.

The grab groundwater samples collected from the laterally discontinuous perched groundwater zones located in the vicinities of MW-5 and MW-6 were submitted to Onsite for analysis of DRO and HO by Ecology Method NWTPH-Dx (without silica gel cleanup) and dissolved RCRA 8 Metals (arsenic, barium, cadmium, chromium, mercury, lead, selenium, and silver) by EPA Method 200.8/7470A. Grab groundwater samples collected for analysis of dissolved metals were laboratory filtered.

As described above, wells MW-4, MW-5 and MW-6 were screened at depth intervals to enable collection of groundwater samples from the shallow regional aquifer present within the vicinity of the Subject Property, independently of the shallower laterally discontinuous perched groundwater zones that were observed underlying portions of the Site (i.e. near MW-5 and MW-6) during drilling activities.

After allowing the monitoring wells to sit undisturbed for at least 3 days to equilibrate with the surrounding water-bearing formation, SLR collected groundwater samples from monitoring wells MW-4, MW-5, and MW-6, on August 28, 2017. Prior to collecting samples, SLR personnel opened all the well caps to allow the groundwater to equilibrate with atmospheric conditions and then measured the depth to groundwater in each well by using an electronic groundwater level indicator. Each well was then purged and sampled using a low-flow bladder pump with dedicated tubing. During the purging of each

well, the pH, conductivity, temperature, oxidation-reduction (redox) potential, and dissolved oxygen of the extracted water were measured. After stabilization of the field parameter measurements, groundwater samples were collected from each well and submitted to Onsite for analysis of DRO and HO by Ecology Method NWTPH-Dx, dissolved RCRA 8 metals (arsenic, barium, cadmium, chromium, mercury, lead, selenium, and silver) by EPA Method 200.8/7470A, and dissolved hexavalent chromium by Method SM 3500-CrB. Groundwater samples collected for analysis of dissolved metals were filtered in the field using an in-line 0.45 micron disposable filter.

It should be noted that MW-2 did not have a measurable amount of water within the well on August 28, 2017, and therefore a groundwater sample was not able to be collected. Based on the sampling results from the other on-site monitoring wells, it is unlikely that the omission of this sampling event will significantly affect the conclusion of this report.

5.3 SURVEY WELL LOCATIONS

To assess the groundwater flow direction beneath the Subject Property, Signature Surveying & Mapping, PLLC (Signature Survey) of Shoreline, Washington, a professional land surveying firm, surveyed the top of casing elevation of each newly installed monitoring wells (MW-4, MW-5, and MW-6) relative to the NAVD88 datum. The depths to groundwater measurements were converted to groundwater elevations based on the survey results.

5.4 WASTE STREAM MANAGEMENT

The soil generated by the drilling activities and water generated during the decontamination of the drilling and sampling equipment, well development, and groundwater sampling activities are temporarily stored at the Subject Property in properly labeled 55-gallon drums pending off-site disposal at a licensed facility.

6. RESULTS

The Additional Remedial Investigation results are summarized below:

- The soil encountered during drilling activities included unconsolidated laterally discontinuous zones of fill material consisting of sand with silt, silty sand, sandy silt, and clay with varying amounts of gravel to maximum depths of up to approximately 35 feet bgs. On-site native soils were encountered beneath the fill material and were observed to include dense glacial till or outwash, and are generally composed of unconsolidated and laterally discontinuous interbedded sand, sand with silty fines, silty sand, sandy silt, and silt with varying degrees of gravel that extend to at least 100 feet bgs, the deepest exploration completed at the Subject Property.

- Shallow perched groundwater was observed at depths ranging from approximately 11 to 19 feet bgs (near MW-5), and approximately 37 to 60 feet bgs (near MW-6), underlying the eastern and southern portions of the Subject Property, respectively. The perched groundwater encountered in these portions of the Subject Property appears to be laterally discontinuous and may be highly influenced by the historic Subject Property filling and grading activities, and laterally discontinuous nature of the interbedded sand, silty sand, and silt in the underlying native formation. Although the majority of the soils underlying the Subject Property are largely surfaced with asphalt pavement or covered by the on-site building, creating a generally impervious site, small stormwater retention ponds are located on the northern portion of the Subject Property and on the south-adjacent property that may provide a recharge source for these shallow perched-zone groundwater.

  Additionally, the Cadman facility that operates on the east-adjacent property has a large (approximately 13-acre) settling and infiltration pond for stormwater and process water that is located immediately to the east and northeast of the Subject Property. This large pond on the Cadman facility likely provides a zone of recharge over a large area to the shallow perched-zone groundwater. Cross sections illustrating the perched zones in relation to the adjacent stormwater/infiltration ponds, and deeper groundwater bearing zones, are shown on Figures 5 and 6.

- Based on the approximate groundwater elevations (approximately 54 [MW-5] to 30 feet [MW-6] relative to NAVD88) observed during drilling and well installation activities, and the measured groundwater elevations (ranging from approximately 73 [MW-4] to 65 feet [MW-6] relative to NAVD88) subsequently measured after the groundwater had sufficient time to equilibrate to static conditions, it appears that laterally discontinuous confined groundwater conditions are present in some portions of the Subject Property. Based on the elevations of the potentiometric surface measured at MW-4 through MW-6, confined groundwater flow at the Subject Property appears to generally be toward the southeast.

  However, this data does not appear to be representative of regional groundwater flow, as regional groundwater flow in the vicinity of the Subject Property has consistently been documented by the city of Redmond to be toward the west to southwest. Based on the topography of the Subject Property and surrounding areas, there is not an area to the west/northwest that is topographically higher in elevation. An area that is higher in elevation

would provide a zone of recharge and a resulting area of higher hydraulic head pressure that would cause an apparent localized groundwater flow direction to the southeast. Therefore, for the purposes of this assessment, regional groundwater flow direction data provided by the city of Redmond (see Appendix B) in the vicinity of the Subject Property was used to assess general groundwater flow direction.

- The soil samples collected from borings MW-4, MW-5, MW-6, SB-1, and SB-2 and submitted for analysis did not contain petroleum hydrocarbons or PAHs at concentrations above either the laboratory's practical quantitation limit (PQL) or the applicable MTCA Method A or B cleanup levels for industrial properties.
- The groundwater samples collected from monitoring wells MW-4, MW-5, and MW-6, and the reconnaissance groundwater samples collected from the perched groundwater zones observed in borings MW-5 and MW-6, did not contain petroleum hydrocarbons or metals (with the exception of arsenic) at concentrations above either the laboratory's PQL or the applicable MTCA Method A or B groundwater cleanup levels.
- The groundwater samples collected from wells MW-5 and MW-6 contained dissolved arsenic (13 and 5.6 µg/L, respectively) that exceeded the MTCA Method A groundwater cleanup level (5 µg/L).
- The reconnaissance groundwater samples collected from the shallow perched groundwater zones observed in borings MW-5 and MW-6 contained dissolved arsenic (86 and 6.2 µg/L, respectively) that exceeded the MTCA Method A groundwater cleanup level.

The recent and previous soil sample analytical results are summarized in Tables 1 through 3, the groundwater sample analytical results are summarized in Tables 4 and 5, and the groundwater monitoring and sampling field parameters are summarized in Tables 6 and 7, respectively. The soil sample analytical results for petroleum hydrocarbons and PAHs are shown on Figure 3. The groundwater analytical results for petroleum hydrocarbons, arsenic, and chromium are shown of Figures 4, 5, and 6. Copies of the laboratory reports are presented in Appendix E.

7. CONCLUSIONS

During August 2017, SLR conducted additional RI activities at the Subject Property. The primary objectives of the individual tasks were to: 1) complete the characterization of soil and groundwater conditions at the Subject Property to sufficiently demonstrate that residual petroleum hydrocarbons and chromium are not present at the Subject Property at concentrations that exceed applicable MTCA cleanup levels, and 2) demonstrate that a property-specific NFA is warranted for the Subject Property. The additional RI activities consisted of drilling and sampling five soil borings (MW-4 through MW-6, SB-1, and SB-2) on the Subject Property; completing three borings (MW-4 through MW-6) as groundwater monitoring wells screened at depths consistent with the shallow regional aquifer in the vicinity of the Subject Property; collecting groundwater samples from the newly installed wells; and collecting reconnaissance groundwater samples from zones of perched groundwater observed during drilling at the Subject Property.

The additional RI activities were conducted to address Ecology's comments and/or requests presented in previous opinion letters to others (see Section 2.1) and subsequent communications with SLR following submittal of the Work Plan (SLR, 2017). As previously discussed, the Work Plan presented a proposed scope of work to address Ecology's comments and requests. The table below depicts work completed by SLR to address Ecology's comments and/or requests.

Ecology's Requests/Comments	SLR Tasks
Prepare a Conceptual Site Model	A Conceptual Site Model was presented in the Work Plan. **An updated Conceptual Site Model was presented in this Additional RI Report.**
Prepare Geologic Cross Sections	Cross sections were provided in the Work Plan. **Updated cross sections are presented in this Additional RI Report.**
Prepare a Terrestrial Ecological Evaluation (TEE)	A completed TEE was presented in the Work Plan and this Additional RI Report.
Collect representative soil samples below the vertical extent of contamination at borings PB-2 and PB-3 and their associated AOC-6 and AOC-7 excavations (discussed below).	In accordance with the Work Plan, and as discussed in Section 3.1, SLR collected representative soil samples below the vertical extent of the AOC-6 and AOC-7 excavations. **The soil samples did not contain DRO, HO, or PAHs concentrations above applicable MTCA Method A cleanup levels for industrial properties.**
Total chromium was detected at 50.2 micrograms per liter (µg/L), which exceeds the MTCA Method A Cleanup level (50 µg/L). Additional groundwater monitoring wells are needed to assess groundwater conditions and establish flow direction.	In general accordance with the Work Plan, and as discussed in Section 3.2, SLR installed and sampled three additional monitoring wells to assess groundwater conditions in the regional shallow aquifer present beneath the Subject Property. **The groundwater samples did not contain DRO, HO, or chromium concentrations above the laboratory PQLs.**

Ecology's Requests/Comments (cont.)	SLR Tasks (cont.)
If perched groundwater is observed, additional sampling will be necessary to characterize the perched groundwater.	Perched groundwater was identified during the additional RI activities; therefore, the scope of work was modified to include the collection of reconnaissance groundwater samples to characterize the shallow perched groundwater. **The reconnaissance groundwater samples did not contain DRO, HO, or chromium concentrations above the laboratory PQLs.**
Analyze groundwater samples for chromium VI as well as total chromium.	Groundwater samples collected during the additional RI activities were submitted for analysis of both chromium VI and total chromium. **The groundwater samples did not contain chromium VI or total chromium concentrations above the laboratory PQLs.**
Enter the site data into Ecology's Environmental Information Management System (EIMS) database.	**The historical data and data collected during the additional RI activities have been entered into the EIMS database.**
The property is zoned Manufacturing Park; residential use is not allowed. Method A Industrial cleanup levels for soil may be appropriate; however, an environmental covenant must be placed on the property restricting future use to industrial and manufacturing uses only.	Following receipt of confirmation from Ecology that characterization of the Subject Property is complete, and that no further investigation or remedial activities are required, an environmental covenant will be placed on the property.

The soil beneath the Subject Property includes fill material that was placed in the early 1990s that consists of sand with silt, silty sand, sandy silt, and clay with varying amounts of gravel to maximum depths of approximately 35 feet bgs. Native soils encountered beneath the fill material and were observed to include dense glacial till or outwash, and are generally composed of unconsolidated and laterally discontinuous interbedded sand, sand with silty fines, silty sand, sandy silt, and silt with varying degrees of gravel to depth of at least 100 feet bgs, the deepest exploration completed at the Subject Property.

During drilling at the Subject Property, there was no evidence of petroleum hydrocarbon or other impacts to soil based on field screening (i.e. sheen, odor, etc.). The results of the soil samples collected and submitted for laboratory analysis during the additional RI activities did not contain any concentrations of petroleum hydrocarbons or PAHs at concentrations either above the laboratory's PQL or applicable MTCA cleanup levels for industrial properties.

As discussed in Section 2.1, only one groundwater sample (from MW-1) had previously been collected at the Subject Property (by RGI in 2012) prior to the 2017 RI activities. The groundwater sample from well MW-1 collected in 2012 did not contain DRO, HO, GRO, BTEX, or PAHs at concentrations above the laboratory's PQL. The 2012 sample from MW-1 did contain total chromium (50.2 µg/L) at a concentration that just slightly exceeded the MTCA Method A groundwater cleanup level (50 µg/L); however, the dissolved chromium concentration (2.2 µg/L) from the same sample was well below the Method A cleanup level, indicating that the sampling result was likely due to sediment entrained in the

sample from the newly installed well, and therefore was likely not representative of the groundwater conditions at the Subject Property. The sample did not contain any other metals at concentrations either above the laboratory's PQL or MTCA cleanup levels.

In accordance with the Work Plan and subsequent communications with Ecology, SLR collected and submitted groundwater samples collected during the RI activities for analysis of DRO, HO, dissolved RCRA 8 metals, and hexavalent chromium. The groundwater samples collected during the RI activities did not contain petroleum hydrocarbons or dissolved chromium at concentrations above the laboratory PQL. However, the groundwater samples from well MW-5 and MW-6, and the reconnaissance groundwater samples collected from perched zones observed during the drilling of MW-5 and MW-6, contained concentrations of dissolved arsenic ranging from 5.6 µg/L (MW-6) to 86 µg/L (MW-5 reconnaissance sample). SLR reviewed historical use of the Subject Property and analytical results for soil and groundwater samples collected during previous investigations performed at the Subject Property. Based on SLRs review, there are no readily apparent sources of arsenic or other metals on the Subject Property that would be contributing to elevated concentrations of dissolved arsenic in groundwater. Arsenic was detected in all of the previous soil samples, but at concentrations (between 2.05 to 6.42 mg/kg) that are well below the MTCA cleanup level (20 mg/kg). These concentrations appear to be consistent with naturally occurring arsenic that is commonly found in soil throughout Washington State.

Based on a review of groundwater maps provided by the city of Redmond (see Appendix B), the regional groundwater flow direction in the vicinity of the Subject Property is toward the west to southwest. Based on this information, the highest dissolved arsenic concentration (86 µg/L in the reconnaissance groundwater sample from MW-5) is located at the up-gradient boundary of the Subject Property, and the lowest (non-detect in the groundwater sample from well MW-4) dissolved arsenic concentration is at the down-gradient boundary of the Subject Property. Well MW-4 was installed to replace down-gradient well MW-1, which was apparently destroyed during the 2013 site redevelopment. The dissolved arsenic concentrations (1.7 µg/L and non-detect [<3.0 µg/L]) from the groundwater samples collected from MW-1 in 2012 and MW-4 in 2017, respectively, are below the MTCA Method A groundwater cleanup level (5 µg/L).

7.1 DISCUSSION OF POTENTIAL DISSOLVED ARSENIC SOURCE

As discussed above, groundwater samples collected during the additional RI activities contained dissolved arsenic at concentrations (ranging from 5.6 to 86 µg/L) that exceeded the MTCA Method A groundwater cleanup level (5 µg/L). However, subsequent analysis indicates that these concentrations are a results of migration from an off-site, up-gradient, source.

In general, arsenic has low mobility in soil and groundwater in the acid to neutral range; however, under even slightly alkaline (pH > 7.00) conditions arsenic mobility increases as it can be desorbed from soil and into a dissolved phase in groundwater. In attempting to identify a source of the elevated concentrations of arsenic, SLR reviewed operations on nearby properties and identified that Cadman maintains several infiltration/settling ponds on the east-adjacent (i.e. up-gradient) property (see Appendix A and Figures 2 and 6).

SLR reviewed Cadman's publically available DMR data for the years 2013 to 2017 on Ecology's Water Quality Permitting and Reporting Information System (PARIS) database. Cadman's DMR results indicated that stormwater and/or process water samples collected at stormwater and/or infiltration ponds at the facility consistently contained alkaline pH measurements (ranging from 7.11 to 8.14). A summary table with the DMR data obtained from the PARIS database is presented in Appendix F.

As previously discussed, Cadman maintains several stormwater/infiltration ponds, including a large (approximately 13 acre) infiltration pond that is located directly to the east/northeast of the Subject Property. It is likely that these ponds provide an area of recharge to the groundwater beneath both the Cadman facility and the Subject Property, and the alkaline (pH > 7.00) nature of the water may be increasing the mobility of naturally occurring arsenic found in soil, resulting in the elevated concentrations of arsenic observed in the groundwater samples collected at the Subject Property. The highest dissolved arsenic concentration (86 µg/L in the reconnaissance groundwater sample from MW-5) that was collected at the up-gradient boundary of the Subject Property (adjacent to the Cadman facility) suggests that the elevated arsenic concentrations are migrating onto the Subject Property from an off-site, up-gradient, source.

Additionally, SLR submitted a request to the city of Redmond, and obtained publically available groundwater analytical data from 2009 to 2017 for city wells located in the vicinity of the Subject Property and the Cadman facility. SLR reviewed available data for two city wells (MW025 and MW356) located up-gradient of the Cadman facility, and four city wells (MW022, MW053, MW338, and MW361) located down-gradient of Cadman. With the exception of one well (MW338), all the down-gradient wells reviewed were either up- or cross-gradient of the Subject Property. The groundwater samples collected from the wells (MW025 and MW356) located up-gradient of Cadman did not contain any arsenic at concentrations above the laboratory reporting limit or MTCA groundwater cleanup level (5 µg/L). The remaining wells (MW022, MW053, MW338, and MW361) located down-gradient of the Cadman facility all contained arsenic (ranging from 11 to 160 µg/L) at concentrations above the MTCA groundwater cleanup level. A map showing the locations of the city of Redmond's wells and summary tables presenting groundwater analytical results for arsenic are presented in Appendix G.

Based on the results of the RI activities and data obtained from the city of Redmond, it appears that the Subject Property has been fully characterized, and that residual concentrations of petroleum hydrocarbons, PAHs, and chromium are no longer present in soil and/or groundwater at concentrations that exceed applicable MTCA Method A cleanup levels. Additionally, the dissolved arsenic identified in groundwater beneath the Subject Property at concentrations above the MTCA Method A groundwater cleanup level appears to be migrating onto the Subject Property from the up-gradient, off-property, Cadman facility.

Based on this information, SLR requests that a site-specific NFA be provided for petroleum hydrocarbons, PAHs, and chromium that are no longer present at the Subject Property at concentrations that exceed applicable MTCA Method A cleanup levels. In addition, following development of an institutional control (i.e. environmental covenant) that restricts groundwater use, to eliminate the drinking water pathway, at the Subject Property, SLR requests that a property-specific NFA be provided with respect to the concentrations of dissolved arsenic above MTCA Method A groundwater cleanup levels that are migrating onto the Subject Property from an off-site, up-gradient, source.

8. REFERENCES

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Washington State Department of Ecology. 2014. Opinion Letter to Mr. John Phillips of Suncap Seattle, LLC, Regarding Comments on Langan Treadwell Rollo's Work Plan, Fed Ex Ground Distribution Center, 188th Avenue and NE 73rd Street, Redmond, WA 98052, Facility/Site No: 11311, VCP Project No. NW2766. August 25.

LIMITATIONS

The services described in this work product were performed in accordance with generally accepted professional consulting principles and practices. No other representations or warranties, expressed or implied, are made. These services were performed consistent with our agreement with our client. This work product is intended solely for the use and information of our client unless otherwise noted. Any reliance on this work product by a third party is at such party's sole risk.

Opinions and recommendations contained in this work product are based on conditions that existed at the time the services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. The data reported and the findings, observations, and conclusions expressed are limited by the scope of work. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this work product.

The purpose of an environmental assessment is to reasonably evaluate the potential for, or actual impact of, past practices on a given site area. In performing an environmental assessment, it is understood that a balance must be struck between a reasonable inquiry into the environmental issues and an appropriate level of analysis for each conceivable issue of potential concern. The following paragraphs discuss the assumptions and parameters under which such an opinion is rendered.

No investigation can be thorough enough to exclude the presence of hazardous materials at a given site. If hazardous conditions have not been identified during the assessment, such a finding should not therefore be construed as a guarantee of the absence of such materials on the site, but rather as the result of the services performed within the scope, practical limitations, and cost of the work performed.

Environmental conditions that are not apparent may exist at the site. Our professional opinions are based in part on interpretation of data from a limited number of discrete sampling locations and therefore may not be representative of the actual overall site environmental conditions.

The passage of time, manifestation of latent conditions, or occurrence of future events may require further study at the site, analysis of the data, and/or reevaluation of the findings, observations, and conclusions in the work product.

This work product presents professional opinions and findings of a scientific and technical nature. The work product shall not be construed to offer legal opinion or representations as to the requirements of, nor the compliance with, environmental laws rules, regulations, or policies of federal, state or local governmental agencies.

FIGURES

Legend

Subject Property Boundary

Property Boundary

N

0 250 500 1,000 Feet

THIS DRAWING IS FOR CONCEPTUAL PURPOSES ONLY.
ACTUAL LOCATIONS MAY VARY AND NOT ALL STRUCTURES ARE SHOWN.

SLR

FEDEX GROUND DISTRIBUTION CENTER
18795 NORTHEAST 73RD STREET
REDMOND, WASHINGTON

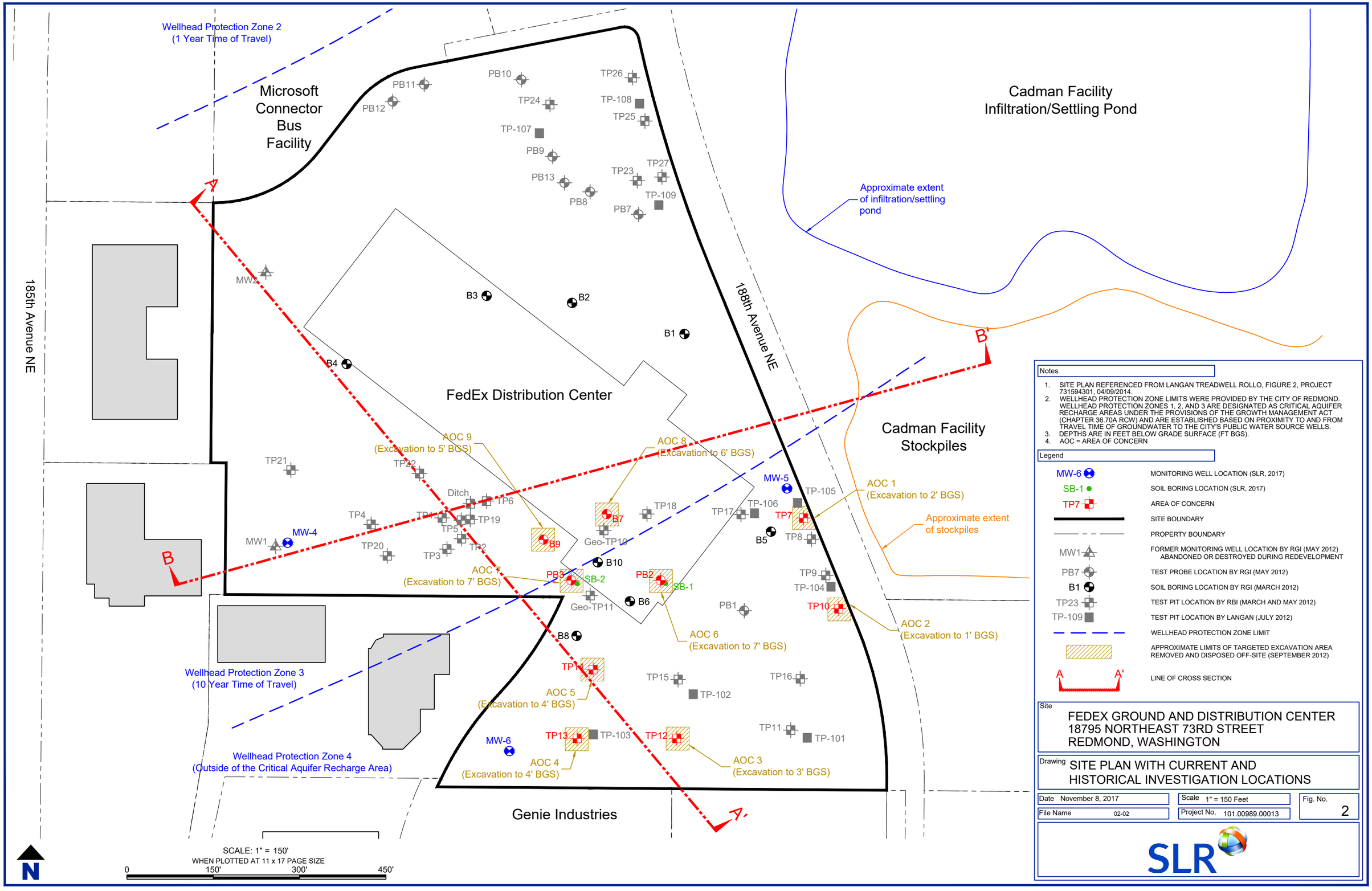
Report

REMEDIAL INVESTIGATION REPORT

Drawing

SITE LOCATION MAP

Date	February 2017	Scale	1 in = 500 Feet	Fig. No. 1
File Name	F1 FedEx Dist Center_17.mxd	Project No.	101.00989.00013	



Notes

1. SITE PLAN REFERENCED FROM LANGAN TREADWELL ROLLO, FIGURE 2, PROJECT 731594301, 04/09/2014.
2. WELLHEAD PROTECTION ZONE LIMITS WERE PROVIDED BY THE CITY OF REDMOND. WELLHEAD PROTECTION ZONES 1, 2, AND 3 ARE DESIGNATED AS CRITICAL AQUIFER RECHARGE AREAS UNDER THE PROVISIONS OF THE GROWTH MANAGEMENT ACT (CHAPTER 36.70A RCW) AND ARE ESTABLISHED BASED ON PROXIMITY TO AND FROM TRAVEL TIME OF GROUNDWATER TO THE CITY'S PUBLIC WATER SOURCE WELLS.
3. DEPTHS ARE IN FEET BELOW GRADE SURFACE (FT BGS).
4. AOC = AREA OF CONCERN

Legend

- MW-6 — MONITORING WELL LOCATION (SLR, 2017)
- SB-1 — SOIL BORING LOCATION (SLR, 2017)
- TP7 — AREA OF CONCERN
- SITE BOUNDARY
- PROPERTY BOUNDARY
- MW1 — FORMER MONITORING WELL LOCATION BY RGI (MAY 2012) ABANDONED OR DESTROYED DURING REDEVELOPMENT
- PB7 — TEST PROBE LOCATION BY RGI (MAY 2012)
- B1 — SOIL BORING LOCATION BY RGI (MARCH 2012)
- TP23 — TEST PIT LOCATION BY RBI (MARCH AND MAY 2012)
- TP-109 — TEST PIT LOCATION BY LANGAN (JULY 2012)
- WELLHEAD PROTECTION ZONE LIMIT
- APPROXIMATE LIMITS OF TARGETED EXCAVATION AREA REMOVED AND DISPOSED OFF-SITE (SEPTEMBER 2012)
- A — A' — LINE OF CROSS SECTION

Site
FEDEX GROUND AND DISTRIBUTION CENTER
18795 NORTHEAST 73RD STREET
REDMOND, WASHINGTON

Drawing
SITE PLAN WITH CURRENT AND HISTORICAL INVESTIGATION LOCATIONS

Date November 8, 2017	Scale 1" = 150 Feet	Fig. No. 2
File Name 02-02	Project No. 101.00989.00013	

SLR

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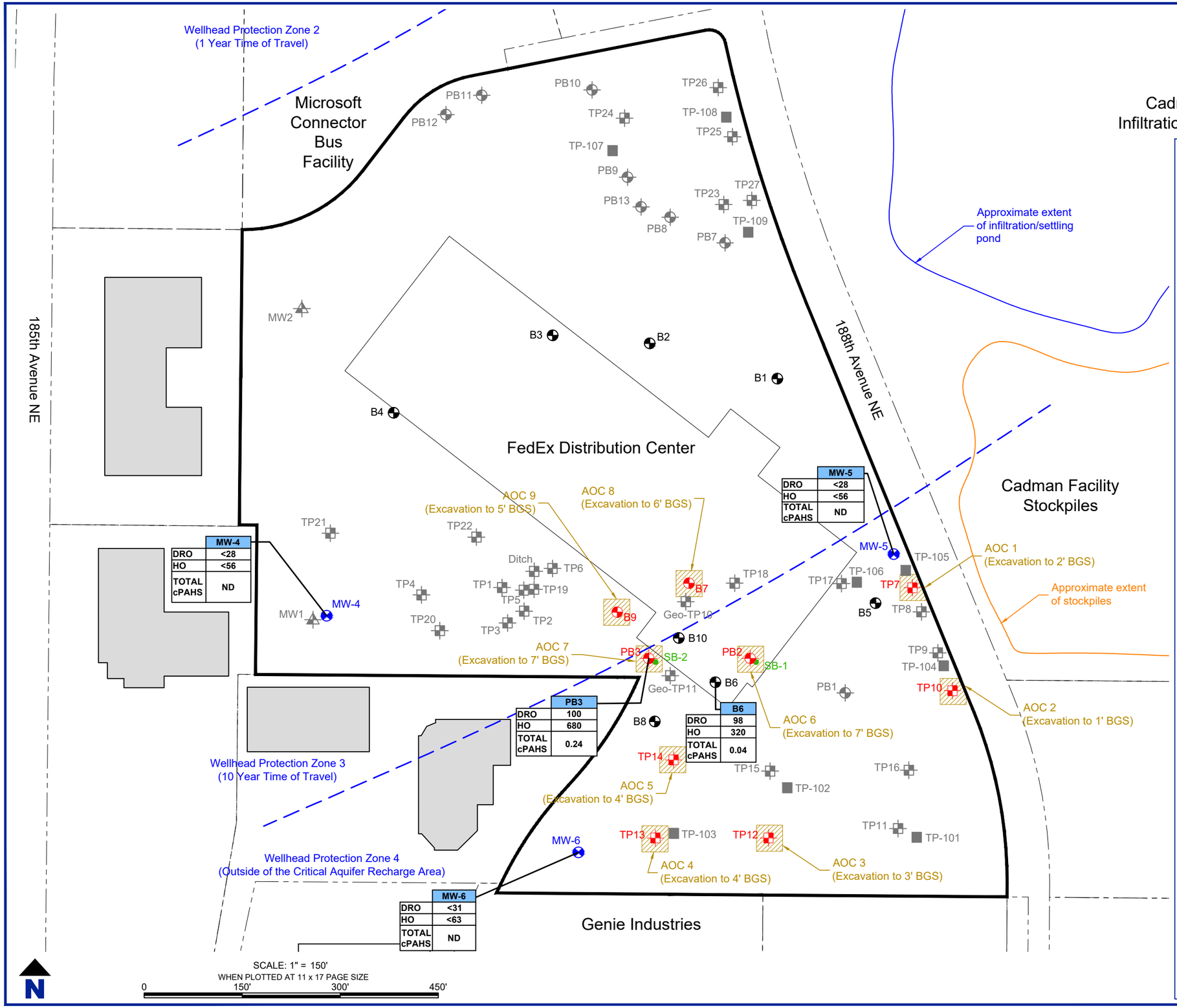

Notes

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2. WELLHEAD PROTECTION ZONE LIMITS WERE PROVIDED BY THE CITY OF REDMOND. WELLHEAD PROTECTION ZONES 1, 2, AND 3 ARE DESIGNATED AS CRITICAL AQUIFER RECHARGE AREAS UNDER THE PROVISIONS OF THE GROWTH MANAGEMENT ACT (CHAPTER 36.70A RCW) AND ARE ESTABLISHED BASED ON PROXIMITY TO AND FROM TRAVEL TIME OF GROUNDWATER TO THE CITY'S PUBLIC WATER SOURCE WELLS.
3. DEPTHS ARE IN FEET BELOW GRADE SURFACE (FT BGS).
4. AOC = AREA OF CONCERN
5. ND = NON-DETECT

Legend

MW-6	MONITORING WELL LOCATION (SLR, 2017)
SB-1	SOIL BORING LOCATION (SLR, 2017)
TP7	AREA OF CONCERN
	SITE BOUNDARY
	PROPERTY BOUNDARY
MW1	FORMER MONITORING WELL LOCATION BY RGI (MAY 2012) ABANDONED OR DESTROYED DURING REDEVELOPMENT
PB7	TEST PROBE LOCATION BY RGI (MAY 2012)
B1	SOIL BORING LOCATION BY RGI (MARCH 2012)
TP23	TEST PIT LOCATION BY RBI (MARCH AND MAY 2012)
TP-109	TEST PIT LOCATION BY LANGAN (JULY 2012)
	WELLHEAD PROTECTION ZONE LIMIT
	APPROXIMATE LIMITS OF TARGETED EXCAVATION AREA REMOVED AND DISPOSED OFF-SITE (SEPTEMBER 2012)

Sampling Result Guidelines

DRO	DIESEL RANGE ORGANICS
HO	HEAVY OIL RANGE ORGANICS
cPAHs	CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS
MTCA	MODEL TOXICS CONTROL ACT
mg/kg	MILLIGRAM PER KILOGRAM

ANALYTE	MW-4 (SAMPLE ID)
DRO	98
HO	320
TOTAL cPAHS	0.04

SAMPLE RESULTS (mg/kg)

98 — SAMPLE **DOES NOT EXCEEDED** RESPECTIVE MTCA METHOD A INDUSTRIAL CLEANUP LEVEL

<31 — NOT DETECTED ABOVE THE LABORATORY REPORTING LIMIT

Site
FEDEX GROUND AND DISTRIBUTION CENTER
18795 NORTHEAST 73RD STREET
REDMOND, WASHINGTON

Drawing SITE PLAN WITH 2017 ANALYTICAL RESULTS - SOIL

Date November 8, 2017 | Scale 1" = 150 Feet | Fig. No. 3

File Name 03-03 | Project No. 101.00989.00013

SLR

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Wellhead Protection Zone 2
(1 Year Time of Travel)

Microsoft Connector Bus Facility

185th Avenue NE

188th Avenue NE

Cadman Facility
Infiltration/Settling Pond

Approximate extent of infiltration/settling pond

FedEx Distribution Center

Cadman Facility
Stockpiles

Approximate extent of stockpiles

Genie Industries

Wellhead Protection Zone 3
(10 Year Time of Travel)

Wellhead Protection Zone 4
(Outside of the Critical Aquifer Recharge Area)

PB10 PB11 PB12 PB9 PB13 PB8 PB7

TP26 TP24 TP-108 TP25 TP-107 TP27 TP23 TP-109

TP21 TP22 TP4 TP6 TP1 TP19 TP5 TP2 TP20 TP3 Ditch

TP18 TP17 TP-106 TP-105 TP7 TP8 TP9 TP-104 TP10

TP14 TP15 TP-102 TP16 TP13 TP-103 TP12 TP11 TP-101

NS MW2

B3 B2 B1 B4 B7 B9 B10 B5 B6 B8

Geo-TP10 Geo-TP11

PB3 SB-2 PB2 SB-1 PB1

MW-5 MW-6

AOC 1 (Excavation to 2' BGS)

AOC 2 (Excavation to 1' BGS)

AOC 3 (Excavation to 3' BGS)

AOC 4 (Excavation to 4' BGS)

AOC 5 (Excavation to 4' BGS)

AOC 6 (Excavation to 7' BGS)

AOC 7 (Excavation to 7' BGS)

AOC 8 (Excavation to 6' BGS)

AOC 9 (Excavation to 5' BGS)

MW-4	
DATE	08/25/17
DRO	<0.26
HO	<0.42
Cr	<10
As	<3.0

MW-5*	
DATE	08/18/17
DRO	<0.27
HO	<0.43
Cr	<10
As	86

MW-5	
DATE	08/25/17
DRO	<0.27
HO	<0.44
Cr	<10
As	13

MW-6*	
DATE	08/16/17
DRO	<0.27
HO	<0.43
Cr	<10
As	6.2

MW-6	
DATE	08/25/17
DRO	<0.26
HO	<0.42
Cr	<10
As	5.6

SCALE: 1" = 150'
WHEN PLOTTED AT 11 x 17 PAGE SIZE
0 150' 300' 450'

N

Notes

1. SITE PLAN REFERENCED FROM LANGAN TREADWELL ROLLO, FIGURE 2, PROJECT 731594301, 04/09/2014.
2. WELLHEAD PROTECTION ZONE LIMITS WERE PROVIDED BY THE CITY OF REDMOND. WELLHEAD PROTECTION ZONES 1, 2, AND 3 ARE DESIGNATED AS CRITICAL AQUIFER RECHARGE AREAS UNDER THE PROVISIONS OF THE GROWTH MANAGEMENT ACT (CHAPTER 36.70A RCW) AND ARE ESTABLISHED BASED ON PROXIMITY TO AND FROM TRAVEL TIME OF GROUNDWATER TO THE CITY'S PUBLIC WATER SOURCE WELLS.
3. DEPTHS ARE IN FEET BELOW GRADE SURFACE (FT BGS).
4. AOC = AREA OF CONCERN

Legend

- MW-6 — MONITORING WELL LOCATION (SLR, 2017)
- SB-1 — SOIL BORING LOCATION (SLR, 2017)
- TP7 — AREA OF CONCERN
- SITE BOUNDARY
- PROPERTY BOUNDARY
- MW1 — FORMER MONITORING WELL LOCATION BY RGI (MAY 2012) ABANDONED OR DESTROYED DURING REDEVELOPMENT
- PB7 — TEST PROBE LOCATION BY RGI (MAY 2012)
- B1 — SOIL BORING LOCATION BY RGI (MARCH 2012)
- TP23 — TEST PIT LOCATION BY RBI (MARCH AND MAY 2012)
- TP-109 — TEST PIT LOCATION BY LANGAN (JULY 2012)
- WELLHEAD PROTECTION ZONE LIMIT
- APPROXIMATE LIMITS OF TARGETED EXCAVATION AREA REMOVED AND DISPOSED OFF-SITE (SEPTEMBER 2012)

Sampling Result Guidelines

DRO	DIESEL RANGE ORGANICS
HO	HEAVY OIL RANGE ORGANICS
Cr	CHROMIUM
As	ARSENIC
MTCA	MODEL TOXICS CONTROL ACT
µg/L	MICROGRAMS PER LITER

MW-4	
DATE	09/01/17
DRO	<0.26
HO	<0.42
Cr	<10
As	5.6

DATE COLLECTED — SAMPLE ID — ANALYTE — SAMPLE RESULTS (µg/L)

<0.26 SAMPLE **DOES NOT EXCEEDED** RESPECTIVE MTCA METHOD A CLEANUP LEVEL

6.2 SAMPLE HAS **EXCEEDED** RESPECTIVE MTCA METHOD A CLEANUP LEVEL

Site
FEDEX GROUND AND DISTRIBUTION CENTER
18795 NORTHEAST 73RD STREET
REDMOND, WASHINGTON

Drawing
SITE PLAN WITH 2017 ANALYTICAL RESULTS - GROUNDWATER

Date November 8, 2017 | Scale 1" = 150 Feet | Fig. No. 4
File Name 04-03 | Project No. 101.00989.00013

SLR

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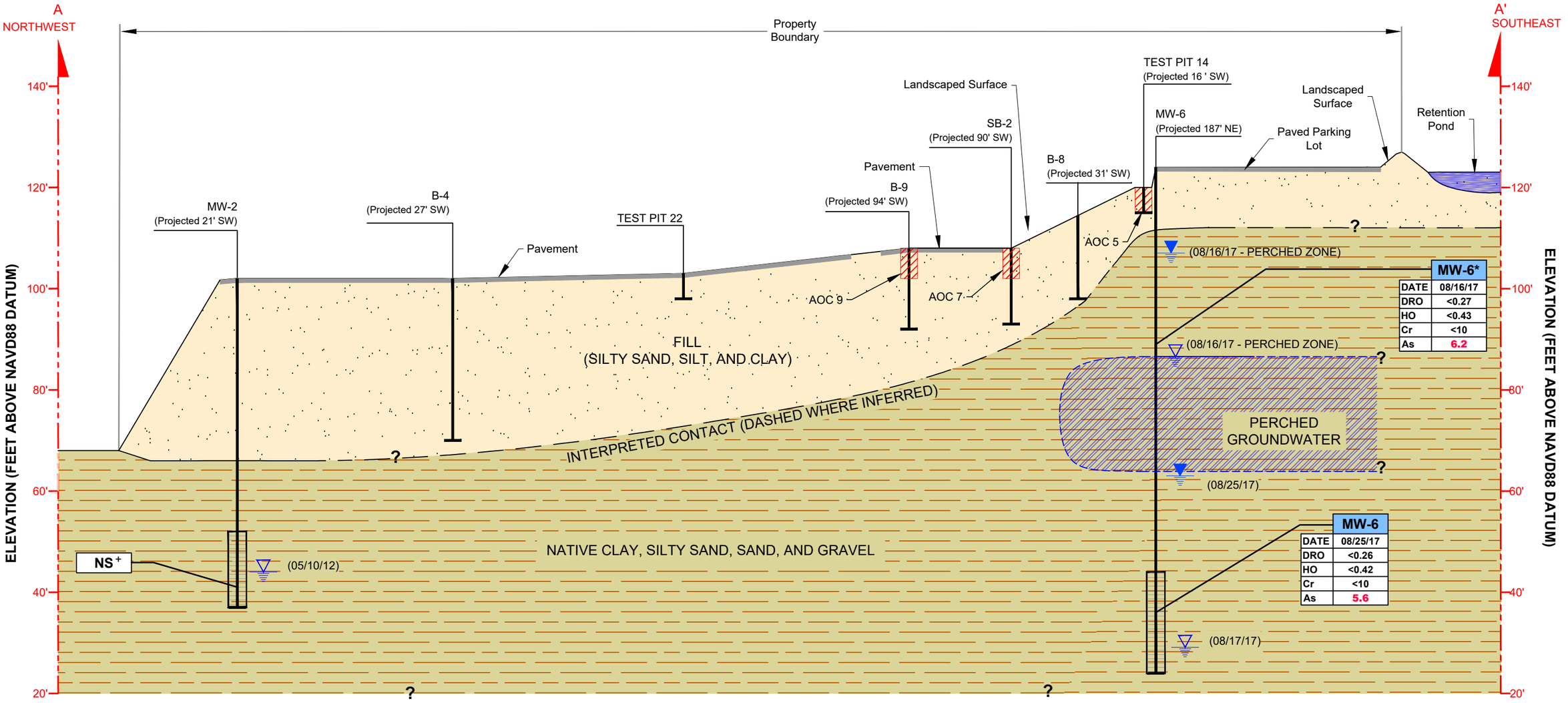
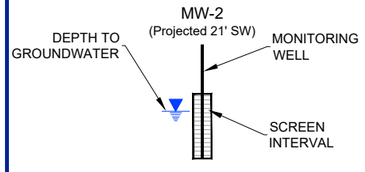


Notes

1. Cross section location is shown on Figure 2.
2. B = Soil Boring Location
3. TP = Test Pit Location
4. MW = Monitoring Well Location
5. NS = Not Sampled
6. ✱ = Reconnaissance groundwater sample collected from shallow perched zone during drilling.
7. + = Insufficient water in well to collect a sample.

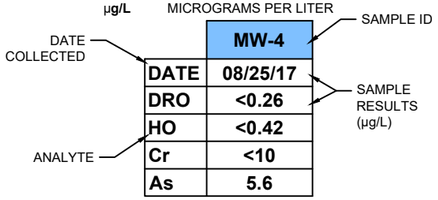
Legend



- MEASURED GROUNDWATER ELEVATION
- GROUNDWATER ELEVATION OBSERVED DURING DRILLING
- INFERRED LITHOLOGIC CONTACT
- ASPHALT
- FILL (SILTY SAND, SILT, AND CLAY)
- NATIVE CLAY, SILTY SAND, SAND, AND GRAVEL
- APPROXIMATE LIMITS OF TARGETED EXCAVATION AREA REMOVED AND DISPOSED OFF-SITE
- RETENTION POND
- PERCHED GROUNDWATER

Sampling Result Guidelines

DRO	DIESEL RANGE ORGANICS
HO	HEAVY OIL RANGE ORGANICS
Cr	CHROMIUM
AS	ARSENIC
MTCA	MODEL TOXICS CONTROL ACT
µg/L	MICROGRAMS PER LITER



<0.26 SAMPLE **DOES NOT EXCEEDED** RESPECTIVE MTCA METHOD A CLEANUP LEVEL

6.2 SAMPLE HAS **EXCEEDED** RESPECTIVE MTCA METHOD A CLEANUP LEVEL

0 100' 200'

Horizontal Scale: 1 Inch = 100 Feet

0 20' 40'

Vertical Scale: 1 Inch = 20 Feet (NAVD88 Vertical Datum)

Site
FEDEX GROUND AND DISTRIBUTION CENTER
18795 NORTHEAST 73RD STREET
REDMOND, WASHINGTON

Drawing
GEOLOGIC CROSS SECTION A - A'

Date November 8, 2017	Scale As Shown	Fig. No. 5
File Name 05-01	Project No. 101.00989.00013	

SLR

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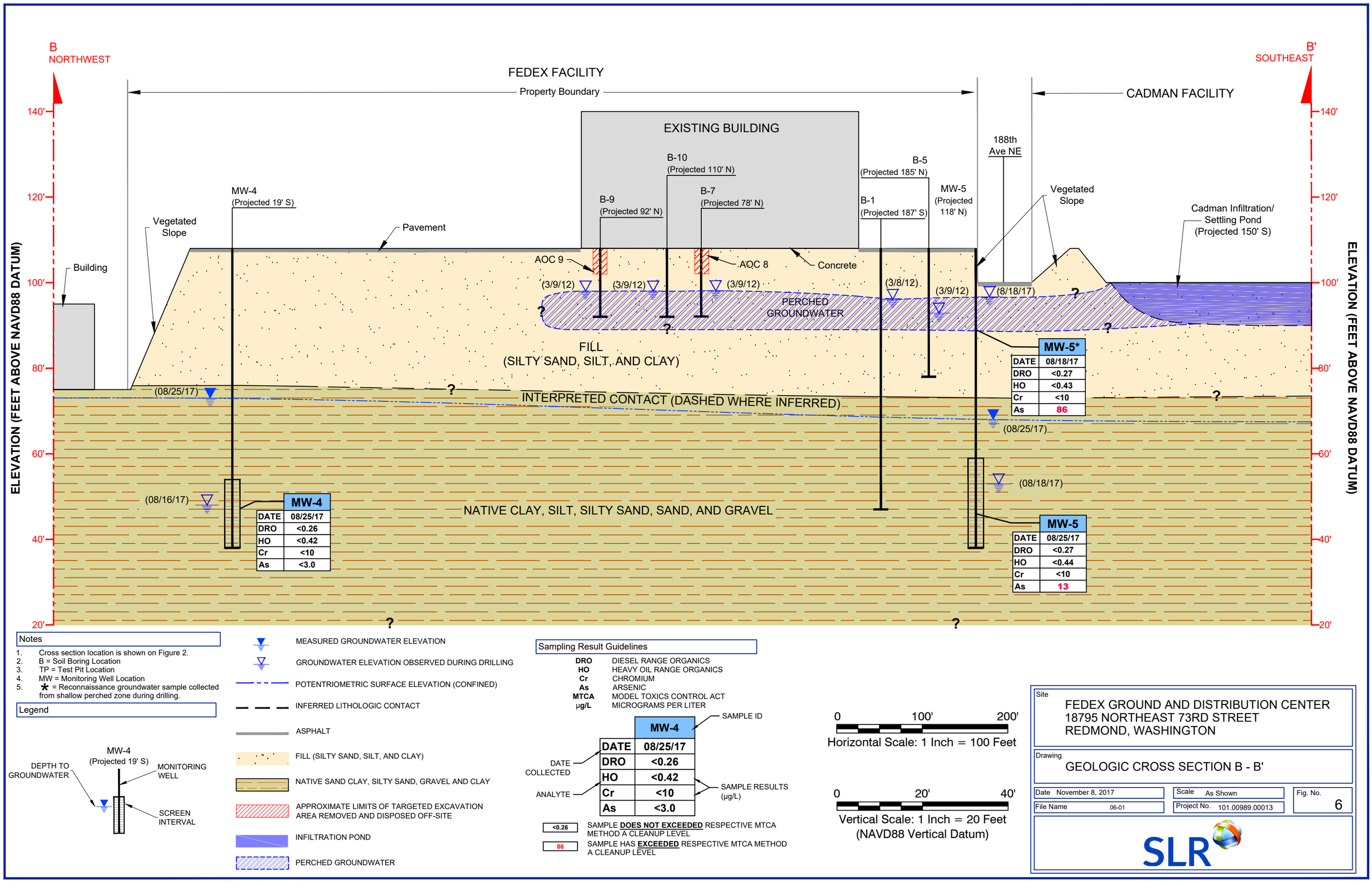


Notes

1. Cross section location is shown on Figure 2.
2. B = Soil Boring Location
3. TP = Test Pit Location
4. MW = Monitoring Well Location
5. ★ = Reconnaissance groundwater sample collected from shallow perched zone during drilling.

Legend

- MEASURED GROUNDWATER ELEVATION
- GROUNDWATER ELEVATION OBSERVED DURING DRILLING
- POTENTRIOMETRIC SURFACE ELEVATION (CONFINED)
- INFERRED LITHOLOGIC CONTACT
- ASPHALT
- FILL (SILTY SAND, SILT, AND CLAY)
- NATIVE SAND CLAY, SILTY SAND, GRAVEL AND CLAY
- APPROXIMATE LIMITS OF TARGETED EXCAVATION AREA REMOVED AND DISPOSED OFF-SITE
- INFILTRATION POND
- PERCHED GROUNDWATER

Sampling Result Guidelines

DRO	DIESEL RANGE ORGANICS
HO	HEAVY OIL RANGE ORGANICS
Cr	CHROMIUM
As	ARSENIC
MTCA	MODEL TOXICS CONTROL ACT
µg/L	MICROGRAMS PER LITER

<0.26 SAMPLE **DOES NOT EXCEEDED** RESPECTIVE MTCA METHOD A CLEANUP LEVEL

86 SAMPLE HAS **EXCEEDED** RESPECTIVE MTCA METHOD A CLEANUP LEVEL

0 100' 200'
Horizontal Scale: 1 Inch = 100 Feet

0 20' 40'
Vertical Scale: 1 Inch = 20 Feet
(NAVD88 Vertical Datum)

Site
FEDEX GROUND AND DISTRIBUTION CENTER
18795 NORTHEAST 73RD STREET
REDMOND, WASHINGTON

Drawing
GEOLOGIC CROSS SECTION B - B'

Date November 8, 2017	Scale As Shown	Fig. No. 6
File Name 06-01	Project No. 101.00989.00013	

SLR

TABLES

Table 1
Soil Sample Analytical Results - BTEX and Petroleum Hydrocarbons
FedEx Ground Distribution Center
Redmond, Washington

Soil Boring Number/ Sample Location	Sample ID	Sampled By	Approx. Sample Depth (feet)	Date Collected	BTEX[a]				Petroleum Hydrocarbons		
					Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline-Range Organics[b]	Diesel-Range Organics[c]	Heavy Oil-Range Organics[c]
MTCA Method A Cleanup Levels[d]					**0.03**	**7**	**6**	**9**	**100**	**2,000**	**2,000**
TP1	TP1-1	Riley Group	1.0	3/6/2012	<0.03	<0.05	<0.05	<0.1	NA	<50	<250
TP1	TP1-9	Riley Group	9.0	3/6/2012	<0.03	<0.05	<0.05	<0.1	NA	<50	<250
TP2	TP2-1	Riley Group	1.0	3/6/2012	<0.03	<0.05	<0.05	<0.1	NA	<50	<250
TP3	TP3-1	Riley Group	1.0	3/6/2012	<0.03	<0.05	<0.05	<0.1	NA	<50	<250
TP5	TP5-1	Riley Group	1.0	3/6/2012	<0.03	<0.05	<0.05	<0.1	NA	<50	<250
TP7	*TP7-0*	*Riley Group*	*0.0*	*3/6/2012*	<0.03	<0.05	<0.05	<0.1	*NA*	*300 x*	***2,200***
TP7	*TP7-1*	*Riley Group*	*1.0*	*3/6/2012*	*NA*	*NA*	*NA*	*NA*	*NA*	*450 x*	***3,100***
TP7	TP7-2	Riley Group	2.0	3/6/2012	NA	NA	NA	NA	NA	<50	<250
TP8	TP8-1	Riley Group	1.0	3/6/2012	NA	NA	NA	NA	NA	<50	<250
TP8	TP8-2	Riley Group	2.0	3/6/2012	NA	NA	NA	NA	NA	<50	<250
TP9	TP9-1	Riley Group	1.0	3/6/2012	NA	NA	NA	NA	NA	<50	<250
TP9	TP9-2	Riley Group	2.0	3/6/2012	NA	NA	NA	NA	NA	<50	<250
TP10	*TP10-1*	*Riley Group*	*1.0*	*3/6/2012*	*NA*	*NA*	*NA*	*NA*	*NA*	*100 x*	*850*
TP10	TP10-2	Riley Group	2.0	3/6/2012	NA	NA	NA	NA	NA	<50	<250
Geo-TP10	Geo-TP10-10	Riley Group	10.0	3/6/2012	<0.03	<0.05	<0.05	<0.1	<2	76 x	<250
B1	B1-10	Riley Group	10.0	3/8/2012	<0.03	<0.05	<0.05	<0.1	NA	NA	NA
B1	B1-20	Riley Group	20.0	3/8/2012	<0.03	<0.05	<0.05	<0.1	NA	NA	NA
B2	B2-5	Riley Group	5.0	3/8/2012	<0.03	<0.05	<0.05	<0.1	<2	<50	<250
B2	B2-15	Riley Group	15.0	3/8/2012	<0.03	<0.05	<0.05	<0.1	NA	NA	NA
B3	B3-5	Riley Group	5.0	3/8/2012	NA	NA	NA	NA	NA	<50	<250
B3	B3-10	Riley Group	10.0	3/8/2012	<0.03	<0.05	<0.05	<0.1	NA	NA	NA
B4	B4-10	Riley Group	10.0	3/8/2012	<0.03	<0.05	<0.05	0.067	NA	NA	NA
B5	B5-5	Riley Group	5.0	3/9/2012	<0.03	<0.05	<0.05	<0.1	<2	<50	<250
B6	B6-7.5	Riley Group	7.5	3/9/2012	NA	NA	NA	NA	NA	<50	<250
B8	B8-10	Riley Group	10.0	3/9/2012	NA	NA	NA	NA	NA	69 x	460
B9	B9-10	Riley Group	10.0	3/9/2012	NA	NA	NA	NA	NA	75 x	880
B10	B10-7.5	Riley Group	7.5	3/9/2012	NA	NA	NA	NA	NA	<50	380
B10	B10-10	Riley Group	10.0	3/9/2012	NA	NA	NA	NA	NA	<50	<250

Table 1
Soil Sample Analytical Results - BTEX and Petroleum Hydrocarbons
FedEx Ground Distribution Center
Redmond, Washington

Soil Boring Number/ Sample Location	Sample ID	Sampled By	Approx. Sample Depth (feet)	Date Collected	BTEX[a]				Petroleum Hydrocarbons		
					Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline-Range Organics[b]	Diesel-Range Organics[c]	Heavy Oil-Range Organics[c]
MTCA Method A Cleanup Levels[d]					**0.03**	**7**	**6**	**9**	**100**	**2,000**	**2,000**
PB-1	PB-1-2	Riley Group	2.0	5/11/2012	NA	NA	NA	NA	NA	<50	<250
PB-1	PB-1-4	Riley Group	4.0	5/11/2012	NA	NA	NA	NA	NA		
PB-1	PB-1-6	Riley Group	6.0	5/11/2012	NA	NA	NA	NA	NA		
PB-1	PB-1-8	Riley Group	8.0	5/11/2012	NA	NA	NA	NA	NA		
PB-2	*PB-2-4*	*Riley Group*	*4.0*	*5/11/2012*	*NA*	*NA*	*NA*	*NA*	*NA*	*83 x*	*1,000*
PB-2	*PB-2-6*	*Riley Group*	*6.0*	*5/11/2012*	*NA*	*NA*	*NA*	*NA*	*NA*		
PB-3	*PB-3-2*	*Riley Group*	*2.0*	*5/11/2012*	*NA*	*NA*	*NA*	*NA*	*NA*	*140 x*	*1,200*
PB-3	*PB-3-4*	*Riley Group*	*4.0*	*5/11/2012*	*NA*	*NA*	*NA*	*NA*	*NA*		
PB-3	*PB-3-6*	*Riley Group*	*6.0*	*5/11/2012*	*NA*	*NA*	*NA*	*NA*	*NA*		
TP-11	TP-11-2	Riley Group	2.0	5/9/2012	NA	NA	NA	NA	NA	130 x	<250
TP-11	TP-11-4	Riley Group	4.0	5/9/2012	NA	NA	NA	NA	NA	NA	NA
TP-12	*TP-12-2*	*Riley Group*	*2.0*	*5/9/2012*	*NA*	*NA*	*NA*	*NA*	*NA*	*170 x*	*1,600*
TP-12	TP-12-5	Riley Group	5.0	5/9/2012	NA	NA	NA	NA	NA	NA	NA
TP-13	*TP-13-3*	*Riley Group*	*3.0*	*5/9/2012*	*NA*	*NA*	*NA*	*NA*	*NA*	*110 x*	*<250*
TP-13	TP-13-5	Riley Group	5.0	5/9/2012	NA	NA	NA	NA	NA	NA	NA
TP-14	*TP-14-3*	*Riley Group*	*3.0*	*5/9/2012*	*NA*	*NA*	*NA*	*NA*	*NA*	*180 x*	*1,800*
TP-15	TP-15-2	Riley Group	2.0	5/9/2012	NA	NA	NA	NA	NA	<50	<250
TP-16	TP-16-3	Riley Group	3.0	5/9/2012	NA	NA	NA	NA	NA	<50	<250
TP-16	TP-16-5	Riley Group	5.0	5/9/2012	NA	NA	NA	NA	NA		
TP-17	TP-17-3	Riley Group	3.0	5/9/2012	NA	NA	NA	NA	NA	<50	340
TP-17	TP-17-5	Riley Group	5.0	5/9/2012	NA	NA	NA	NA	NA	<50	<250
TP-18	TP-18-3	Riley Group	3.0	5/9/2012	NA	NA	NA	NA	NA	<50	<250
TP-18	TP-18-5	Riley Group	5.0	5/9/2012	NA	NA	NA	NA	NA	<50	460
TP-19	TP-19-3	Riley Group	3.0	5/9/2012	NA	NA	NA	NA	NA	<50	<250
TP-19	TP-19-5	Riley Group	5.0	5/9/2012	NA	NA	NA	NA	NA		
TP-20	TP-20-3	Riley Group	3.0	5/9/2012	NA	NA	NA	NA	NA	<50	<250
TP-20	TP-20-5	Riley Group	5.0	5/9/2012	NA	NA	NA	NA	NA	<50	<250

Table 1
Soil Sample Analytical Results - BTEX and Petroleum Hydrocarbons
FedEx Ground Distribution Center
Redmond, Washington

Soil Boring Number/ Sample Location	Sample ID	Sampled By	Approx. Sample Depth (feet)	Date Collected	BTEX[a]				Petroleum Hydrocarbons		
					Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline-Range Organics[b]	Diesel-Range Organics[c]	Heavy Oil-Range Organics[c]
				MTCA Method A Cleanup Levels[d]	0.03	7	6	9	100	2,000	2,000
Targeted Excavation Locations											
AOC1	AOC1-E-5	Riley Group	1.0	9/11/2012	NA	NA	NA	NA	NA	<50	<250
	AOC1-N-5	Riley Group	1.0	9/11/2012	NA	NA	NA	NA	NA	<50	<250
	AOC1-S-5	Riley Group	1.0	9/11/2012	NA	NA	NA	NA	NA	<50	<250
	AOC1-W-5	Riley Group	1.0	9/11/2012	NA	NA	NA	NA	NA	<50	<250
AOC2	AOC2-E-5	Riley Group	1.0	9/11/2012	NA	NA	NA	NA	NA	<50	<250
	AOC2-N-5	Riley Group	1.0	9/11/2012	NA	NA	NA	NA	NA	<50	<250
	AOC2-S-5	Riley Group	1.0	9/11/2012	NA	NA	NA	NA	NA	<50	300
	AOC2-W-5	Riley Group	1.0	9/11/2012	NA	NA	NA	NA	NA	62	980
AOC3	AOC3-E-5	Riley Group	2.0	9/10/2012	NA	NA	NA	NA	NA	<50	460
	AOC3-N-5	Riley Group	2.0	9/10/2012	NA	NA	NA	NA	NA	<50	<250
	AOC3-S-5	Riley Group	2.0	9/10/2012	NA	NA	NA	NA	NA	<50	<250
	AOC3-W-5	Riley Group	2.0	9/10/2012	NA	NA	NA	NA	NA	<50	<250
AOC5	AOC5-B(4)	Riley Group	4.0	9/10/2012	NA	NA	NA	NA	NA	<50	320
	AOC5-E-5	Riley Group	3.0	9/10/2012	NA	NA	NA	NA	NA	<50	330
	AOC5-N-5	Riley Group	3.0	9/10/2012	NA	NA	NA	NA	NA	<50	300
	AOC5-S-5	Riley Group	3.0	9/10/2012	NA	NA	NA	NA	NA	<50	410
	AOC5-W-5	Riley Group	3.0	9/10/2012	NA	NA	NA	NA	NA	<50	420

Table 1
Soil Sample Analytical Results - BTEX and Petroleum Hydrocarbons
FedEx Ground Distribution Center
Redmond, Washington

Soil Boring Number/ Sample Location	Sample ID	Sampled By	Approx. Sample Depth (feet)	Date Collected	BTEX[a]				Petroleum Hydrocarbons		
					Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline-Range Organics[b]	Diesel-Range Organics[c]	Heavy Oil-Range Organics[c]
MTCA Method A Cleanup Levels[d]					**0.03**	**7**	**6**	**9**	**100**	**2,000**	**2,000**
Targeted Excavation Locations continued											
AOC6	AOC6-E-5	Riley Group	6.0	9/10/2012	NA	NA	NA	NA	NA	<50	<250
	AOC6-N-5	Riley Group	6.0	9/10/2012	NA	NA	NA	NA	NA	170	<250
	AOC6-S-5	Riley Group	6.0	9/10/2012	NA	NA	NA	NA	NA	<50	<250
	AOC6-W-5	Riley Group	6.0	9/10/2012	NA	NA	NA	NA	NA	<50	<250
AOC7	AOC7-E-5	Riley Group	6.0	9/11/2012	NA	NA	NA	NA	NA	<50	<250
	AOC7-N-5	Riley Group	6.0	9/11/2012	NA	NA	NA	NA	NA	<50	<250
	AOC7-S-5	Riley Group	6.0	9/11/2012	NA	NA	NA	NA	NA	<50	<250
	AOC7-W-5	Riley Group	6.0	9/11/2012	NA	NA	NA	NA	NA	<50	<250
AOC9	AOC9-E-5	Riley Group	4.0	9/11/2012	NA	NA	NA	NA	NA	<50	<250
	AOC9-N-5	Riley Group	4.0	9/11/2012	NA	NA	NA	NA	NA	<50	<250
	AOC9-S-5	Riley Group	4.0	9/11/2012	NA	NA	NA	NA	NA	<50	<250
	AOC9-W-5	Riley Group	4.0	9/11/2012	NA	NA	NA	NA	NA	<50	<250
2017 SLR Investigation											
MW-4	MW-4-60'	SLR	60.0	8/16/2017	NA	NA	NA	NA	NA	<28	<56
MW-5	MW-5-55'	SLR	55.0	8/18/2017	NA	NA	NA	NA	NA	<28	<56
MW-6	MW-6-80'	SLR	80.0	8/17/2017	NA	NA	NA	NA	NA	<31	<63
SB-1	SB-1-8-9'	SLR	8.0-9.0	8/21/2017	NA	NA	NA	NA	NA	98	320
SB-2	SB-2-8-9'	SLR	8.0-9.0	8/21/2017	NA	NA	NA	NA	NA	100	680

Notes:

All values in milligrams per kilogram (mg/kg).

Values in bold represent concentrations above MTCA Method A Cleanup Levels.

Italicized values that are highlighted in grey indicate samples that were overexcavated/removed during cleanup action activities conducted by Langan in 2013.

TPH = total petroleum hydrocarbons

NA = Not analyzed.

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SLR = SLR International Corporation

Riley Group = The Riley Group, Inc.

[a] Analyzed by EPA Method 8260C.

[b] Analyzed by Ecology Method NWTPH-Gx.

[c] Analyzed by Ecology Method NWTPH-Dx, after silica gel cleanup.

[d] Ecology's Model Toxics Control Act (MTCA) Cleanup Regulation (Chapter 173-340 WAC), Table 745-1, Method A Soil Cleanup Levels for Industrial Properties.

Table 2
Soil Sample Analytical Results - PAHs
FedEx Ground Distribution Center
Redmond, Washington

Soil Boring Number/ Sample Location	Sample ID	Sampled By	Approx. Sample Depth (feet)	Date Collected	PAHs[a]									cPAHs[a]								
					Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)-perylene	Fluoranthene	Fluorene	Naphthalene[b]	Phenanthrene	Pyrene	Benzo(a)-pyrene	Benzo[a]-anthracene	Benzo(b)-fluoranthene	Benzo(j,k)-fluoranthene	Chrysene	Dibenzo(a,h)-anthracene	Indeno(1,2,3-cd)-pyrene	Total cPAHs (U=1/2 MRL)	Total cPAHs (U = 0)
MTCA Method A Cleanup Levels[c]					**4,800[d]**	**NV**	**24,000[d]**	**NV**	**3,200[d]**	**3,200[d]**	**5**	**NV**	**2,400[d]**	**2.0**	**1.37[d]**	**1.37[d]**	**13.7[d]**	**137[d]**	**0.137[d]**	**1.37[d]**	**2.0**	**2.0**
TP7	TP7-0	Riley Group	0	3/6/2012	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	0.077	0.0025	0.11	0.0025	0.2	0.0025	0.054	0.09615	0.09615
Geo-TP10	Geo-TP10-10	Riley Group	10.0	3/6/2012	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	0.019	0.02	0.021	0.005	0.031	0.005	0.012	0.02561	0.02561
B2	B2-5	Riley Group	5.0	3/8/2012	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	0.024	0.019	0.029	0.011	0.022	<0.01	0.018	0.03242	0.03192
B3	B3-10	Riley Group	10.0	3/8/2012	NA	NA	NA	NA	NA	NA	0.05	NA	NA	0.017	0.013	0.02	<0.01	0.016	<0.01	0.014	0.02286	0.02186
B4	B4-10	Riley Group	10.0	3/8/2012	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	0.1	<0.01	0.1	<0.01	<0.01	<0.01	<0.01	0.13050	0.11
B5	B5-5	Riley Group	5.0	3/9/2012	<0.01	<0.01	<0.01	0.018	0.016	<0.01	<0.01	<0.01	0.023	0.021	0.014	0.023	<0.01	0.024	<0.01	0.014	0.02734	0.02634
TP1	TP1-1[e]	Riley Group	1.0	3/6/2012	-	-	-	-	-	-	<0.05	-	-	0.38	0.45	0.47	0.17	0.53	0.062	0.25	0.5255	0.5255
TP2	TP2-1[e]	Riley Group	1.0	3/6/2012	-	-	-	-	-	-	<0.05	-	-	0.022	0.015	0.030	0.011	0.02	0.005	0.022	0.0305	0.0305
TP3	TP3-1[e]	Riley Group	1.0	3/6/2012	-	-	-	-	-	-	<0.05	-	-	0.029	0.025	0.037	0.013	0.029	0.005	0.024	0.03969	0.03969
TP4	TP4-1[e]	Riley Group	1.0	3/6/2012	-	-	-	-	-	-	<0.01	-	-	0.034	0.025	0.043	0.013	0.04	0.005	0.025	0.0455	0.0455
TP5	TP5-1[e]	Riley Group	1.0	3/6/2012	-	-	-	-	-	-	<0.05	-	-	0.013	0.005	0.014	0.005	0.012	0.005	0.01	0.01702	0.01702
TP6	TP6-1[e]	Riley Group	1.0	3/6/2012	-	-	-	-	-	-	NA	-	-	0.029	0.024	0.04	0.013	0.032	0.005	0.025	0.04002	0.04002
TP6	TP6-2[e]	Riley Group	2.0	3/6/2012	-	-	-	-	-	-	<0.01	-	-	0.27	0.18	0.31	0.100	0.22	0.048	0.2	0.356	0.356
TP7	*TP7-1[e]*	*Riley Group*	*1.0*	*3/6/2012*	-	-	-	-	-	-	*<0.1*	-	-	*0.15*	*0.11*	*0.17*	*0.005*	*0.16*	*0.005*	*0.1*	*0.1906*	*0.1906*
TP7	TP7-2[e]	Riley Group	2.0	3/6/2012	-	-	-	-	-	-	<0.01	-	-	0.048	0.037	0.056	0.016	0.049	0.005	0.036	0.06349	0.06349
TP8	TP8-1[e]	Riley Group	1.0	3/6/2012	-	-	-	-	-	-	<0.01	-	-	0.041	0.03	0.054	0.017	0.038	0.005	0.033	0.05528	0.05528
TP8	TP8-2[e]	Riley Group	2.0	3/6/2012	-	-	-	-	-	-	<0.01	-	-	0.015	0.015	0.017	0.005	0.016	0.005	0.012	0.02056	0.02056
TP9	TP9-1[e]	Riley Group	1.0	3/6/2012	-	-	-	-	-	-	<0.01	-	-	0.032	0.017	0.04	0.005	0.051	0.012	0.021	0.04201	0.04201
TP9	TP9-2[e]	Riley Group	2.0	3/6/2012	-	-	-	-	-	-	<0.01	-	-	0.097	0.063	0.12	0.046	0.083	0.017	0.075	0.12993	0.12993
TP10	*TP10-1[e]*	*Riley Group*	*1.0*	*3/6/2012*	-	-	-	-	-	-	*<0.01*	-	-	*0.071*	*0.042*	*0.082*	*0.022*	*0.075*	*0.02*	*0.052*	*0.09355*	*0.09355*
TP10	TP10-2[e]	Riley Group	2.0	3/6/2012	-	-	-	-	-	-	<0.01	-	-	0.012	0.005	0.012	0.005	0.013	0.005	0.005	0.01533	0.01533
B3	B3-5[e]	Riley Group	5.0	3/8/2012	-	-	-	-	-	-	<0.01	-	-	0.015	0.016	0.014	0.005	0.018	0.005	0.005	0.01968	0.01968
B4	B4-15[e]	Riley Group	15.0	3/8/2012	-	-	-	-	-	-	<0.01	-	-	0.013	0.013	0.016	0.005	0.016	0.005	0.011	0.01816	0.01816
B7	*B7-5[e]*	*Riley Group*	*5.0*	*3/9/2012*	-	-	-	-	-	-	*0.031*	-	-	***2.2***	***1.4***	***2.3***	*0.94*	*1.9*	***0.44***	***1.6***	***2.887***	***2.887***
B10	B10-7.5[e]	Riley Group	7.5	3/9/2012	-	-	-	-	-	-	<0.01	-	-	0.028	0.022	0.031	0.014	0.029	0.005	0.021	0.0376	0.03759
PB-1	PB-1-2/4/6/8	Riley Group	2.0-8.0	5/11/2012	NA	NA	NA	NA	NA	NA	<0.01	NA	NA	0.15	0.1	0.17	0.052	0.13	0.027	0.13	0.19920	0.1992
PB-2	*PB-2-4/6*	*Riley Group*	*4.0-6.0*	*5/11/2012*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*<0.01*	*NA*	*NA*	*0.094*	*0.058*	*0.160*	*0.052*	*0.100*	*0.020*	*0.085*	*0.13250*	*0.1325*
PB-3	*PB-3-2/4/6*	*Riley Group*	*2.0-6.0*	*5/11/2012*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*<0.01*	*NA*	*NA*	*0.074*	*0.049*	*0.130*	*0.040*	*0.077*	*0.015*	*0.074*	*0.10557*	*0.10557*
TP-11	TP-11-2[e]	Riley Group	2.0	5/9/2012	-	-	-	-	-	-	<0.01	-	-	0.420	0.270	0.510	0.140	0.370	0.072	0.340	0.5569	0.5569
TP-12	*TP-12-2*	*Riley Group*	*2.0*	*5/9/2012*	*<0.1*	*<0.1*	*<0.1*	*0.28*	*0.32*	*<0.1*	*<0.1*	*<0.1*	*0.35*	*0.340*	*0.220*	*0.410*	*0.140*	*0.300*	*<0.1*	*0.260*	*0.45100*	*0.446*
TP-13	*TP-13-3*	*Riley Group*	*3.0*	*5/9/2012*	*0.80*	*<0.5*	*1.6*	*6.4*	*7.1*	*<0.5*	*<0.5*	*8.0*	*17*	***9.8***	***6.8***	***7.4***	*2.3*	*9.7*	***1.6***	***4.9***	***12.197***	***12.197***
TP-14	*TP-14-3*	*Riley Group*	*3.0*	*5/9/2012*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*0.11*	*<0.1*	*<0.1*	*<0.1*	*0.13*	*0.094*	*<0.1*	*0.12*	*<0.1*	*0.13*	*<0.1*	*<0.1*	*0.12730*	*0.1073*
TP-15	TP-15-2	Riley Group	2.0	5/9/2012	<0.01	<0.01	0.010	0.100	0.110	<0.01	<0.01	0.054	0.14	0.13	0.081	0.15	0.045	0.11	0.026	0.1	0.1713	0.1713
TP-16	TP-16-3/5	Riley Group	3.0-5.0	5/9/2012	<0.01	<0.01	<0.01	0.026	0.033	<0.01	<0.01	0.017	0.039	0.031	0.021	0.037	0.016	0.029	<0.01	0.026	0.04179	0.04129
TP-17	TP-17-3	Riley Group	3.0	5/9/2012	<0.01	<0.01	<0.01	0.057	0.055	<0.01	<0.01	0.027	0.076	0.066	0.041	0.083	0.029	0.060	0.013	0.052	0.0884	0.0884
TP-17	TP-17-5	Riley Group	5.0	5/9/2012	<0.01	<0.01	0.014	0.120	0.140	<0.01	<0.01	0.076	0.19	0.160	0.120	0.210	0.067	0.160	0.028	0.120	0.2161	0.2161
TP-18	TP-18-3	Riley Group	3.0	5/9/2012	<0.01	<0.01	0.011	0.041	0.037	<0.01	<0.01	0.028	0.055	0.061	0.048	0.068	0.025	0.072	0.011	0.039	0.08082	0.08082
TP-18	TP-18-5	Riley Group	5.0	5/9/2012	<0.1	<0.1	<0.1	0.16	0.14	<0.1	<0.1	<0.1	0.18	0.160	0.110	0.019	<0.1	0.170	<0.1	0.130	0.19760	0.1876
TP-19	TP-19-3/5	Riley Group	3.0-5.0	5/9/2012	<0.01	<0.01	<0.01	<0.01	0.017	<0.01	<0.01	0.011	0.02	<0.01	<0.01	0.013	<0.01	<0.01	<0.01	<0.01	0.00835	0.0013
TP5	TP5-2[e]	Riley Group	2.0	3/6/2012	-	-	-	-	-	-	NA	-	-	-	-	-	-	-	-	-	-	-

Table 2
Soil Sample Analytical Results - PAHs
FedEx Ground Distribution Center
Redmond, Washington

Soil Boring Number/ Sample Location	Sample ID	Sampled By	Approx. Sample Depth (feet)	Date Collected	PAHs[a]									cPAHs[a]								
					Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)-perylene	Fluoranthene	Fluorene	Naphthalene[b]	Phenanthrene	Pyrene	Benzo(a)-pyrene	Benzo[a]-anthracene	Benzo(b)-fluoranthene	Benzo(j,k)-fluoranthene	Chrysene	Dibenzo(a,h)-anthracene	Indeno(1,2,3-cd)-pyrene	Total cPAHs (U=1/2 MRL)	Total cPAHs (U = 0)
MTCA Method A Cleanup Levels[c]					**4,800[d]**	**NV**	**24,000[d]**	**NV**	**3,200[d]**	**3,200[d]**	**5**	**NV**	**2,400[d]**	**2.0**	**1.37[d]**	**1.37[d]**	**13.7[d]**	**137[d]**	**0.137[d]**	**1.37[d]**	**2.0**	**2.0**
B1	B1-10	Riley Group	10.0	3/8/2012	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.00755	0
B1	B1-20	Riley Group	20.0	3/8/2012	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.01510	0
B2	B2-15	Riley Group	15.0	3/8/2012	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0
TP1	TP1-2[e]	Riley Group	2.0	3/6/2012	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	<0.01
TP1	TP1-9[e]	Riley Group	9.0	3/6/2012	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	-	-	<0.01
TP2	TP2-2[e]	Riley Group	2.0	3/6/2012	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	<0.01
TP3	TP3-2[e]	Riley Group	2.0	3/6/2012	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	<0.01
TP4	TP4-2[e]	Riley Group	2.0	3/6/2012	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	<0.01
TP20	TP-20-3	Riley Group	3.0	5/9/2012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.00755	0
TP20	TP-20-5	Riley Group	5.0	5/9/2012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.00755	0
Targeted Excavation Locations																						
AOC4	AOC4-B(4)	Riley Group	4.0	9/10/2012	0.017	<0.01	0.019	0.140	0.180	<0.01	<0.01	0.077	0.210	0.200	0.130	0.240	0.091	0.160	0.033	0.130	0.26400	0.2640
	AOC4-E-5	Riley Group	3.0	9/10/2012	<0.01	<0.01	<0.01	0.047	0.036	<0.01	<0.01	0.014	0.047	0.049	0.034	0.067	0.017	0.050	<0.01	0.034	0.06520	0.0647
	AOC4-N-5	Riley Group	3.0	9/10/2012	<0.01	<0.01	<0.01	0.067	0.075	<0.01	<0.01	0.027	0.093	0.086	0.054	0.100	0.036	0.074	0.013	0.069	0.11394	0.11394
	AOC4-S-5	Riley Group	3.0	9/10/2012	<0.01	<0.01	<0.01	0.055	0.070	<0.01	<0.01	0.025	0.095	0.08	0.05	0.091	0.03	0.08	0.01	0.06	0.09915	0.09915
	AOC4-W-5	Riley Group	3.0	9/10/2012	<0.01	<0.01	<0.01	0.078	0.057	<0.01	<0.01	0.028	0.079	0.064	0.038	0.084	0.026	0.074	0.016	0.056	0.08674	0.08674
AOC8	AOC8-B(6)	Riley Group	6.0	9/11/2012	0.026	<0.01	0.026	0.300	0.410	<0.01	<0.01	0.140	0.520	0.470	0.300	0.530	0.200	0.400	0.070	0.380	0.62200	0.622
	AOC8-E-5	Riley Group	5.0	9/11/2012	0.045	<0.01	0.049	0.730	0.710	0.015	0.011	0.260	1.000	0.990	0.590	1.100	0.390	0.760	**0.180**	0.890	1.31260	1.3126
	AOC8-N-5	Riley Group	5.0	9/11/2012	0.011	<0.01	0.016	0.200	0.220	<0.01	<0.01	0.081	0.320	0.280	0.160	0.310	0.110	0.230	0.049	0.240	0.06930	0.3692
	AOC8-S-5	Riley Group	5.0	9/11/2012	<0.01	<0.01	<0.01	<0.01	ND<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.00755	0
	AOC8-W-5	Riley Group	5.0	9/11/2012	<0.01	<0.01	<0.01	0.040	0.034	<0.01	<0.01	0.018	0.061	0.048	0.029	0.048	0.014	0.046	<0.01	0.040	0.06206	0.06156
2017 SLR Investigation																						
MW-4	MW-4-60'	SLR	60.0	8/16/2017	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	0.0057	0
MW-5	MW-5-55'	SLR	55.0	8/18/2017	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	0.0057	0
MW-6	MW-6-80'	SLR	80.0	8/17/2017	<0.0084	<0.0084	<0.0084	<0.0084	<0.0084	<0.0084	<0.0084	<0.0084	<0.0084	<0.0084	<0.0084	<0.0084	<0.0084	<0.0084	<0.0084	<0.0084	0.0063	0
SB-1	SB-1-8-9'	SLR	8.0-9.0	8/21/2017	<0.0077	<0.0077	<0.0077	0.024	0.027	0.011	0.021	0.026	0.031	0.029	0.022	0.032	0.012	0.029	<0.0077	0.021	0.0384	0.0380
SB-2	SB-2-8-9'	SLR	8.0-9.0	8/21/2017	0.12	0.089	0.18	0.13	0.39	0.17	0.51	0.59	0.44	0.19	0.21	0.21	0.057	0.23	0.029	0.12	0.253	0.252

Notes:

All values in milligrams per kilogram (mg/kg).

Values in bold represent concentrations above MTCA Method A or B Cleanup Levels.

Italicized values that are highlighted in grey indicate samples that were overexcavated/removed during cleanup action activities conducted by Langan in 2013.

PAHs = polycyclic aromatic hydrocarbons.

cPAHs = carcinogenic polycyclic aromatic hydrocarbons.

NA = Not analyzed.

- = Data not avaliable.

SLR = SLR International Corporation

Riley Group = The Riley Group, Inc.

[a] Analyzed by EPA Method 8720D SIM (except as noted).

[b] Analyzed by EPA Method 8270D SIM or 8260C.

[c] Ecology's Model Toxics Control Act (MTCA) Cleanup Regulation (Chapter 173-340 WAC), Table 745-1, Method A Soil Cleanup Levels for Industrial Properties.

[d] Method B cleanup level used because Method A level is not established. Standard formula values, direct contact Method B soil cleanup levels as published on Ecology's Cleanup Level and Risk Calculations (CLARC) on-line database (December 2016).

[e] Laboratory analytical reports were not avaliable for review; reported data was obtained from Table 1 completed by The Riley Group, Inc. and Appendix E completed by The Riley Group, Inc. included in the Level One and Level Two Hydrogeologic Assessment Report prepared by Langan Engineering & Environmental Services, Inc. PC.

Table 3
Soil Sample Analytical Results - Metals
Fed Ex Ground Distribution Center
Redmond, Washington

Soil Boring Number	Sample ID	Sampled By	Approx. Sample Depth (feet)	Date Collected	Metals[a]				
					Arsenic	Cadmium	Chromium	Lead	Mercury
			MTCA Method A Cleanup Levels[b]		20	2.0	2,000[c]	1,000	2.0
TP7	TP7-0	Riley Group	0.0	3/6/2012	3.60	<1	15.6	19.1	<0.1
Geo-TP10	Geo-TP10-10	Riley Group	10.0	3/6/2012	3.14	<1	15.8	14.7	<0.1
B1	B1-10	Riley Group	10.0	3/8/2012	4.26	<1	21.00	7.07	<0.1
B1	B1-20	Riley Group	20.0	3/8/2012	3.28	<1	18.4	7.13	<0.1
B2	B2-5	Riley Group	5.0	3/8/2012	4.47	<1	15.2	5.96	<0.1
B2	B2-15	Riley Group	15.0	3/8/2012	3.98	<1	23.4	5.28	<0.1
B3	B3-10	Riley Group	10.0	3/8/2012	4.81	<1	19.3	21.1	<0.1
B4	B4-10	Riley Group	10.0	3/8/2012	3.33	<1	20.3	8.91	<0.1
B5	B5-5	Riley Group	5.0	3/9/2012	2.42	<1	12.9	5.45	<0.1
PB-1	PB-1-2	Riley Group	2.0	5/11/2012	4.65	<1	16.4	18.6	<0.1
PB-1	PB-1-4	Riley Group	4.0	5/11/2012					
PB-1	PB-1-6	Riley Group	6.0	5/11/2012					
PB-1	PB-1-8	Riley Group	8.0	5/11/2012					
PB-2	PB-2-4	Riley Group	4.0	5/11/2012	3.31	<1	12.9	14.7	<0.1
PB-2	PB-2-6	Riley Group	6.0	5/11/2012					
PB-3	PB-3-2	Riley Group	2.0	5/11/2012	3.17	<1	10.7	6.34	<0.1
PB-3	PB-3-4	Riley Group	4.0	5/11/2012					
PB-3	PB-3-6	Riley Group	6.0	5/11/2012					
TP-11	TP-11-2	Riley Group	2.0	5/9/2012	5.9	<1	19.2	29.5	<0.1
TP-12	TP-2-2	Riley Group	2.0	5/9/2012	3.96	<1	16.3	71.9	<0.1
TP-13	TP-13-3	Riley Group	3.0	5/9/2012	5.46	<1	15.3	158	<0.1
TP-14	TP-14-3	Riley Group	3.0	5/9/2012	3.60	<1	13.2	15.8	<0.1
TP-15	TP-15-2	Riley Group	2.0	5/9/2012	3.68	<1	14.5	20.0	<0.1
TP-16	TP-16-3	Riley Group	3.0	5/9/2012	3.35	<1	13.2	16.9	<0.1
TP-16	TP-16-5	Riley Group	5.0	5/9/2012					
TP-17	TP-17-3	Riley Group	3.0	5/9/2012	3.04	<1	11.8	6.31	<0.1
TP-17	TP-17-5	Riley Group	5.0	5/9/2012	4.86	<1	15.1	23.2	<0.1
TP-18	TP-18-3	Riley Group	3.0	5/9/2012	2.05	<1	10.1	7.10	<0.1
TP-18	TP-18-5	Riley Group	5.0	5/9/2012	2.07	<1	8.94	6.74	<0.1
TP-19	TP-19-3	Riley Group	3.0	5/9/2012	3.97	<1	11.7	5.05	<0.1
TP-19	TP-19-5	Riley Group	5.0	5/9/2012					
TP-20	TP-20-3	Riley Group	3.0	5/9/2012	6.42	<1	20.3	5.51	<0.1
TP-20	TP-20-5	Riley Group	5.0	5/9/2012	5.12	<1	22.0	5.54	<0.1
TP-21	TP-21-3	Riley Group	3.0	5/9/2012	NA	NA	NA	NA	NA

Notes:

All values in milligrams per kilogram (mg/kg).

Values in bold represent concentrations above MTCA Method A or B Cleanup Levels.

Italicized values that are highlighted in grey indicate samples that were overexcavated/removed during cleanup action activities conducted by Langan in 2013.

NA = Not analyzed.

Riley Group = The Riley Group, Inc.

[a] Metals analyzed by EPA Methods 200.8 and 1631E.

[b] Ecology's Model Toxics Control Act (MTCA) Cleanup Regulation (Chapter 173-340 WAC), Table 745-1, Method A Soil Cleanup Levels for Industrial Properties.

[c] Based on Chromium III.

Table 4
Groundwater Sample Analytical Results - BTEX, Petroleum Hydrocarbons, and Metals
FedEx Ground Distribution Center
Redmond, Washington

Soil Boring/ Well ID	Sample ID	Sampled By	Date Collected	BTEX[a]				Petroleum Hydrocarbons			Total MTCA 5 Metals					Dissolved Metals							
				Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline-Range Organics	Diesel-Range Organics[b]	Heavy Oil-Range Organics[b]	Arsenic[c]	Cadmium[c]	Chromium[c]	Lead[c]	Mercury[d]	Arsenic[c]	Cadmium[c]	Chromium[c]	Lead[c]	Mercury[d]	Selenium	Silver	Hexavalent Chromium[e]
MTCA Method A Cleanup Levels[f]				**5**	**1,000**	**700**	**1,000**	**800**	**500**	**500**	**5**	**5**	**50**	**15**	**2**	**5**	**5**	**50**	**15**	**2**	**80[g]**	**80[g]**	**48[g]**
MW-1	MW-1	Riley Group	5/14/2012	<0.35	<1	<1	<2	NA	<50[h]	<250	4.55	<1	**50.2**	5.24	<0.1	1.7	<1	2.2	<1	<0.1	NA	NA	NA
MW-B[i]	MW-B	Riley Group	5/16/2012	NA	NA	NA	NA	NA	<50[h]	<250	<1	<1	<1	<1	<0.1	NA	NA	NA	NA	NA	NA	NA	NA
2017 SLR Investigation																							
*Reconnaissance Groundwater Grab Samples**																							
MW-5	MW-5-0817a	SLR	8/18/2017	NA	NA	NA	NA	NA	<0.27	<0.43	NA	NA	NA	NA	NA	**86**	<4.0	<10	<1.0	<0.50	<5.0	<10	<10
MW-6	MW-6-0817a	SLR	8/16/2017	NA	NA	NA	NA	NA	<0.27	<0.43	NA	NA	NA	NA	NA	**6.2**	<4.0	<10	<1.0	<0.50	<5.0	<10	<10
Monitoring Well Samples																							
MW-4	MW-4-0817	SLR	8/25/2017	NA	NA	NA	NA	NA	<26	<0.42	NA	NA	NA	NA	NA	<3.0	<4.0	<10	<1.0	<0.50	<5.0	<10	<10
MW-5	MW-5-0817	SLR	8/25/2017	NA	NA	NA	NA	NA	<0.27	<0.44	NA	NA	NA	NA	NA	**13**	<4.0	<10	<1.0	<0.50	<5.0	<10	<10
MW-6	MW-6-0817	SLR	8/25/2017	NA	NA	NA	NA	NA	<0.26	<0.42	NA	NA	NA	NA	NA	**5.6**	<4.0	<10	<1.0	<0.50	<5.0	<10	<10

Notes:

All values in micrograms per liter (µg/L).

Values in bold represent concentrations above MTCA Method A Cleanup Levels.

TPH = total petroleum hydrocarbons.

NA = Not analyzed.

* = Collected at time of drilling.

SLR = SLR International Corporation

Riley Group = The Riley Group, Inc.

[a] Analyzed by EPA Method 8260C.

[b] Analyzed by Ecology Method NWTPH-Dx.

[c] Analyzed by EPA Method 200.8.

[d] Analyzed by EPA Method 1631E or EPA Method 7470A.

[e] Analyzed by Method SM 3500-CrB.

[f] Ecology's Model Toxics Control Act (MTCA) Cleanup Regulation (Chapter 173-340 WAC), Table 720-1, Method A Cleanup Levels for Groundwater.

[g] Method B cleanup level used because Method A level is not established. Standard formula values, Method B non-cancer groundwater cleanup levels as published on Ecology's Clenup Level and Risk Calculation (CLARC) on-line database (Septemeber 2017).

[h] NWTPH-Dx with silca gel cleanup.

[i] No information for sample MW-B could be found and there are no wells at the Site designated as "MW-B". SLR believes this sample is for a quality assurance field or rinsate blank.

Table 5
Groundwater Sample Analytical Results - PAHs
FedEx Ground Distribution Center
Renton, Washington

Soil Boring Number	Sample ID	Sampled By	Date Collected	PAHs[a]			cPAHs[a]								
				1-Methyl-naphthalene	2-Methyl-naphthalene	Naphthalene	Benzo(a)-pyrene	Benzo[a]-anthracene	Benzo(b)-fluoranthene	Benzo(j,k)-fluoranthene	Chrysene	Dibenzo(a,h)-anthracene	Indeno(1,2,3-cd)-pyrene	Total cPAHs (U=1/2 MRL)	Total cPAHs (U = 0)
MTCA Method A Cleanup Levels[b]				**1.5[c]**	**32[c]**	**160**	**0.1**	**0.12[c]**	**0.12[c]**	**1.2[c]**	**12[c]**	**0.012[c]**	**0.12[c]**	**0.1**	**0.1**
MW-1	MW-1	Riley Group	5/14/2012	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.0755	0
MW-B[d]	MW-B	Riley Group	5/16/2012	NA	NA	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.0755	0

Notes:

All values in micrograms per liter (µg/L).

Values in bold represent concentrations above MTCA Method A or B Cleanup Levels.

PAHs = polycyclic aromatic hydrocarbons.

cPAHs = carcinogenic polycyclic aromatic hydrocarbons.

NA = Not analyzed.

Riley Group = The Riley Group, Inc.

[a] Analyzed by EPA Method 8720D SIM.

[b] Ecology's Model Toxics Control Act (MTCA) Cleanup Regulation (Chapter 173-340 WAC), Table 720-1, Method A Cleanup Levels for Groundwater.

[c] Method B cleanup level used because Method A level is not established. Standard formula values, direct contact Method B soil cleanup levels as published on Ecology's Cleanup Level and Risk Calculations (CLARC) on-line database (December 2016).

[d] No information for sample MW-B could be found and there are no wells at the Site designated as "MW-B". SLR believes this sample is for a quality assurance field or rinsate blank.

Table 6
Groundwater Monitoring Data
PMF Investments - FedEx Distribution Center
Redmond, Washington

Well Number	Approximate Depth of Well Screen (feet)	Top of Casing Elevation[a] (feet)	Date Measured	Depth to Groundwater (feet)	Groundwater Elevation[a] (feet)
MW-2	50.0 to 65.0	103.75	8/25/2017	N/A*	N/A
			9/1/2017	N/A*	N/A
MW-4	55.0 to 70.0	107.85	8/25/2017	34.82	73.03
			9/1/2017	34.95	72.90
MW-5	51.0 to 71.0	109.00	8/25/2017	39.83	69.17
			9/1/2017	40.07	68.93
MW-6	80.0 to 100	124.10	8/25/2017	58.75	65.35
			9/1/2017	58.86	65.24

Notes:

Groundwater elevations are relative to the NAVD 88 datum.

N/A = Not applicable.

[a] Top of well casing elevations were surveyed relative to a known elevation above the NAVD 88 datum.

[*] A small quantity of water was measured in the well cap at the bottom of the well. This water is likely condensation and is not considered representative of the groundwater elevation at this location.

Table 7
Groundwater Sampling Field Parameter Measurements
FedEx Ground Distribution Center
Redmond, Washington

Well Number	Date Measured	Approximate Total Purge Volume (gallons)	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Redox Potential (mV)
MW-4	8/25/2017	1.50	15.53	0.514	0.39	7.57	-130.3
MW-5	8/25/2017	1.25	15.95	0.391	0.20	7.69	-71.9
MW-6	8/25/2017	1.50	13.68	0.207	0.30	8.04	-189.8

Notes:

Field parameter measurements in this table were the final measurements prior to collecting each groundwater sample.

°C = degrees Celsius.

mS/cm = millisiemens per centimeter.

mg/L = milligrams per liter.

mV = millivolts.

APPENDIX A

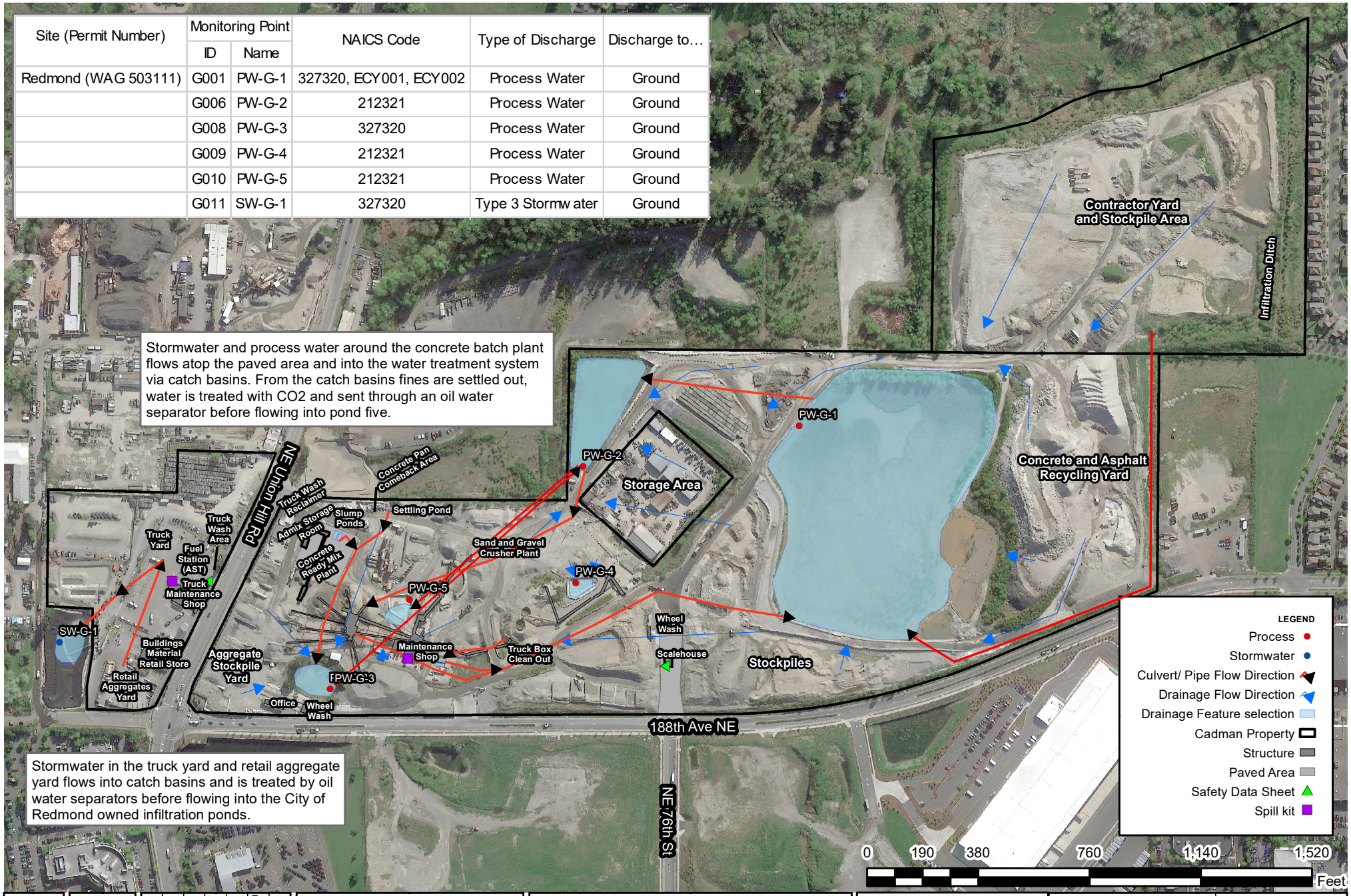
CADMAN GRAVEL CO. SITE PLAN

Additional Remedial Investigation Report

Franklin-Kennewick, LLC
FedEx Ground Distribution Center
18795 Northeast 73rd Street
Redmond, Washington 98052

December 2017

Site (Permit Number)	Monitoring Point		NAICS Code	Type of Discharge	Discharge to…
	ID	Name			
Redmond (WAG 503111)	G001	PW-G-1	327320, ECY001, ECY002	Process Water	Ground
	G006	PW-G-2	212321	Process Water	Ground
	G008	PW-G-3	327320	Process Water	Ground
	G009	PW-G-4	212321	Process Water	Ground
	G010	PW-G-5	212321	Process Water	Ground
	G011	SW-G-1	327320	Type 3 Stormw ater	Ground



SHEET NO.: R-1 OF _____

N

FILE:
LOCATION:
REGION: NORTH
DATE:
CHECKED:
DRAWN:
DESIGNED:

Cadman
Redmond Site Map

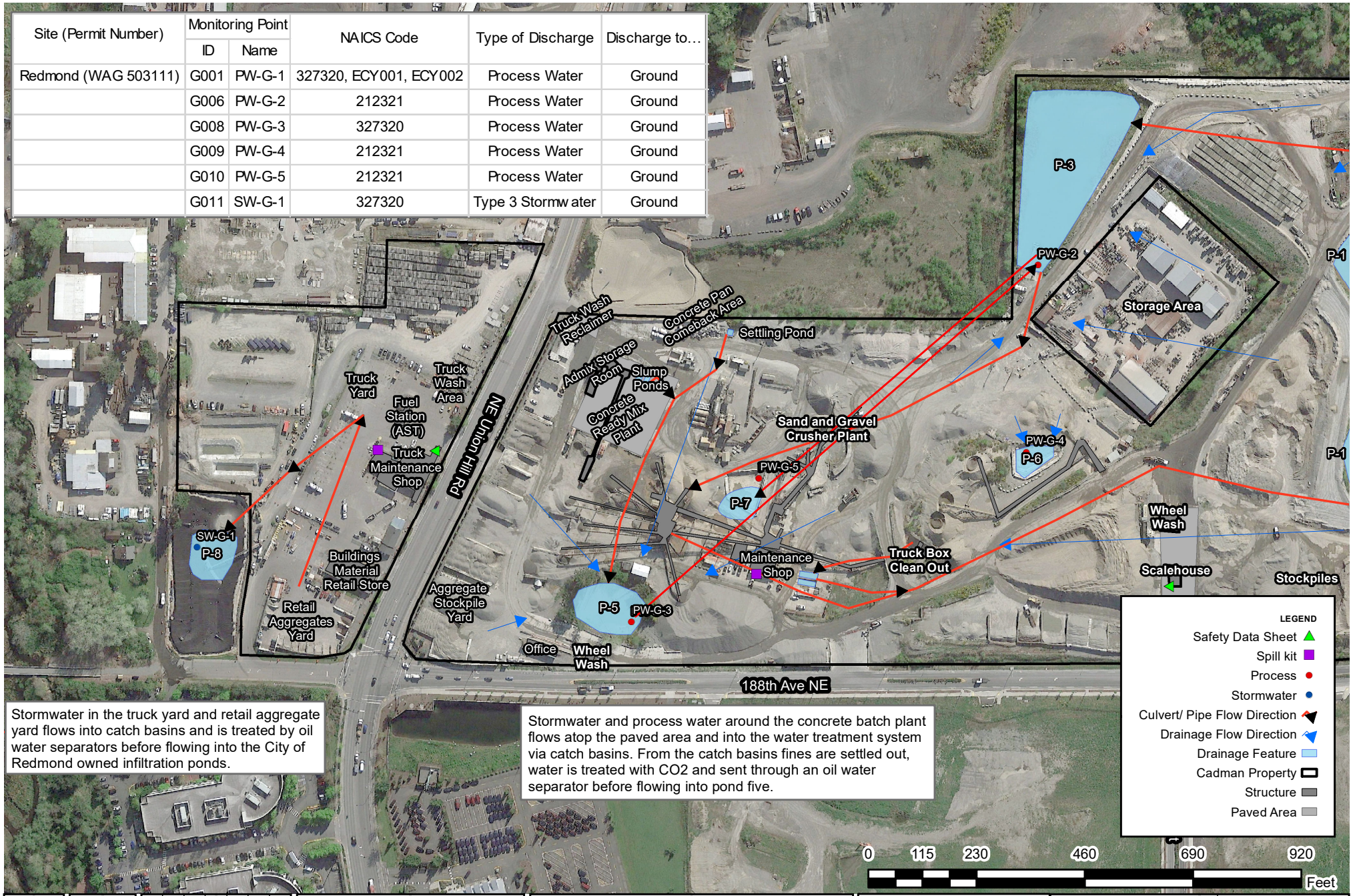
LEHIGH HANSON REGION NORTH
REDMOND
KING COUNTY, WA

Imagery Date: 6\27\16
Horizontal Scale;1:100
Projection:NAD_1983_HARN_StatePlane _Washington_North_FIPS_4601_Feet

CADMAN HEIDELBERGCEMENT Group

Cadman Heidelberg
185TH AVENUE NE SUITE 7554 REDMOND, WA 98052

Site (Permit Number)	Monitoring Point		NAICS Code	Type of Discharge	Discharge to…
	ID	Name			
Redmond (WAG 503111)	G001	PW-G-1	327320, ECY001, ECY002	Process Water	Ground
	G006	PW-G-2	212321	Process Water	Ground
	G008	PW-G-3	327320	Process Water	Ground
	G009	PW-G-4	212321	Process Water	Ground
	G010	PW-G-5	212321	Process Water	Ground
	G011	SW-G-1	327320	Type 3 Stormw ater	Ground



SHEET NO.: R-1 OF _____

N

FILE:
LOCATION:
REGION: NORTH
DATE:
CHECKED:
DRAWN:
DESIGNED:

Cadman
Redmond Site Map

LEHIGH HANSON REGION NORTH
REDMOND
KING COUNTY, WA

Imagery Date: 6\27\16
Horizontal Scale;1:100
Projection:NAD_1983_HARN_StatePlane _Washington_North_FIPS_4601_Feet

CADMAN HEIDELBERGCEMENT Group

Cadman Heidelberg
185TH AVENUE NE SUITE 7554 REDMOND, WA 98052

APPENDIX B

CITY OF REDMOND GROUNDWATER CONTOUR AND DEPTH TO WATER MAPS

Additional Remedial Investigation Report

Franklin-Kennewick, LLC
FedEx Ground Distribution Center
18795 Northeast 73rd Street
Redmond, Washington 98052

December 2017

LEGEND

- 001 — CITY OF REDMOND MONITORING WELL (INSTALLED AS PART OF THE GROUNDWATER MONITORING PROGRAM BETWEEN 2007 AND 2011)
- 027 — CITY OF REDMOND MONITORING WELL (INSTALLED DURING OTHER INVESTIGATIONS)
- 079 — PRIVATELY OWNED MONITORING WELL
- 205 — KING COUNTY MONITORING WELL
- 065 — ABANDONED PRIVATELY OWNED MONITORING WELL
- GROUNDWATER LEVEL CONTOUR, BASED ON AUGUST 12, 2015 MEASUREMENTS, ELEVATION IN FEET (NAVD 88), DASHED WHERE INFERRED.
- CITY OF REDMOND LIMITS
- UPLAND AREAS

NOTES:

- 055 — THE GROUNDWATER LEVEL IN MW055 WAS ANOMALOUSLY HIGH (94.89 FEET ELEVATION), CONSISTENT WITH IT TAPPING A PERCHED UPLAND AQUIFER, AND NOT THE ALLUVIAL VALLEY AQUIFER.
- 330 — THE GROUNDWATER LEVEL IN MW330 WAS ANOMALOUSLY HIGH (64.03 FEET ELEVATION CONSISTENT WITH A PERCHED CONDITION AND NOT REPRESENTATIVE OF THE ALLUVIAL VALLEY AQUIFER.

MONITORING WELL NAMES HAVE BEEN ABBREVIATED TO THE LAST THREE UNIQUE NUMBERS. THE COMPLETE MONITORING WELL NAMES ARE LISTED IN TABLE 1.

REFER TO TABLE 5 FOR A COMPLETE LIST OF MEASURED GROUNDWATER LEVELS AT EACH MONITORING WELL.

N W E S

0 1400' 2800'

REFERENCE: ALL TOPOLOGY PROVIDED BY CITY OF REDMOND MARCH 2008 INFORMATION SERVICES DEPARTMENT.

GeoEngineers
Earth Science + Technology

AUGUST 2015 GROUNDWATER SURFACE CONTOUR MAP CITY OF REDMOND

FIGURE 1

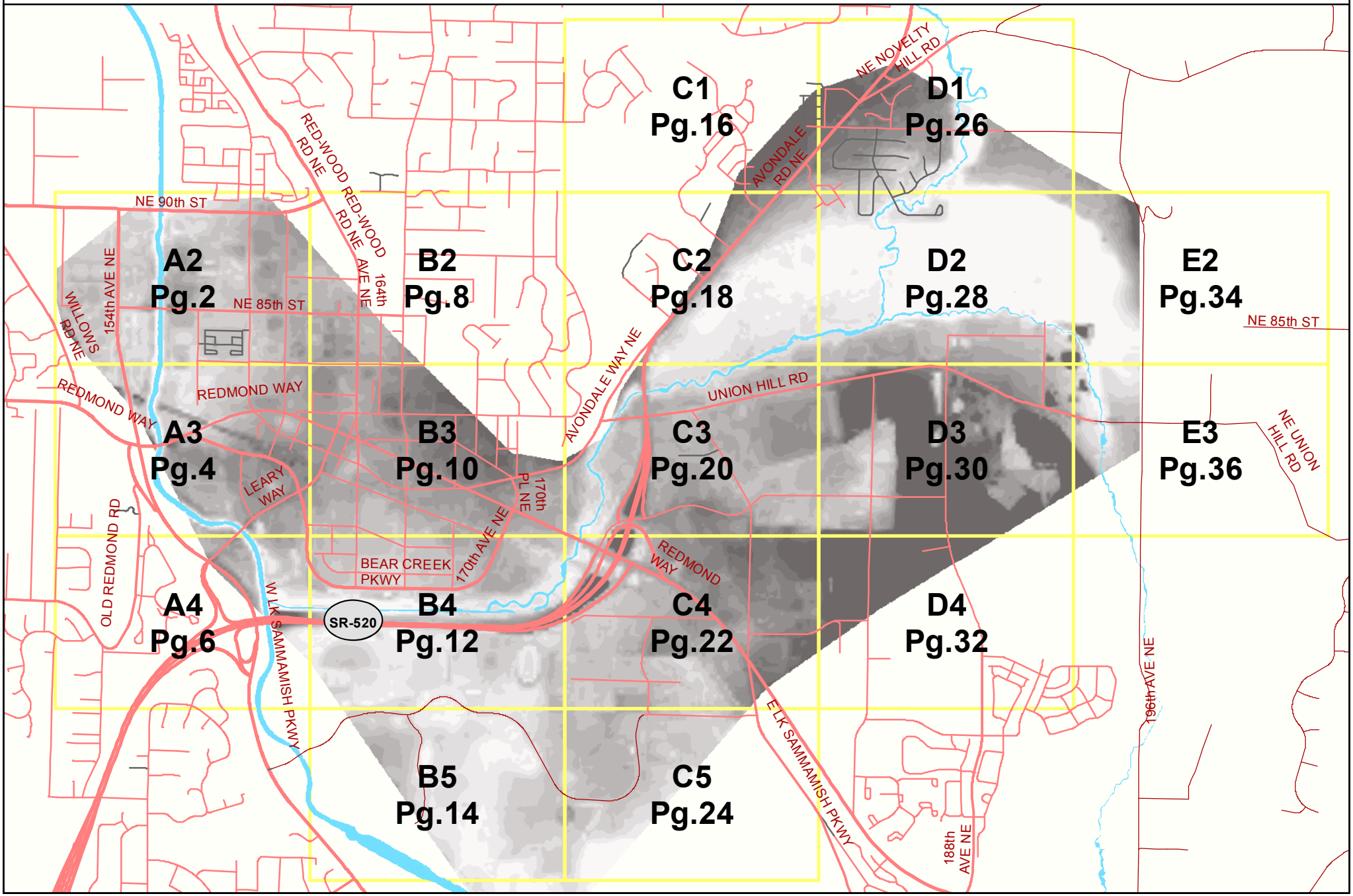
Depth-To-Water Map Index

Disclaimer: This map is created and maintained by the Natural Resources Division of the City of Redmond for reference purposed only. The City makes no guarantee as to the accuracy or completeness of the features shown on this map

0 1,250 2,500 5,000 Feet

Background Information

This map estimates the shallowest depth to water at a given location. The depth to water data was generated by interpolating a water surface model from the shallowest observed water level at 55 monitoring wells. The vertical distance between this water surface model and the earth's surface was calculating using LiDAR data. This data was contoured and is displayed on this map.



Depth-To-Water Sheet D4

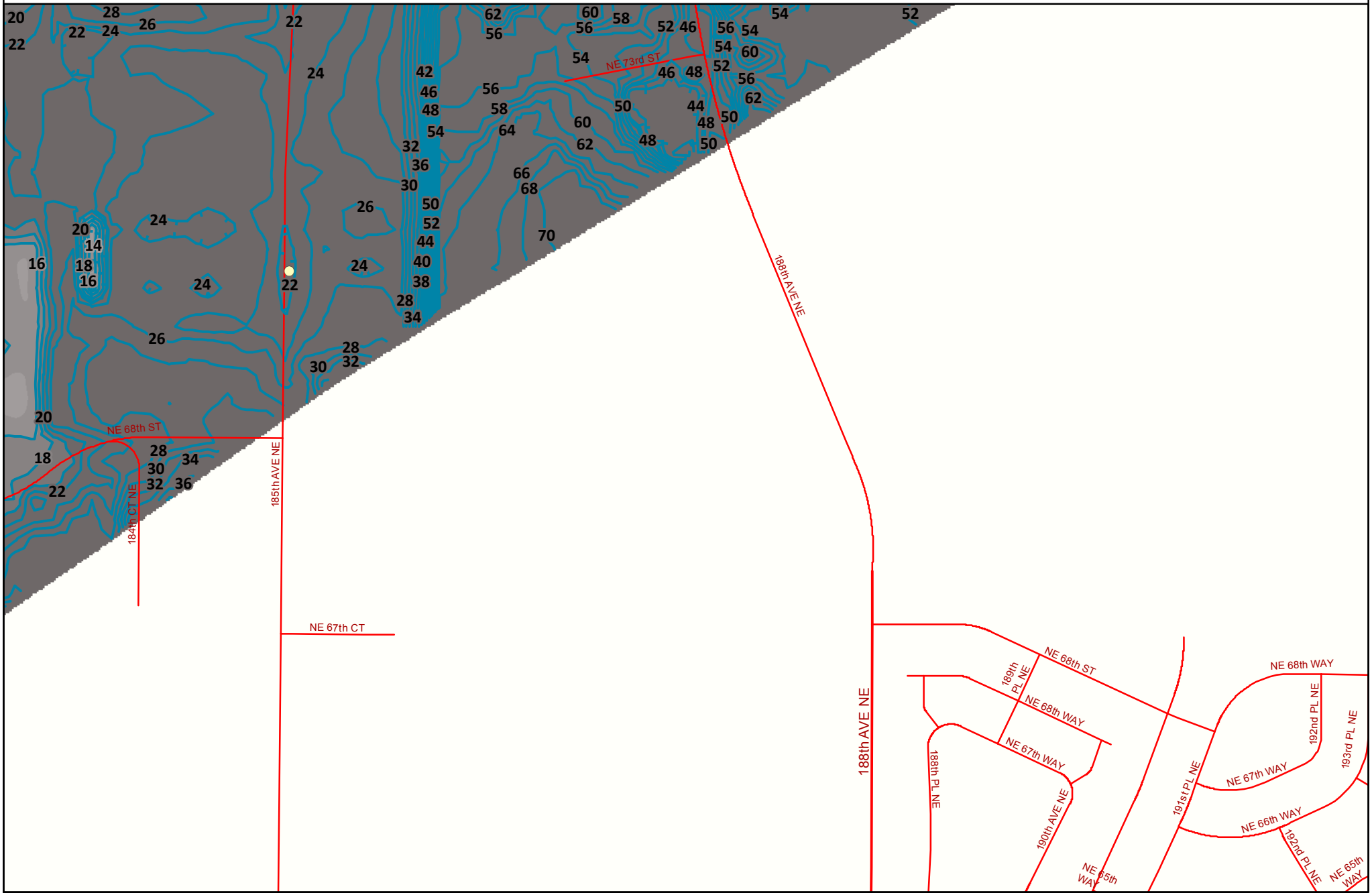
Disclaimer: This map is created and maintained by the Natural Resources Division of the City of Redmond for reference purposed only. The City makes no guarantee as to the accuracy or completeness of the features shown on this map

0 250 500 1,000 Feet

Monitoring Points Used to Create Contours
Depth-to-Water Contours (2ft)
Depth-to-Water Contours (Depressions)
Shallow Groundwater
Deep Groundwater
Open Water

Background Information

This map estimates the shallowest depth to water at a given location. The depth to water data was generated by interpolating a water surface model from the shallowest observed water level at 55 monitoring wells. The vertical distance between this water surface model and the earth's surface was calculating using LiDAR data. This data was contoured and is displayed on this map.



Depth-To-Water Sheet D4

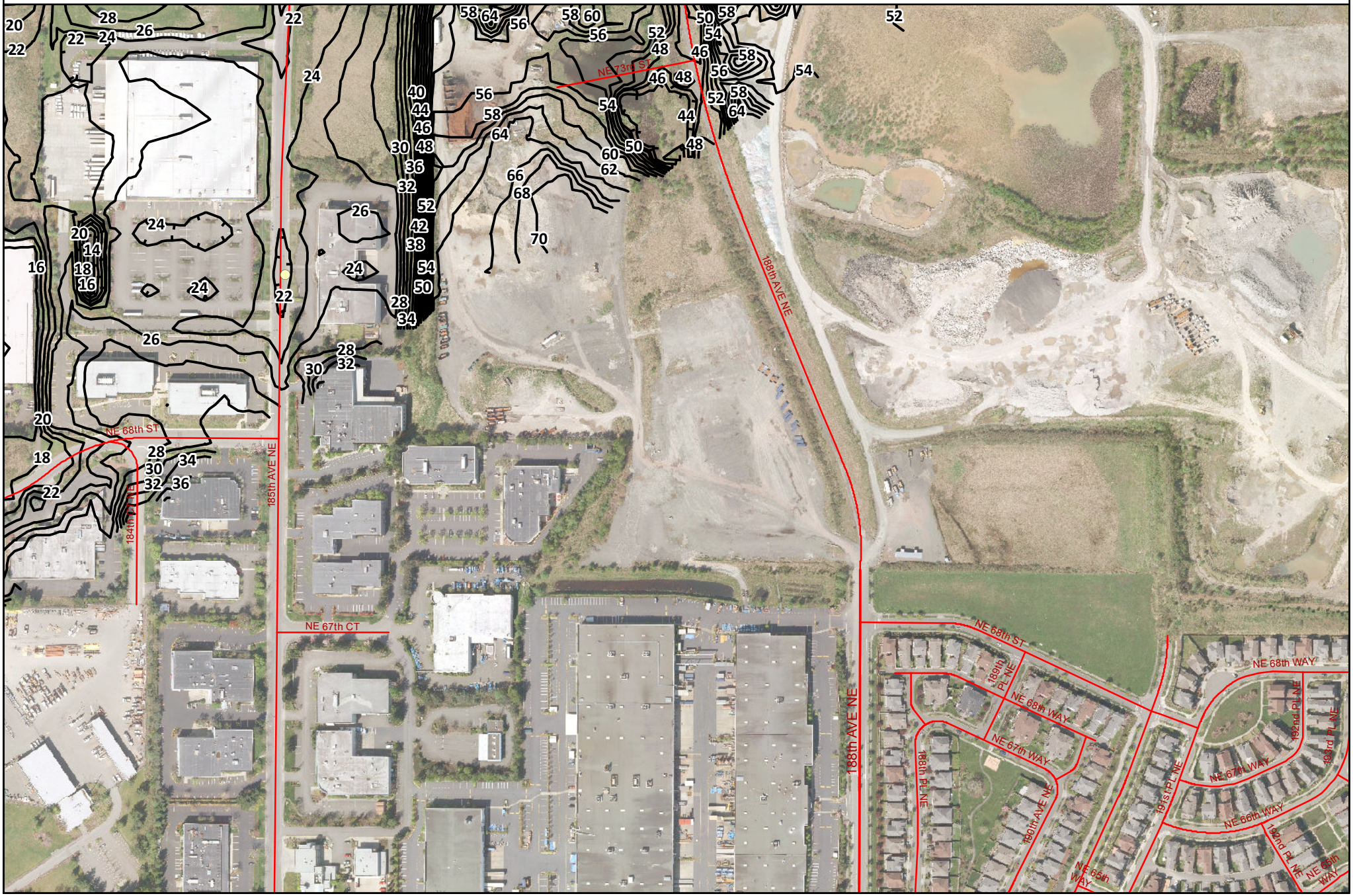
Disclaimer: This map is created and maintained by the Natural Resources Division of the City of Redmond for reference purposed only. The City makes no guarantee as to the accuracy or completeness of the features shown on this map

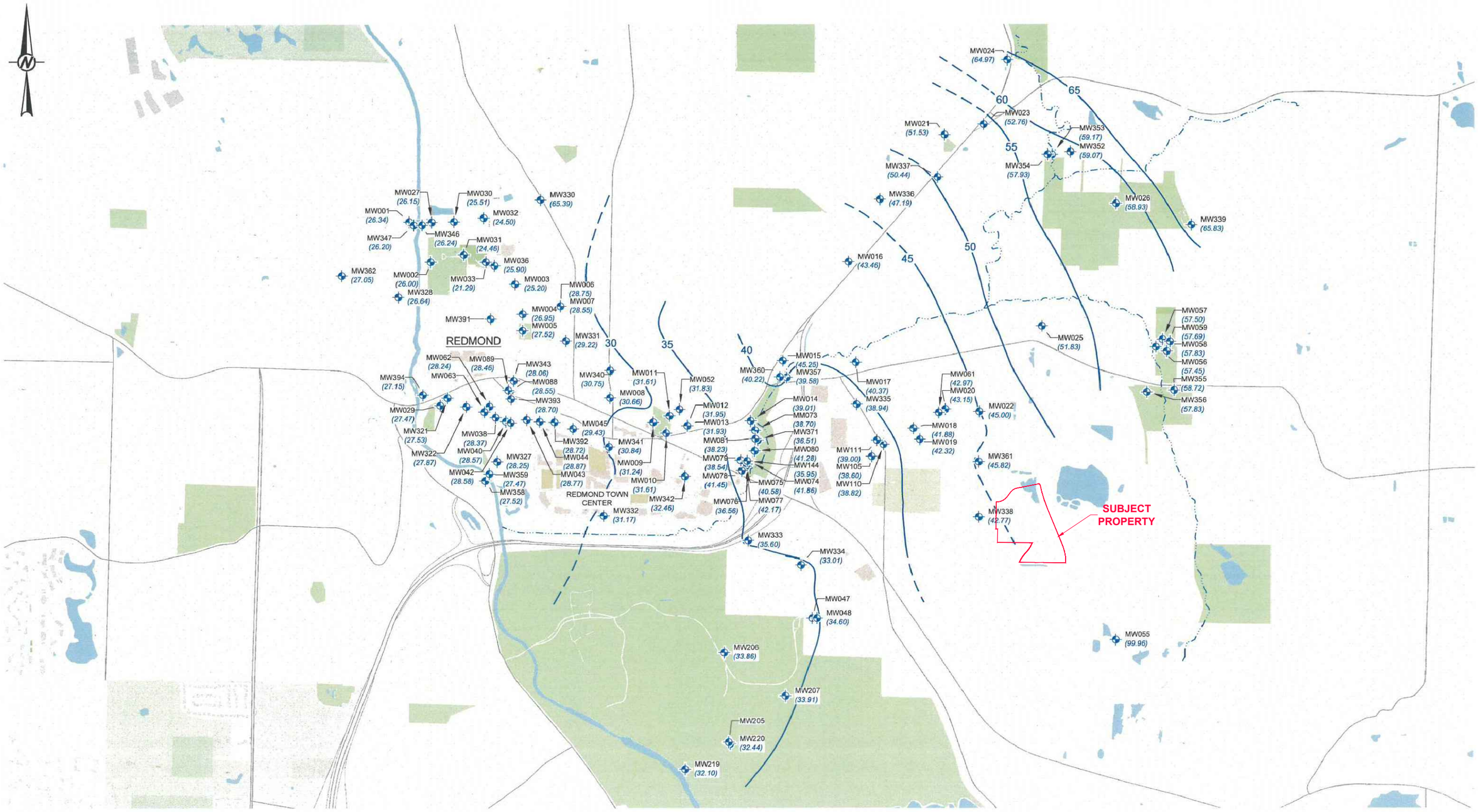
0 250 500 1,000 Feet

- Monitoring Points Used to Create Contours
- Depth-to-Water Contours (2ft)
- Depth-to-Water Contours (Depressions)
- 2012 Aerial Photo
- Open Water

Background Information

This map estimates the shallowest depth to water at a given location. The depth to water data was generated by interpolating a water surface model from the shallowest observed water level at 55 monitoring wells. The vertical distance between this water surface model and the earth's surface was calculating using LiDAR data. This data was contoured and is displayed on this map.





LEGEND

- INTERPRETED GROUNDWATER CONTOUR, 5 FT INTERVAL (NAVD88)
- MW027 (25.96) — REDMOND CITY MONITORING WELL NAME AND LOCATION; GROUNDWATER ELEVATION TAKEN FEBRUARY 2016

NOTE(S)

1. REFER TO TABLE 5 FOR A COMPLETE LIST OF MEASURED GROUNDWATER LEVELS AT EACH MONITORING WELL.
2. MONITORING WELL LOCATIONS MW205, MW206, MW207, MW219, AND MW220 ARE APPROXIMATE.

REFERENCE(S)

1. CITY OF REDMOND (GROUNDWATER MONITORING WELLS)
2. TOPOGRAPHY MAP FROM WORLD TOPO MAP THROUGH GLOBAL MAPPER

0 800 1600
1" = 800' FEET

CLIENT
CITY OF REDMOND

CONSULTANT
Golder Associates

YYYY-MM-DD	2016-04-05
DESIGNED	--
PREPARED	REDMOND
REVIEWED	JSL
APPROVED	JFL

PROJECT
GROUNDWATER MONITORING
WINTER 2016 GROUNDWATER SAMPLING

TITLE
GROUNDWATER CONTOUR MAP - FEBRUARY 2, 2016

PROJECT NO.	PHASE	REV.	FIGURE
1403741600	001	0	1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1 in

Path: \\redmond.golder.gds\geomatics\CityofRedmond\Redmond\69_PROJECTS\1-403741600_GW_Monitoring\001_GW-Reporting\02_PRODUCTION\DWG\ | File Name: 1403741600_001_R_001.dwg

APPENDIX C

TERRESTRIAL ECOLOGICAL EVALUATION

Additional Remedial Investigation Report

Franklin-Kennewick, LLC
FedEx Ground Distribution Center
18795 Northeast 73rd Street
Redmond, Washington 98052

December 2017

Table 749-1
Simplified Terrestrial Ecological Evaluation-Exposure Analysis Procedure

Estimate the area of contiguous (connected) undeveloped land on the site or within 500 feet of any area of the site to the nearest 1/2 acre (1/4 acre if the area is less than 0.5 acre).	
1) From the table below, find the number of points corresponding to the area and enter this number in the field to the right.	9
Area (acres) / Points 0.25 or less / 4 0.5 / 5 1.0 / 6 1.5 / 7 2.0 / 8 2.5 / 9 3.0 / 10 3.5 / 11 4.0 or more / 12	
2) Is this an industrial or commercial property? If yes, enter a score of 3. If no, enter a score of 1	3
3)[a] Enter a score in the box to the right for the habitat quality of the site, using the following rating system[b]. High=1, Intermediate=2, Low=3	3
4) Is the undeveloped land likely to attract wildlife? If yes, enter a score of 1 in the box to the right. If no, enter a score of 2.[c]	2
5) Are there any of the following soil contaminants present: Chlorinated dioxins/furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, pentachlorobenzene? If yes, enter a score of 1 in the box to the right. If no, enter a score of 4.	4
6) Add the numbers in the boxes on lines 2-5 and enter this number in the box to the right. If this number is larger than the number in the box on line 1, the simplified evaluation may be ended.	12

Notes for Table 749-1

[a] It is expected that this habitat evaluation will be undertaken by an experienced field biologist. If this is not the case, enter a conservative score of (1) for questions 3 and 4.

[b] **Habitat rating system.** Rate the quality of the habitat as high, intermediate or low based on your professional judgment as a field biologist. The following are suggested factors to consider in making this evaluation:

Low: Early successional vegetative stands; vegetation predominantly noxious, nonnative, exotic plant species or weeds. Areas severely disturbed by human activity, including intensively cultivated croplands. Areas isolated from other habitat used by wildlife.

High: Area is ecologically significant for one or more of the following reasons: Late-successional native plant communities present; relatively high species diversity; used by an uncommon or rare species; priority habitat (as defined by the Washington Department of fish and Wildlife); part of a larger area of habitat where size or fragmentation may be important for the retention of some species.

Intermediate: Area does not rate as either high or low.

[c] Indicate "yes" if the area attracts wildlife or is likely to do so. Examples: Birds frequently visit the area to feed; evidence of high use b mammals (tracks, scat, etc.); habitat "island" in an industrial area; unusual features of an area that make it important for feeding animals; heavy use during seasonal migrations.

APPENDIX D

BORING/WELLS LOGS

Additional Remedial Investigation Report

Franklin-Kennewick, LLC
FedEx Ground Distribution Center
18795 Northeast 73rd Street
Redmond, Washington 98052

December 2017

SLR
22118 20th Ave. SE, Suite G-202
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

WELL NUMBER MW-4

CLIENT Franklin-Kennewick, LLC
PROJECT NAME FedEx Ground Distribution Center
PROJECT NUMBER 101.00989.00013
PROJECT LOCATION 18795 Northeast 73rd Street
DATE STARTED 8/16/17 **COMPLETED** 8/16/17
GROUND ELEVATION _____ **HOLE SIZE** 8" - diameter
DRILLING CONTRACTOR Holocene
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING 59.0 ft
LOGGED BY S. Losleben **CHECKED BY** G. Lish
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0								0.2 **ASPHALT PAVEMENT**		
								SILTY SAND; gray-brown; medium dense; fine to coarse grained; few, fine, rounded gravel; no odor; moist **(FILL)**		Concrete
5		HSA								
10		Split Spoon		25	7 6 7	SM			0.6	
15		HSA								
20								20.0		
		Split Spoon		100	7 5 5	ML		**SANDY SILT**; gray-brown with slight orange mottling; stiff; low plasticity; some fine to coarse sand; trace, fine, subrounded gravel; no odor; moist **(FILL)**	2.9	
25										

REMARKS

(Continued Next Page)

SLR
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WELL NUMBER MW-4

CLIENT Franklin-Kennewick, LLC
PROJECT NAME FedEx Ground Distribution Center
PROJECT NUMBER 101.00989.00013
PROJECT LOCATION 18795 Northeast 73rd Street
DATE STARTED 8/16/17 **COMPLETED** 8/16/17
GROUND ELEVATION _____ **HOLE SIZE** 8" - diameter
DRILLING CONTRACTOR Holocene
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING 59.0 ft
LOGGED BY S. Losleben **CHECKED BY** G. Lish
AFTER DRILLING N/A
NOTES _____

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
25		HSA				ML		**SANDY SILT**; gray-brown with slight orange mottling; stiff; low plasticity; some fine to coarse sand; trace, fine, subrounded gravel; no odor; moist **(FILL)** *(continued)*		
30		Split Spoon		100	7 11 20				2.1	Hydrated bentonite chips
								31.0 **SILTY SAND**; brown; dense; fine to coarse grained; trace, fine, rounded gravel; no odor; moist		
35		HSA				SM				
40								40.0		
		Split Spoon		40	50/6			**SAND with SILTY FINES**; brown; very dense; fine to medium grained; little silt; no odor; moist	1.0	
45		HSA				SP-SM				
50										

REMARKS

(Continued Next Page)

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WELL NUMBER MW-4

CLIENT Franklin-Kennewick, LLC
PROJECT NAME FedEx Ground Distribution Center
PROJECT NUMBER 101.00989.00013
PROJECT LOCATION 18795 Northeast 73rd Street
DATE STARTED 8/16/17 **COMPLETED** 8/16/17
GROUND ELEVATION _____ **HOLE SIZE** 8" - diameter
DRILLING CONTRACTOR Holocene
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING 59.0 ft
LOGGED BY S. Losleben **CHECKED BY** G. Lish
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
50										
		Split Spoon		30	50/5			**SAND with SILTY FINES**; brown; very dense; fine to medium grained; little silt; no odor; moist *(continued)*	0.7	
55		HSA				SP-SM				2-inch sch 40 PVC riser
								@ 59.0 feet: Intial ground water level at the time of drilling based on wetted height of drill rod		
60							60.0			
		Split Spoon	*MW-4-60'	25	50/6			**SAND with SILTY FINES**; gray-brown; very dense; fine to coarse grained; little silt; trace, fine, subrounded gravel; no odor; moist	0.3	
		HSA				SP-SM				0.01" slot screen
65							65.0			
		Split Spoon		50	25 50/4			**SANDY SILT**; brown-gray; hard; low plasticity; fine to medium sand; moist	0.4	#10/20 silica sand
		HSA				ML				
70							70.0			End cap
		Split Spoon		75	27 50/5			**SILT**; gray; hard; low plasticity; little fine sand; moist	0.5	
		HSA				ML				
75										Slough

REMARKS

(Continued Next Page)

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WELL NUMBER MW-4

CLIENT Franklin-Kennewick, LLC
PROJECT NAME FedEx Ground Distribution Center
PROJECT NUMBER 101.00989.00013
PROJECT LOCATION 18795 Northeast 73rd Street
DATE STARTED 8/16/17 **COMPLETED** 8/16/17
GROUND ELEVATION _____ **HOLE SIZE** 8" - diameter
DRILLING CONTRACTOR Holocene
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING 59.0 ft
LOGGED BY S. Losleben **CHECKED BY** G. Lish
AFTER DRILLING N/A
NOTES _____

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
75										
		Split Spoon		100	16 21 29	ML		**SILT**; gray; hard; low plasticity; little fine sand; moist *(continued)*	0.2	
								76.5		

WELL COMPLETION DETAILS:

0.0 to 55.0': 2"-diameter, flush threaded Sch. 40 PVC riser.
55.0 to 70.0': 2"-diameter, flush threaded Sch. 40 PVC 0.010-slotted well screen.
69.8 to 70.0': 2"-diameter, flugh-threaded Sch. 40 PVC cap.

REMARKS

SLR
22118 20th Ave. SE, Suite G-202
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

WELL NUMBER MW-5

CLIENT Franklin-Kennewick, LLC
PROJECT NAME FedEx Ground Distribution Center
PROJECT NUMBER 101.00989.00013
PROJECT LOCATION 18795 Northeast 73rd Street
DATE STARTED 8/18/17 **COMPLETED** 8/18/17
GROUND ELEVATION _____ **HOLE SIZE** 8" - diameter
DRILLING CONTRACTOR Holocene
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
▼ **AT TIME OF DRILLING** 11 ft (perched), 55 ft
LOGGED BY S. Losleben **CHECKED BY** G. Lish
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0								0.5 **ASPHALT PAVEMENT**		Concrete.
								SAND; brown; very loose; few silt; trace, fine to coarse, subrounded gravel; no odor; dry **(FILL)**		
5		HSA								
10										
		Split Spoon	*MW-5-10'	25	9 3 2	SW		@ 10.0 feet bgs: Becomes dark brown; moist ▼ @ 11.0 feet bgs: Perched groundwater observed at time of drilling from approximately 11.0 to 19.0 feet bgs	2.4	
15		HSA								
20								20.0		
		Split Spoon		25	10 22 21	SM		**SILTY SAND**; gray-brown; dense; fine to coarse grained; few, fine, subrounded gravel; no odor; wood debris; moist **(FILL)**	4.0	
25										

REMARKS

SLR MW LOG FEDEX DISTRIBUTION CENTER.GPJ GINT US.GDT 11/9/17

(Continued Next Page)

SLR
22118 20th Ave. SE, Suite G-202
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

WELL NUMBER MW-5

CLIENT Franklin-Kennewick, LLC
PROJECT NAME FedEx Ground Distribution Center
PROJECT NUMBER 101.00989.00013
PROJECT LOCATION 18795 Northeast 73rd Street
DATE STARTED 8/18/17 **COMPLETED** 8/18/17
GROUND ELEVATION _____ **HOLE SIZE** 8" - diameter
DRILLING CONTRACTOR Holocene
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
▼ **AT TIME OF DRILLING** 11 ft (perched), 55 ft
LOGGED BY S. Losleben **CHECKED BY** G. Lish
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
25		HSA				SM		**SILTY SAND**; gray-brown; dense; fine to coarse grained; few, fine, subrounded gravel; no odor; wood debris; moist **(FILL)** *(continued)*		Hydrated bentonite chips
30		Split Spoon		0	6 6 7			@ 30.0 feet bgs: Becomes medium dense	NA	
		HSA								
35								35.0		
		Split Spoon		75	2 3 5			**SILTY SAND**; gray; loose; fine to coarse grained; trace, fine, subrounded gravel; no odor; moist	7.6	
40		HSA				SM				
45								45.0		
		Split Spoon		100	13 13 14	SP		45.5 **SAND**; brown; medium dense; medium grained; no odor; wet	1.0	
						SM		**SILTY SAND**; brown; medium dense; fine grained; no odor; moist		
50										

REMARKS

(Continued Next Page)

SLR
22118 20th Ave. SE, Suite G-202
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Telephone: 425.402.8800
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WELL NUMBER MW-5

CLIENT Franklin-Kennewick, LLC
PROJECT NAME FedEx Ground Distribution Center
PROJECT NUMBER 101.00989.00013
PROJECT LOCATION 18795 Northeast 73rd Street
DATE STARTED 8/18/17 **COMPLETED** 8/18/17
GROUND ELEVATION _____ **HOLE SIZE** 8" - diameter
DRILLING CONTRACTOR Holocene
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
▼ **AT TIME OF DRILLING** 11 ft (perched), 55 ft
LOGGED BY S. Losleben **CHECKED BY** G. Lish
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
50										
		HSA				SM		**SILTY SAND**; brown; medium dense; fine grained; no odor; moist *(continued)*		Hydrated bentonite chips
55								55.0		
		Split Spoon	*MW-5-55'	80	7 15 34			**SAND**; gray; very dense; fine grained with few medium and coarse grains; few silt; trace, fine, subrounded gravel; no odor; wet	1.4	
		HSA				SP				0.01" slot screen
60										
65								65.0		#10/20 silica sand
		Split Spoon		100				**SANDY SILT**; gray; hard; non-plastic; fine sand; no odor; moist	2.5	
		HSA				ML				End cap
70										
75										

REMARKS

(Continued Next Page)

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WELL NUMBER MW-5

CLIENT Franklin-Kennewick, LLC
PROJECT NAME FedEx Ground Distribution Center
PROJECT NUMBER 101.00989.00013
PROJECT LOCATION 18795 Northeast 73rd Street
DATE STARTED 8/18/17 **COMPLETED** 8/18/17
GROUND ELEVATION _____ **HOLE SIZE** 8" - diameter
DRILLING CONTRACTOR Holocene
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
▼ **AT TIME OF DRILLING** 11 ft (perched), 55 ft
LOGGED BY S. Losleben **CHECKED BY** G. Lish
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
75										
		Split Spoon		100	15 30 42	ML		**SANDY SILT**; gray; hard; non-plastic; fine sand; no odor; moist *(continued)*	0.8	
		HSA								
80								80.0		
		Split Spoon		100	15 33 42	SM		**SILTY SAND**; gray; very dense; fine grained; no odor; moist 81.5	0.6	

WELL COMPLETION DETAILS:

0.0 to 51.0': 2"-diameter, flush threaded Sch. 40 PVC riser.
51.0 to 71.0': 2"-diameter, flush threaded Sch. 40 PVC 0.010-slotted well screen.
70.8 to 71.0': 2"-diameter, flugh-threaded Sch. 40 PVC cap.

REMARKS

SLR
22118 20th Ave. SE, Suite G-202
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

WELL NUMBER MW-6

CLIENT Franklin-Kennewick, LLC
PROJECT NAME FedEx Ground Distribution Center
PROJECT NUMBER 101.00989.00013
PROJECT LOCATION 18795 Northeast 73rd Street
DATE STARTED 8/16/17 **COMPLETED** 8/17/17
GROUND ELEVATION _____ **HOLE SIZE** 8" - diameter
DRILLING CONTRACTOR Holocene
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING 44 ft
LOGGED BY S. Losleben **CHECKED BY** G. Lish
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0								0.2 **ASPHALT PAVEMENT**		
						SP		**GRAVELLY SAND**; brown; fine to coarse grained; fine to coarse, subrounded gravel; no odor; moist **(FILL)**		Concrete.
5		HSA						7.0		
						SP-SM		**SAND with SILTY FINES**; gray-brown; dense; fine to coarse grained; little silt; no odor; moist **(FILL)**		
10		Split Spoon		100	23 11 25			12.0	0.6	
						SP		**SAND**; gray; very dense; fine to medium grained; trace silt; trace, subrounded, fine gravel; no odor; moist @ 12.0 feet bgs; Becomes more dense and difficult to drill		
15		HSA								
20		Split Spoon	*MW-6-20'	50	47 50/3				1.1	Hydrated bentonite chips
25										

REMARKS

(Continued Next Page)

SLR
22118 20th Ave. SE, Suite G-202
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

WELL NUMBER MW-6

CLIENT Franklin-Kennewick, LLC
PROJECT NAME FedEx Ground Distribution Center
PROJECT NUMBER 101.00989.00013
PROJECT LOCATION 18795 Northeast 73rd Street
DATE STARTED 8/16/17 **COMPLETED** 8/17/17
GROUND ELEVATION _____ **HOLE SIZE** 8" - diameter
DRILLING CONTRACTOR Holocene
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING 44 ft
LOGGED BY S. Losleben **CHECKED BY** G. Lish
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
25		HSA						**SAND**; gray; very dense; fine to medium grained; trace silt; trace, subrounded, fine gravel; no odor; moist *(continued)*		
30		Split Spoon	*MW-6-0817a	0	50/2					
35		HSA				SP		@ 37.0 feet bgs: Drill cuttings become more moist to wet		
40		Split Spoon		5	50/3				0.0	
45		HSA						@ 44.0 feet bgs: Encountered groundwater based on wetted height of drill rod		
50								50.0		Slough

REMARKS

SLR MW LOG FEDEX DISTRIBUTION CENTER.GPJ GINT US.GDT 11/9/17

(Continued Next Page)

SLR
22118 20th Ave. SE, Suite G-202
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

WELL NUMBER MW-6

CLIENT Franklin-Kennewick, LLC
PROJECT NAME FedEx Ground Distribution Center
PROJECT NUMBER 101.00989.00013
PROJECT LOCATION 18795 Northeast 73rd Street
DATE STARTED 8/16/17 **COMPLETED** 8/17/17
GROUND ELEVATION _____ **HOLE SIZE** 8" - diameter
DRILLING CONTRACTOR Holocene
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING 44 ft
LOGGED BY S. Losleben **CHECKED BY** G. Lish
AFTER DRILLING N/A
NOTES _____

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
50		Split Spoon		100	44 50/5	SP		**SAND**; gray; very dense; fine to medium grained; no odor; wet	0.2	
55		HSA								
60								60.0		
		Split Spoon		100	17 28 44	ML		**SILT**; gray; hard; low plasticity; trace, fine sand lenses; no odor; moist	0.5	
65		HSA								Hydrated bentonite chips
70										
		Split Spoon		100	16 26 31	ML		70.5 71.0 **SANDY SILT**; gray; hard; medium to coarse sand; no odor; moist **SILT**; gray; hard; low plasticity; trace, fine sand lenses; no odor; moist	0.6	
75						ML				

REMARKS

SLR MW LOG FEDEX DISTRIBUTION CENTER.GPJ GINT US.GDT 11/9/17

(Continued Next Page)

SLR
22118 20th Ave. SE, Suite G-202
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WELL NUMBER MW-6

CLIENT Franklin-Kennewick, LLC
PROJECT NAME FedEx Ground Distribution Center
PROJECT NUMBER 101.00989.00013
PROJECT LOCATION 18795 Northeast 73rd Street
DATE STARTED 8/16/17 **COMPLETED** 8/17/17
GROUND ELEVATION _____ **HOLE SIZE** 8" - diameter
DRILLING CONTRACTOR Holocene
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING 44 ft
LOGGED BY S. Losleben **CHECKED BY** G. Lish
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
75										
		HSA				ML		**SILT**; gray; hard; low plasticity; trace, fine sand lenses; no odor; moist *(continued)*		2-inch sch 40 PVC riser
80								80.0		
		Split Spoon		100	7 24 43			**SILTY SAND**; gray; very dense; non-plastic fines; fine grained; no odor; moist	0.9	
		HSA				SM				
85								85.0		
		Split Spoon		75	30 37 50/4			**SILT**; gray; hard; poorly graded fine sand lenses (0.25 to 2" thick); no odor; moist	0.6	
		HSA								
90										0.01" slot screen
		Split Spoon		75	12 2 31	ML			0.3	
		HSA								#10/20 silica sand
95								95.0		
		Split Spoon		5	50/5			**GRAVEL**; gray; very dense; fine grained; coarse sand; no odor; wet	0.0	
		HSA				GP				
100								100.0		

REMARKS

(Continued Next Page)

SLR
22118 20th Ave. SE, Suite G-202
Bothell, Washington 98021
Telephone: 425.402.8800
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WELL NUMBER MW-6

CLIENT Franklin-Kennewick, LLC
PROJECT NAME FedEx Ground Distribution Center
PROJECT NUMBER 101.00989.00013
PROJECT LOCATION 18795 Northeast 73rd Street
DATE STARTED 8/16/17 **COMPLETED** 8/17/17
GROUND ELEVATION _____ **HOLE SIZE** 8" - diameter
DRILLING CONTRACTOR Holocene
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING 44 ft
LOGGED BY S. Losleben **CHECKED BY** G. Lish
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
100										
		Split Spoon		50	45 50/5	SP		**SAND**; gray; very dense; medium grained; no odor; wet 101.0	0.1	End cap

WELL COMPLETION DETAILS:

0.0 to 80.0': 2"-diameter, flush threaded Sch. 40 PVC riser.
80.0 to 100.0': 2"-diameter, flush threaded Sch. 40 PVC 0.010-slotted well screen.
99.8 to 100.0': 2"-diameter, flugh-threaded Sch. 40 PVC cap.

REMARKS

SLR
22118 20th Ave. SE, Suite G-202
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER SB-1

CLIENT Franklin-Kennewick, LLC
PROJECT NAME FedEx Ground Distribution Center
PROJECT NUMBER 101.00989.00013
PROJECT LOCATION 18795 Northeast 73rd Street
DATE STARTED 8/21/17 **COMPLETED** 8/21/17
GROUND ELEVATION _____ **HOLE SIZE** 4" - diamter
DRILLING CONTRACTOR Holocene
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING N/A
LOGGED BY S. Losleben **CHECKED BY** G. Lish
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	SAMPLE NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0							0.3 **CONCRETE**	
							1.3 **CRUSHED ROCK SUBGRADE**	
		Direct Push		75	ML		**SANDY SILT**; gray-brown; loose; low plasticity; fine to coarse sand; few, fine, subrounded gravel; trace asphalt debris; no odor; moist **(FILL)**	0.2
5								1.2
		Direct Push	*SB-1-8-9'	75			7.5 7.8 **CRUSHED ASPHALT**	1.1
10					SM		**SILTY SAND**; gray-brown; medium dense; fine to coarse grained; trace, fine, subrounded gravel; no odor; moist **(FILL)**	4.1
		Direct Push		50				2.3
15					SP		13.5 **SAND**; brown-gray; medium grained; few silt; no odor; moist **(FILL)** 15.0	0.8

REMARKS

PID = Photoionization detector readings in parts per million (ppm).

SLR
22118 20th Ave. SE, Suite G-202
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER SB-2

CLIENT Franklin-Kennewick, LLC
PROJECT NAME FedEx Ground Distribution Center
PROJECT NUMBER 101.00989.00013
PROJECT LOCATION 18795 Northeast 73rd Street
DATE STARTED 8/21/17 **COMPLETED** 8/21/17
GROUND ELEVATION _____ **HOLE SIZE** 4" - diamter
DRILLING CONTRACTOR Holocene
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING N/A
LOGGED BY S. Losleben **CHECKED BY** G. Lish
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	SAMPLE NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0							0.2 **ASPHALT PAVEMENT**	
							1.0 **CRUSHED ROCK SUBGRADE**	
		Direct Push		90	ML		**SANDY SILT**; gray-brown; loose; low plasticity; fine to coarse sand; few, fine to coarse, subrounded gravel; no odor; moist **(FILL)**	1.9
5								5.5
		Direct Push	*SB-2-8-9'	75	SP		7.5 8.0 **SAND**; brown; loose; medium grained; moist	4.6
					SM		**SILTY SAND**; gray-brown; medium dense; fine to coarse grained; trace, fine, subrounded gravel; no odor; moist **(FILL)**	2.4
10							11.0	
		Direct Push		100	SP-SM		**SAND with SILTY FINES**; gray-brown; fine to medium grained; little fines; no odor; moist **(FILL)**	1.1
15							15.0	1.3

REMARKS

PID = Photoionization detector readings in parts per million (ppm).

APPENDIX E

LABORATORY ANALYTICAL REPORTS

Additional Remedial Investigation Report

Franklin-Kennewick, LLC
FedEx Ground Distribution Center
18795 Northeast 73rd Street
Redmond, Washington 98052

December 2017

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 29, 2017

Greg Lish
SLR International Corp
22118 20th Avenue SE, Suite G202
Bothell, WA 98021

Re: Analytical Data for Project 101.00989.00013
Laboratory Reference No. 1708-224

Dear Greg:

Enclosed are the analytical results and associated quality control data for samples submitted on August 16, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: August 29, 2017
Samples Submitted: August 16, 2017
Laboratory Reference: 1708-224
Project: 101.00989.00013

Case Narrative

Samples were collected on August 16, 2017 and received by the laboratory on August 16, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: August 29, 2017
Samples Submitted: August 16, 2017
Laboratory Reference: 1708-224
Project: 101.00989.00013

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6-0817a**					
Laboratory ID:	08-224-01					
Diesel Range Organics	**ND**	0.27	NWTPH-Dx	8-18-17	8-21-17	
Lube Oil Range Organics	**ND**	0.43	NWTPH-Dx	8-18-17	8-21-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*79*	*50-150*				

Date of Report: August 29, 2017
Samples Submitted: August 16, 2017
Laboratory Reference: 1708-224
Project: 101.00989.00013

NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0818W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	8-18-17	8-21-17	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	8-18-17	8-21-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*86*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-224-01										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*79*	*86*	*50-150*			

Date of Report: August 29, 2017
Samples Submitted: August 16, 2017
Laboratory Reference: 1708-224
Project: 101.00989.00013

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-224-01					
Client ID:	**MW-6-0817a**					
Arsenic	**6.2**	3.0	200.8	8-17-17	8-23-17	
Barium	**ND**	25	200.8	8-17-17	8-23-17	
Cadmium	**ND**	4.0	200.8	8-17-17	8-23-17	
Chromium	**ND**	10	200.8	8-17-17	8-23-17	
Lead	**ND**	1.0	200.8	8-17-17	8-23-17	
Mercury	**ND**	0.50	7470A	8-17-17	8-23-17	
Selenium	**ND**	5.0	200.8	8-17-17	8-23-17	
Silver	**ND**	10	200.8	8-17-17	8-23-17	

Date of Report: August 29, 2017
Samples Submitted: August 16, 2017
Laboratory Reference: 1708-224
Project: 101.00989.00013

DISSOLVED METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Filtered:	8-17-17
Date Analyzed:	8-23-17
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0817F1

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.0
Barium	200.8	**ND**	25
Cadmium	200.8	**ND**	4.0
Chromium	200.8	**ND**	10
Lead	200.8	**ND**	1.0
Selenium	200.8	**ND**	5.0
Silver	200.8	**ND**	10

Date of Report: August 29, 2017
Samples Submitted: August 16, 2017
Laboratory Reference: 1708-224
Project: 101.00989.00013

DISSOLVED MERCURY
EPA 7470A
METHOD BLANK QUALITY CONTROL

Date Filtered:	8-17-17
Date Analyzed:	8-23-17
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0817F1

Analyte	Method	Result	PQL
Mercury	7470A	**ND**	0.50

Date of Report: August 29, 2017
Samples Submitted: August 16, 2017
Laboratory Reference: 1708-224
Project: 101.00989.00013

DISSOLVED METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Filtered: 8-17-17
Date Analyzed: 8-23-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-238-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**8.75**	**8.15**	7	3.0	
Barium	**ND**	**ND**	NA	25	
Cadmium	**ND**	**ND**	NA	4.0	
Chromium	**ND**	**ND**	NA	10	
Lead	**ND**	**ND**	NA	1.0	
Selenium	**ND**	**ND**	NA	5.0	
Silver	**ND**	**ND**	NA	10	

Date of Report: August 29, 2017
Samples Submitted: August 16, 2017
Laboratory Reference: 1708-224
Project: 101.00989.00013

DISSOLVED MERCURY
EPA 7470A
DUPLICATE QUALITY CONTROL

Date Filtered: 8-17-17
Date Analyzed: 8-23-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-240-03

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.50	

Date of Report: August 29, 2017
Samples Submitted: August 16, 2017
Laboratory Reference: 1708-224
Project: 101.00989.00013

DISSOLVED METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Filtered: 8-17-17
Date Analyzed: 8-23-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-238-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	**221**	106	**216**	103	3	
Barium	200	**217**	109	**209**	105	4	
Cadmium	200	**206**	103	**195**	97	6	
Chromium	200	**188**	94	**179**	89	5	
Lead	200	**202**	101	**193**	97	5	
Selenium	200	**220**	110	**220**	110	0	
Silver	200	**191**	96	**183**	92	4	

Date of Report: August 29, 2017
Samples Submitted: August 16, 2017
Laboratory Reference: 1708-224
Project: 101.00989.00013

DISSOLVED MERCURY
EPA 7470A
MS/MSD QUALITY CONTROL

Date Filtered: 8-17-17
Date Analyzed: 8-23-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-240-03

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	6.25	**6.33**	101	**6.23**	100	2	

Date of Report: August 29, 2017
Samples Submitted: August 16, 2017
Laboratory Reference: 1708-224
Project: 101.00989.00013

HEXAVALENT CHROMIUM
SM 3500-Cr B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-224-01					
Client ID:	**MW-6-0817a**					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	8-17-17	8-17-17	

Date of Report: August 29, 2017
Samples Submitted: August 16, 2017
Laboratory Reference: 1708-224
Project: 101.00989.00013

HEXAVALENT CHROMIUM
SM 3500-Cr B
METHOD BLANK QUALITY CONTROL

Date Extracted:	8-17-17
Date Analyzed:	8-17-17
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0817F1

Analyte	Method	Result	PQL
Hexavalent Chromium	SM 3500-Cr B	**ND**	10

Date of Report: August 29, 2017
Samples Submitted: August 16, 2017
Laboratory Reference: 1708-224
Project: 101.00989.00013

HEXAVALENT CHROMIUM
SM 3500-Cr B
DUPLICATE QUALITY CONTROL

Date Extracted: 8-17-17
Date Analyzed: 8-17-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-224-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Hexavalent Chromium	**ND**	**ND**	NA	10	

Date of Report: August 29, 2017
Samples Submitted: August 16, 2017
Laboratory Reference: 1708-224
Project: 101.00989.00013

HEXAVALENT CHROMIUM
SM 3500-Cr B
MS/MSD QUALITY CONTROL

Date Extracted:	8-17-17
Date Analyzed:	8-17-17
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	08-224-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Hexavalent Chromium	100	**99.1**	99	**97.9**	98	1	

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: SLR
Project Number: 101.00989.00013
Project Name: Fed Ex
Project Manager: Greg Lish
Sampled by: Steven Losleben

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 08-224

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals Dissolved RCRA 8 Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Hex. Chromium by SM 3500-Cr B				% Moisture
1	MW-6-051717a	5/16/17	1640	water	6				X					X					X				X				

	Signature	Company	Date	Time
Relinquished		SLR	5/16/17	1709
Received			5/16/17	1709
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
> Hold PAHs pending TPH-Dx results
> Lab filter RCRA 8 Metals
> Lab filter Hex Chromium

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 29, 2017

Greg Lish
SLR International Corp
22118 20th Avenue SE, Suite G202
Bothell, WA 98021

Re: Analytical Data for Project 101.00989.00013
Laboratory Reference No. 1708-247

Dear Greg:

Enclosed are the analytical results and associated quality control data for samples submitted on August 18, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

Case Narrative

Samples were collected on August 18, 2017 and received by the laboratory on August 18, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5-0817a**					
Laboratory ID:	08-247-01					
Diesel Range Organics	**ND**	0.27	NWTPH-Dx	8-23-17	8-23-17	
Lube Oil Range Organics	**ND**	0.43	NWTPH-Dx	8-23-17	8-23-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823W2					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	8-23-17	8-23-17	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	8-23-17	8-23-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*80*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-239-23										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	X1
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	X1
Surrogate:											
o-Terphenyl						*113*	*109*	*50-150*			

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4-60'**					
Laboratory ID:	08-247-02					
Diesel Range Organics	**ND**	28	NWTPH-Dx	8-25-17	8-25-17	X1
Lube Oil Range Organics	**ND**	56	NWTPH-Dx	8-25-17	8-25-17	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*125*	*50-150*				
Client ID:	**MW-6-80'**					
Laboratory ID:	08-247-04					
Diesel Range Organics	**ND**	31	NWTPH-Dx	8-25-17	8-25-17	X1
Lube Oil Range Organics	**ND**	63	NWTPH-Dx	8-25-17	8-25-17	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*130*	*50-150*				
Client ID:	**MW-5-55'**					
Laboratory ID:	08-247-06					
Diesel Range Organics	**ND**	28	NWTPH-Dx	8-25-17	8-25-17	X1
Lube Oil Range Organics	**ND**	56	NWTPH-Dx	8-25-17	8-25-17	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*134*	*50-150*				

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0825S2					
Diesel Range Organics	**ND**	25	NWTPH-Dx	8-25-17	8-28-17	X1
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	8-25-17	8-28-17	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*130*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-255-02										
	ORIG	DUP									
Diesel Fuel #2	**278**	**84.2**	NA	NA		NA		NA	107	NA	
Lube Oil	**57.9**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*112*	*106*	*50-150*			

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4-60'**					
Laboratory ID:	08-247-02					
Naphthalene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-28-17	
2-Methylnaphthalene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-28-17	
1-Methylnaphthalene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-28-17	
Acenaphthylene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-28-17	
Acenaphthene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-28-17	
Fluorene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-28-17	
Phenanthrene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-28-17	
Anthracene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-28-17	
Fluoranthene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-28-17	
Pyrene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-28-17	
Benzo[a]anthracene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-28-17	
Chrysene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-28-17	
Benzo[b]fluoranthene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-28-17	
Benzo(j,k)fluoranthene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-28-17	
Benzo[a]pyrene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-28-17	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-28-17	
Dibenz[a,h]anthracene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-28-17	
Benzo[g,h,i]perylene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-28-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*72*	*32 - 122*				
Pyrene-d10	*68*	*33 - 125*				
Terphenyl-d14	*86*	*36 - 118*				

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6-80'**					
Laboratory ID:	08-247-04					
Naphthalene	**ND**	0.0084	EPA 8270D/SIM	8-24-17	8-29-17	
2-Methylnaphthalene	**ND**	0.0084	EPA 8270D/SIM	8-24-17	8-29-17	
1-Methylnaphthalene	**ND**	0.0084	EPA 8270D/SIM	8-24-17	8-29-17	
Acenaphthylene	**ND**	0.0084	EPA 8270D/SIM	8-24-17	8-29-17	
Acenaphthene	**ND**	0.0084	EPA 8270D/SIM	8-24-17	8-29-17	
Fluorene	**ND**	0.0084	EPA 8270D/SIM	8-24-17	8-29-17	
Phenanthrene	**ND**	0.0084	EPA 8270D/SIM	8-24-17	8-29-17	
Anthracene	**ND**	0.0084	EPA 8270D/SIM	8-24-17	8-29-17	
Fluoranthene	**ND**	0.0084	EPA 8270D/SIM	8-24-17	8-29-17	
Pyrene	**ND**	0.0084	EPA 8270D/SIM	8-24-17	8-29-17	
Benzo[a]anthracene	**ND**	0.0084	EPA 8270D/SIM	8-24-17	8-29-17	
Chrysene	**ND**	0.0084	EPA 8270D/SIM	8-24-17	8-29-17	
Benzo[b]fluoranthene	**ND**	0.0084	EPA 8270D/SIM	8-24-17	8-29-17	
Benzo(j,k)fluoranthene	**ND**	0.0084	EPA 8270D/SIM	8-24-17	8-29-17	
Benzo[a]pyrene	**ND**	0.0084	EPA 8270D/SIM	8-24-17	8-29-17	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0084	EPA 8270D/SIM	8-24-17	8-29-17	
Dibenz[a,h]anthracene	**ND**	0.0084	EPA 8270D/SIM	8-24-17	8-29-17	
Benzo[g,h,i]perylene	**ND**	0.0084	EPA 8270D/SIM	8-24-17	8-29-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*75*	*32 - 122*				
Pyrene-d10	*72*	*33 - 125*				
Terphenyl-d14	*88*	*36 - 118*				

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5-55'**					
Laboratory ID:	08-247-06					
Naphthalene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-29-17	
2-Methylnaphthalene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-29-17	
1-Methylnaphthalene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-29-17	
Acenaphthylene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-29-17	
Acenaphthene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-29-17	
Fluorene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-29-17	
Phenanthrene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-29-17	
Anthracene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-29-17	
Fluoranthene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-29-17	
Pyrene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-29-17	
Benzo[a]anthracene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-29-17	
Chrysene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-29-17	
Benzo[b]fluoranthene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-29-17	
Benzo(j,k)fluoranthene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-29-17	
Benzo[a]pyrene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-29-17	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-29-17	
Dibenz[a,h]anthracene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-29-17	
Benzo[g,h,i]perylene	**ND**	0.0075	EPA 8270D/SIM	8-24-17	8-29-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*71*	*32 - 122*				
Pyrene-d10	*70*	*33 - 125*				
Terphenyl-d14	*87*	*36 - 118*				

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0824S1					
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	8-24-17	8-28-17	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	8-24-17	8-28-17	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	8-24-17	8-28-17	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	8-24-17	8-28-17	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	8-24-17	8-28-17	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	8-24-17	8-28-17	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	8-24-17	8-28-17	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	8-24-17	8-28-17	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	8-24-17	8-28-17	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	8-24-17	8-28-17	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	8-24-17	8-28-17	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	8-24-17	8-28-17	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	8-24-17	8-28-17	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	8-24-17	8-28-17	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	8-24-17	8-28-17	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270D/SIM	8-24-17	8-28-17	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	8-24-17	8-28-17	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	8-24-17	8-28-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*62*	*32 - 122*				
Pyrene-d10	*67*	*33 - 125*				
Terphenyl-d14	*85*	*36 - 118*				

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0824S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0539**	**0.0558**	0.0833	0.0833	65	67	58 - 114	3	18	
Acenaphthylene	**0.0585**	**0.0622**	0.0833	0.0833	70	75	54 - 127	6	15	
Acenaphthene	**0.0604**	**0.0622**	0.0833	0.0833	73	75	58 - 119	3	15	
Fluorene	**0.0581**	**0.0580**	0.0833	0.0833	70	70	60 - 123	0	15	
Phenanthrene	**0.0564**	**0.0585**	0.0833	0.0833	68	70	54 - 120	4	15	
Anthracene	**0.0622**	**0.0645**	0.0833	0.0833	75	77	55 - 152	4	15	
Fluoranthene	**0.0584**	**0.0605**	0.0833	0.0833	70	73	56 - 129	4	15	
Pyrene	**0.0572**	**0.0598**	0.0833	0.0833	69	72	60 - 126	4	15	
Benzo[a]anthracene	**0.0637**	**0.0671**	0.0833	0.0833	76	81	56 - 137	5	15	
Chrysene	**0.0563**	**0.0592**	0.0833	0.0833	68	71	59 - 122	5	15	
Benzo[b]fluoranthene	**0.0640**	**0.0674**	0.0833	0.0833	77	81	46 - 133	5	21	
Benzo(j,k)fluoranthene	**0.0627**	**0.0639**	0.0833	0.0833	75	77	47 - 129	2	21	
Benzo[a]pyrene	**0.0600**	**0.0647**	0.0833	0.0833	72	78	54 - 132	8	15	
Indeno(1,2,3-c,d)pyrene	**0.0567**	**0.0555**	0.0833	0.0833	68	67	54 - 129	2	15	
Dibenz[a,h]anthracene	**0.0565**	**0.0553**	0.0833	0.0833	68	66	59 - 122	2	15	
Benzo[g,h,i]perylene	**0.0522**	**0.0513**	0.0833	0.0833	63	62	57 - 125	2	16	
Surrogate:										
2-Fluorobiphenyl					*66*	*69*	*32 - 122*			
Pyrene-d10					*71*	*72*	*33 - 125*			
Terphenyl-d14					*87*	*89*	*36 - 118*			

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-247-01					
Client ID:	**MW-5-0817a**					
Arsenic	**86**	3.0	200.8	8-18-17	8-23-17	
Barium	**47**	25	200.8	8-18-17	8-23-17	
Cadmium	**ND**	4.0	200.8	8-18-17	8-23-17	
Chromium	**ND**	10	200.8	8-18-17	8-23-17	
Lead	**ND**	1.0	200.8	8-18-17	8-23-17	
Mercury	**ND**	0.50	7470A	8-18-17	8-23-17	
Selenium	**ND**	5.0	200.8	8-18-17	8-23-17	
Silver	**ND**	10	200.8	8-18-17	8-23-17	

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

DISSOLVED METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Filtered: 8-18-17
Date Analyzed: 8-23-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0818F1

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.0
Barium	200.8	**ND**	25
Cadmium	200.8	**ND**	4.0
Chromium	200.8	**ND**	10
Lead	200.8	**ND**	1.0
Selenium	200.8	**ND**	5.0
Silver	200.8	**ND**	10

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

DISSOLVED MERCURY
EPA 7470A
METHOD BLANK QUALITY CONTROL

Date Filtered:	8-18-17
Date Analyzed:	8-23-17
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0818F1

Analyte	Method	Result	PQL
Mercury	7470A	**ND**	0.50

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

DISSOLVED METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Filtered: 8-18-17
Date Analyzed: 8-23-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-238-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**8.75**	**8.15**	7	3.0	
Barium	**ND**	**ND**	NA	25	
Cadmium	**ND**	**ND**	NA	4.0	
Chromium	**ND**	**ND**	NA	10	
Lead	**ND**	**ND**	NA	1.0	
Selenium	**ND**	**ND**	NA	5.0	
Silver	**ND**	**ND**	NA	10	

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

DISSOLVED MERCURY
EPA 7470A
DUPLICATE QUALITY CONTROL

Date Filtered: 8-18-17
Date Analyzed: 8-23-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-245-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.50	

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

DISSOLVED METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Filtered: 8-18-17
Date Analyzed: 8-23-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-238-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	**221**	106	**216**	103	3	
Barium	200	**217**	109	**209**	105	4	
Cadmium	200	**206**	103	**195**	97	6	
Chromium	200	**188**	94	**179**	89	5	
Lead	200	**202**	101	**193**	97	5	
Selenium	200	**220**	110	**220**	110	0	
Silver	200	**191**	96	**183**	92	4	

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

DISSOLVED MERCURY
EPA 7470A
MS/MSD QUALITY CONTROL

Date Filtered: 8-18-17
Date Analyzed: 8-23-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-245-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	6.25	**5.38**	86	**5.55**	89	3	

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

HEXAVALENT CHROMIUM
SM 3500-Cr B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-247-01					
Client ID:	**MW-5-0817a**					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	8-19-17	8-19-17	

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

HEXAVALENT CHROMIUM
SM 3500-Cr B
METHOD BLANK QUALITY CONTROL

Date Extracted:	8-19-17
Date Analyzed:	8-19-17
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0819F1

Analyte	Method	Result	PQL
Hexavalent Chromium	SM 3500-Cr B	**ND**	10

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

HEXAVALENT CHROMIUM
SM 3500-Cr B
DUPLICATE QUALITY CONTROL

Date Extracted: 8-19-17
Date Analyzed: 8-19-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-247-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Hexavalent Chromium	**ND**	**ND**	NA	10	

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

HEXAVALENT CHROMIUM
SM 3500-Cr B
MS/MSD QUALITY CONTROL

Date Extracted:	8-19-17
Date Analyzed:	8-19-17
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	08-247-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Hexavalent Chromium	100	**104**	104	**108**	108	3	

Date of Report: August 29, 2017
Samples Submitted: August 18, 2017
Laboratory Reference: 1708-247
Project: 101.00989.00013

% MOISTURE

Date Analyzed: 8-24-17

Client ID	Lab ID	% Moisture
MW-4-60'	08-247-02	11
MW-6-80'	08-247-04	20
MW-5-55'	08-247-06	11

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Laboratory Number: 08-247

Company: SLR
Project Number: 101.00989.00013
Project Name: FedEx
Project Manager: Greg Lish
Sampled by: Steven Losleben

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☒ 3 Days (D+)
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up) Acid - soil only	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	~~Total RCRA Metals~~ Dissolved RCRA 8 Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Hex. Chromium by SM 3500-Cr B		HOLD		% Moisture
1	MW-5-0817a	8/16/17	0940	water	6				X					X	-HOLD				X				X				
2	MW-4-60'	8/16/17	1015	soil	1				X					X													X
3	MW-6-20'	8/16/17	1630	↓	1				X					X											X		X
4	MW-6-80'	8/17/17	1245		1				X					X													X
5	MW-5-10'	8/16/17	0930		1				X					X											X		X
6	MW-5-55'	8/16/17	1130	↓	1				X					X													X

	Signature	Company	Date	Time
Relinquished		SLR	8/16/17	1658
Received			8/18/17	1658
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
> Hold water PAHs, pending TPH-Dx results
> Lab filter water RCRA 8 Metals and Hex. Chromium.
> Silica gel cleanup on soil samples only
> Hold soil samples MW-6-20' and MW-5-10'.

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 5, 2017

Greg Lish
SLR International Corp
22118 20th Avenue SE, Suite G202
Bothell, WA 98021

Re: Analytical Data for Project 101.00989.00013
Laboratory Reference No. 1708-314

Dear Greg:

Enclosed are the analytical results and associated quality control data for samples submitted on August 25, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

Case Narrative

Samples were collected on August 21 and 25, 2017 and received by the laboratory on August 25, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SB-1-8-9'**					
Laboratory ID:	08-314-01					
Diesel Fuel #1	**98**	29	NWTPH-Dx	8-28-17	8-29-17	X1,N
Lube Oil	**320**	58	NWTPH-Dx	8-28-17	8-29-17	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*118*	*50-150*				
Client ID:	**SB-2-8-9'**					
Laboratory ID:	08-314-02					
Diesel Fuel #1	**100**	29	NWTPH-Dx	8-28-17	8-29-17	X1,N
Lube Oil	**680**	57	NWTPH-Dx	8-28-17	8-29-17	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*111*	*50-150*				

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0828S2					
Diesel Range Organics	**ND**	25	NWTPH-Dx	8-28-17	8-29-17	X1
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	8-28-17	8-29-17	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*108*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	08-273-05									
	ORIG	DUP								
Diesel Range	**ND**	**ND**	NA	NA		NA	NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						*84* *112*	*50-150*			

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4-0817**					
Laboratory ID:	08-314-03					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	8-29-17	8-29-17	
Lube Oil Range Organics	**ND**	0.42	NWTPH-Dx	8-29-17	8-29-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*92*	*50-150*				
Client ID:	**MW-5-0817**					
Laboratory ID:	08-314-04					
Diesel Range Organics	**ND**	0.27	NWTPH-Dx	8-29-17	8-29-17	
Lube Oil Range Organics	**ND**	0.44	NWTPH-Dx	8-29-17	8-29-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*106*	*50-150*				
Client ID:	**MW-6-0817**					
Laboratory ID:	08-314-05					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	8-29-17	8-29-17	
Lube Oil Range Organics	**ND**	0.42	NWTPH-Dx	8-29-17	8-29-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0829W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	8-29-17	8-29-17	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	8-29-17	8-29-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*105*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-323-01										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*86*	*89*	*50-150*			

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SB-1-8-9'**					
Laboratory ID:	08-314-01					
Naphthalene	**0.021**	0.0077	EPA 8270D/SIM	8-28-17	8-29-17	
2-Methylnaphthalene	**0.016**	0.0077	EPA 8270D/SIM	8-28-17	8-29-17	
1-Methylnaphthalene	**0.038**	0.0077	EPA 8270D/SIM	8-28-17	8-29-17	
Acenaphthylene	**ND**	0.0077	EPA 8270D/SIM	8-28-17	8-29-17	
Acenaphthene	**ND**	0.0077	EPA 8270D/SIM	8-28-17	8-29-17	
Fluorene	**0.011**	0.0077	EPA 8270D/SIM	8-28-17	8-29-17	
Phenanthrene	**0.026**	0.0077	EPA 8270D/SIM	8-28-17	8-29-17	
Anthracene	**ND**	0.0077	EPA 8270D/SIM	8-28-17	8-29-17	
Fluoranthene	**0.027**	0.0077	EPA 8270D/SIM	8-28-17	8-29-17	
Pyrene	**0.031**	0.0077	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[a]anthracene	**0.022**	0.0077	EPA 8270D/SIM	8-28-17	8-29-17	
Chrysene	**0.029**	0.0077	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[b]fluoranthene	**0.032**	0.0077	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo(j,k)fluoranthene	**0.012**	0.0077	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[a]pyrene	**0.029**	0.0077	EPA 8270D/SIM	8-28-17	8-29-17	
Indeno(1,2,3-c,d)pyrene	**0.021**	0.0077	EPA 8270D/SIM	8-28-17	8-29-17	
Dibenz[a,h]anthracene	**ND**	0.0077	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[g,h,i]perylene	**0.024**	0.0077	EPA 8270D/SIM	8-28-17	8-29-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*42*	*32 - 122*				
Pyrene-d10	*36*	*33 - 125*				
Terphenyl-d14	*50*	*36 - 118*				

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SB-2-8-9'**					
Laboratory ID:	08-314-02					
Naphthalene	**0.51**	0.0076	EPA 8270D/SIM	8-28-17	8-29-17	
2-Methylnaphthalene	**0.25**	0.0076	EPA 8270D/SIM	8-28-17	8-29-17	
1-Methylnaphthalene	**0.17**	0.0076	EPA 8270D/SIM	8-28-17	8-29-17	
Acenaphthylene	**0.089**	0.0076	EPA 8270D/SIM	8-28-17	8-29-17	
Acenaphthene	**0.12**	0.0076	EPA 8270D/SIM	8-28-17	8-29-17	
Fluorene	**0.17**	0.0076	EPA 8270D/SIM	8-28-17	8-29-17	
Phenanthrene	**0.59**	0.0076	EPA 8270D/SIM	8-28-17	8-29-17	
Anthracene	**0.18**	0.0076	EPA 8270D/SIM	8-28-17	8-29-17	
Fluoranthene	**0.39**	0.0076	EPA 8270D/SIM	8-28-17	8-29-17	
Pyrene	**0.44**	0.0076	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[a]anthracene	**0.21**	0.0076	EPA 8270D/SIM	8-28-17	8-29-17	
Chrysene	**0.23**	0.0076	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[b]fluoranthene	**0.21**	0.0076	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo(j,k)fluoranthene	**0.057**	0.0076	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[a]pyrene	**0.19**	0.0076	EPA 8270D/SIM	8-28-17	8-29-17	
Indeno(1,2,3-c,d)pyrene	**0.12**	0.0076	EPA 8270D/SIM	8-28-17	8-29-17	
Dibenz[a,h]anthracene	**0.029**	0.0076	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[g,h,i]perylene	**0.13**	0.0076	EPA 8270D/SIM	8-28-17	8-29-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*65*	*32 - 122*				
Pyrene-d10	*68*	*33 - 125*				
Terphenyl-d14	*89*	*36 - 118*				

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0828S2					
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	8-28-17	8-29-17	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	8-28-17	8-29-17	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	8-28-17	8-29-17	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	8-28-17	8-29-17	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	8-28-17	8-29-17	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	8-28-17	8-29-17	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	8-28-17	8-29-17	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	8-28-17	8-29-17	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	8-28-17	8-29-17	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	8-28-17	8-29-17	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	8-28-17	8-29-17	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270D/SIM	8-28-17	8-29-17	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	8-28-17	8-29-17	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	8-28-17	8-29-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*90*	*32 - 122*				
Pyrene-d10	*75*	*33 - 125*				
Terphenyl-d14	*113*	*36 - 118*				

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0828S2									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0661**	**0.0657**	0.0833	0.0833	79	79	58 - 114	1	18	
Acenaphthylene	**0.0747**	**0.0731**	0.0833	0.0833	90	88	54 - 127	2	15	
Acenaphthene	**0.0696**	**0.0666**	0.0833	0.0833	84	80	58 - 119	4	15	
Fluorene	**0.0762**	**0.0738**	0.0833	0.0833	91	89	60 - 123	3	15	
Phenanthrene	**0.0728**	**0.0735**	0.0833	0.0833	87	88	54 - 120	1	15	
Anthracene	**0.0789**	**0.0793**	0.0833	0.0833	95	95	55 - 152	1	15	
Fluoranthene	**0.0746**	**0.0752**	0.0833	0.0833	90	90	56 - 129	1	15	
Pyrene	**0.0743**	**0.0751**	0.0833	0.0833	89	90	60 - 126	1	15	
Benzo[a]anthracene	**0.0836**	**0.0824**	0.0833	0.0833	100	99	56 - 137	1	15	
Chrysene	**0.0758**	**0.0764**	0.0833	0.0833	91	92	59 - 122	1	15	
Benzo[b]fluoranthene	**0.0779**	**0.0780**	0.0833	0.0833	94	94	46 - 133	0	21	
Benzo(j,k)fluoranthene	**0.0784**	**0.0764**	0.0833	0.0833	94	92	47 - 129	3	21	
Benzo[a]pyrene	**0.0772**	**0.0771**	0.0833	0.0833	93	93	54 - 132	0	15	
Indeno(1,2,3-c,d)pyrene	**0.0631**	**0.0627**	0.0833	0.0833	76	75	54 - 129	1	15	
Dibenz[a,h]anthracene	**0.0637**	**0.0633**	0.0833	0.0833	76	76	59 - 122	1	15	
Benzo[g,h,i]perylene	**0.0613**	**0.0611**	0.0833	0.0833	74	73	57 - 125	0	16	
Surrogate:										
2-Fluorobiphenyl					*88*	*86*	*32 - 122*			
Pyrene-d10					*86*	*86*	*33 - 125*			
Terphenyl-d14					*104*	*104*	*36 - 118*			

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-314-03					
Client ID:	**MW-4-0817**					
Arsenic	**ND**	3.0	200.8		8-31-17	
Barium	**28**	25	200.8		8-31-17	
Cadmium	**ND**	4.0	200.8		8-31-17	
Chromium	**ND**	10	200.8		8-31-17	
Lead	**ND**	1.0	200.8		8-31-17	
Mercury	**ND**	0.50	7470A		8-30-17	
Selenium	**ND**	5.0	200.8		8-31-17	
Silver	**ND**	10	200.8		8-31-17	
Lab ID:	08-314-04					
Client ID:	**MW-5-0817**					
Arsenic	**13**	3.0	200.8		8-31-17	
Barium	**44**	25	200.8		8-31-17	
Cadmium	**ND**	4.0	200.8		8-31-17	
Chromium	**ND**	10	200.8		8-31-17	
Lead	**ND**	1.0	200.8		8-31-17	
Mercury	**ND**	0.50	7470A		8-30-17	
Selenium	**ND**	5.0	200.8		8-31-17	
Silver	**ND**	10	200.8		8-31-17	

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-314-05					
Client ID:	**MW-6-0817**					
Arsenic	**5.6**	3.0	200.8		8-31-17	
Barium	**ND**	25	200.8		8-31-17	
Cadmium	**ND**	4.0	200.8		8-31-17	
Chromium	**ND**	10	200.8		8-31-17	
Lead	**ND**	1.0	200.8		8-31-17	
Mercury	**ND**	0.50	7470A		8-30-17	
Selenium	**ND**	5.0	200.8		8-31-17	
Silver	**ND**	10	200.8		8-31-17	

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

DISSOLVED METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Analyzed: 8-31-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0830F1

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.0
Barium	200.8	**ND**	25
Cadmium	200.8	**ND**	4.0
Chromium	200.8	**ND**	10
Lead	200.8	**ND**	1.0
Selenium	200.8	**ND**	5.0
Silver	200.8	**ND**	10

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

DISSOLVED MERCURY
EPA 7470A
METHOD BLANK QUALITY CONTROL

Date Analyzed: 8-30-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0830D1

Analyte	Method	Result	PQL
Mercury	7470A	**ND**	0.50

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

DISSOLVED METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Analyzed: 8-31-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-379-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	3.0	
Barium	**51.0**	**52.0**	2	25	
Cadmium	**ND**	**ND**	NA	4.0	
Chromium	**ND**	**ND**	NA	10	
Lead	**ND**	**ND**	NA	1.0	
Selenium	**ND**	**ND**	NA	5.0	
Silver	**ND**	**ND**	NA	10	

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

DISSOLVED MERCURY
EPA 7470A
DUPLICATE QUALITY CONTROL

Date Analyzed: 8-30-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-314-03

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.50	

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

DISSOLVED METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Analyzed: 8-31-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-379-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	**205**	102	**201**	101	2	
Barium	200	**250**	99	**254**	102	2	
Cadmium	200	**192**	96	**197**	99	3	
Chromium	200	**194**	97	**193**	96	1	
Lead	200	**186**	93	**185**	93	0	
Selenium	200	**212**	106	**216**	108	2	
Silver	200	**190**	95	**197**	98	4	

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

DISSOLVED MERCURY
EPA 7470A
MS/MSD QUALITY CONTROL

Date Analyzed: 8-30-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-314-03

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	12.5	**11.8**	94	**11.4**	91	4	

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

DISSOLVED HEXAVALENT CHROMIUM
SM 3500-Cr B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-314-03					
Client ID:	**MW-4-0817**					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	8-25-17	8-25-17	
Lab ID:	08-314-04					
Client ID:	**MW-5-0817**					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	8-25-17	8-25-17	
Lab ID:	08-314-05					
Client ID:	**MW-6-0817**					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	8-25-17	8-25-17	

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

DISSOLVED HEXAVALENT CHROMIUM
SM 3500-Cr B
METHOD BLANK QUALITY CONTROL

Date Extracted:	8-25-17
Date Analyzed:	8-25-17
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0825D1

Analyte	Method	Result	PQL
Hexavalent Chromium	SM 3500-Cr B	**ND**	10

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

DISSOLVED HEXAVALENT CHROMIUM
SM 3500-Cr B
DUPLICATE QUALITY CONTROL

Date Extracted: 8-25-17
Date Analyzed: 8-25-17

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-314-03

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Hexavalent Chromium	**ND**	**ND**	NA	10	

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

DISSOLVED HEXAVALENT CHROMIUM
SM 3500-Cr B
MS/MSD QUALITY CONTROL

Date Extracted:	8-25-17
Date Analyzed:	8-25-17
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	08-314-03

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Hexavalent Chromium	100	**99.3**	99	**99.2**	99	0.1	

Date of Report: September 5, 2017
Samples Submitted: August 25, 2017
Laboratory Reference: 1708-314
Project: 101.00989.00013

% MOISTURE

Date Analyzed: 8-28-17

Client ID	Lab ID	% Moisture
SB-1-8-9'	08-314-01	14
SB-2-8-9'	08-314-02	12

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Laboratory Number: 08-314

Company: SLR
Project Number: 101.00989.00013
Project Name: Fed Ex
Project Manager: Greg Lish
Sampled by: Steven Losleben

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☒ 3 Days (CDX water)
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☒ Acid / SG Clean-up) SG only on Soil	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	~~Total~~ RCRA Metals Dissolved RCRA 8 Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Dissolved Hex. Chromium by SM3500-CrB				% Moisture
1	SB-1-8-9'	8/21/17	0915	soil	1				X					X													X
2	SB-2-8-9'	8/21/17	0830	soil	1				X					X													X
3	MW-4-0817	8/25/17	1028	water	6				X					X					X				X				
4	MW-5-0817	8/25/17	1200	water	6				X					X					X				X				
5	MW-6-0817	8/25/17	0734	water	6				X					X					X				X				

	Signature	Company	Date	Time
Relinquished	Steven Losleben	SLR	8/25/17	1250
Received		CDE	8/25/17	1250
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
- Hold water PAHs pending TPH-Dx results
- Silica Gel on TPH-Dx on soil only
- All ground water Metals were Field Filtered. Dissolved only.

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

APPENDIX F

CADMAN GRAVEL CO. DMR DATA

Additional Remedial Investigation Report

Franklin-Kennewick, LLC
FedEx Ground Distribution Center
18795 Northeast 73rd Street
Redmond, Washington 98052

December 2017

Facility Name	Permit Number	Monitor Begin Date	Monitor End Date	Sample Date	Outfall	Monitor Point	Parameter	Units	Measurement Value	Sample Type	Sample Frequ	Limit Min/I
CADMAN REDMOND	WAG503111	1/1/2013	3/31/2013	1/23/2013	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	8.14	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	1/1/2013	3/31/2013	2/28/2013	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.92	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	1/1/2013	3/31/2013	3/29/2013	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.87	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	4/1/2013	6/30/2013	4/30/2013	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.96	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	4/1/2013	6/30/2013	5/22/2013	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.83	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	4/1/2013	6/30/2013	6/28/2013	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.9	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	7/1/2013	9/30/2013	7/29/2013	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.94	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	7/1/2013	9/30/2013	8/16/2013	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.82	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	7/1/2013	9/30/2013	9/27/2013	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.64	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	10/1/2013	12/31/2013	10/31/2013	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.78	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	10/1/2013	12/31/2013	11/25/2013	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.88	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	10/1/2013	12/31/2013	12/9/2013	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	-	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	1/1/2014	3/31/2014	1/31/2014	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.64	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	1/1/2014	3/31/2014	2/28/2014	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.83	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	1/1/2014	3/31/2014	3/25/2014	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.88	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	4/1/2014	6/30/2014	4/30/2014	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.91	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	4/1/2014	6/30/2014	5/23/2014	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.82	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	4/1/2014	6/30/2014	6/25/2014	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.93	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	7/1/2014	9/30/2014	7/31/2014	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.62	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	7/1/2014	9/30/2014	9/30/2014	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.71	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	7/1/2014	9/30/2014	8/21/2014	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.53	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	10/1/2014	12/31/2014	12/17/2014	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.68	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	10/1/2014	12/31/2014	10/31/2014	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	8.02	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	10/1/2014	12/31/2014	11/26/2014	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.83	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	1/1/2015	3/31/2015	1/30/2015	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	8.08	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	1/1/2015	3/31/2015	2/27/2015	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	8.13	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	1/1/2015	3/31/2015	3/31/2015	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.98	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	4/1/2015	6/30/2015	4/30/2015	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.89	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	4/1/2015	6/30/2015	5/29/2015	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.86	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	4/1/2015	6/30/2015	6/30/2015	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.94	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	7/1/2015	9/30/2015	7/23/2015	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.83	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	7/1/2015	9/30/2015	8/25/2015	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.52	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	7/1/2015	9/30/2015	9/29/2015	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.62	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	10/1/2015	12/31/2015	10/30/2015	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.11	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	10/1/2015	12/31/2015	11/30/2015	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.68	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	10/1/2015	12/31/2015	12/4/2015	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.82	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	1/1/2016	3/31/2016	1/29/2016	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.82	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	1/1/2016	3/31/2016	2/29/2016	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.59	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	1/1/2016	3/31/2016	3/31/2016	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.88	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	4/1/2016	6/30/2016	5/31/2016	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.63	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	4/1/2016	6/30/2016	6/29/2016	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.74	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	7/1/2016	9/30/2016	7/28/2016	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	8.02	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	7/1/2016	9/30/2016	8/29/2016	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.82	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	7/1/2016	9/30/2016	9/26/2016	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.81	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	10/1/2016	12/31/2016	10/31/2016	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.38	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	10/1/2016	12/31/2016	11/8/2016	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.41	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	10/1/2016	12/31/2016	12/12/2016	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.28	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	4/1/2016	6/30/2016	4/29/2016	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.84	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	1/1/2017	3/31/2017	1/30/2017	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.73	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	1/1/2017	3/31/2017	3/30/2017	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.91	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	1/1/2017	3/31/2017	2/27/2017	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.82	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	4/1/2017	6/30/2017	4/28/2017	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.72	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	4/1/2017	6/30/2017	5/31/2017	G001	G008	pH (Hydrogen Ion) (Not	Standard Units	7.58	Grab	Monthly	6.5/8.5

CADMAN REDMOND	WAG503111	4/1/2017	6/30/2017	6/30/2017	G001	G008	pH (Hydrogen Ion) (Not .	Standard Units	7.64	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	7/1/2017	9/30/2017	7/31/2017	G001	G001	pH (Hydrogen Ion) (Not .	Standard Units	7.47	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	7/1/2017	9/30/2017	7/31/2017	G001	G008	pH (Hydrogen Ion) (Not .	Standard Units	7.86	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	7/1/2017	9/30/2017	8/31/2017	G001	G001	pH (Hydrogen Ion) (Not .	Standard Units	7.62	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	7/1/2017	9/30/2017	8/31/2017	G001	G008	pH (Hydrogen Ion) (Not .	Standard Units	7.47	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	7/1/2017	9/30/2017	9/29/2017	G001	G001	pH (Hydrogen Ion) (Not .	Standard Units	7.65	Grab	Monthly	6.5/8.5
CADMAN REDMOND	WAG503111	7/1/2017	9/30/2017	9/29/2017	G001	G008	pH (Hydrogen Ion) (Not .	Standard Units	7.93	Grab	Monthly	6.5/8.5

APPENDIX G

CITY OF REDMOND GROUNDWATER ANALYTICAL DATA

Additional Remedial Investigation Report

Franklin-Kennewick, LLC
FedEx Ground Distribution Center
18795 Northeast 73rd Street
Redmond, Washington 98052

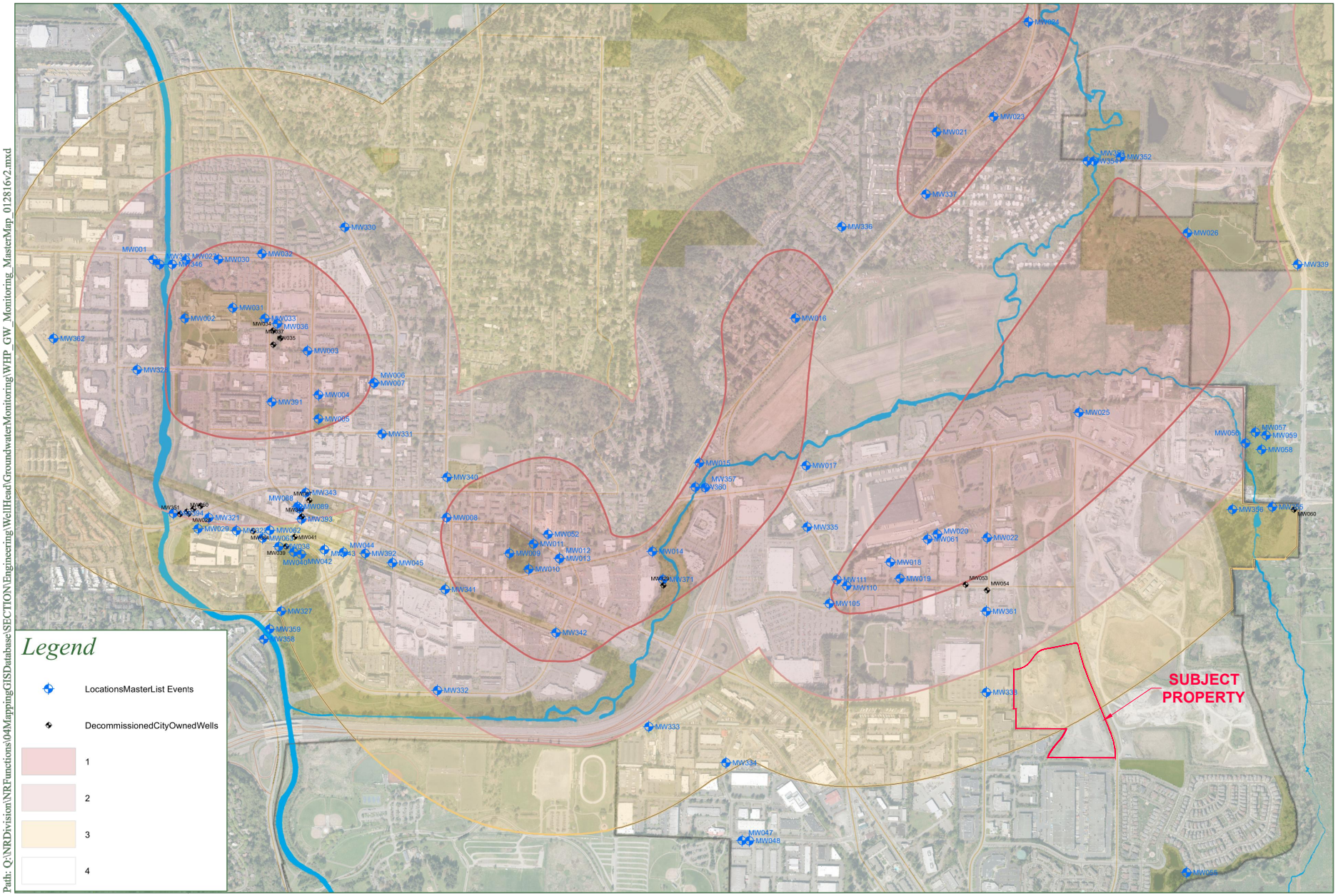
December 2017

Groundwater Monitoring Locations

City of Redmond, Washington

Draft Date 03/04/16

0 0.1 0.2 0.4 0.6 0.8 Miles



Path: Q:\NRDivision\NRFunctions\04MappingGISDatabase\SECTION\Engineering\WellHead\GroundwaterMonitoring\WHP_GW_Monitoring_MasterMap_012816v2.mxd

Last updated by: abalzer on 3/14/2016 at 12:55:11 PM

Sample Location	Sample Date	Analysis Date	Chemical Name	Report Result (text)	Report Result (value)	Result Unit	Reporting Detection Limit	Detection Limit Unit	Matrix	Analytic Method	Fraction	Method Analyte Group
MW022	2/4/2009	2/12/2009	Arsenic	9.8	9.8	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW022	7/27/2009	8/3/2009	Arsenic	9.3	9.3	ug/L	3	ug/L	WATER	EPA200.8	D	METALS
MW022	7/27/2009	8/4/2009	Arsenic	17	17	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW022	8/11/2011	8/22/2011	Arsenic	11	11	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW022	2/7/2012	2/10/2012	Arsenic	9.6	9.6	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW022	8/20/2012	8/23/2012	Arsenic	13	13	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW025	1/30/2009	2/5/2009	Arsenic	< 3.3	3.3	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW025	7/23/2009	7/28/2009	Arsenic	< 3.3	3.3	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW025	2/9/2011	2/11/2011	Arsenic	< 3.3	3.3	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW025	1/30/2012	1/31/2012	Arsenic	< 3.3	3.3	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW025	8/20/2012	8/23/2012	Arsenic	< 3.3	3.3	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW053	2/4/2009	2/5/2009	Arsenic	26	26	ug/L	3	ug/L	WATER	EPA200.8	D	METALS
MW053	2/4/2009	2/12/2009	Arsenic	27	27	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW053	7/28/2009	8/3/2009	Arsenic	130	130	ug/L	3	ug/L	WATER	EPA200.8	D	METALS
MW053	7/28/2009	8/4/2009	Arsenic	160	160	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW053	2/17/2011	2/25/2011	Arsenic	26	26	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW338	2/2/2010	2/10/2010	Arsenic	< 3.3	3.3	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW338	8/12/2010	8/16/2010	Arsenic	83	83	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW338	2/9/2011	2/11/2011	Arsenic	< 3.3	3.3	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW338	8/11/2011	8/22/2011	Arsenic	23	23	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW338	2/7/2012	2/10/2012	Arsenic	< 3.3	3.3	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW338	8/15/2012	8/21/2012	Arsenic	12	12	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW356	11/3/2011	11/7/2011	Arsenic	3.5	3.5	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW356	4/24/2012	4/27/2012	Arsenic	< 3.3	3.3	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW356	11/13/2012	11/20/2012	Arsenic	< 3.3	3.3	ug/L	3.3	ug/L	WG	EPA200.8	T	METALS
MW361	2/1/2012	2/2/2012	Arsenic	13	13	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS
MW361	8/15/2012	8/21/2012	Arsenic	15	15	ug/L	3.3	ug/L	WATER	EPA200.8	T	METALS

Sample Location	Sample Date	Analysis Date	Chemical Name	Report Result (text)	Report Result (value)	Result Unit	Reportable Result	Detect Flag	Reporting Detection Limit	Detection Limit Unit	Matrix	Analytic Method	Fraction	Method Analyte Group
MW022	7/31/2013	8/1/2013	Arsenic	13	13	ug/L	Yes	Y	3.3	ug/L	WATER	EPA200.8	T	METALS
MW022	2/4/2014	2/10/2014	Arsenic	11	11	ug/L	Yes	Y	3.3	ug/L	WATER	EPA200.8	T	METALS
MW022	7/31/2014	8/11/2014	Arsenic	14	14	ug/L	Yes	Y	3.3	ug/L	WATER	EPA200.8	T	METALS
MW022	2/3/2015	2/6/2015	Arsenic	14	14	ug/L	Yes	Y	3.3	ug/L	WATER	EPA200.8	T	METALS
MW022	8/11/2015	8/12/2015	Arsenic	16	16	ug/L	Yes	Y	3.3	ug/L	WATER	EPA200.8	T	METALS
MW022	2/17/2016	2/24/2016	Arsenic	12	12	ug/L	Yes	Y	3.3	ug/L	WATER	EPA200.8	T	METALS
MW022	8/9/2016	8/16/2016	Arsenic	15	15	ug/L	Yes	Y	3.3	ug/L	WATER	EPA200.8	T	METALS
MW022	8/9/2016	8/16/2016	Arsenic	14	14	ug/L	Yes	Y	3.3	ug/L	WATER	EPA200.8	T	METALS
MW022	2/17/2017	2/21/2017	Arsenic	10	10	ug/L	Yes	Y	3.3	ug/L	WATER	EPA200.8	T	METALS
MW025	8/10/2015	8/12/2015	Arsenic	< 3.3	3.3	ug/L	Yes	N	3.3	ug/L	WATER	EPA200.8	T	METALS
MW025	2/26/2016	3/2/2016	Arsenic	< 3.3	3.3	ug/L	Yes	N	3.3	ug/L	WATER	EPA200.8	T	METALS
MW025	8/9/2016	8/16/2016	Arsenic	< 3.3	3.3	ug/L	Yes	N	3.3	ug/L	WATER	EPA200.8	T	METALS
MW025	2/14/2017	2/21/2017	Arsenic	< 3.3	3.3	ug/L	Yes	N	3.3	ug/L	WATER	EPA200.8	T	METALS
MW361	2/4/2014	2/10/2014	Arsenic	15	15	ug/L	Yes	Y	3.3	ug/L	WATER	EPA200.8	T	METALS
MW361	8/11/2015	8/12/2015	Arsenic	18	18	ug/L	Yes	Y	3.3	ug/L	WATER	EPA200.8	T	METALS
MW361	2/17/2016	2/24/2016	Arsenic	17	17	ug/L	Yes	Y	3.3	ug/L	WATER	EPA200.8	T	METALS
MW361	8/10/2016	8/16/2016	Arsenic	18	18	ug/L	Yes	Y	3.3	ug/L	WATER	EPA200.8	T	METALS
MW361	2/8/2017	2/14/2017	Arsenic	16	16	ug/L	Yes	Y	3.3	ug/L	WATER	EPA200.8	T	METALS