Contaminated Media Management Plan

Former ESCO Main Plant #1,#2
2141 NW 25th Avenue
Portland, Multnomah County, Oregon

Report Prepared for and Reliance Provided to:

1535-A1 LLC
2495 NW Nicolai Street
Portland, Oregon 97210

Point Source Solutions Project No: ESCI #6285
September 26, 2025

1.0 INTRODUCTION

This Contaminated Media Management Plan (CMMP) has been prepared by Point Source Solutions (Point Source) for the property identified as "Former ESCO Main Plant #1, #2" (Site). This CMMP is intended to assist any future construction team in field identification and management of contaminated media (soil, fill material, groundwater) that could be encountered during site demolition/excavation work during Site redevelopment.

This CMMP includes field protocol for identification, response actions, communications, removal, temporary storage or stockpiling, transportation, and treatment and/or disposal of contaminated media. Decisions pertaining to the identification and management of contaminated media will be made by the project environmental representative, property developer/owner and the Oregon Department of Environmental Quality (DEQ).

With the exception of the area immediately surrounding Building 4, soil vapor has not been evaluated on the Site. The evaluation of soil vapor immediately surrounding Building 4 indicates occurrences of volatile organic compounds which may require mitigation should redevelopment occur.

Due to the size of the Site, the different contaminant impacts and remedial actions, and the potential future multiple uses (residential and occupational), soil vapor will be evaluated on a case-by-case basis as development plans for the Site are implemented.

2.0 SITE DESCRIPTION & ENVIRONMENTAL SETTING

The Site, addressed as 2141 NW 25th Avenue, 2414 NW Nicolai Avenue, 2300 NW 26th Avenue and 2404 NW Nicolai Avenue, Portland, Oregon, 97210, is owned by 1535-A1 LLC (1535-A1).

The Site includes Multnomah County tax lots 1N1E29DD00100 (0.25 acres), 1N1E29DD01600 (0.25 acres), 1N1E28C00100 (15.57 acres), 1N1E29DA01700 (2.36 acres), 1N1E28C00300 (0.35 acres) and 1N1E28CB00800 (0.15 acres) comprising 18.43 acres. This Site is zoned EG1-General Employment and IH-Heavy Industrial by the City of Portland.

The Site is generally bounded by NW Nicolai Street to the north, NW Vaughn Street to the south, NW 24th Avenue to the east, and NW 26th Avenue to the west with surrounding properties being commercial and light industrial in nature.

The Site is identified in **Figure 1** (Site Location Map), **Figure 2** (Topographic Map), **Figure 3** (Site Plan), **Figure 4** (Tax Lots), and **Figure 5** (Former UST Location Diagram), attached to this report.

2.1 Topography

The Site is depicted on the United States Geological Survey (USGS), Portland Quadrangle 7.5-minute series topographic map. This map was published by the USGS in 1990. According to the contour lines on the topographic map, the Site ranges from 82 feet above mean sea level (MSL) in the southwest corner of the Site to 58 feet above MSL in the northeast corner of the Site. The topography slopes down to the northeast toward the Willamette River in the Site vicinity.

2.2 Regional/Site Geology & Soils

According to the *Geologic Map of the Portland Quadrangle (M.N. Beeson, T.L. Tolan, and I.P. Madin, 1991)*, the Property is underlain by Pleistocene-aged complexly interlayered and variable silt, sand, and gravel deposited in a major flood channel that was cut in earlier and/or contemporaneous fine and coarse grained glacial outburst flood sediments.

At the Site, 0.5-2.5 feet of urban fill material overlies native deposits. The near surface native sediments are underlain by unsaturated fine-grained facies of the Pleistocene flood deposits (17-35 feet thick at Site). Below the fine-grained deposits lie course-grained flood deposits and the Upper Troutdale Formation which consists of moderately to well-lithified conglomerates with minor interbeds of sandstone, siltstone, claystone, volcanic ash and debris flows (up to 73 feet thick in boring terminated at 90 feet bgs at Site). At depth, the rocks of the Troutdale Formation are underlain by the Miocene to Pliocene aged Sandy River Mudstone and Miocene aged flood-basalt flows of the Columbia River Basalt Group.

The following soil description is taken from the USDA Soil Conservation Service Soil Survey of Multnomah County.

The Site is mapped primarily as Urban Land. Urban Land is used mainly for commercial purposes. Eighty five percent or more of the soils are covered with office buildings, service buildings, hotels and motels, industrial buildings and yards, streets and sidewalks, parking lots, railroads, shopping centers, closely spaced residences, and other works and structures. Original soils were silt loam, loam, silty clay loam, and gravelly loam.

2.3 Hydrogeology

Resource protection wells installed on the Site in 2018 consistently demonstrated measured static water levels from 40 to 65 feet bgs with the groundwater elevation being measured at approximately 20 feet above mean sea level (MSL) with a seasonal variation of up to 1.5 feet. Coarse-grained deposits were noted as the water-bearing unit at the Site.

Groundwater flow has consistently been determined to be to the northeast toward the Willamette River.

According to the USEPA Ground Water Handbook, Vol.1 Ground Water and Contamination, September 1990, the water table typically conforms to surface topography. This means the direction of flow for shallow groundwater is generally from higher elevations to lower elevations. Localized flow direction may vary as a result of tide, rainfall, development, geologic characteristics, nearby surface water bodies, underground utilities such as storm drains, septic systems and sewers, or other influences such as the presence of high-volume wells.

3.0 SITE DEVELOPMENT HISTORY

Development of the Site has a relatively long history that dates to the late-1800s. Initially, the Site was developed with scattered residential development, and the original Chapman School site (1901 Sanborn Map). By 1905, the scattered residential development had largely been replaced by portions of the Lewis & Clark Centennial Exposition grounds, the original Chapman School and the Vaughn Street Ball Grounds (1905 Sanborn Map). The Electric Steel Corporation (ESCO) began operating a foundry on the Site in 1913. The foundry was expanded through the 1960s until it ended production in 2016. The foundry specialized in the casting of products for the mining, construction, and oil & gas industries.

In 2016, ESCO ended production of the Main Plant operations beginning the closure process and decommissioning of the 103 year old facility. The initial phase demolition of the Site industrial structures was conducted by Northwest Demolition & Dismantling (NW Demolition) in 2017-2018, and according to NW Demolition deconstruction included a variety of operational strategies to mitigate impacts of industrial air emissions, while controlling Site discharges and minimizing the quantities of regulated solid and hazardous waste generated from demolition. The initial phase was only for large scale structural demolition and building clearing involving 23 buildings, with the exception of Building 4, Building 9, and Building 15. The initial phase of demolition also did not include removal of concrete foundation slabs. The remaining foundation slabs along with Buildings 9 and 15 were demolished by Elder Demolition (Elder) in 2019-2020 after the sale of the Site to 1535-A1 LLC.

4.0 SITE REGULATORY HISTORY & APPLICABLE ENVIRONMENTAL INVESTIGATIONS

4.1 Site Regulatory History

The Site is listed in ODEQ's Environmental Cleanup and Tanks Program regulatory records as follows:

LUST Facility 26-18-0569

Six USTs (T7, T8, T9A, T9B, T14 and T17) were decommissioned at the Site during the 2018 demolition event. The following extents of soil contamination were identified from samples collected from the vicinity of USTs discovered on-site and decommissioned under Point Source's supervision in 2018. The sampling and decommissioning, as well as cleanup actions taken in response, are documented in the Point Source February 2019 Risk-Based Corrective Action Determination report.

- T7 - Staining and odors indicative of petroleum hydrocarbon impact were noted in the T7 UST cavity following removal. The UST was 6.0 feet in diameter and 10.0 feet long. Concentrations of diesel-range petroleum hydrocarbons (TPH-Dx) up to 17,000 mg/kg and gasoline range petroleum hydrocarbons (TPH-Gx) up to 637 mg/kg were detected in initial soil samples collected below tank bottom. PCS in the T17 cavity was found to be limited in extent.

- T9A and T9B – T9A and T9B, interpreted originally to be one buried UST based on the geophysical survey, were revealed to be two USTs buried in a single nest. T9A was found to be 6.0 feet in diameter and 10.0 feet long. T9B was found to be 7.0 feet in diameter and 17.0 feet long. Initial soil samples were collected from both UST cavities. TPH-Dx and TPH-Gx were encountered beneath T9A at concentrations up to 664 mg/kg, and 1,020 mg/kg respectively. TPH-Dx was encountered beneath T9B at concentrations up to 690 mg/kg. PCS in the T9A and T9B nested cavity was found to be limited in extent.

- T14 – Heavy staining and odors indicative of petroleum hydrocarbon impact were noted in the UST cavity. The UST was 7.0 feet in diameter and 32.0 feet long. Concentrations of TPH-Dx and TPH-Gx were detected in the initial soil samples at concentrations of up to 42,800 mg/kg TPH-Dx and 8,080 mg/kg TPH-Gx. A 5 foot thick lens, 5.0 feet to 10.0 feet below ground surface (bgs) of diesel and gasoline impacted soil related to former T14 (decommissioned by removal) was left in place due to a large electrical tower being over top of the remaining plume. Soil samples collected of this material returned concentrations of diesel and gasoline below method detection limits, however soil staining and odor indicative of petroleum impact were present in the soils sampled. The remaining pocket of PCS is estimated to be approximately 180 cubic yards of material.

- T17 – Heavy staining and odors indicative of petroleum hydrocarbon impact were noted in the UST cavity and TPH-Dx and TPH-Gx were detected in initial soil samples at concentrations up to 31,100 mg/kg and 2,780 mg/kg respectively. The UST was 4.0 feet in diameter and 20 feet long.

All USTs were decommissioned by removal with 3,826 tons of PCS disposed of at Wasco County Landfill and 432 tons of PCS disposed of at Hillsboro Landfill. Point Source submitted a *Risk-Based Corrective Action Determination* dated February 29, 2019 to the ODEQ. ODEQ issued a "No Further Action" determination for the release from these USTs on August 14, 2019. Applicable closure documentation can be found at:

https://www.deq.state.or.us/Webdocs/Forms/Output/FPController.ashx?SourceId=26-18-0569&SourceIdType=12.

HOT LUST Facility 26-20-0458

One heating oil tank (T6) was decommissioned at the Site during the 2019-2020 demolition event. The UST was decommissioned by removal with 120 tons of PCS disposed of at Hillsboro Landfill. Point Source submitted a *Heating Oil Tank Decommissioning and Generic Remedy Closure Report* dated July 23, 2020 to ODEQ. ODEQ acknowledged receipt of the report and Heating Oil Tank Project Certification on January 4, 2021. Applicable certification documentation can be found at:

https://www.deq.state.or.us/Webdocs/Forms/Output/FPController.ashx?SourceId=26-20-0458&SourceIdType=12

LUST Facility 26-20-0284

Two USTs (T10 and T15) were decommissioned at the Site during the 2019-2020 demolition event. Both USTs were decommissioned by removal with 4,199 tons of PCS disposed of at Hillsboro Landfill. Point Source submitted a *UST Decommissioning and Cleanup Report* dated August 26, 2020 to ODEQ. ODEQ issued a "No Further Action" determination for the release from these USTs on May 25, 2021. Applicable closure documentation can be found at:

https://www.deq.state.or.us/Webdocs/Forms/Output/FPController.ashx?SourceId=26-20-0284&SourceIdType=12

Prior to commencement of the Main Plant #1/#2 shutdown and subsequent demolition, three (3) additional LUST Files had been opened on the Site.

- **LUST File #26-90-0054** was issued a No Further Action determination on 11/23/1990.
- **LUST File #26-93-0026** was issued a No Further Action determination on 10/21/1996.
- **LUST File #26-97-0487** was issued a No Further Action determination on 09/19/2000.

ECSI Facility #6285

On July 6, 2018, 1535-A1 LLC submitted an "Intent to Participate" application to the ODEQ Voluntary Cleanup Program for the purpose of seeking a "No Further Action" determination for the documented release on the Site - ECSI #6285.

A Baseline Environmental Site Assessment (BESA) Report for the Main Plant was prepared in May 2018 by Bridgewater Group in association with Tuppan Consultants on behalf of the ESCO Corporation to evaluate soil and groundwater quality at the Site and evaluate for the presence of underground storage tanks (USTs). The results of that preliminary investigation assisted in the development of the Contaminated Media Management Plan (CMMP) prepared by Point Source for the final phase of demolition conducted by Elder.

Point Source prepared the CMMP on September 12, 2019, to assist the final demolition team in field identification and management of contaminated media that was predicted to be encountered during demolition/excavation work. The CMMP included field protocol for identification, response actions, communications, removal, temporary storage or stockpiling, transportation, and treatment and/or disposal of contaminated media. Off-site transport and disposal of contaminated media was considered to be the most suitable for soil management for this Site due to the ease of access of large machinery and trucking. The CMMP was submitted to Mr. Ray Hoy of ODEQ on October 23, 2019 and verbal approval of the CMMP was given by Mr. Hoy on November 1, 2019.

Based upon the BESA Report, post-demolition investigations conducted by Point Source, and various environmental conditions found during demolition (such as underground storage tanks (USTs) and in-ground hydraulic hoists), approximately 7,017 tons of petroleum contaminated soil (PCS) and polycyclic aromatic hydrocarbon (PAH) impacted soil from the Site was excavated and transported to the Waste Management Hillsboro Subtitle D Landfill. In total, remedial actions overseen by Bridgewater/Tuppan and Point Source resulted in the removal and disposal of 10,843 tons of impacted soil.

Residual soil contamination potentially impacting future development contamination was evaluated using an ISM (incremental sampling methodology) approach and the results were limited to detections of Benzo(a)pyrene Equivalence (BaPeq), as well as Arsenic and Lead. Based on the current Site zoning, EG1-General Employment and IH-Heavy Industrial, by the City of Portland and potential for zoning change, the appropriate receptors for the current and future land use are Occupational and Future Residential Receptors.

4.2 Applicable Environmental Investigations

The following applicable environmental investigations of the Site were provided to Point Source.

- *Baseline Environmental Site Assessment Report, Former Main Plant Properties ESCO Corporation, 2141 NW 25th Avenue, Portland, Oregon dated May 2018 prepared by Bridgewater Group in association with Tuppan Consultants LLC. Project #ESCO_BESA180427.*
- *Stormwater Infiltration Facility Soil Investigation, ECSI No: 6285, Former ESCO Plant #1/#2, 2141 NW 25th Avenue, Portland, Oregon dated September 6, 2023, prepared by Point Source Solutions.*
- *Site Characterization, Remedial Action and Residual Risk Assessment Report, ECSI No: 6285, Former ESCO Plant #1/#2, 2141 NW 25th Avenue, Portland, Oregon dated April 30, 2025, prepared by Point Source Solutions.*

5.0 SUBSURFACE CONDITIONS & RESIDUAL CONTAMINATION

5.1 Soil

The following areas contain residual contamination after the completion of remedial activities:

- **Area B/Building 8/EB-10 Residual PAHs and Arsenic**

  Concentrations of BaPeq exceed the DEQ Residential RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation in the Area B Building 8 area.

  BESA ISM (2018 - pre-remedial actions) returned average BaPeq in the upper soil horizon (0.5 – 2.5 ft bgs) exceeding the DEQ Residential RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation. No concentrations of PAHs in the soil of the vicinity exceed DEQ Occupational RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation.

  BESA ISM sampling also confirmed average concentrations of arsenic in both depth horizons that exceed the DEQ Occupational RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation. The upper horizon (0.5 -2.5 ft bgs) exceeds the published regional background concentration for arsenic by 1.1 mg/kg, while the lower horizon (2.5 – 5.0 ft bgs) exceeds the regional background by 25.8 mg/kg. This area is currently uncapped, but it is only used as a storage area for nearby occupational usage by Calbag Metals. Proper disposal of selected soils volumes can then more easily occur with final replacement with clean fill as per the CMMP.

- **Area A/EB-7 – Residual PAHs, Arsenic, Lead**

  Concentrations of BaPeq exceed the DEQ Residential RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation in Area A. The area containing elevated concentrations of PAHs is bound laterally to the north by SB7, to the east by SB9, to the south by SB5, and to the west by SB6.

  BESA ISM (2018 - pre-remedial actions) also returned average BaPeq in the upper soil horizon (0.5 – 2.5 ft bgs) exceeding the DEQ Residential RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation. Elevated concentrations of PAHs are found in this area below the asphalt cap to 6.0 feet bgs, where clean vertical samples were obtained from SB1, SB2, SB3, and SB4.

  BESA ISM sampling also confirmed average concentrations of arsenic in both depth horizons that exceed the DEQ Occupational RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation. The upper horizon exceeds the published regional background concentration for arsenic by 2.4 mg/kg, while the lower horizon exceeds the regional background by 5.2 mg/kg. BESA ISM sampling also identified average concentrations of lead exceeding the DEQ Residential RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation in the lower depth horizon. It should be noted that 2 of the 3 sample aliquots (sample replicates) for the Area A ISM lower depth interval were below the DEQ Occupational RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation at AP-L1=308; AP-L2=323; AP-L3=936 (BESA, Table 4-3). This variability between replicate samples (308 to 936 mg/kg) which straddle the appliable RBCs and cleanup goals for the Site represents heterogeneity of urban fill and deleterious materials within the subsurface. These factors increase the potential that the sampling methodology will be more prone to elicit inaccurate risk conclusions and a wider confidence interval. This area is currently capped with an asphalt parking area as an engineering control. **If the protective cap is removed for additional construction or redevelopment, it will be necessary to resample Area A with a more subdivided decision unit to further evaluate possible spatial patterns of arsenic and lead concentrations within Area A as per guidance by the ITRC. Proper disposal of selected soils volumes can then more easily occur with final replacement with clean fill as per the CMMP. A Work Plan describing the soil re-sampling plan should be submitted to DEQ for approval.**

- **Roosevelt 5 – Residual PCS, Arsenic**

  A small pocket of PCS is located on the eastern property line of tax lot 1N1E28C100 in the Roosevelt 5 area. Concentrations of diesel in the soil exceed DEQ Residential RBC_{SS} for Ingestion, Dermal Contact, and inhalation. The lens of contamination is bound laterally by clean samples NPW-5 to the north, EPW2-5 to the east, SPW-5 to the south, and PB-7 to the west. The contaminated soil is confined to the sidewalk area along NW 24th Avenue. The lens extends vertically from approximately 3.0 to 6.0 ft bgs. This area is estimated to be less than 10 cubic yards of material and laterally extend approximately 15 feet in length by 5 feet wide and is currently under an engineering control of a protective cap via the concrete sidewalk along NW 24th Avenue, and therefore inaccessible to receptors.

  Point Source 2020 ISM sampling confirmed average concentrations of arsenic exceeding the DEQ Occupational RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation in the area. Upper horizon soils (0.5 – 2.0 ft bgs) averaged 1.8 mg/kg above the regional background concentration, lower horizon soils (2.0 ft – 4.0 ft bgs) averaged 2.6 mg/kg above the background concentration. This area is currently uncapped, but it is not used by any occupational tenants. If more substantial and regular occupational usage of the area is to occur, or if the area is redeveloped for residential usage, it will be necessary to resample the Roosevelt 5 area with a more subdivided decision unit to further evaluate possible spatial patterns of arsenic concentrations as per guidance by the ITRC. Proper disposal of selected soils volumes can then more easily occur with final replacement with clean fill as per the CMMP.

- **Building 43 – Residual PAHs, Arsenic**

  Concentrations of BaPeq exceed the DEQ Residential RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation in Building 43 area. SB5 containing the elevated concentration of BaPeq is bound laterally to the north by SB12, to the east by SB4, to the south by SB8, and to the west by SB11.

  Point Source 2020 ISM sampling confirmed average concentrations of PAHs above the corresponding BaPeq for DEQ RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation. Soils from 0.5 – 2.0 bgs averaged a BAPeq of 1.757 mg/kg, exceeding the DEQ Residential RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation, while soils from the 2.0 – 4.0 ft bgs horizon averaged 2.373 mg/kg, exceeding the DEQ Occupational RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation. It should be noted that 2 of the 3 sample aliquots (sample replicates) for the Building 43 ISM upper depth interval sample were below the DEQ Residential RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation at U1=1.67; U2=1.27; U3=2.33 (Table 3A) and similarly the ISM lower depth interval sample were below the DEQ Occupational RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation at L1=1.77; L2=3.88; L3=1.47 (Table 3A). This variability between replicate samples (example 1.27 to 3.88 mg/kg) which straddle the appliable RBCs and cleanup goals for the Site represents heterogeneity of urban fill and deleterious materials within the subsurface. These factors increase the potential that the sampling methodology will be more prone to elicit inaccurate risk conclusions and a wider confidence interval. This area is currently uncapped, but it is only used as a storage area for nearby occupational usage by Calbag Metals. **If more substantial and regular occupational usage of the area is to occur, or if the area is redeveloped, it will be necessary to resample the Building 43 area with a more subdivided decision unit to further evaluate possible spatial patterns of BaPeq concentrations as per guidance by the ITRC. Proper disposal of selected soils volumes can then more easily occur with final replacement with clean fill as per the attached CMMP. A Work Plan describing the soil re-sampling plan should be submitted to DEQ for approval.**

  Point Source 2020 ISM sampling confirmed average concentrations of arsenic in both horizons exceed the DEQ Occupational RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation, however the upper horizon was found to be less than the published regional background concentration for arsenic (8.8 mg/kg), and the lower horizon exceeded the background concentration by 0.8 mg/kg. This area is currently uncapped, but it is only used as a storage area for nearby occupational usage by Calbag Metals. If more substantial and regular occupational usage of the area is to occur, or if the area is redeveloped for residential usage, it will be necessary to resample the Building 43 area with a more subdivided decision unit to further evaluate possible spatial patterns of arsenic concentrations as per guidance by the ITRC. Proper dispose of selected soils volumes can then more easily occur with final replacement with clean fill as per the CMMP.

  The former Building 43 is the current location of Stormwater Basin #4 serving the Site. In September 2023 Point Source conducted a Stormwater Infiltration Facility Soil Investigation which included sampling within this basin. No evidence of leaching of these contaminants was disclosed as a result of this investigation. The investigation was approved by DEQ.

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- **Roosevelt 3 – Residual PCS, Arsenic**

  Residual heavy oil concentrations in the vicinity of a former leaking hydraulic ram in the Roosevelt 3 area are found between 8.0 and 12.0 ft bgs in concentrations between 584 and 3,000 mg/kg. Analysis for constituents such as PAHs, Metals, VOCs, and PCBs returned no detections exceeding applicable RBCs.

  Point Source 2020 ISM sampling confirmed average concentrations of arsenic exceeding the DEQ Occupational RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation. Upper horizon soils averaged 0.7 mg/kg above the regional background concentration of 8.8 mg/kg, while lower horizon soils averaged 1.2 mg/kg above the background concentration. This area is currently uncapped, but it is not used by any occupational tenants. If more substantial and regular occupational usage of the area is to occur, or if the area is redeveloped for residential usage, it will be necessary to resample the Roosevelt 3 area with a more subdivided decision unit to further evaluate possible spatial patterns of Arsenic concentrations as per guidance by the ITRC. Proper disposal of selected soils volumes can then more easily occur with final replacement with clean fill as per the CMMP.

- **Roosevelt 4 – Residual PAHs, Arsenic**

  Point Source 2020 ISM sampling confirmed average concentrations of PAHs above the corresponding BaPeq for DEQ Residential RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation. Soils in the upper depth horizon averaged a BAPeq of 1.023 mg/kg, while soils from the lower depth horizon averaged a BaPeq of 0.2888 mg/kg, both exceeding the DEQ Residential RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation.

  Point Source 2020 ISM sampling confirmed average concentrations of arsenic in both horizons exceed the DEQ Occupational RBC_{ss} for Soil Ingestion, Dermal Contact, and Inhalation. Upper horizon soils averaged 1.0 mg/kg above the regional background concentration of 8.8 mg/kg, while lower horizon soils averaged 0.7 mg/kg above the regional background concentration. This area is currently uncapped, but it is not used by any occupational tenants. If more substantial and regular occupational usage of the area is to occur, or if the area is redeveloped for residential usage, it will be necessary to resample the Roosevelt 3 area with a more subdivided decision unit to further evaluate possible spatial patterns of Arsenic concentrations as per guidance by the ITRC. Proper disposal of selected soils volumes can then more easily occur with final replacement with clean fill as per the CMMP.

- **Soil lens below electrical tower near LUST #26-18-0569 & LUST #26-20-0284**

  A 5-foot-thick soil lens (5.0 feet to 10.0 feet bgs) of visually PCS-impacted soil related to LUST #26-18-0569 & LUST #26-20-0284 is present surrounding an active electrical tower. Soil samples of this material identified concentrations of diesel and gasoline below method detection limits, however soil staining and odor indicative of PCS impact were present in the soils. This area is estimated to include approximately 180 cubic yards of material. This material may require removal and proper disposal as per the attached CMMP after the removal of the electrical tower.

Locations of residual contamination are shown in **Figures 6-8** according to analytical suite (PAHs, Metals, and TPH). Residual contaminant concentrations are displayed on **Tables 1-8**.

5.2 Groundwater

Low-level concentrations of TPH, VOCs, and PAHs were detected in groundwater samples. There has been no documented detections of those COIs above Leaching to Groundwater (RBC_{sw}) that did not have a vertical separation distance of at least 10 ft between soil and groundwater in any of the soil investigations conducted from 2017 to 2023. Groundwater has also been ruled out as a route of exposure as there is no beneficial use of groundwater at the Site or in the Site vicinity based on the results of the BLWUD completed in the ICP report for this Site.

5.3 Soil Vapor

With the exception of the area immediately surrounding Building 4, soil vapor has not been evaluated on the Site. The evaluation of soil vapor immediately surrounding Building 4 indicates occurrences of volatile organic compounds which may require mitigation should redevelopment occur.

Due to the size of the Site, the different contaminant impacts and remedial actions, and the potential future multiple uses (residential and occupational), soil vapor will be evaluated on a case-by-case basis as development plans for the Site are implemented.

6.0 PRELIMINARY SITE REDEVELOPMENT ACTIVITIES

At the time of this CMMP submittal, no specific redevelopment activities are planned. Any redevelopment plans should be submitted by the Responsible party (RP), Site operator, or contractor to Portland Bureau of Development Services (BDS) with a Site Development Permit and a work plan detailing a Site-specific development plan should be forwarded to ODEQ as further discussed below.

6.1 ODEQ Notification

DEQ will require future work to be subject to DEQ oversight. Redevelopers should enter the DEQ Cleanup Program through the Your DEQ online portal. Assignment of a DEQ Project Manager will likely take more than 15 days.

6.2 Hazard Communication Plan (HCP) & Health and Safety Plan (HASP)

The Responsible party (RP), Site operator, or contractor must prepare a Hazard Communication Plan (HCP) as required by Occupational Safety and Health Administration (OSHA) regulations for work safety as per Code of Federal Regulations (29 CFR 1910.120) and worker “right to know” requirements (29 CFR 1926.59) which covers hazard communication information and training, as well as potential job hazards and protections, including label and material safety data sheet information and other required safety training. A written copy of the HCP must be submitted to the RP prior to the start of work on the Site and must be posted at all times during the duration of the project. The RP is responsible for notifying any/all subcontractors of pertinent environmental conditions. Subcontractors may either adopt the RP’s HCP or must prepare their own HCP. This document should be used in conjunction with, not in place of, the HCP and the project specifications.

Additionally, in conjunction with the development of the HCP, the RP must prepare a Site-specific Health and Safety Plan (HASP) in accordance with OSHA requirements. A safety meeting will be conducted at the site prior to the commencement of the fieldwork and all field personnel directly involved in the fieldwork will be made aware of potential health and safety issues during the briefing. Topics will include potential exposure to contaminants of interest, personal protective equipment (sampling and media contact), location of first aid kit, and location/directions to closest emergency medical facility. This Site will require the minimum use of Level D personal protective equipment (PPE), including steel-toed boots, disposable gloves, hard hat, and safety glasses. Each contractor is responsible for the safety of its employees, including compliance with applicable OSHA regulations.

7.0 CONTAMINATED MEDIA MANAGEMENT PLAN

The goals of this CMMP are to (1) provide the excavation contractor with information on the preliminary spatial distribution of impacted soil at the Site, (2) establish a decision structure to assist the earthwork contractor in the detection and management of impacted soil during excavation activities, (3) prevent the exacerbation of environmental conditions, and (4) insure that site conditions remain protective for future receptors.

Additionally, actions taken under this CMMP must ensure that post construction conditions of redevelopment be considered protective of future receptors.

7.1 ODEQ Clean Fill Screening Levels

There are currently no ODEQ regulations requiring pre-transport testing of soil that is reasonably expected to be clean. However, ODEQ has published an internal management directive (*Clean Fill Determinations*, dated July 23, 2014), which includes Clean Fill Screening Levels (CFSLs) to use as guidance when evaluating disposal options for soil with low levels of contamination. Soil that does not appear contaminated and contains contamination at levels less than the ODEQ CFSLs can generally be re-used on site or disposed of off-site without restrictions. Excavation spoils will not meet DEQ's definition of "clean fill" if field screening evidence of contamination is observed or other chemical constituents are found to be present though additional characterization during construction.

For this Site, contractors should assume that soil generated during construction will not qualify as clean fill, unless the results of soil testing indicate otherwise.

7.2 Identification & Management Of Contaminated Soil

As mentioned above, visual and olfactory (staining and odor) observations, field screening instrument readings (photoionization detector), and sheen testing are all methods that can be used to assist in identification of petroleum impacted soils. It should be noted that soil impacted with TPH and VOCs exhibits distinct field screening characteristics, soil impacted with BaPeq, arsenic and/or lead generally does not. Soil management will rely on analytical results provided in Section 4.0 & 5.0, as well as specific sampling.

7.3 Soil Management Method #1: Off-Site Transport & Disposal

Based on known subsurface conditions at the Site (Section 4.0 & 5.0), contractors should assume that soil containing debris/urban fill or removed from the vicinity of borings specified in Section 4.0 & 5.0 during construction will not qualify as clean fill, unless the results of soil testing indicate otherwise.

Soil generated during development of the Site is expected to be suitable for disposal as non-hazardous waste at a RCRA Subtitle D Landfill or an ODEQ-approved disposal facility. Where soil needs to be disposed of at an off-site facility, the excavation contractor will need to obtain a permit from the disposal facility prior to hauling the impacted soil to their facility. The earthwork contractor will likely need to provide chemical analytical laboratory data to the selected disposal facility.

Copies of the permit should accompany each load transported to the selected disposal facility.

Disposal facilities often have the following requirements prior to accepting material at their facility:

- No material will be received without a completed contaminated soil profile and application form (to be completed by the earthwork contractor), an approval of credit application on file and pre-approval from the disposal facility.

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- Trucks will be permitted to weigh in as negotiated with the facility.
- Material may be sampled upon delivery by the disposal facility. Comparisons may be made between the submitted profile and on-site analysis. Soil transported to the disposal facility that is not consistent with the soil profile may be rejected.
- Exported soil must not contain any free liquids or foreign material (i.e., rebar, fittings, cans, wood, etc.). Truck loads with excessive foreign material may be reloaded and returned to the contractor or screened, sorted, and disposed of by the disposal facility for an additional fee.

7.3 Soil Management Method #2: On-Site Re-Use

Based on our knowledge of the environmental condition of the Site, soil generated during earthwork at the Site can be re-used on site without additional testing requirements, assuming (1) it is geotechnically suitable, (2) does not exceed its ODEQ CFSL and/or Soil Ingestion, Inhalation, and Dermal Contact RBC_{ss} for Residential Receptors and (3) is ultimately capped with either a structure, pavement, or an approved geotextile. Refer to **Figures 6, 7, & 8** for the extent of estimated residual contamination on the Site.

Long term management of contaminated materials on the Site is subject to DEQ approval.

7.3.1 Stockpile Management

If potentially contaminated soil is encountered within the boundary of the Site that cannot be immediately transported off site for disposal, it must be temporarily stockpiled in areas designated by a qualified firm. Soil that is placed in temporary stockpiles within the project site must be well maintained at all times. All stockpiled soil must be placed on impermeable plastic sheeting (minimum 6-mil thick) with a berm around the perimeter of the stockpile. The plastic sheeting and berm prevent the runoff of stockpiled soil contaminants to surrounding areas. The berm may be constructed with hay bales or other equivalent methods approved by a qualified firm. The bottom plastic sheeting should be lapped over the berm materials, and the soil stockpile within the berm should also be covered with plastic sheeting to prevent erosion or leaching of contaminants from the soil stockpile impacting the underlying soil. The upper plastic sheeting covering the soil stockpile should be secured using sandbags or an equivalent. The upper plastic sheeting prevents the stockpiled soil from being exposed to precipitation and wind.

The contractor is responsible for restoration of all stockpiled areas to a pre-stockpile condition, which means all soil and debris should be removed from the area. Stockpile plastic debris is not to remain on the project site or any adjacent sites following stockpile soil removal. If stockpiled soil is removed for off-site disposal, completion of removal must be satisfactory to the Responsible party (RP), Site operator, or their representative.

7.3.2 Composite Soil Sampling

Potentially contaminated stockpiled soil will be sampled using composite soil sampling methods and analyzed for disposal profiling.

STOCKPILE SOIL SAMPLING FREQUENCY	
Stockpile Volume Cubic Yards	**Number of Composite Soil Samples to Collect**
0 - 10	1
11 - 50	2
51 - 100	3

101 - 500	4
Each composite soil sample will be comprised of three soil sub-samples collected from a particular area of the soil stockpile. Soil stockpiles greater than 1,000 cubic yards will be sampled at a rate of five composite soil samples for the first 500 cubic yards, plus one composite soil sample for each additional 500 cubic yards.	

Stockpiled soil samples will be collected by hand or the use of hand tools. Decontaminated hand tools should be used to remove the surface layer of soil and then the soil sample will be retrieved with a decontaminated stainless steel scoop or disposable gloves. Chrome-plated tools will not be used.

Soil samples will be collected using the procedure outlined below. Disposable gloves will be worn and changed between samples.

- Remove the top layer of soil to the desired sampling depth using a decontaminated hand tool.
- Conduct an initial visual screen (based on discoloration and sheen) to help identify the most appropriate sampling location.
- Mix the discrete soil samples into one composite soil sample in a decontaminated stainless steel bowl or disposable plastic bag until thoroughly homogenized.
- Transfer the composite soil sample to a labeled, laboratory-prepared sample jar using a decontaminated stainless steel or plastic laboratory spoon. Fill the jar(s) completely to minimize headspace.
- Clean the jar rim(s) before tightening the lids, and quickly and adequately seal the sample containers.
- Collect a sufficient volume of soil sample for the particular analysis. Place the labeled soil sample jar(s) in an iced cooler for temporary storage. Transport the soil samples to the chemical analytical laboratory.
- Use a field notebook to record a description of the soil that was sampled, the location of soil sample, the sample I.D., and the time of soil sample collection. Record the sample on the soil sampling field forms and chain-of-custody form. The stockpile soil sample I.D. will include a prefix identifying the stockpile (SP) number followed by a sequential numeric designation. For example, the third composite soil sample collected from stockpile SP-3 will be identified as "SP3-3".
- Decontaminate the equipment between the collection of soil samples. Decontamination will include: (1) rinse with tap water and scrub with a scrub brush until free of large particles, (2) wash with phosphate-free detergent solution, (3) rinse with tap water and (4) rinse with distilled water.

Soil stockpile composite samples will be submitted to an analytical laboratory for analysis of the following (as required by the receiving disposal facility):

- Total Petroleum Hydrocarbons by Gasoline-range (NWTPH-Gx), and Diesel and Oil Range (NWTPH-Dx);
- Volatile Organic Compounds (VOCs) by EPA Method 8260;
- Polycyclic Aromatic Hydrocarbons (PAHs), EPA 8270;
- Polychlorinated Biphenyls by Method 8082 (PCB Aroclors);
- Total Metals by EPA 6000/7000 Series Methods

The chemical analytical results shall be used to evaluate the appropriate off-site disposal location. All soil designated for off-site disposal must be characterized and permitted in accordance with the receiving facility's requirements prior to transport and disposal.

7.4 Potential USTs

A total of fourteen (14) USTs have been decommissioned by removal with a total of six (6) confirmed LUST files, all resulting in file closure through "No Further Action" determinations. Further details are discussed in Section 4.1. At this point in the redevelopment of the Former ESCO Main Plant, there are only three (3) remaining USTs (T4, T5, and T11) that were anticipated but have not been confirmed and are unsupported by geophysical data and test pits. However, the existence of these USTs cannot be ruled out and the future discovery of which should still be considered.

In the event a UST is encountered during redevelopment, the Responsible party (RP), Site operator, or contractor should cease work in the area of discovery and notify an owner's representative so the UST can be decommissioned by a licensed UST service provider in accordance with current applicable DEQ rules and regulations.

7.5 Erosion & Dust Control

General Site planning for erosion prevention already exists the Site to control soil erodibility through vegetative cover, and shallow topography. Once the remaining concrete slabs and asphalt paving have been removed from the Site, the exposed soil will become susceptible to erosion by wind and water; therefore, erosion control measures should continue to be planned carefully and be in place before construction begins that removes concrete and/or asphalt. Silt fences, hay bales, and/or granular haul roads will be used as required to reduce sediment transport during construction to acceptable levels.

Erosion control best management practices be implemented in accordance with the State of Oregon Administrative Rules; OAR 340-41-006, and OAR 340-41-455; City of Portland Code (PCC) Title 10 Erosion and Sediment Control Regulations, and Multnomah County regulations regarding erosion control. In general, erosion control measures must limit sediment transport to less than 1 ton per acre per year, as calculated by the Universal Soil Loss equation.

7.6 Cultural Resources

This Site is not expected to contain cultural resources or archaeological artifacts. However, if cultural or archaeological resources are inadvertently discovered during redevelopment, all work in the area must stop and the Legislative Commission on Indian Services shall be notified by calling 503.986.1067 or visiting www.leg.state.or.us/cis/ for further information. The Oregon State Historic Preservation Office should also be contacted (www.oregon.gov/oprd/HCD/SHPO/Pages/index.aspx) regarding discovery or potential damage to archaeological sites. ODEQ should also be contacted so that modifications to the scope of work may be discussed. Additionally, in conjunction with any redevelopment plans an Inadvertent Discovery Plan should be prepared.

7.7 Reporting Requirements

The Responsible party (RP), Site operator, or contractor is responsible for keeping a detailed daily record of all soil excavation, stockpiling, export, and disposal of potentially contaminated soil. This includes the purpose, origin, destination, and volume of soil that is (1) loaded and hauled to the approved off-site disposal facilities, (2) re-used as fill on the Site, or (3) transported to temporary stockpile locations (within the Site). The contractor is responsible for preparing a daily field report for distribution to the owner that identifies the number of truck-loads of soil transported off site and daily tonnage for each disposal location. All soil excavation, handling, and disposal activities will be documented in these daily field reports by the contractor, and soil sampling and analysis by a qualified firm will be summarized in a final report. The daily reports should also contain documentation of any dewatering systems as described in Section 6.8.

7.8 GROUNDWATER MANAGEMENT

Groundwater has been noted to be encountered at depths between 40 and 65 feet bgs in the vicinity of the Site. It is unknown whether groundwater will be encountered during future redevelopment activities. If only a limited volume of groundwater or surface water requires removal during excavation, vacuum trucks can be mobilized to remove and dispose of the accumulated water.

If the quantity of water encountered merits dewatering, the contractor should make arrangements to have the water generated during construction activities pumped to above-ground storage tanks for management. Containerized water will require handling and chemical analytical testing in accordance with applicable regulations.

If impacted groundwater is identified during construction, contingencies to address unacceptable contaminant levels in the effluent stream will be employed. A typical treatment system could include a series of 20,000-gallon storage tanks equipped with chitosan socks, carbon adsorption filters, sand filters, and/or bag filters to remove sediments and contaminants (if necessary). The excavation contractor is responsible for obtaining the necessary discharge permits; the treatment system setup, maintenance, and modification of the system; effluent testing; discharge metering; and agency reporting.

8.0 IMPORTED BACKFILL CONSIDERATIONS

All fill material imported to the Site shall consist of either a manufactured rock product (e.g., ¾-inch-minus crushed rock from a permitted rock quarry) or must be free of contaminants at concentrations exceeding DEQ's CFSLs. It is the Responsible party (RP), Site operator, or contractor's responsibility to ensure all imported fill material meet these criteria and provide the owner with the imported material origin information and accompanying documentation demonstrating the material meets DEQ CFSLs, if not using a manufactured rock product. If the source facility or contractor cannot provide documentation demonstrating that the material meets DEQ CFSLs, the material should not be used as backfill at the project site. In addition, if evidence of contamination is observed in imported fill material, the RP should reject the imported backfill and identify an alternate source. Also, material imported as structural backfill should be evaluated and approved by the geotechnical engineer before placement on the Site.

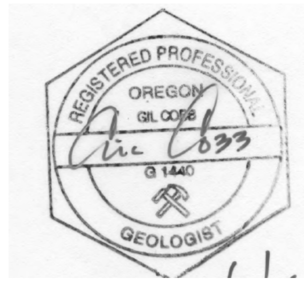
9.0 UNFORESEEN CONDITIONS

In the event that undocumented contamination or other potentially hazardous conditions are encountered that are not addressed in this CMMP, the Responsible party (RP), Site operator, or contractor shall cease work and notify the owner and the qualified environmental contractor. The earthwork contractor will then barricade or otherwise isolate the area and avoid filling the area until authorized to do so by the qualified environmental contractor. The qualified firm will determine the appropriate course of action to assess potential unknown conditions encountered during excavation. The earthwork contractor shall not replace any known or suspected contaminated soil in any excavation area without prior approval by the qualified environmental contractor.

10.0 ASSUMPTIONS AND LIMITATIONS

This CMMP is designed to provide the Responsible party (RP), Site operator, or contractor with guidance for the proper handling and management of impacted soil. This document is intended to be used as a general overview document for the use of the excavation contractor and project development team during the earthwork portions of Site redevelopment.

If you have any questions regarding this CMMP, please do not hesitate to contact the undersigned.



Gil Cobb, RG
Registered Geologist (Oregon #G1440)

Expires 12/31/2025

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FIGURES		**TABLES**	
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Figure 2	Topographic Map	Table 2	Area A Soil Sampling
Figure 3	Site Plan	Table 3	Area H Soil Sampling
Figure 4	Tax Lots	Table 4	Area B Soil Sampling
Figure 5	Former UST Location Diagram	Table 5	Rail Spur Soil Sampling
Figure 6	Estimated Residual PAHs	Table 6	Roosevelt 3 Soil Sampling
Figure 7	Estimated Residual Metals	Table 7	Roosevelt 4 Soil Sampling
Figure 8	Estimated Residual TPH	Table 8	Roosevelt 5 Soil Sampling

FIGURES

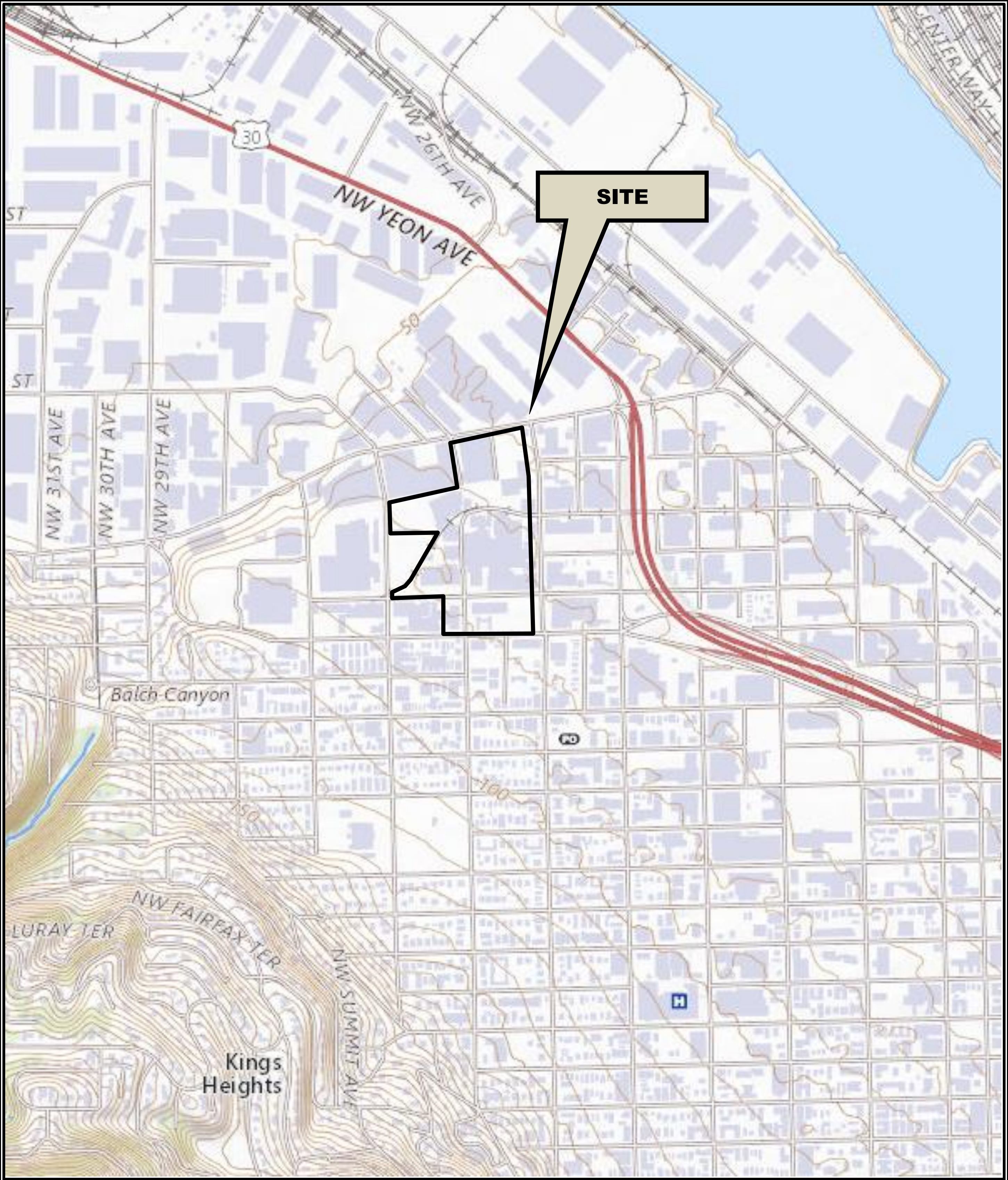

FIGURE 1: SITE LOCATION MAP

Source: USGS National Map

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Project Number: ECSI #6285

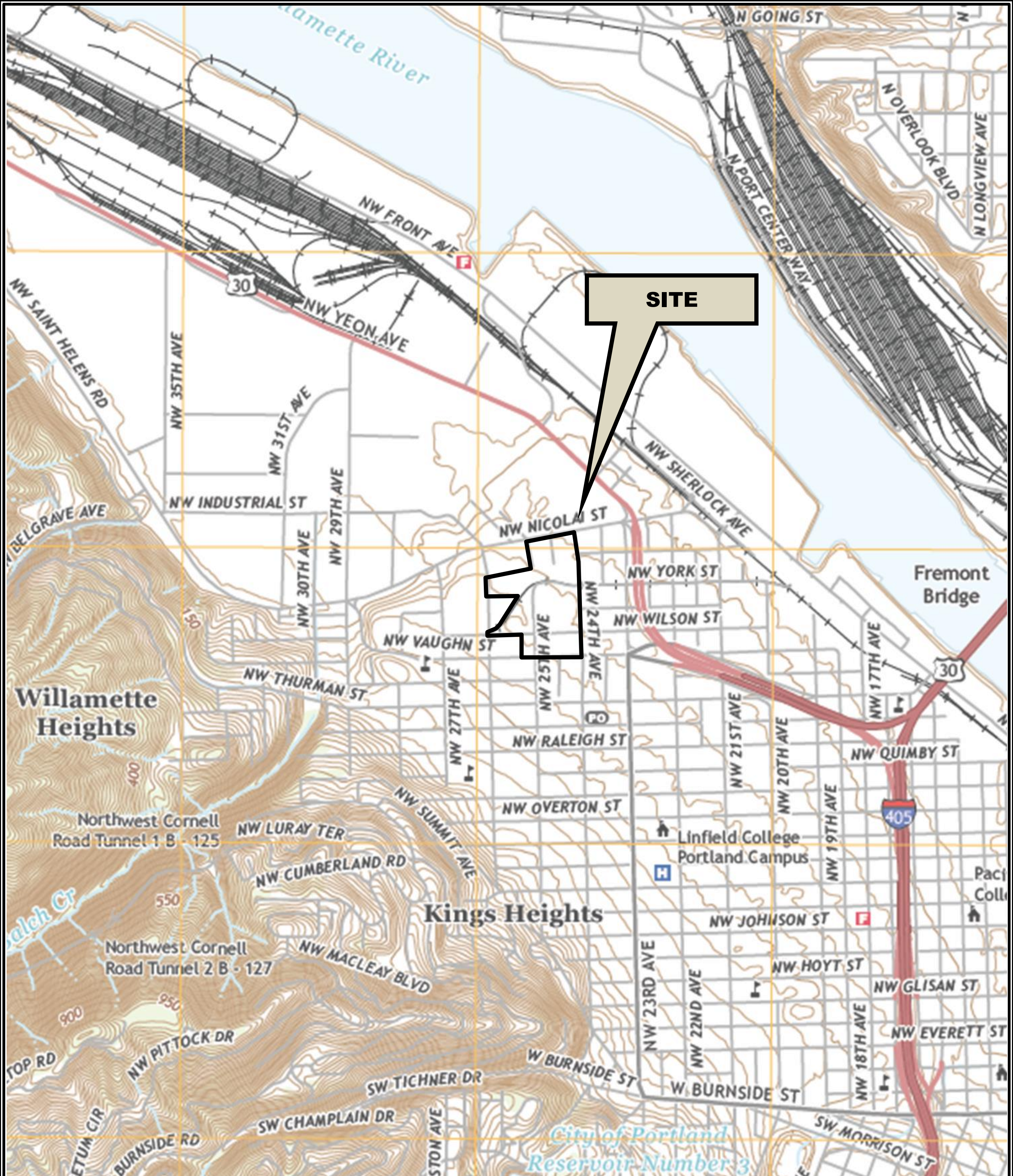

FIGURE 2: TOPOGRAPHIC MAP

Source: USGS 7.5 Minute Topo Map
Portland, Oregon 2020

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FIGURE 3: SITE PLAN

Background Imagery from Google Earth 2022

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ESCO Main Plant #1/#2 Site Boundary — Non - ESCO Main Plant #1/#2 Sites — ESCO Main Plant #1/#2 BESA Area Designations

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Scale in Feet (Approximate)

225

FIGURE 4: TAX LOTS

Background Imagery from Google Earth 2022
(*Tax Lots Sourced from Portland Maps*)

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ESCO Main Plant #1/#2 Tax Lots

Non - ESCO Main Plant #1/#2 Tax Lots

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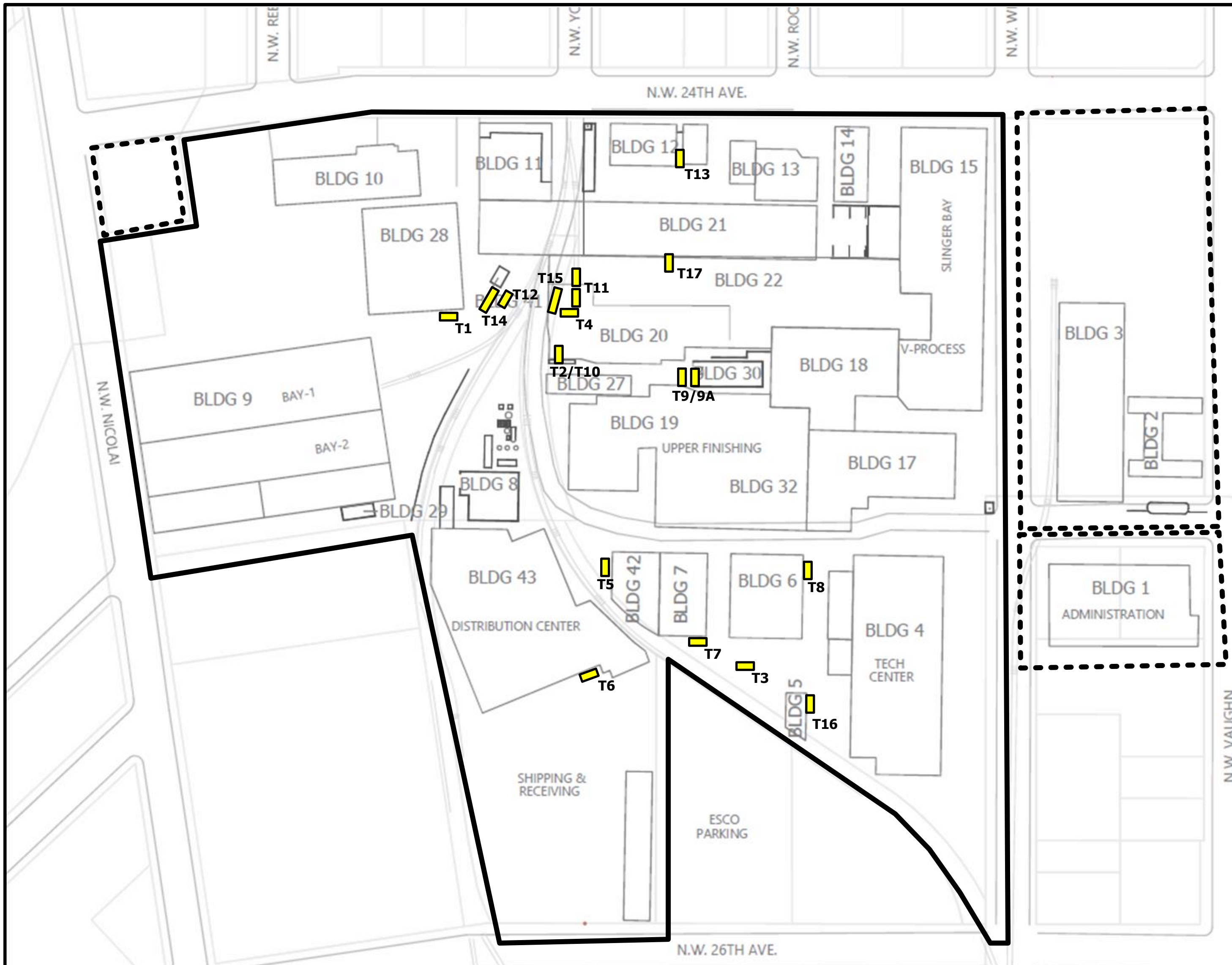
Project Number: ECSI #6285

Scale in Feet (Approximate)

225



T1	LUST #26-90-0054 – No Further Action
T2/T10	LUST #26-20-0284 – No Further Action *UST assigned as both #2 & #10
T3	LUST #26-93-0026 – No Further Action
T4	No Confirmation. Unsupported by Geophysical Data or Test Pits *UST assigned as both #4 & #11
T5	No Confirmation. Unsupported by Geophysical Data or Test Pits
T6	LUST #26-20-0458 – No Further Action
T7	LUST #26-18-0569 – No Further Action
T8	LUST #26-18-0569 – No Further Action
T9/9A	LUST #26-18-0569 – No Further Action
T10	LUST #26-20-0284 – No Further Action *UST assigned as both #2 & #10
T11	No Confirmation. Unsupported by Geophysical Data or Test Pits *UST assigned as both #4 & #11
T12	LUST #26-97-0487 – No Further Action
T13	Clean Decommission Closure Report
T14	LUST #26-18-0569 – No Further Action
T15	LUST #26-20-0284 – No Further Action
T16	LUST #26-93-0026 – No Further Action
T17	LUST #26-18-0569 – No Further Action

FIGURE 6: FORMER UST LOCATIONS

Background Imagery from BESA
(*ESCO Main Plant #1/#2 Building Layout*)

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Scale in Feet (Approximate)

225

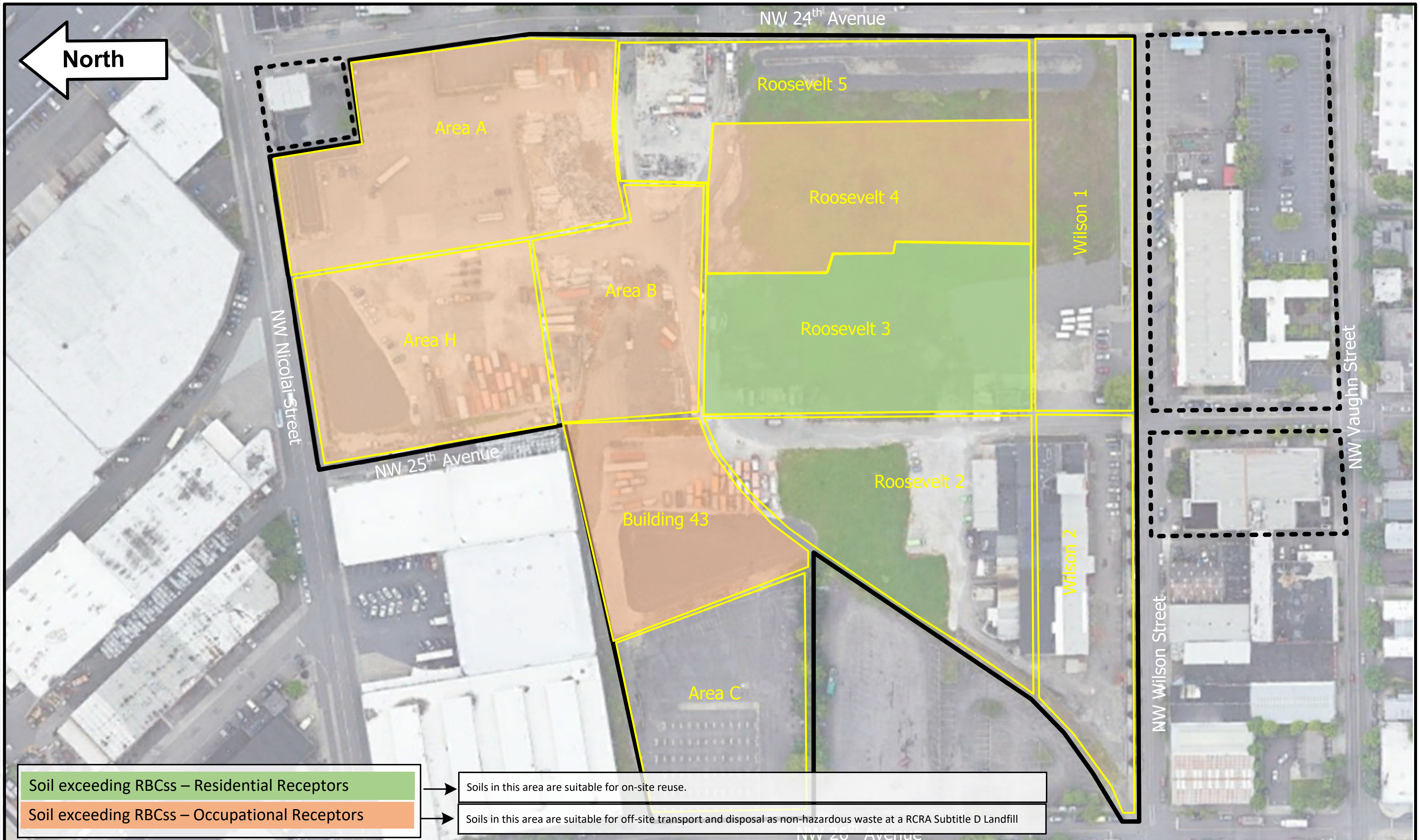

FIGURE 25: ESTIMATED RESIDUAL SOIL CONTAMINATION - PAHs

Background Imagery from Google Earth 2022

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FIGURE 26: ESTIMATED RESIDUAL SOIL CONTAMINATION - Metals

Background Imagery from Google Earth 2022

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225

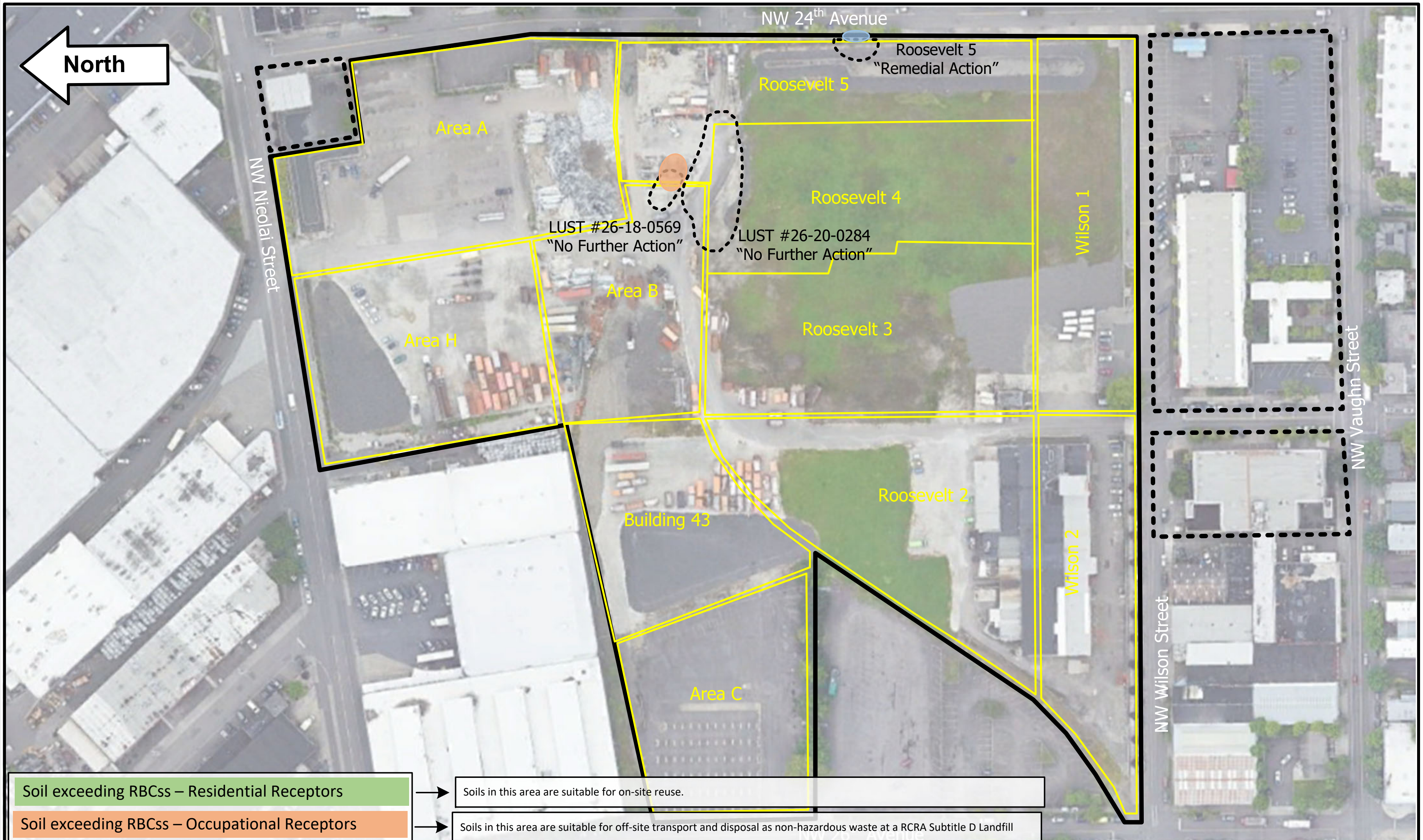

FIGURE 27: ESTIMATED RESIDUAL SOIL CONTAMINATION - TPH

Background Imagery from Google Earth 2022

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Project Number: ECSI #6285

Scale in Feet (Approximate)

225

TABLES

TABLE 1 – BUILDING 43 NOVEMBER/DECEMBER 2019 POST DEMOLITION SOIL SAMPLING (POINT SOURCE SOLUTIONS)										
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Indstr	EB-31-RC (2')	EB-31-RC (6')	EB-31-RC (10')	SB1 (2')	SB3 (2')	SB4 (2')	SB5 (2')
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)										
Acenaphthene	4700	70000	-	<0.0119	<0.0131	<0.0127	<0.0118	<0.0123	**0.0684**	**0.430**
Acenaphthylene	-	-	-	<0.0119	<0.0131	<0.0127	**0.0137**	<0.0123	**0.117**	**0.123**
Benz(a)anthracene	1.1	21	-	**0.0319**	<0.0131	<0.0127	**0.0205**	**0.0492**	**0.615**	**0.625**
Benzo(a)pyrene	0.11	2.1	-	**0.0283**	<0.0131	<0.0127	**0.0344**	**0.0471**	**0.618**	**0.655**
Benzo(b)fluoranthene	1.1	21	-	**0.0390**	**0.0150**	<0.0127	**0.0374**	**0.0546**	**1.11**	**0.656**
Benzo(k)fluoranthene	11	210	-	<0.0119	<0.0131	<0.0127	<0.0118	**0.0174**	**0.297**	**0.223**
Benzo(g,h,i)perylene	-	-	-	**0.0239**	<0.0131	<0.0127	**0.0540**	**0.0337**	**0.485**	**0.422**
Chrysene	110	2100	-	**0.0414**	**0.0193**	<0.0127	**0.0289**	**0.0542**	**0.869**	**0.718**
Dibenz(a,h)anthracene	0.11	2.1	-	<0.0119	<0.0131	<0.0127	<0.0118	<0.0123	**0.130**	**0.0956**
Fluoranthene	2400	30000	-	**0.0739**	**0.0266**	<0.0127	**0.0407**	**0.0769**	**0.744**	**1.29**
Fluorene	3100	47000	-	<0.0119	<0.0131	<0.0127	<0.0118	<0.0123	**0.0956**	**0.656**
Indeno(1,2,3-cd)pyrene	1.1	21	-	**0.0237**	<0.0131	<0.0127	**0.0439**	**0.0333**	**0.463**	**0.410**
Naphthalene	5.3	23	-	**0.0246**	**0.0428**	**0.0143**	**0.0164**	**0.0184**	**0.783**	**1.52**
Phenanthrene	-	-	-	**0.0689**	**0.0260**	<0.0127	**0.0183**	**0.0458**	**0585**	**1.80**
Pyrene	1800	23000	-	**0.0875**	**0.0152**	<0.0127	**0.0610**	**0.100**	**0.990**	**1.58**
BaP Equivalence	0.11	2.1	-	**0.0378**	**0.0015**	NA	**0.0446**	**0.0610**	**0.9706**	**0.9226**

TABLE 1 – BUILDING 43 NOVEMBER/DECEMBER 2019 POST DEMOLITION SOIL SAMPLING (POINT SOURCE SOLUTIONS)								
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	SB8 (2')	SB9 (2')	SB10 (4')	SB11 (4')	SB12 (4')
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)								
Acenaphthene	4700	70000	-	**0.0135**	<0.0121	<0.1	<0.1	<0.1
Acenaphthylene	-	-	-	<0.0135	<0.0121	<0.1	<0.1	<0.1
Benz(a)anthracene	1.1	21	-	<0.0135	<0.0121	<0.1	<0.1	<0.1
Benzo(a)pyrene	0.11	2.1	-	<0.0135	<0.0121	<0.1	<0.1	<0.1
Benzo(b)fluoranthene	1.1	21	-	<0.0135	<0.0121	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	11	210	-	<0.0135	<0.0121	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	-	-	-	<0.0135	<0.0121	<0.1	<0.1	<0.1
Chrysene	110	2100	-	<0.0135	<0.0121	<0.1	<0.1	<0.1
Dibenz(a,h)anthracene	0.11	2.1	-	<0.0135	<0.0121	<0.1	<0.1	<0.1
Fluoranthene	2400	30000	-	<0.0135	<0.0121	<0.1	<0.1	<0.1
Fluorene	3100	47000	-	**0.0192**	<0.0121	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	1.1	21	-	<0.0135	<0.0121	<0.1	<0.1	<0.1
Naphthalene	5.3	23	-	**0.0777**	<0.0121	**0.1**	**0.2**	**0.2**
Phenanthrene	-	-	-	**0.0361**	<0.0121	<0.1	<0.1	<0.1
Pyrene	1800	23000	-	<0.0135	<0.0121	<0.1	<0.1	<0.1
BaP Equivalence	0.11	2.1	-	NA	NA	NA	NA	NA

Notes:

- Concentrations are only presented for regulated compounds. Various compounds were detected in these samples without corresponding RBCs for the relevant exposure scenarios.
- \- = No RBC value, due to the chemical's non-volatility, the RBC exceeding three-phase equilibrium partitioning, or the RBC exceeding 1,000,000, or otherwise not posing a risk in this receptor scenario.
- ODEQ has instructed Point Source to screen lead concentrations in soil at 200 mg/kg for residential and occupational receptors as updates to RBC tables are soon to take effect as detailed in the January 17, 2024 ODEQ memorandum titled "*Updated Residential Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities*".

Soil exceeding RBCss – Residential Receptors

Soil exceeding EPA RSL – TEQ=0.1

Soil exceeding RBCss – Occupational Receptors

TABLE 1A – BUILDING 43 JUNE 2020 ISM SOIL SAMPLING (POINT SOURCE SOLUTIONS)									
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	BLDG 43 U1 (0.5 – 2.0')	BLDG 43 U2 (0.5 – 2.0')	BLDG 43 U3 (0.5 – 2.0')	BLDG 43 L1 (2.0 – 4.0')	BLDG 43 L2 (2.0 – 4.0')	BLDG 43 L3 (2.0 – 4.0')
SOIL (MG/KG) – EPA METHOD 8270 (PAHS), METHOD 6020 (METALS)									
Acenaphthene	4700	70000	-	**0.15**	**0.133**	**0.294**	**0.142**	**0.453**	**0.099**
Acenaphthylene	-	-	-	**0.147**	**0.138**	**0.275**	**0.165**	**0.42**	**0.12**
Benz(a)anthracene	1.1	21	-	**1.17**	**0.896**	**1.69**	**1.2**	**2.8**	**1.01**
Benzo(a)pyrene	0.11	2.1	-	**1.19**	**0.907**	**1.66**	**1.25**	**2.81**	**1.05**
Benzo(b)fluoranthene	1.1	21	-	**1.22**	**0.928**	**1.67**	**1.27**	**2.66**	**1.07**
Benzo(k)fluoranthene	11	210	-	**0.403**	**0.354**	**0.619**	**0.478**	**1.04**	**0.393**
Benzo(g,h,i)perylene	-	-	-	**0.747**	**0.572**	**1.01**	**0.775**	**1.59**	**0.676**
Chrysene	110	2100	-	**1.26**	**1.04**	**1.82**	**1.35**	**3.06**	**1.11**
Dibenz(a,h)anthracene	0.11	2.1	-	**0.152**	**0.118**	**0.21**	**0.178**	**0.335**	**0.134**
Fluoranthene	2400	30000	-	**2.42**	**1.85**	**3.5**	**2.12**	**5.51**	**1.81**
Fluorene	3100	47000	-	**0.322**	**0.277**	**0.715**	**0.284**	**0.916**	**0.156**
Indeno(1,2,3-cd)pyrene	1.1	21	-	**0.721**	**0.567**	**1.01**	**0.768**	**1.57**	**0.663**
Naphthalene	5.3	23	-	**0.124**	**0.147**	**0.549**	**0.344**	**0.408**	**0.1**
Phenanthrene	-	-	-	**2.88**	**2.29**	**4.94**	**2.59**	**7.22**	**1.77**
Pyrene	1800	23000	-	**2.97**	**2.25**	**4.18**	**2.73**	**6.86**	**2.29**
BaP Equivalence	0.11	2.1	-	**1.67**	**1.27**	**2.33**	**1.77**	**3.88**	**1.47**
Arsenic	0.43	1.9	-	**7.82**	**8.45**	**8.46**	**9.42**	**9.94**	**9.42**
Barium	15000	220000	-	**193.0**	**198.0**	**191.0**	**199.0**	**205.0**	**191.0**
Cadmium	78	1100	-	<0.223	<0.213	**0.235**	**0.341**	**0.408**	**0.39**
Chromium	-	-	-	**24.5**	**24.6**	**24.1**	**23.9**	**24.2**	**25.0**
Copper	3100	47000	-	**23.7**	**23.4**	**23.1**	**25.1**	**25.1**	**25.8**
Lead	200	200	-	**33.7**	**38.0**	**36.5**	**42.6**	**49.7**	**43.1**
Mercury	23	350	-	**0.093**	**0.093**	<0.085	**0.144**	**0.153**	**0.187**
Nickel	1500	22000	-	**19.7**	**19.5**	**18.9**	**18.3**	**17.8**	**18.2**
Zinc	15000	220000	-	**123.0**	**111.0**	**108.0**	**180.0**	**193.0**	**189.0**
Total PCBs	0.23	0.59	-	<0.009	<0.01	<0.009	<0.01	<0.01	<0.01

TABLE 1A - BUILDING 43 JUNE 2020 ISM SOIL SAMPLING (POINT SOURCE SOLUTIONS) AVERAGE SOIL CONCENTRATIONS – PCBS/BAPeq/ARSENIC/LEAD MG/KG					
Area	**Depth**	**PCBs**	**BaPeq**	**Arsenic**	**Lead**
Building 43	0.5-2.0’	0.0097	**1.757**	**8.2**	36.1
	2.0-4.0’	0.0102	**2.373**	**9.6**	45.1
Soil Ingestion - Residential		**0.23**	**0.11**	**0.43**	**200**
Soil Ingestion - Occupational		**0.59**	**2.1**	**1.9**	**200**
Construction/Excavation Worker		**4.9/140**	**170/4,900**	**15/420**	**800/800**
Background Levels of Metals in Soil		**NA**	**NA**	**8.8**	**79**

TABLE 2 – AREA A - DECEMBER 2019 – FEBRUARY 2020 SOIL SAMPLING (POINT SOURCE SOLUTIONS)									
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	EB-7-RC (3')	EB-7-RC (3.5')	EB-7-RC (6')	SB1 (1')	SB1 (3')	SB1 (6')
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)									
Acenaphthene	4700	70000	-	<0.0125	<0.0120	<0.0120	**0.0218**	<0.0130	<0.0129
Acenaphthylene	-	-	-	<0.0125	<0.0120	<0.0120	**0.0488**	<0.0130	<0.0129
Benz(a)anthracene	1.1	21	-	**0.0351**	<0.0120	<0.0120	**0.136**	<0.0130	<0.0129
Benzo(a)pyrene	0.11	2.1	-	**0.0505**	<0.0120	<0.0120	**0.165**	<0.0130	<0.0129
Benzo(b)fluoranthene	1.1	21	-	**0.104**	<0.0120	<0.0120	**0.225**	<0.0130	<0.0129
Benzo(k)fluoranthene	11	210	-	**0.0310**	<0.0120	<0.0120	**0.0773**	<0.0130	<0.0129
Benzo(g,h,i)perylene	-	-	-	**0.0990**	<0.0120	<0.0120	**0.222**	**0.0160**	<0.0129
Chrysene	110	2100	-	**0.0432**	<0.0120	<0.0120	**0.179**	<0.0130	<0.0129
Dibenz(a,h)anthracene	0.11	2.1	-	<0.0125	<0.0120	<0.0120	**0.0314**	<0.0130	<0.0129
Fluoranthene	2400	30000	-	**0.0525**	<0.0120	<0.0120	**0.405**	**0.0201**	<0.0129
Fluorene	3100	47000	-	<0.0125	<0.0120	<0.0120	**0.0294**	<0.0130	<0.0129
Indeno(1,2,3-cd)pyrene	1.1	21	-	**0.0828**	<0.0120	<0.0120	**0.177**	<0.0130	<0.0129
Naphthalene	5.3	23	-	**0.0465**	**0.0161**	**0.0350**	**0.126**	**0.0377**	<0.0129
Phenanthrene	-	-	-	**0.0424**	<0.0120	<0.0120	**0.294**	**0.0207**	<0.0129
Pyrene	1800	23000	-	**0.0591**	<0.0120	<0.0120	**0.432**	**0.0250**	<0.0129
BaP Equivalence	0.11	2.1	-	**0.198**	NA	NA	**0.251**	NA	NA

TABLE 2 – AREA A - DECEMBER 2019 SOIL SAMPLING (POINT SOURCE SOLUTIONS)										
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	SB2 (3’)	SB2-RC (3.5’)	SB2 (6’)	SB3 (1’)	SB3 (3’)	SB3 (6’)	SB4 (3’)
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)										
Acenaphthene	4700	70000	-	<0.0125	<0.0130	**0.0221**	**0.0164**	**0.0162**	<0.0123	<0.0125
Acenaphthylene	-	-	-	<0.0125	<0.0130	<0.0124	**0.0121**	<0.0127	<0.0123	<0.0125
Benz(a)anthracene	1.1	21	-	<0.0125	<0.0130	<0.0124	**0.334**	**0.274**	<0.0123	<0.0125
Benzo(a)pyrene	0.11	2.1	-	<0.0125	<0.0130	<0.0124	**0.571**	**0.459**	<0.0123	<0.0125
Benzo(b)fluoranthene	1.1	21	-	<0.0125	<0.0130	<0.0124	**1.21**	**0.704**	<0.0123	<0.0125
Benzo(k)fluoranthene	11	210	-	<0.0125	<0.0130	<0.0124	**0.305**	**0.227**	<0.0123	<0.0125
Benzo(g,h,i)perylene	-	-	-	<0.0125	<0.0130	<0.0124	**0.865**	**0.437**	<0.0123	<0.0125
Chrysene	110	2100	-	<0.0125	<0.0130	<0.0124	**0.568**	**0.381**	<0.0123	<0.0125
Dibenz(a,h)anthracene	0.11	2.1	-	<0.0125	<0.0130	<0.0124	**0.208**	**0.114**	<0.0123	<0.0125
Fluoranthene	2400	30000	-	<0.0125	<0.0130	<0.0124	**0.301**	**0.211**	<0.0123	<0.0125
Fluorene	3100	47000	-	<0.0125	<0.0130	<0.0124	**0.0215**	**0.0211**	<0.0123	<0.0125
Indeno(1,2,3-cd)pyrene	1.1	21	-	<0.0125	<0.0130	<0.0124	**0.752**	**0.449**	<0.0123	<0.0125
Naphthalene	5.3	23	-	<0.0125	<0.0130	**0.168**	**0.171**	**0.100**	**0.0374**	**0.0162**
Phenanthrene	-	-	-	<0.0125	<0.0130	**0.0309**	**0.133**	**0.115**	<0.0123	<0.0125
Pyrene	1800	23000	-	<0.0125	<0.0130	<0.0124	**0.331**	**0.246**	<0.0123	<0.0125
BaP Equivalence	0.11	2.1	-	NA	NA	NA	**1.01**	**0.718**	NA	NA

TABLE 2 – AREA A - DECEMBER 2019 SOIL SAMPLING (POINT SOURCE SOLUTIONS)									
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	SB4-RC (3.5')	SB4 (6')	BLDG28-SB1 (2')	BLDG28-SB2 (2')	BLDG28-SB3 (2')	BLDG28-SB4 (2')
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)									
Acenaphthene	4700	70000	-	<0.0121	**0.0197**	<0.0127	<0.0119	<0.0127	<0.0127
Acenaphthylene	-	-	-	<0.0121	<0.0125	<0.0127	<0.0119	<0.0127	<0.0127
Benz(a)anthracene	1.1	21	-	<0.0121	<0.0125	**0.0180**	<0.0119	<0.0127	**0.0921**
Benzo(a)pyrene	0.11	2.1	-	<0.0121	<0.0125	**0.0218**	<0.0119	<0.0127	**0.173**
Benzo(b)fluoranthene	1.1	21	-	<0.0121	<0.0125	**0.0295**	**0.0186**	<0.0127	**0.260**
Benzo(k)fluoranthene	11	210	-	<0.0121	<0.0125	<0.0127	<0.0119	<0.0127	**0.0872**
Benzo(g,h,i)perylene	-	-	-	<0.0121	<0.0125	**0.0335**	**0.0127**	<0.0127	<0.0127
Chrysene	110	2100	-	<0.0121	<0.0125	**0.0262**	<0.0119	<0.0127	**0.141**
Dibenz(a,h)anthracene	0.11	2.1	-	<0.0121	<0.0125	<0.0127	<0.0119	<0.0127	**0.0634**
Fluoranthene	2400	30000	-	<0.0121	<0.0125	**0.0402**	<0.0119	<0.0127	**0.0884**
Fluorene	3100	47000	-	<0.0121	<0.0125	<0.0127	<0.0119	<0.0127	<0.0127
Indeno(1,2,3-cd)pyrene	1.1	21	-	<0.0121	<0.0125	**0.0272**	**0.0141**	<0.0127	**0.204**
Naphthalene	5.3	23	-	<0.0121	**0.144**	**0.0249**	**0.0218**	<0.0127	**0.0260**
Phenanthrene	-	-	-	<0.0121	**0.0298**	**0.0368**	<0.0119	<0.0127	**0.0498**
Pyrene	1800	23000	-	<0.0121	<0.0125	**0.0373**	<0.0119	<0.0127	**0.0937**
BaP Equivalence	0.11	2.1	-	NA	NA	**0.0293**	**0.0019**	NA	**0.2726**

TABLE 2A – AREA A – JULY 2023 DELINEATORY SOIL SAMPLING (POINT SOURCE SOLUTIONS)												
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	SB5 (1')	SB6 (1')	SB7 (1')	SB8 (1')	SB9 (1')	SB10 (1')	SB11 (1')	SB12 (1')	SB12-DUP (1')
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)												
1-Methylnaphthalene	-	-	-	<0.012	<0.012	<0.011	<0.011	<0.011	<0.012	<0.01	<0.06	<0.01
2-Methylnaphthalene	-	-	-	<0.012	<0.012	<0.011	**0.018**	<0.011	<0.012	<0.01	<0.06	<0.01
Acenaphthene	4700	70000	-	<0.012	<0.012	<0.011	<0.011	<0.011	<0.012	<0.01	<0.06	<0.01
Acenaphthylene	-	-	-	<0.012	<0.012	<0.011	**0.092**	<0.011	<0.012	**0.018**	<0.06	<0.01
Anthracene	23000	350000	-	<0.012	<0.012	<0.011	**0.154**	<0.011	<0.012	**0.027**	<0.06	<0.01
Benz(a)anthracene	1.1	21	-	<0.012	<0.012	<0.011	**0.557**	<0.011	<0.012	**0.122**	<0.06	<0.01
Benzo(a)pyrene	0.11	2.1	-	<0.012	<0.012	<0.011	**0.663**	<0.011	<0.012	**0.185**	<0.06	<0.01
Benzo(b)fluoranthene	1.1	21	-	<0.012	<0.012	<0.011	**1.19**	<0.011	<0.012	**0.185**	<0.06	<0.01
Benzo(ghi)perylene	-	-	-	<0.012	<0.012	<0.011	**0.53**	<0.011	<0.012	**0.173**	<0.06	<0.01
Benzo(k)fluoranthene	11	210	-	<0.012	<0.012	<0.011	**0.323**	<0.011	<0.012	**0.073**	<0.06	<0.01
Chrysene	110	2100	-	<0.012	<0.012	<0.011	**0.759**	<0.011	<0.012	**0.151**	<0.06	<0.01
Dibenz(ah)anthracene	0.11	2.1	-	<0.012	<0.012	<0.011	**0.069**	<0.011	<0.012	**0.017**	<0.06	<0.01
Dibenzofuran	-	-	-	<0.012	<0.012	<0.011	**0.019**	<0.011	<0.012	<0.01	<0.06	<0.01
Fluoranthene	2400	30000	-	<0.012	<0.012	<0.011	**0.948**	<0.011	<0.012	**0.289**	<0.06	<0.01
Fluorene	3100	47000	-	<0.012	<0.012	<0.011	**0.02**	<0.011	<0.012	<0.01	<0.06	<0.01
Indeno(123-cd)pyrene	1.1	21	-	<0.012	<0.012	<0.011	**0.611**	<0.011	<0.012	**0.164**	<0.06	<0.01
Naphthalene	5.3	23	-	<0.012	<0.012	**0.012**	**0.085**	<0.011	<0.012	**0.01**	<0.06	<0.01
Phenanthrene	-	-	-	<0.012	<0.012	<0.011	**0.297**	<0.011	<0.012	**0.146**	<0.06	<0.01
Pyrene	1800	23000	-	<0.012	<0.012	<0.011	**1.12**	<0.011	<0.012	**0.351**	<0.06	<0.01
BaP Equivalence	0.11	2.1	-	NA	NA	NA	**0.972**	NA	NA	**0.384**	NA	NA

Notes:

- Concentrations are only presented for regulated compounds. Various compounds were detected in these samples without corresponding RBCs for the relevant exposure scenarios.
- - = No RBC value, due to the chemical's non-volatility, the RBC exceeding three-phase equilibrium partitioning, or the RBC exceeding 1,000,000, or otherwise not posing a risk in this receptor scenario.
- ** = Soils represented by sample were excavated from Site and transported to Hillsboro Landfill.

Soil exceeding RBCss – Residential Receptors

Soil exceeding EPA RSLs– THQ=0.1

Soil exceeding RBCss – Occupational Receptors

TABLE 3 – AREA H BUILDING 9 DECEMBER 2019 POST DEMOLITION SOIL SAMPLING (POINT SOURCE SOLUTIONS)											
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	BLDG9-SB1 (2′)	BLDG9-SB2 (2′)	BLDG9-SB3 (2′)	BLDG9-SB4 (2′)	BLDG9-SB5 (2′)	BLDG9-SB6 (2′)	BLDG9-SB7 (2′)	BLDG9-SB8 (2′)
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)											
Acenaphthene	4700	70000	-	<0.0120	<0.0121	<0.0124	<0.0116	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	-	-	-	**0.0164**	<0.0121	<0.0124	<0.0116	<0.1	<0.1	<0.1	<0.1
Benz(a)anthracene	1.1	21	-	**0.0602**	**0.0488**	**0.0405**	<0.0116	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	0.11	2.1	-	**0.0558**	**0.0699**	**0.0519**	<0.0116	<0.1	<0.1	<0.1	**0.4**
Benzo(b)fluoranthene	1.1	21	-	**0.0765**	**0.108**	**0.0725**	<0.0116	<0.1	<0.1	<0.1	**0.5**
Benzo(k)fluoranthene	11	210	-	**0.0258**	**0.0348**	**0.0236**	<0.0116	<0.1	<0.1	<0.1	**0.2**
Benzo(g,h,i)perylene	-	-	-	**0.0501**	**0.0644**	**0.0529**	<0.0116	<0.1	<0.1	<0.1	**0.4**
Chrysene	110	2100	-	**0.0787**	**0.0722**	**0.0617**	<0.0116	<0.1	<0.1	<0.1	**0.3**
Dibenz(a,h)anthracene	0.11	2.1	-	**0.0126**	**0.0171**	<0.0124	<0.0116	<0.1	<0.1	<0.1	<0.1
Fluoranthene	2400	30000	-	**0.109**	**0.0474**	**0.0930**	<0.0116	<0.1	<0.1	<0.1	**0.2**
Fluorene	3100	47000	-	<0.0120	<0.0121	<0.0124	<0.0116	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	1.1	21	-	**0.0474**	**0.0664**	**0.0489**	<0.0116	<0.1	<0.1	<0.1	**0.2**
Naphthalene	5.3	23	-	**0.0176**	<0.0121	**0.0180**	<0.0116	<0.1	<0.1	<0.1	<0.1
Phenanthrene	-	-	-	**0.106**	**0.0230**	**0.0658**	<0.0116	<0.1	<0.1	<0.1	**0.1**
Pyrene	1800	23000	-	**0.127**	**0.0551**	**0.0972**	<0.0116	<0.1	<0.1	<0.1	**0.3**
BaP Equivalence	0.11	2.1	-	**0.0871**	**0.109**	**0.0684**	NA	NA	NA	NA	**0.472**

TABLE 3 – AREA H BUILDING 9 DECEMBER 2019 POST DEMOLITION SOIL SAMPLING (POINT SOURCE SOLUTIONS)											
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	BLDG9-SB9 (2')	BLDG9-SB10 (2')	BLDG9-SB11 (2')	BLDG9-SB12 (2')	BLDG9-SB13 (2')	BLDG9-SB14 (2')	BLDG9-SB15 (2')	BLDG9-SB16 (2')
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)											
Acenaphthene	4700	70000	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(a)anthracene	1.1	21	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.4**
Benzo(a)pyrene	0.11	2.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.4**
Benzo(b)fluoranthene	1.1	21	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.5**
Benzo(k)fluoranthene	11	210	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.2**
Benzo(g,h,i)perylene	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.2**
Chrysene	110	2100	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.4**
Dibenz(a,h)anthracene	0.11	2.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.2**
Fluoranthene	2400	30000	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.5**
Fluorene	3100	47000	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	1.1	21	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.2**
Naphthalene	5.3	23	-	**0.2**	**0.1**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**	**0.2**
Phenanthrene	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.5**
Pyrene	1800	23000	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.5**
BaP Equivalence	0.11	2.1	-	NA	NA	NA	NA	NA	NA	NA	**0.712**

TABLE 3 – AREA H BUILDING 9 DECEMBER 2019 POST DEMOLITION SOIL SAMPLING (POINT SOURCE SOLUTIONS)						
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	BLDG9-SB17 (2')	BLDG9-SB18 (2')	BLDG9-SB19 (2')
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)						
Acenaphthene	4700	70000	-	<0.1	<0.1	<0.1
Acenaphthylene	-	-	-	<0.1	<0.1	<0.1
Benz(a)anthracene	1.1	21	-	<0.1	<0.1	<0.1
Benzo(a)pyrene	0.11	2.1	-	<0.1	<0.1	<0.1
Benzo(b)fluoranthene	1.1	21	-	<0.1	<0.1	**0.1**
Benzo(k)fluoranthene	11	210	-	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	-	-	-	<0.1	<0.1	<0.1
Chrysene	110	2100	-	<0.1	<0.1	<0.1
Dibenz(a,h)anthracene	0.11	2.1	-	<0.1	<0.1	<0.1
Fluoranthene	2400	30000	-	<0.1	<0.1	<0.1
Fluorene	3100	47000	-	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	1.1	21	-	<0.1	<0.1	<0.1
Naphthalene	5.3	23	-	**0.2**	**0.2**	**0.2**
Phenanthrene	-	-	-	<0.1	<0.1	<0.1
Pyrene	1800	23000	-	<0.1	<0.1	<0.1
BaP Equivalence	0.11	2.1	-	NA	NA	NA

Notes:

- Concentrations are only presented for regulated compounds. Various compounds were detected in these samples without corresponding RBCs for the relevant exposure scenarios.
- - = No RBC value, due to the chemical's non-volatility, the RBC exceeding three-phase equilibrium partitioning, or the RBC exceeding 1,000,000, or otherwise not posing a risk in this receptor scenario.

Soil exceeding RBCss – Residential Receptors
Soil exceeding EPA RSLs – THQ=0.1
Soil exceeding RBCss – Occupational Receptors

TABLE 3A – AREA H BUILDING 9 JANUARY 2020 SOIL PCS EXCAVATION CONFIRMATION SAMPLING (POINT SOURCE SOLUTIONS)											
ANALYTE	RBCsw Residential	RBCsw Occupational	EPA RSLs Res/Industr	NEPB (12')	SWPB (12')	WNWPW (8')	WSWPW (8')	NNEPW (8')	NNWPW (8')	ENEPW (8')	ESEPW (8')
SOIL (MG/KG) – EPA METHOD NWTPH-DX											
Diesel	9,500	>Max	-	<25.0	<25.0	<26.8	<25.3	<26.9	<27.0	<25.4	<25.9
Heavy Oil	-	-	-	**57.6**	**298**	<53.7	<50.6	<53.9	<53.9	<50.9	<51.8

TABLE 3A – AREA H BUILDING 9 JANUARY 2020 SOIL PCS EXCAVATION CONFIRMATION SAMPLING (POINT SOURCE SOLUTIONS)						
ANALYTE	RBCsw Residential	RBCsw Occupational	EPA RSLs	SEPB (12')	SSWPW (8')	SSEPW (8')
SOIL (MG/KG) – EPA METHOD NWTPH-DX						
Diesel	9,500	>Max	-	<25.0	<28.1	<25.0
Heavy Oil	-	-	-	<50.0	<56.2	<20.1

TABLE 3A – AREA H BUILDING 9 JANUARY 2020 SOIL PCS EXCAVATION CONFIRMATION SAMPLING (POINT SOURCE SOLUTIONS)											
ANALYTE	RBCsw Residential	RBCsw Occupational	EPA RSLs Res/Industr	NEPB (12’)	SWPB (12’)	WNWPW (8’)	WSWPW (8’)	NNEPW (8’)	NNWPW (8’)	ENEPW (8’)	ESEPW (8’)
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)											
Acenaphthene	-	-	-	<0.0109	<0.0108	<0.0129	<0.0129	<0.0136	<0.0135	<0.0133	<0.0137
Acenaphthylene	-	-	-	<0.0109	<0.0108	<0.0129	<0.0129	<0.0136	<0.0135	<0.0133	<0.0137
Benz(a)anthracene	1.6	-	-	<0.0109	<0.0108	<0.0129	<0.0129	<0.0136	<0.0135	<0.0133	<0.0137
Benzo(a)pyrene	4.4	-	-	<0.0109	<0.0108	<0.0129	<0.0129	<0.0136	<0.0135	<0.0133	<0.0137
Benzo(b)fluoranthene	-	-	-	<0.0109	<0.0108	<0.0129	<0.0129	<0.0136	<0.0135	<0.0133	<0.0137
Benzo(k)fluoranthene	-	-	-	<0.0109	<0.0108	<0.0129	<0.0129	<0.0136	<0.0135	<0.0133	<0.0137
Benzo(g,h,i)perylene	-	-	-	<0.0109	<0.0108	<0.0129	<0.0129	<0.0136	<0.0135	<0.0133	<0.0137
Chrysene	-	-	-	<0.0109	<0.0108	<0.0129	<0.0129	<0.0136	<0.0135	<0.0133	<0.0137
Dibenz(a,h)anthracene	-	-	-	<0.0109	<0.0108	<0.0129	<0.0129	<0.0136	<0.0135	<0.0133	<0.0137
Fluoranthene	-	-	-	<0.0109	<0.0108	<0.0129	<0.0129	<0.0136	<0.0135	<0.0133	<0.0137
Fluorene	-	-	-	<0.0109	<0.0108	<0.0129	<0.0129	<0.0136	<0.0135	<0.0133	<0.0137
Indeno(1,2,3-cd)pyrene	-	-	-	<0.0109	<0.0108	<0.0129	<0.0129	<0.0136	<0.0135	<0.0133	<0.0137
Naphthalene	0.077	0.34	-	<0.0109	**0.0211**	**0.0333**	<0.0129	**0.0280**	<0.0135	**0.103**	**0.0152**
Phenanthrene	-	-	-	<0.0109	<0.0108	**0.0158**	<0.0129	<0.0136	<0.0135	<0.0133	<0.0137
Pyrene	-	-	-	<0.0109	<0.0108	<0.0129	<0.0129	<0.0136	<0.0135	<0.0133	<0.0137
BaP Equivalent	0.11	2.1	-	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 3A – AREA H BUILDING 9 JANUARY 2020 SOIL PCS EXCAVATION CONFIRMATION SAMPLING (POINT SOURCE SOLUTIONS)						
ANALYTE	RBCsw Residential	RBCsw Occupational	EPA RSLs	SEPB (12’)	SSWPW (8’)	SSEPW (8’)
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)						
Acenaphthene	-	-	-	<0.0119	<0.0137	<0.0135
Acenaphthylene	-	-	-	<0.0119	<0.0137	<0.0135
Benz(a)anthracene	1.6	-	-	<0.0119	<0.0137	<0.0135
Benzo(a)pyrene	4.4	-	-	<0.0119	<0.0137	<0.0135
Benzo(b)fluoranthene	-	-	-	<0.0119	<0.0137	<0.0135
Benzo(k)fluoranthene	-	-	-	<0.0119	<0.0137	<0.0135
Benzo(g,h,i)perylene	-	-	-	<0.0119	<0.0137	<0.0135
Chrysene	-	-	-	<0.0119	<0.0137	<0.0135
Dibenz(a,h)anthracene	-	-	-	<0.0119	<0.0137	<0.0135
Fluoranthene	-	-	-	<0.0119	<0.0137	<0.0135
Fluorene	-	-	-	<0.0119	<0.0137	<0.0135
Indeno(1,2,3-cd)pyrene	-	-	-	<0.0119	<0.0137	<0.0135
Naphthalene	0.077	0.34	-	<0.0119	<0.0137	**0.0153**
Phenanthrene	-	-	-	<0.0119	<0.0137	<0.0135
Pyrene	-	-	-	<0.0119	<0.0137	<0.0135
BaP Equivalence	0.11	2.1	-	NA	NA	NA

Notes:

- Concentrations are only presented for regulated compounds. Various compounds were detected in these samples without corresponding RBCs for the relevant exposure scenarios.
- - = No RBC value, due to the chemical’s non-volatility, the RBC exceeding three-phase equilibrium partitioning, or the RBC exceeding 1,000,000, or otherwise not posing a risk in this receptor scenario.

Soil exceeding RBCss/RBCsw – Residential Receptors
Soil exceeding EPA RSLs – THQ=0.1
Soil exceeding RBCss/RBC/sw – Occupational Receptors

TABLE 4 – AREA B BUILDING 8 FEBURARY 2020 SOIL SAMPLING (POINT SOURCE SOLUTIONS)									
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	EB-10-RC (3’)	EB-10-RC (3.5’)	SB1 (1’)	SB1 (3’)	SB2 (3’)	SB3 (1’)
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)									
Acenaphthene	4700	70000	-	<0.0109	<0.0127	<0.0109	<0.0122	**0.0210**	<0.0454
Acenaphthylene	-	-	-	<0.0109	<0.0127	<0.0109	<0.0122	**0.0140**	<0.0454
Benz(a)anthracene	1.1	21	-	**0.167**	<0.0127	**0.198**	<0.0122	**0.559**	<0.0454
Benzo(a)pyrene	0.11	2.1	-	**0.282**	<0.0127	**0.313**	**0.0131**	**0.887**	**0.0471**
Benzo(b)fluoranthene	1.1	21	-	**0.474**	<0.0127	**0.567**	**0.0216**	**1.05**	**0.0782**
Benzo(k)fluoranthene	11	210	-	**0.157**	<0.0127	**0.169**	<0.0122	**0.371**	<0.0454
Benzo(g,h,i)perylene	-	-	-	**0.323**	<0.0127	**0.367**	**0.0162**	**0.630**	**0.0485**
Chrysene	110	2100	-	**0.285**	<0.0127	**0.300**	<0.0122	**0.732**	**0.0615**
Dibenz(a,h)anthracene	0.11	2.1	-	**0.0772**	<0.0127	**0.0944**	<0.0122	**0.132**	<0.0454
Fluoranthene	2400	30000	-	**0.157**	<0.0127	**0.175**	<0.0122	**0.701**	<0.0454
Fluorene	3100	47000	-	<0.0109	<0.0127	<0.0109	<0.0122	<0.0115	<0.0454
Indeno(1,2,3-cd)pyrene	1.1	21	-	**0.0314**	<0.0127	**0.353**	**0.0156**	**0.638**	**0.0461**
Naphthalene	5.3	23	-	<0.0109	<0.0127	<0.0109	<0.0122	**0.0123**	<0.0454
Phenanthrene	-	-	-	**0.0237**	<0.0127	**0.0281**	<0.0122	**0.184**	<0.0454
Pyrene	1800	23000	-	**0.201**	<0.0127	**0.209**	<0.0122	**0.831**	<0.0454
BaP Equivalence	0.11	2.1	-	**0.428**	NA	**0.521**	**0.0168**	**1.248**	**0.0596**

TABLE 4 – AREA B BUILDING 8 FEBURARY 2020 SOIL SAMPLING (POINT SOURCE SOLUTIONS)								
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	SB3 (3’)	SB4 (1’)	SB4 (3’)	BLDG8-SB1 (1’)	BLDG8-SB1 (3’)
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)								
Acenaphthene	4700	70000	-	<0.0122	**0.0153**	<0.0124	**0.0333**	<0.0126
Acenaphthylene	-	-	-	<0.0122	**0.125**	<0.0124	**0.125**	<0.0126
Benz(a)anthracene	1.1	21	-	<0.0122	**0.446**	<0.0124	**0.407**	<0.0126
Benzo(a)pyrene	0.11	2.1	-	<0.0122	**0.658**	<0.0124	**0.474**	<0.0126
Benzo(b)fluoranthene	1.1	21	-	<0.0122	**0.910**	<0.0124	**0.493**	<0.0126
Benzo(k)fluoranthene	11	210	-	<0.0122	**0.314**	<0.0124	**0.169**	<0.0126
Benzo(g,h,i)perylene	-	-	-	<0.0122	**0.502**	<0.0124	**0.312**	<0.0126
Chrysene	110	2100	-	<0.0122	**0.555**	<0.0124	**0.468**	<0.0126
Dibenz(a,h)anthracene	0.11	2.1	-	<0.0122	**0.135**	<0.0124	**0.0641**	<0.0126
Fluoranthene	2400	30000	-	<0.0122	**0.468**	<0.0124	**0.697**	<0.0126
Fluorene	3100	47000	-	<0.0122	<0.0105	<0.0124	**0.0411**	<0.0126
Indeno(1,2,3-cd)pyrene	1.1	21	-	<0.0122	**0.543**	<0.0124	**0.298**	<0.0126
Naphthalene	5.3	23	-	<0.0122	**0.0292**	<0.0124	**0.0525**	<0.0126
Phenanthrene	-	-	-	<0.0122	**0.132**	<0.0124	**0.578**	<0.0126
Pyrene	1800	23000	-	<0.0122	**0.501**	<0.0124	**0.921**	<0.0126
BaP Equivalence	0.11	2.1	-	NA	**0.986**	NA	**0.660**	NA

Notes:

- Concentrations are only presented for regulated compounds. Various compounds were detected in these samples without corresponding RBCs for the relevant exposure scenarios.
- - = No RBC value, due to the chemical’s non-volatility, the RBC exceeding three-phase equilibrium partitioning, or the RBC exceeding 1,000,000, or otherwise not posing a risk in this receptor scenario.
- * = Soils represented by sample were excavated from Site and transported to Hillsboro Landfill.

Soil exceeding RBCss – Residential Receptors

Soil exceeding EPA RSLs– THQ=0.1

Soil exceeding RBCss – Occupational Receptors

TABLE 5 – JUNE 2020 RAIL SPUR SOIL SAMPLING (POINT SOURCE SOLUTIONS)											
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	TB1-S1 (2')	TB2-S1 (2')	TB3-S1 (2')	TB4-S1 (2')	TB5-S1 (2')	TB6-S1 (2')	TB7-S1 (2')	TB8-S1 (2')
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)											
1-Methylnaphthalene	-	-	-	<0.007	<0.006	<0.006	<0.006	<0.025	<0.006	<0.025	<0.026
12-Dichlorobenzene	2200	36000	-	<0.008	<0.008	<0.008	<0.008	<0.031	<0.007	<0.032	<0.032
12-Dinitrobenzene	-	-	0.63/8.2	<0.088	<0.083	<0.083	<0.082	<0.316	<0.079	<0.32	<0.327
124-Trichlorobenzene	-	-	5.8/260	<0.008	<0.008	<0.008	<0.008	<0.031	<0.007	<0.032	<0.032
13-Dichlorobenzene	-	-	-	<0.008	<0.008	<0.008	<0.008	<0.031	<0.007	<0.032	<0.032
13-Dinitrobenzene	-	-	0.63/8.2	<0.088	<0.083	<0.083	<0.082	<0.316	<0.079	<0.32	<0.327
14-Dichlorobenzene	14	64	-	<0.008	<0.008	<0.008	<0.008	<0.031	<0.007	<0.032	<0.032
14-Dinitrobenzene	-	-	0.63/8.2	<0.088	<0.083	<0.083	<0.082	<0.316	<0.079	<0.32	<0.327
2-Chloronaphthalene	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.012	<0.003	<0.012	<0.013
2-Chlorophenol	-	-	39/580	<0.017	<0.016	<0.016	<0.016	<0.063	<0.015	<0.063	<0.065
2-Methylnaphthalene	-	-	-	<0.007	<0.006	<0.006	<0.006	<0.025	<0.006	<0.025	<0.026
2-Methylphenol	-	-	-	<0.008	<0.008	<0.008	<0.008	<0.031	<0.007	<0.032	<0.032
2-Nitroaniline	-	-	63/800	<0.07	<0.066	<0.066	<0.066	<0.253	<0.063	<0.256	<0.261
2-Nitrophenol	-	-	-	<0.035	<0.033	<0.033	<0.033	<0.127	<0.031	<0.128	<0.131
22'-Oxybis(1-Chloropropane)	-	-	-	<0.008	<0.008	<0.008	<0.008	<0.031	<0.007	<0.032	<0.032
2346-Tetrachlorophenol	-	-	190/2,500	<0.017	<0.016	<0.016	<0.016	<0.063	<0.015	<0.063	<0.065
2356-Tetrachlorophenol	-	-	-	<0.017	<0.016	<0.016	<0.016	<0.063	<0.015	<0.063	<0.065
24-Dichlorophenol	-	-	19/2,500	<0.017	<0.016	<0.016	<0.016	<0.063	<0.015	<0.063	<0.065
24-Dimethylphenol	-	-	19/2,500	<0.017	<0.016	<0.016	<0.016	<0.063	<0.015	<0.063	<0.065
24-Dinitrophenol	-	-	13/160	<0.088	<0.083	<0.083	<0.082	<0.316	<0.079	<0.32	<0.327
24-Dinitrotoluene	-	-	1.7/7.4	<0.035	<0.033	<0.033	<0.033	<0.127	<0.031	<0.128	<0.131
245-Trichlorophenol	-	-	630/8,200	<0.017	<0.016	<0.016	<0.016	<0.063	<0.015	<0.063	<0.065
246-Trichlorophenol	49	210	-	<0.017	<0.016	<0.016	<0.016	<0.063	<0.015	<0.063	<0.065
26-Dinitrotoluene	0.36	1.5	-	<0.035	<0.033	<0.033	<0.033	<0.127	<0.031	<0.128	<0.131
3-Nitroaniline	-	-	-	<0.07	<0.066	<0.066	<0.066	<0.253	<0.063	<0.256	<0.261
33'-Dichlorobenzidine	1.2	5.1	-	<0.035	<0.033	<0.033	<0.033	<0.127	<0.031	<0.128	<0.131
4-Bromophenyl phenyl ether	-	-	-	<0.008	<0.008	<0.008	<0.008	<0.031	<0.007	<0.032	<0.032
4-Chloro-3-methylphenol	-	-	-	<0.035	<0.033	<0.033	<0.033	<0.127	<0.031	<0.128	<0.131

TABLE 5 – JUNE 2020 RAIL SPUR SOIL SAMPLING (POINT SOURCE SOLUTIONS)

ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	TB1-S1 (2’)	TB2-S1 (2’)	TB3-S1 (2’)	TB4-S1 (2’)	TB5-S1 (2’)	TB6-S1 (2’)	TB7-S1 (2’)	TB8-S1 (2’)
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)											
4-Chloroaniline	-	-	2.7/11	<0.008	<0.008	<0.008	<0.008	<0.031	<0.007	<0.032	<0.032
4-Chlorophenyl phenyl ether	-	-	-	<0.008	<0.008	<0.008	<0.008	<0.031	<0.007	<0.032	<0.032
4-Nitroaniline	-	-	25/110	<0.07	<0.066	<0.066	<0.066	<0.253	<0.063	<0.256	<0.261
4-Nitrophenol	-	-	-	<0.035	<0.033	<0.033	<0.033	<0.127	<0.031	<0.128	<0.131
46-Dinitro-2-methylphenol	-	-	-	<0.088	<0.083	<0.083	<0.082	<0.316	<0.079	<0.32	<0.327
Acenaphthene	4700	70000	-	<0.003	<0.003	<0.003	<0.003	<0.012	<0.003	<0.012	<0.013
Acenaphthylene	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.012	<0.003	<0.012	<0.013
Aniline	-	-	44/400	<0.017	<0.016	<0.016	<0.027	<0.063	<0.015	<0.063	<0.065
Anthracene	23000	350000	-	<0.003	<0.003	<0.003	<0.003	<0.012	<0.003	<0.012	<0.013
Azobenzene (12-DPH)	-	-	5.6/26	<0.008	<0.008	<0.008	<0.008	<0.031	<0.007	<0.032	<0.032
Benz(a)anthracene	1.1	21	-	<0.003	<0.003	**0.007**	<0.003	**0.028**	<0.003	<0.012	**0.05**
Benzo(a)pyrene	0.11	2.1	-	<0.005	<0.004	**0.01**	<0.004	**0.044**	<0.004	<0.019	**0.099**
Benzo(b)fluoranthene	1.1	21	-	<0.005	<0.004	**0.018**	<0.004	**0.049**	<0.004	<0.019	**0.107**
Benzo(ghi)perylene	-	-	-	<0.003	<0.003	**0.01**	<0.003	**0.031**	<0.003	<0.012	**0.07**
Benzo(k)fluoranthene	11	210	-	<0.005	<0.004	**0.006**	<0.004	**0.021**	<0.004	<0.019	**0.042**
Benzoic acid	-	-	25,000/330,000	<0.442	<0.415	<0.415	<0.413	<1.58	<0.397	<1.6	<1.63
Benzyl alcohol	-	-	630/8,200	<0.017	<0.016	<0.016	<0.016	<0.063	<0.015	<0.063	<0.065
Bis(2-Chloroethoxy) methane	-	-	19/250	<0.008	<0.008	<0.008	<0.008	<0.031	<0.007	<0.032	<0.032
Bis(2-Chloroethyl) ether	0.29	1.3	-	<0.008	<0.008	<0.008	<0.008	<0.031	<0.007	<0.032	<0.032
Bis(2-Ethylhexyl) adipate	-	-	-	<0.088	<0.083	<0.083	<0.082	<0.316	<0.079	<0.32	<0.327
Bis(2-ethylhexyl)phthalate	39	160	-	<0.053	<0.049	<0.049	<0.049	<0.19	<0.047	<0.192	<0.196
Butyl benzyl phthalate	-	-	-	<0.035	<0.033	<0.033	<0.033	<0.127	<0.031	<0.128	<0.131
Carbazole	-	-	-	<0.005	<0.004	<0.004	<0.004	<0.019	<0.004	<0.019	<0.019
Chrysene	110	2100	-	<0.003	<0.003	**0.013**	<0.003	**0.04**	<0.003	<0.012	**0.062**
Di-n-butylphthalate	-	-	-	<0.035	<0.033	<0.033	<0.033	<0.127	<0.031	<0.128	<0.131
Di-n-octyl phthalate	-	-	-	<0.035	<0.033	<0.033	<0.033	<0.127	<0.031	<0.128	<0.131
Dibenz(ah)anthracene	0.11	2.1	-	<0.003	<0.003	<0.003	<0.003	<0.012	<0.003	<0.012	**0.013**
Dibenzofuran	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.012	<0.003	<0.012	<0.013

TABLE 5 – JUNE 2020 RAIL SPUR SOIL SAMPLING (POINT SOURCE SOLUTIONS)											
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	TB1-S1 (2')	TB2-S1 (2')	TB3-S1 (2')	TB4-S1 (2')	TB5-S1 (2')	TB6-S1 (2')	TB7-S1 (2')	TB8-S1 (2')
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)											
Diethylphthalate	-	-	-	<0.035	<0.033	<0.033	<0.033	<0.127	<0.031	<0.128	<0.131
Dimethylphthalate	-	-	-	<0.035	<0.033	<0.033	<0.033	<0.127	<0.031	<0.128	<0.131
Fluoranthene	2400	30000	-	<0.003	<0.003	**0.011**	<0.003	**0.062**	<0.003	**0.018**	**0.082**
Fluorene	3100	47000	-	<0.003	<0.003	<0.003	<0.003	<0.012	<0.003	<0.012	<0.013
Hexachlorobenzene	0.21	0.93	-	<0.003	<0.003	<0.003	<0.003	<0.012	<0.003	<0.012	<0.013
Hexachlorobutadiene	-	-	1.2/5.3	<0.008	<0.008	<0.008	<0.008	<0.031	<0.007	<0.032	<0.032
Hexachlorocyclopentadiene	-	-	0.18/0.75	<0.017	<0.016	<0.016	<0.016	<0.063	<0.015	<0.063	<0.065
Hexachloroethane	7.4	32	-	<0.008	<0.008	<0.008	<0.008	<0.031	<0.007	<0.032	<0.032
Indeno(123-cd)pyrene	1.1	21	-	<0.003	<0.003	**0.01**	<0.003	**0.028**	<0.003	<0.012	**0.07**
Isophorone	-	-	570/2,400	<0.008	<0.008	<0.008	<0.008	<0.031	<0.007	<0.032	<0.032
N-Nitroso-di-n-propylamine	0.078	0.33	-	<0.008	<0.008	<0.008	<0.008	<0.031	<0.007	<0.032	<0.032
N-Nitrosodimethylamine	-	-	0.0002/0.0034	<0.008	<0.008	<0.008	<0.008	<0.031	<0.007	<0.032	<0.032
N-Nitrosodiphenylamine	110	470	-	<0.008	<0.008	<0.008	<0.008	<0.031	<0.007	<0.032	<0.032
Naphthalene	5.3	23	-	<0.007	<0.006	<0.006	<0.006	<0.025	<0.006	<0.025	**0.065**
Nitrobenzene	-	-	5.1/22	<0.035	<0.033	<0.033	<0.033	<0.127	<0.031	<0.128	<0.131
Pentachlorophenol (PCP)	1	4	-	<0.035	<0.033	<0.033	<0.033	<0.127	<0.031	<0.128	<0.131
Phenanthrene	-	-	-	0.004	<0.003	**0.004**	<0.003	**0.041**	<0.003	**0.016**	**0.044**
Phenol	-	-	1,900/25,000	<0.007	<0.006	<0.006	<0.006	<0.025	<0.006	<0.025	<0.026
Pyrene	1800	23000	-	**0.004**	<0.003	**0.011**	<0.003	**0.075**	<0.003	**0.017**	**0.096**
Pyridine	-	-	-	<0.017	<0.016	<0.016	<0.016	<0.063	<0.015	<0.063	<0.065
BaP Equivalence	0.11	2.1	-	NA	NA	**0.013**	NA	**0.054**	NA	NA	**0.135**

TABLE 5 – JUNE 2020 RAIL SPUR SOIL SAMPLING (POINT SOURCE SOLUTIONS)								
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	TB9-S1 (2')	TB10-S1 (2')	TB11-S1 (2')	TB12-S1 (2')	TB13-S1 (2')
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)								
1-Methylnaphthalene	-	-	-	<0.007	<0.011	<0.012	<0.012	<0.013
12-Dichlorobenzene	2200	36000	-	<0.008	<0.011	<0.012	<0.012	<0.013
12-Dinitrobenzene	-	-	0.63/8.2	<0.088	<0.011	**0.025**	<0.012	<0.013
124-Trichlorobenzene	-	-	5.8/260	<0.008	<0.011	<0.012	<0.012	<0.013
13-Dichlorobenzene	-	-	-	<0.008	<0.011	**0.015**	<0.012	<0.013
13-Dinitrobenzene	-	-	0.63/8.2	<0.088	<0.011	<0.012	<0.012	<0.013
14-Dichlorobenzene	14	64	-	<0.008	<0.011	<0.012	<0.012	<0.013
14-Dinitrobenzene	-	-	0.63/8.2	<0.088	<0.011	<0.012	<0.012	<0.013
2-Chloronaphthalene	-	-	-	<0.003	<0.011	<0.012	<0.012	<0.013
2-Chlorophenol	-	-	39/580	<0.017	<0.011	<0.012	<0.012	<0.013
2-Methylnaphthalene	-	-	-	<0.007	<0.011	<0.012	<0.012	<0.013
2-Methylphenol	-	-	-	<0.008	<0.011	<0.012	<0.012	<0.013
2-Nitroaniline	-	-	63/800	<0.071	<0.011	<0.012	<0.012	<0.013
2-Nitrophenol	-	-	-	<0.035	<0.011	**0.034**	<0.012	<0.013
22'-Oxybis(1-Chloropropane)	-	-	-	<0.008	<0.011	**0.016**	<0.012	<0.013
2346-Tetrachlorophenol	-	-	190/2,500	<0.017	<0.011	<0.012	<0.012	<0.013
2356-Tetrachlorophenol	-	-	-	<0.017	<0.011	**0.013**	<0.012	<0.013
24-Dichlorophenol	-	-	19/2,500	<0.017	<0.011	**0.087**	**0.02**	<0.013
24-Dimethylphenol	-	-	19/2,500	<0.017	<0.011	**0.036**	<0.012	<0.013
24-Dinitrophenol	-	-	13/160	<0.088	<0.011	<0.012	<0.012	<0.013
24-Dinitrotoluene	-	-	1.7/7.4	<0.035	<0.011	<0.012	<0.012	<0.013
245-Trichlorophenol	-	-	630/8,200	<0.017	<0.011	**0.025**	<0.012	<0.013
246-Trichlorophenol	49	210	-	<0.017	<0.011	<0.012	<0.012	<0.013
26-Dinitrotoluene	0.36	1.5	-	<0.035	<0.011	**0.015**	<0.012	<0.013
3-Nitroaniline	-	-	-	<0.071	<0.011	<0.012	<0.012	<0.013
33'-Dichlorobenzidine	1.2	5.1	-	<0.035	<0.011	<0.012	<0.012	<0.013
4-Bromophenyl phenyl ether	-	-	-	<0.008	<0.011	<0.012	<0.012	<0.013
4-Chloro-3-methylphenol	-	-	-	<0.035	<0.011	<0.012	<0.012	<0.013

TABLE 5 – JUNE 2020 RAIL SPUR SOIL SAMPLING (POINT SOURCE SOLUTIONS)								
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	TB9-S1 (2’)	TB10-S1 (2’)	TB11-S1 (2’)	TB12-S1 (2’)	TB13-S1 (2’)
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)								
4-Chloroaniline	-	-	2.7/11	<0.008	<0.011	<0.012	<0.012	<0.013
4-Chlorophenyl phenyl ether	-	-	-	<0.008	<0.011	<0.012	<0.012	<0.013
4-Nitroaniline	-	-	25/110	<0.071	<0.011	<0.012	<0.012	<0.013
4-Nitrophenol	-	-	-	<0.035	<0.011	<0.012	<0.012	<0.013
46-Dinitro-2-methylphenol	-	-	-	<0.088	<0.011	**0.034**	<0.012	<0.013
Acenaphthene	4700	70000	-	<0.003	<0.011	**0.016**	<0.012	<0.013
Acenaphthylene	-	-	-	<0.003	<0.011	<0.012	<0.012	<0.013
Aniline	-	-	44/400	<0.017	<0.011	**0.013**	<0.012	<0.013
Anthracene	23000	350000	-	<0.003	<0.011	**0.087**	**0.02**	<0.013
Azobenzene (12-DPH)	-	-	5.6/26	<0.008	<0.011	**0.036**	<0.012	<0.013
Benz(a)anthracene	1.1	21	-	<0.003	<0.011	<0.012	<0.012	<0.013
Benzo(a)pyrene	0.11	2.1	-	<0.005	<0.011	<0.012	<0.012	<0.013
Benzo(b)fluoranthene	1.1	21	-	<0.005	<0.011	**0.025**	<0.012	<0.013
Benzo(ghi)perylene	-	-	-	<0.003	<0.011	<0.012	<0.012	<0.013
Benzo(k)fluoranthene	11	210	-	<0.005	<0.011	**0.015**	<0.012	<0.013
Benzoic acid	-	-	25,000/330,000	<0.442	<0.011	<0.012	<0.012	<0.013
Benzyl alcohol	-	-	630/8,200	<0.017	<0.011	<0.012	<0.012	<0.013
Bis(2-Chloroethoxy) methane	-	-	19/250	<0.008	<0.011	<0.012	<0.012	<0.013
Bis(2-Chloroethyl) ether	0.29	1.3	0.23/1	<0.008	<0.011	<0.012	<0.012	<0.013
Bis(2-Ethylhexyl) adipate	-	-	-	<0.088	<0.011	<0.012	<0.012	<0.013
Bis(2-ethylhexyl)phthalate	39	160	-	<0.053	<0.011	<0.012	<0.012	<0.013
Butyl benzyl phthalate	-	-	-	<0.035	<0.011	<0.012	<0.012	<0.013
Carbazole	-	-	-	<0.005	<0.011	<0.012	<0.012	<0.013
Chrysene	110	2100	-	<0.003	<0.011	**0.034**	<0.012	<0.013
Di-n-butylphthalate	-	-	-	<0.035	<0.011	**0.016**	<0.012	<0.013
Di-n-octyl phthalate	-	-	-	<0.035	<0.011	<0.012	<0.012	<0.013
Dibenz(ah)anthracene	0.11	2.1	-	<0.003	<0.011	**0.013**	<0.012	<0.013
Dibenzofuran	-	-	-	<0.003	<0.011	**0.087**	**0.02**	<0.013

TABLE 5 – JUNE 2020 RAIL SPUR SOIL SAMPLING (POINT SOURCE SOLUTIONS)								
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	TB9-S1 (2')	TB10-S1 (2')	TB11-S1 (2')	TB12-S1 (2')	TB13-S1 (2')
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)								
Diethylphthalate	-	-	-	<0.035	<0.011	**0.036**	<0.012	<0.013
Dimethylphthalate	-	-	-	<0.035	<0.011	<0.012	<0.012	<0.013
Fluoranthene	2400	30000	-	<0.003	<0.011	<0.012	<0.012	<0.013
Fluorene	3100	47000	-	<0.003	<0.011	**0.025**	<0.012	<0.013
Hexachlorobenzene	0.21	0.93	-	<0.003	<0.011	<0.012	<0.012	<0.013
Hexachlorobutadiene	-	-	1.2/5.3	<0.008	<0.011	**0.015**	<0.012	<0.013
Hexachlorocyclopentadiene	-	-	0.18/0.75	<0.017	<0.011	<0.012	<0.012	<0.013
Hexachloroethane	7.4	32	-	<0.008	<0.011	<0.012	<0.012	<0.013
Indeno(123-cd)pyrene	1.1	21	-	<0.003	<0.011	<0.012	<0.012	<0.013
Isophorone	-	-	570/2,400	<0.008	<0.011	<0.012	<0.012	<0.013
N-Nitroso-di-n-propylamine	0.078	0.33	-	<0.008	<0.011	<0.012	<0.012	<0.013
N-Nitrosodimethylamine	-	-	0.0002/0.0034	<0.008	<0.011	<0.012	<0.012	<0.013
N-Nitrosodiphenylamine	110	470	-	<0.008	<0.011	<0.012	<0.012	<0.013
Naphthalene	5.3	23	-	<0.007	<0.011	<0.012	<0.012	<0.013
Nitrobenzene	-	-	5.1/22	<0.035	<0.011	**0.034**	<0.012	<0.013
Pentachlorophenol (PCP)	1	4	-	<0.035	<0.011	**0.016**	<0.012	<0.013
Phenanthrene	-	-	-	<0.003	<0.011	<0.012	<0.012	<0.013
Phenol	-	-	1,900/25,000	<0.007	<0.011	**0.013**	<0.012	<0.013
Pyrene	1800	23000	-	<0.003	<0.011	**0.087**	**0.02**	<0.013
Pyridine	-	-	-	<0.017	<0.011	**0.036**	<0.012	<0.013
BaP Equivalence	0.11	2.1	-	NA	NA	**0.0157**	NA	NA

Notes:

- Concentrations are only presented for regulated compounds. Various compounds were detected in these samples without corresponding RBCs for the relevant exposure scenarios.
- - = No RBC value, due to the chemical's non-volatility, the RBC exceeding three-phase equilibrium partitioning, or the RBC exceeding 1,000,000, or otherwise not posing a risk in this receptor scenario.

Soil exceeding RBCss – Residential Receptors

Soil exceeding EPA RSLs – THQ=0.1

Soil exceeding RBCss – Occupational Receptors

TABLE 6 – ROOSEVELT 3 PCS EXCAVATION CONFIRMATION SOIL SAMPLES (POINT SOURCE SOLUTIONS)								
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Idustrl	R3PB-S1 (12’)	R3NW-S1 (8’)	R3SW-S1 (8’)	R3EW-S1 (8’)	R3WW-S1 (8’)
SOIL (MG/KG) – EPA METHODS NWTPH-DX, NWTPH-GX								
Diesel	1100	2200	-	<118	<25.0	<26.9	<25.2	<25.0
Oil	-	-	-	**3000**	**795**	<53.8	**584**	<50.0
Gasoline	1200	2500	-	<6.66	<6.41	<8.10	<8.08	<8.17

TABLE 6 – ROOSEVELT 3 PCS EXCAVATION CONFIRMATION SOIL SAMPLES (POINT SOURCE SOLUTIONS)				
ANALYTE	RBCsw Residential	RBCsw Occupational	EPA RSLs Groundwater Protection	R3PB-S1 (12’)
SOIL (MG/KG) – EPA METHOD 8270 (PAHS)				
Acenaphthene	-	-	0.55	<0.0120
Acenaphthylene	-	-	-	<0.0120
Benz(a)anthracene	1.6	-	-	<0.0120
Benzo(a)pyrene	4.4	-	-	<0.0120
Benzo(b)fluoranthene	-	-	0.3	<0.0120
Benzo(k)fluoranthene	-	-	2.9	<0.0120
Benzo(g,h,i)perylene	-	-	-	<0.0120
Chrysene	-	-	9	<0.0120
Dibenz(a,h)anthracene	-	-	0.096	<0.0120
Fluoranthene	-	-	8.9	<0.0120
Fluorene	-	-	0.54	<0.0120
Indeno(1,2,3-cd)pyrene	-	-	0.98	<0.0120
Naphthalene	0.077	0.34	-	<0.0120
Phenanthrene	-	-	-	<0.0120
Pyrene	-	-	1.3	<0.0120

TABLE 6 – ROOSEVELT 3 PCS EXCAVATION CONFIRMATION SOIL SAMPLES (POINT SOURCE SOLUTIONS)				
ANALYTE	RBCsw Residential	RBCsw Occupational	EPA RSLs Groundwater Protection	R3PB-S1 (12')
SOIL (MG/L) – EPA METHOD 6020A (TCLP METALS)				
Arsenic	*	*	0.0015	**4.44**
Barium	*	*	16	**175**
Cadmium	*	*	0.014	<0.246
Chromium	*	*	4,000,000	**17.3**
Copper	*	*	2.8	N/A
Lead	30	30	-	**6.71**
Molybdenum	-	-	0.2	<0.0984
Nickel	*	*	1.3	N/A
Selenium	-	-	0.052	<1.23
Silver	*	*	0.082	<0.246
Zinc	-	-	370	N/A

Notes:

- Concentrations are only presented for regulated compounds. Various compounds were detected in these samples without corresponding RBCs for the relevant exposure scenarios.
- \- = No RBC value, due to the chemical's nonvolatility, the RBC exceeding three-phase equilibrium partitioning, or the RBC exceeding 1,000,000, or otherwise not posing a risk in this receptor scenario.
- * = Leaching-to-Groundwater (sw) RBCs are not provided for inorganic chemicals. If this pathway is of concern, then site-specific leaching tests must be performed. EPA RSLs are provided in lieu of DEQ RBCs.

Soil exceeding RBCsw – Residential Receptors

Soil exceeding EPA RSLs – THQ=0.1

Soil exceeding RBCsw – Occupational Receptors

TABLE 6A - ROOSEVELT 3 JULY 2020 ISM/RSM SOIL SAMPLE RESULTS AVERAGE SOIL CONCENTRATIONS – PCBS/BAPeq/ARSENIC/LEAD MG/KG					
Area	**Depth**	**PCBs**	**BaPeq**	**Arsenic**	**Lead**
Roosevelt 3	0.5-2.0’	0.0246	**0.201**	**9.5**	44.8
	2.0-4.0’	0.0410	**0.131**	**11.0**	25.4
Soil Ingestion - Residential		**0.23**	**0.11**	**0.43**	**200**
Soil Ingestion - Occupational		**0.59**	**2.1**	**1.9**	**200**
Construction/Excavation Worker		**4.9/140**	**170/4,900**	**15/420**	**800/800**
Background Levels of Metals in Soil		**NA**	**NA**	**8.8**	**79**

TABLE 7 – ROOSEVELT 4 MARCH 2020 PCS EXCAVATION CONFIRMATION SOIL SAMPLES (POINT SOURCE SOLUTIONS)							
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	PB-S1 (9')	SWW-S1 (7')	NWW-S1 (7')	SW-S1 (7')
SOIL (MG/KG) – EPA METHODS NWTPH-DX, NWTPH-GX							
Diesel	1,100	14,000	-	<25.0	<25.7	<26.2	<25.7
Oil	-	-	-	**201**	<51.5	<52.3	<51.5
Gasoline	1200	20,000	-	<6.72	<7.99	<7.60	<7.39

TABLE 7A – ROOSEVELT 4 JULY 2020 ISM SOIL SAMPLING (POINT SOURCE SOLUTIONS)									
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	R4 U1 (0.5 – 2.0')	R4 U2 (0.5 – 2.0')	R4 U3 (0.5 – 2.0')	R4 L1 (2.0 – 4.0')	R4 L2 (2.0 – 4.0')	R4 L3 (2.0 – 4.0')
SOIL (MG/KG) – EPA METHOD NWTPH-DX, 8270 (PAHS), METHOD 6020 (METALS)									
Diesel	1,100	14,000	-	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
Oil	-	-	-	**133**	**169**	**170**	**95.9**	**87.4**	**81**
Acenaphthene	4700	70000	-	**0.021**	**0.074**	**0.064**	**0.027**	**0.023**	**0.02**
Acenaphthylene	-	-	-	**0.09**	**0.297**	**0.261**	**0.015**	**0.01**	<0.01
Benz(a)anthracene	1.1	21	-	**0.322**	**0.837**	**0.977**	**0.202**	**0.124**	**0.097**
Benzo(a)pyrene	0.11	2.1	-	**0.335**	**0.821**	**0.987**	**0.256**	**0.137**	**0.152**
Benzo(b)fluoranthene	1.1	21	-	**0.399**	**0.956**	**1.15**	**0.407**	**0.206**	**0.264**
Benzo(k)fluoranthene	11	210	-	**0.159**	**0.327**	**0.422**	**0.139**	**0.077**	**0.097**
Benzo(g,h,i)perylene	-	-	-	**0.185**	**0.392**	**0.477**	**0.184**	**0.093**	**0.129**
Chrysene	110	2100	-	**0.339**	**0.844**	**1.02**	**0.257**	**0.139**	**0.145**
Dibenz(a,h)anthracene	0.11	2.1	-	**0.055**	**0.12**	**0.148**	**0.063**	**0.031**	**0.043**
Fluoranthene	2400	30000	-	**0.57**	**1.72**	**1.91**	**0.293**	**0.199**	**0.101**
Fluorene	3100	47000	-	**0.16**	**0.574**	**0.507**	**0.032**	**0.032**	**0.015**
Indeno(1,2,3-cd)pyrene	1.1	21	-	**0.221**	**0.48**	**0.58**	**0.228**	**0.116**	**0.156**
Naphthalene	5.3	23	-	**0.098**	**0.153**	**0.155**	**0.033**	**0.055**	**0.031**
Phenanthrene	-	-	-	**0.826**	**2.88**	**2.78**	**0.292**	**0.233**	**0.091**

TABLE 7A – ROOSEVELT 4 JULY 2020 ISM SOIL SAMPLING (POINT SOURCE SOLUTIONS)									
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	R4 U1 (0.5 – 2.0')	R4 U2 (0.5 – 2.0')	R4 U3 (0.5 – 2.0')	R4 L1 (2.0 – 4.0')	R4 L2 (2.0 – 4.0')	R4 L3 (2.0 – 4.0')
SOIL (MG/KG) – EPA METHOD NWTPH-DX, 8270 (PAHS), METHOD 6020 (METALS)									
Pyrene	1800	23000	-	**0.556**	**1.67**	**1.84**	**0.28**	**0.187**	**0.103**
Arsenic	0.43	1.9	-	**9.6**	**9.73**	**10.2**	**9.32**	**10.3**	**8.86**
Barium	15000	220000	-	**173.0**	**168.0**	**181.0**	**180.0**	**170.0**	**177.0**
Cadmium	78	1100	-	**0.322**	**0.335**	**0.417**	**0.296**	**0.363**	**0.368**
Chromium	120,000	-	-	**52.5**	**53.1**	**67.8**	**41.1**	**1210.0**	**41.7**
Copper	3100	47000	-	**39.8**	**61.0**	**60.5**	**35.6**	**73.3**	**37.8**
Lead	200	200	-	**71.6**	**58.3**	**79.7**	**44.3**	**54.8**	**50.2**
Mercury	23	350	-	<0.086	<0.084	<0.085	<0.09	<0.086	<0.09
Nickel	1500	22000	-	**49.6**	**47.1**	**54.8**	**41.1**	**249.0**	**40.8**
Zinc	15000	220000	-	**147.0**	**136.0**	**163.0**	**120.0**	**130.0**	**182.0**

TABLE 7A - ROOSEVELT 4 JULY 2020 ISM/RSM SOIL SAMPLE RESULTS AVERAGE SOIL CONCENTRATIONS – PCBS/BAPeq/ARSENIC/LEAD MG/KG					
Area	Depth	PCBs	BaPeq	Arsenic	Lead
Roosevelt 4	0.5-2.0'	0.0644	**1.023**	**9.8***	69.9
	2.0-4.0'	0.0418	**0.2888**	**9.5***	49.8
Soil Ingestion - Residential		0.23	0.11	0.43	200
Soil Ingestion - Occupational		0.59	2.1	1.9	200
Construction/Excavation Worker		4.9/140	170/4,900	15/420	800/800
Background Levels of Metals in Soil		NA	NA	8.8	28

TABLE 8 – ROOSEVELT 5 PCS EXCAVATION CONFIRMATION SOIL SAMPLES (POINT SOURCE SOLUTIONS)								
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	NPW-5	WPW-5	SPW-5	EPW-5	PB-7
SOIL (MG/KG) – EPA METHODS NWTPH-DX, NWTPH-GX								
Diesel	1,100	14,000	-	<26.5	<25.0	<26.4	**2,020**	<25.0
Oil	-	-	-	<53.0	<50.0	<52.7	<52.7	<50.0
Gasoline	1,200	20,000	-	<7.80	<7.65	<8.26	**233**	<7.36

TABLE 8 – ROOSEVELT 5 PCS EXCAVATION CONFIRMATION SOIL SAMPLES (POINT SOURCE SOLUTIONS)					
ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	EPW2 (5')	EPW2-DUP (5')
SOIL (MG/KG) – EPA METHODS NWTPH-DX, NWTPH-GX					
Diesel	1,100	14,000	-	<25.7	<23.6
Oil	-	-	-	<7.23	<7.0
Gasoline	1,200	20,000	-	<51.3	<47.1

Notes:

- Concentrations are only presented for regulated compounds. Various compounds were detected in these samples without corresponding RBCs for the relevant exposure scenarios.
- \- = No RBC value, due to the chemical's nonvolatility, the RBC exceeding three-phase equilibrium partitioning, or the RBC exceeding 1,000,000, or otherwise not posing a risk in this receptor scenario.

Soil exceeding RBCss – Residential Receptors

Soil exceeding EPA RSLs– THQ=0.1

Soil exceeding RBCss – Occupational Receptors

TABLE 8A – ROOSEVELT 5 JULY 2020 ISM SOIL SAMPLING (POINT SOURCE SOLUTIONS)

ANALYTE	RBCss Residential	RBCss Occupational	EPA RSLs Res/Industr	R5 U1 (0.5 – 2.0’)	R5 U2 (0.5 – 2.0’)	R5 U3 (0.5 – 2.0’)	R5 L1 (2.0 – 4.0’)	R5 L2 (2.0 – 4.0’)	R5 L3 (2.0 – 4.0’)
SOIL (MG/KG) – EPA METHOD NWTPH-DX, 8270 (PAHS), METHOD 6020 (METALS)									
Diesel	1,100	14,000	-	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
Oil	-	-	-	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
Acenaphthene	4700	70000	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Acenaphthylene	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benz(a)anthracene	1.1	21	-	**0.012**	**0.032**	**0.02**	<0.01	<0.01	<0.01
Benzo(a)pyrene	0.11	2.1	-	**0.013**	**0.039**	**0.028**	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	1.1	21	-	**0.021**	**0.058**	**0.044**	<0.01	<0.01	0.012
Benzo(k)fluoranthene	11	210	-	<0.01	**0.019**	**0.014**	<0.01	<0.01	<0.01
Benzo(g,h,i)perylene	-	-	-	**0.015**	**0.034**	**0.027**	<0.01	<0.01	<0.01
Chrysene	110	2100	-	**0.014**	**0.038**	**0.026**	<0.01	<0.01	0.011
Dibenz(a,h)anthracene	0.11	2.1	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Fluoranthene	2400	30000	-	**0.014**	**0.04**	**0.023**	<0.01	<0.01	0.015
Fluorene	3100	47000	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	1.1	21	-	**0.015**	**0.036**	**0.029**	<0.01	<0.01	<0.01
Naphthalene	5.3	23	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenanthrene	-	-	-	<0.01	**0.025**	**0.012**	<0.01	<0.01	<0.01
Pyrene	1800	23000	-	**0.015**	**0.044**	**0.025**	<0.01	<0.01	0.018
Arsenic	0.43	1.9	-	**10.9**	**10.4**	**10.6**	**12.0**	**11.1**	**11.1**
Barium	15000	220000	-	**191.0**	**185.0**	**192.0**	**192.0**	**181.0**	**181.0**
Cadmium	78	1100	-	<0.21	<0.226	<0.215	<0.209	<0.223	<0.225
Chromium	120,000	-	-	**23.9**	**29.0**	**24.9**	**23.7**	**21.8**	**21.0**
Copper	3100	47000	-	**26.0**	**29.2**	**27.1**	**28.7**	**25.9**	**26.1**
Lead	200	200	-	**19.8**	**34.1**	**21.0**	**15.5**	**14.8**	**15.9**
Mercury	23	350	-	<0.084	<0.09	<0.086	<0.083	<0.089	<0.09
Nickel	1500	22000	-	**19.7**	**22.1**	**21.6**	**29.6**	**22.7**	**20.4**
Zinc	15000	220000	-	**86.1**	**88.4**	**89.2**	**86.8**	**79.2**	**77.8**

TABLE 8A - ISM/RSM SOIL SAMPLE RESULTS AVERAGE SOIL CONCENTRATIONS – PCBS/BAPeq/ARSENIC/LEAD MG/KG					
Area	**Depth**	**PCBs**	**BaPeq**	**Arsenic**	**Lead**
Roosevelt 5	0.5-2.0’	0.0103	0.0363	**10.6***	24.9
	2.0-4.0’	0.0103	0.0215	**11.4***	15.4
Soil Ingestion - Residential		**0.23**	**0.11**	**0.43**	**200**
Soil Ingestion - Occupational		**0.59**	**2.1**	**1.9**	**200**
Construction/Excavation Worker		**4.9/140**	**170/4,900**	**15/420**	**800/800**
Background Levels of Metals in Soil		**NA**	**NA**	**8.8**	