CLEANUP ACTION PLAN AMENDMENT AND CONTAMINATED MEDIA MANAGEMENT PLAN FOR CONSTRUCTION

Former Phinney Substation
6109 Phinney Avenue North
Seattle, Washington

Prepared for: Homestead Community Land Trust

Project No. 210143 • September 27, 2024 DRAFT

Aspect
A Geosyntec Company

earth + water

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1 Introduction

Aspect Consulting (Aspect) prepared this Cleanup Action Plan Amendment and Contaminated Media Management Plan for Construction (Plan) for the former Phinney Substation site at 6109 Phinney Avenue North (King County Parcel number 952310-1290; "Substation parcel") and the east-adjacent duplex property at 6111 Phinney Avenue North (King County Parcel number 952310-1291; "Duplex parcel"). These properties, collectively known as the Subject Property, are located in the Phinney Ridge neighborhood of Seattle, Washington (Figure 1).

The Substation parcel is vacant, and a concrete pad and fencing remain from the former electrical substation. The Duplex parcel contains a residential duplex that was built circa 1953 and is currently occupied. The former electrical substation concrete pad and duplex building will be demolished to facilitate construction of a new affordable housing building (Project) at the Subject Property.

Shallow soil (less than 3 feet) on localized areas of the Subject Property and an area on the south-adjacent property have been contaminated by lead, mercury and arsenic. A Remedial Investigation/Feasibility Study and Cleanup Action Plan (RI/FS, CAP) dated October 4, 2021, was submitted to the Washington State Department of Ecology (Ecology) for acceptance into their expedited Voluntary Cleanup Program (eVCP). The Ecology reviewed the RI/FS CAP and issued a No Further Action likely (NFA) opinion letter dated March 2, 2022. Ecology identifies the Site as the "Homestead Phinney Ridge CLT" and assigned it a cleanup site ID of 15480, a facility ID of 98431, and an eVCP project ID of XN0014.

This Plan provides three elements that supplement and complement the RIFS CAP that was submitted to Ecology:

1. An Amendment to Section 4.0 of RI/FS CAP. Section 3.1 of this Plan provides an overview of additional soil investigation data obtained on the south-adjacent property and summarizes how metals-contaminated soil on this property will be integrated into the selected cleanup remedy (remedial excavation) outlined in the CAP.

2. Procedures for (a) handling and disposal of soil and water (if any is generated) that will be excavated to facilitate cleanup and planned construction, (b) soil confirmation sampling from the limits of the remedial excavation area, and (c) procedures for possible unanticipated environmental discoveries (such as underground storage tanks [USTs], debris, and/or undocumented objects of environmental concern) during construction activities.

3. A plan for soil sampling beneath the concrete slab that remains on the Substation parcel and beneath the building on the Duplex parcel. Once this sampling effort is completed, we will be able to evaluate whether the metals-contaminated soil identified at the perimeter of these parcels is limited in extent, or whether shallow fill is impacted over a greater area across the parcels. This sampling effort will complete

characterization of the "Site"[1] when combined with all of the soil sampling data that has been obtained to date.

1.1 Project Understanding and Assumptions

Details regarding Project scope (see first bullet, below) and excavation methods are still in development. This Plan was prepared based on assumptions regarding the Project, excavation methods, and environmental conditions, in order to provide information for planning purposes. The key assumptions relied upon in preparation of this Plan are as follows:

- The Project consists of demolition of an existing duplex, removal of the existing former substation concrete pad, and construction of a new five-story, 28-unit affordable housing condominium building with ground floor retail and nine parking stalls.
- The building, which will cover most of the Subject Property, will be constructed on shallow footings, with an average excavation depth of approximately 4 to 6 feet below existing ground surface (bgs). The deepest areas of excavation will be the elevator pit within the building footprint (<8.5 feet bgs) and the detention tank area (<8.5 feet bgs).
- Excavation to remove metals-contaminated soil in the areas identified on Figures 2 and 4 is anticipated to be within fill soil, which is generally less than 3 feet thick. Confirmation soil samples will be obtained from the perimeter of the remedial excavations completed at the Site.
- In order to obtain footing grade, excavation cuts on the order of 5 to 6 feet or greater are needed along the property lines and will require shoring.
- The specific soil disposal facilities to be used for the Project have not yet been selected. Disposal facilities will be selected via recommendation by the earthwork contractor and approved by Aspect and Homestead. Common disposal facilities include Rabanco/Roosevelt Regional Subtitle D Landfill in Klickitat County, Washington, and/or Waste Management's Subtitle D or C Landfills in Arlington, Oregon, or Waste Management's Subtitle D Landfill in Wenatchee, Washington. Compliance with the acceptance criteria and handling requirements for the specific disposal facilities as well as tracking soil will be coordinated between Homestead, Aspect, and the General Contractor.
- Groundwater is anticipated to be present at elevations well below the excavation depths, and construction groundwater dewatering is not anticipated for the Project; however, depending on the season of the construction activity, it is possible that rainwater will require management within the excavation. The General Contractor will be responsible for water removal, management, permitting and treatment/discharge (if necessary) from the excavation.

[1] Site" is defined under the Washington State Model Toxics Control Act (MTCA) as anywhere contamination has come to be located.

2 Subject Property Background

This section includes contextual information on Subject Property history, local geologic and hydrogeologic conditions, and known Subject Property environmental conditions.

2.1 Operational History

There are currently two structures on the two parcels: a 980-square-foot concrete pad (left from the former substation) and a residential duplex (on the Duplex parcel). The Subject Property is zoned NC2P-55 (M), which is mixed-use residential and commercial. This zone is restricted to the parcels that front Phinney Avenue North; the properties to the west are zoned for detached single-family houses only (zone SF 5000).

The Substation parcel is L-shaped and was used as an electrical substation from approximately the mid-1950s to 1990s. Prior to development, the Substation parcel was used for equipment storage by the City of Seattle, and presumably by Seattle City Light, after its acquisition of the parcel in 1948. The electrical substation was constructed between 1948 and 1953. In the 1990s, the substation was de-energized and demolished, and the parcel was vacated, leaving only the concrete slab in place. The Substation parcel has been vacant since.

The Duplex parcel bounds the Substation parcel to the east and north. It was first developed for residential use in 1953, when the current duplex was constructed, and has been occupied for residential purposes since.

The City of Seattle currently owns the Substation parcel, and Homestead owns the Duplex parcel. The Substation parcel is in the process of being sold to Homestead and we understand this transaction will be completed before building construction starts. The South-Adjacent Property that has been affected by shallow metals-contaminated soil is owned by a private individual. That property contains a two-story mixed-use building with commercial uses on the ground floor and apartments on the second floor. Based on discussions with the City of Seattle, they will handle all communications and access agreements with the South-Adjacent Property owner.

2.2 Geology and Hydrogeology

The Subject Property is located on Phinney Ridge, a north-south oriented glacially deposited drumlin that was formed during the most recent Vashon Stade glacial advance. The surface geology on Phinney Ridge is mapped as Quaternary Glacial Till (Qvt), which is described as a compact diamict of silt, sand, and sub-rounded to well-rounded gravel (Booth, et al., 2007). Borings completed on the same block as the Subject Property have been advanced to 35 feet bgs without encountering groundwater; the deepest wells in the area show static water levels at approximately 100 feet bgs. Perched water within the till does not appear common in this area, and wells constructed from ground surface to 30 feet bgs are consistently dry, according to nearby geotechnical studies (as referenced in Aspect RI/FS CAP, 2021). The till is described as being very dense, which limits infiltration from surface runoff or precipitation.

2.3 Environmental Contaminants of Concern

Historical environmental investigations have identified metals (arsenic, lead, and mercury) contamination in fill soil at portions of the Subject Property (see historical data summary table in Appendix A). These chemicals exceed the following Model Toxics Control Act (MTCA) Method A cleanup levels:

- Arsenic – 20 milligrams per kilogram (mg/kg)
- Lead – 250 mg/kg
- Mercury – 2 mg/kg

The affected media at the Subject Property is soil. There is no evidence of a release of contaminants at the Subject Property that could have impacted either soil gas or groundwater. Metals-contaminated soil has been found to extend across the south-adjacent property boundary onto private property (see Section 3.1 for details). As stated above in Item #3 of in Section 1.0, this Plan includes a process for soil sampling beneath the concrete slab that remains on the Substation parcel and beneath the building on the Duplex parcel. Once this sampling effort is completed, we will be able to evaluate whether the metals-contaminated soil identified at the perimeter of these parcels is limited in extent, or whether shallow fill is impacted over a greater area across the parcels. This sampling effort will complete characterization of the "Site" when combined with all of the soil sampling data that has been obtained to date.

3 Completed, Future, and Confirmation Soil Sampling

This section represents two different areas of soil within the Site (the Subject Property and South-Adjacent Property) that have been (or will be) sampled and tested to supplement the RI/FS CAP: (1) metals-contaminated soil found extending south of the South-Adjacent Property boundary (Section 3.1), and (2) soil yet to be sampled and tested beneath the former substation concrete slab and duplex (Section 3.2). Soil sampling and testing will be conducted in the unexplored areas beneath concrete slab after demolition. In addition, after remedial excavation, confirmation soil sampling will be completed to confirm that contaminated soil has been removed (Section 3.3). Appendix B presents the Sampling and Analysis Plan (SAP), and Appendix C presents the Quality Assurance Project Plan (QAPP).

3.1 Property Boundary and Off-Property Sampling

The NFA letter from Ecology dated March 2, 2022, states that "Ecology has determined that, upon completion of your proposed cleanup, no further remedial action will likely be necessary to clean up contamination at the Property (Excavation and offsite disposal of

contaminated soil is proposed for King County Parcel No. 9523101290)" [substation parcel]).

Ecology's NFA letter also indicates that "Ecology has determined that further remedial action will likely be necessary elsewhere at the Site (Soil contamination was found near the southern, northwest, and eastern boundaries of Parcel No. 9523101290. Hence, the extent of contamination needs to be determined on these adjacent properties and cleaned up prior to a Site NFA determination being issued by Ecology.)." Based on this statement by Ecology, this Plan outlines new data and establishes a plan for additional soil sampling and testing once the substation slab and duplex building are demolished. Once completed, it is anticipated that a Property-Specific NFA will be achievable.

Ecology also indicates that to be eligible for a *Site* NFA, cleanup of all contamination from a release is required. Ecology indicates in footnote 2 of their letter that "the extent of contamination needs to be determined on these adjacent properties and cleaned up prior to a *Site* NFA determined being issued by Ecology." The following summarizes the additional soil investigation that was completed on adjacent properties to supplement the RI/FS and CAP:

- Metals-contamination in soil near the property boundaries suggested the likelihood of some contamination extending onto adjacent properties (as shown on Figure 2). Targeted property boundary sampling was performed in April 2024 to determine if contamination extended onto adjacent properties to the east, west, and south.
- Five property boundary soil samples (AHA-11 [west]; AHA-07 [east] and AHA-08, -09, -10 [south]) were collected at the locations shown on Figures 2 and 4 after obtaining access from neighboring property owners. The soil samples were collected by removing surface vegetation and advancing a stainless-steel hand auger to the total sampling depth (0 to 6 inches bgs). The five soil samples were placed into laboratory-provided glass jars and stored in a cooler on ice. The sampling equipment was decontaminated between sample locations to minimize the possibility of cross-contamination. After sampling was completed, the samples were submitted to Friedman & Bruya Inc., for chemical testing of lead, arsenic, and mercury by EPA Method 6020B on a standard turnaround time.
- Property boundary soil sampling results indicated that metals contamination was present at one location at the eastern property boundary and all three locations at the southern boundary. This result prompted shallow soil sampling at eight additional locations on the south-adjacent property (6103 Phinney Avenue North) to ascertain the nature and extent of lead and mercury contamination on that property using the same sampling and testing methods summarized above.
- The analytical results for samples collected were compared to the MTCA Method A soil cleanup levels for unrestricted land use, as shown in Tables 2 and 3.
- The shallow soil samples collected on the south-adjacent property indicated the presence of lead and mercury at concentrations above the MTCA Method A cleanup level on the South-Adjacent Property.

3.2 Characterization Sampling of Unknown Soil Areas

The potential extent of metals contamination in soil beneath the concrete slab of the former substation and beneath the duplex on the Duplex parcel is unknown. After the slab and duplex are demolished, the unknown areas will be divided into decision units (DUs) for characterization (Figure 3). Soil samples will be collected from 3 to 4 locations within each DU in an approximate grid pattern with centers approximately 15 feet apart. Equal portions of the discrete soil samples representing each DU will be combined into composite samples for analysis to confirm soils within each DU comply with the applicable MTCA Method A cleanup levels. Portions of each soil sample will be retained for potential analysis of individual subsamples for additional characterization as needed.

The composite soil samples will be analyzed for arsenic, lead, and mercury (EPA Method 6020B). Analytical reporting limits for the soil analyses will be less than cleanup levels. An Ecology-accredited analytical laboratory will conduct the analyses of samples collected. Typically, a 24-hour turnaround will be requested for the composite sample analyses so as to not delay field decision-making and overall progress for the soil removal action.

If soil sample results exceed MTCA Method A cleanup levels, additional excavation will be completed. Where the concentration of arsenic, lead, or mercury in a composite sample exceeds the cleanup level, the excavation will be deepened in the area represented by the sample by a minimum of 0.5 foot, if feasible, followed by collection of new base and sidewall confirmation samples, as described in Section 3.3 below.

3.3 Confirmation Sampling and Overexcavation

Soil sampling to demonstrate that contaminated soil extents have been identified will be conducted on both the Subject Property and South-Adjacent Property as summarized below and in the section above). The goal will be to achieve at least a Property-Specific NFA with intention to achieve a Site-Specific NFA. This will be determined once remedial excavation to the extents practicable is achieved.

An Aspect representative will be on-site to collect the soil samples directly from the excavation. Soil samples will be transported to the laboratory and analyzed for the contaminants of concern (arsenic, lead, and mercury) on an expedited turnaround time.

For the excavations removing contaminated soils, confirmation soil samples will be collected from the planned excavation extents (excavation sidewalls and floor, also referred to as the ‘base’) to confirm that the remaining soils comply with the MTCA Method A cleanup levels. Excavation sidewall and bottom confirmation soil samples will be collected for laboratory analysis to confirm compliance with soil cleanup levels. The soil samples will be collected from within the excavation using the excavator bucket, or by hand if safely accessible to a worker.

As noted on Figure 2, excavation sidewall and base confirmation soil samples will be collected every 15 feet along any contaminated excavation area sidewalls, and on a 15-foot sampling grid from the bases of excavations. For smaller excavation areas, a minimum of one confirmation sample will be collected from each sidewall, and a minimum of one confirmation sample will be collected from the base of the excavation.

Excavation base samples will be collected on a systematic 15-foot grid (one sample per 15-foot by 15-foot square) to document that the cleanup level is met at depth (i.e., vertically bounded). At least one base sample will be collected from each planned excavation area. Excavation sidewall sampling will be conducted to document that the lateral extent of soil exceeding the cleanup level has been removed.

Sidewall samples will be collected within the same 15-foot horizontal grid spacing, across the full extent of excavation sidewalls. At least one sidewall sample will be collected from each sidewall of each excavation area. The performance samples will be discrete grab samples of soil collected from within the excavation using the excavator bucket, or, if safely accessible to a worker, by hand using a decontaminated stainless-steel spoon or disposable spoon.

The confirmation soil samples will be analyzed for arsenic, lead, and mercury (EPA Method 6020B). Analytical reporting limits for the soil analyses will be less than cleanup levels. An Ecology-accredited analytical laboratory will conduct the analyses of samples collected. Typically, a 24-hour turnaround will be requested for the confirmation sample analyses, so as to not delay the field decision making and overall progress for the soil removal action.

If soil sample results exceed MTCA Method A cleanup levels, additional excavation will be completed. Where the concentration of arsenic, lead, or mercury in an excavation sidewall sample exceeds the cleanup level, the length of sidewall represented by the sample will be over-excavated a minimum 1 foot laterally, if feasible, and a new sidewall confirmation sample will be collected. Likewise, where the concentration in an excavation bottom sample exceeds the cleanup level, the excavation will be deepened in the area represented by the sample by a minimum of 0.5 foot, if feasible, followed by collection of a new bottom confirmation sample.

4 Soil Management Recommendations

Soil at the Project has been delineated into soil management categories (Categories) according to the chemical analytical results of historical environmental investigations.

Category areas may be adjusted following selection of specific soil disposal facilities to be used for the Project, at which time this Plan will be updated, if necessary. It is not anticipated that the handling and management recommendations in this section will be significantly changed as part of the Plan update.

4.1 Soil Categories for Disposal

Three Categories are anticipated for soil that will be excavated during completion of the Project (Table 1):

1. **Non-Hazardous Contaminated Soil (that exceeds MTCA Cleanup Levels).** As shown in Tables 2 and 3 and on Figures 2 and 4, there are five areas of

contaminated soil on site that fall into this category. Soil meets the definition of Non-Hazardous Contaminated Soil if:

- Contaminants are detected at concentrations equal to or greater than the MTCA Method A cleanup levels, but do not exceed toxicity characteristic leaching procedure (TCLP) limits, as follows:
    - Arsenic – >20 mg/kg and <5 mg/L TCLP
    - Lead – >250 mg/kg and <5 mg/L TCLP
    - Mercury – >2 mg/kg and <0.2 mg/L TCLP
- Physical evidence of contamination (sheen, odor, staining) is observed as heavy sheen, odor, and/or staining, and moderate to high photoionization detector (PID) readings.

2. **Impacted Soil.** Soil meets the definition of Impacted Soil if:

    - Contaminants are detected at concentrations below the MTCA Method A cleanup levels and TCLP threshold levels, yet are detected at concentrations that exceed the natural background concentrations for the Puget Sound that have been published by Ecology (Ecology, 2009).[2] Because there are areas that have not been tested yet at the Subject Property(beneath the concrete slab of the former substation and beneath the existing duplex building), additional testing will be needed to evaluate if this soil should be categorized as "contaminated" or "impacted," whereby additional management and off-site end use requirements will apply (see sections below).

3. **Clean Soil.** Soil meets the definition of Clean Soil if:

    - Concentrations are not detected or are less than the MTCA Method A cleanup levels and less than natural background concentrations.
    - Physical evidence of contamination (sheen, odor, staining) is not observed and PID readings are <1 parts per million (ppm)

The following sections describe handling recommendations and provide examples of appropriate soil disposal facilities for each Category.

4.2 Handling Recommendations

Table 1 and Figure 2depict soil management categories during construction that will assist in determining the soil categories for disposal:

- Non-Hazardous Contaminated soil (soil that has concentrations exceeding MTCA Method A cleanup levels and below TCLP threshold levels)

[2] Washington State Department of Ecology (Ecology), 2009, Natural Background Soil Metals Concentrations in Washington State, Toxics Cleanup Program Publication No. 94-115, dated October 1994. This may be revised in later drafts of this Plan based on the specific disposal facility acceptance criteria.

- Impacted Soil
- Clean Soil
- Unknown Soil3

Soil excavated from the Contaminated Soil areas has special handling and disposal requirements, as follows:

- **Soil Segregation During Excavation.** Soil must be segregated to prevent co-mingling of soil between Categories. An Aspect representative will be on-site during excavation of Contaminated Soil areas to assist with soil segregation by conducting field screening, which will consist of visual and olfactory inspection, sheen testing, and PID testing. This includes field screening of soils during excavation of foundation footers.
- **Temporary Stockpiling.** Excavated soil will be stockpiled on-site prior to testing and loading for transport. One stockpile will be for the Likely Non-Hazardous Contaminated Soil and one stockpile will be for the Potentially Hazardous Contaminated Soil. Stockpile management requirements are as follows:
    - All stockpiles must be separated from underlying soil. Materials used for separating stockpiles can include preserving pavement for stockpiling, lining with plastic sheeting, plywood, or metal plates, or lining with a minimum of 4-inch-thick bed of clean sand.
    - All stockpiles must be covered with plastic sheeting of 6-mil minimum thickness when not in use, including overnight, and the cover must be anchored to prevent it from being disturbed by wind.
- **Stockpile Sampling.** Both stockpiles will be sampled for TCLP lead, TCLP mercury, and TCLP arsenic, using a composite sampling method. This soil contains metals concentrations that exceed trigger thresholds for TCLP (100 mg/kg arsenic, 100 mg/kg lead, and 4 mg/kg mercury), so disposal facilities will likely require TCLP analysis to prove that concentrations are below D-listed hazardous waste cutoffs.
- **Loading and Transportation/Trucking.** Soil will be loaded into trucks, roll off bins, or similar containers for transport to the selected treatment/disposal facility. A tracking procedure must be developed and then implemented by the earthwork contractor. Transportation and disposal manifests and weight tickets for every truck or container will be provided to Aspect on a weekly basis for tabulation.

4.3 Disposal Facilities and End-Use

Excavated and loaded Non-Hazardous Contaminated Soil will be transported to the selected disposal facility after approval from the facility. The following facilities are common disposal facilities used by similar projects in the Seattle area:

[3] Unknown Soil areas are soil areas that have not yet been sampled/characterized; they are described in Section 3.2 and shown on Figures 2 and 3.

- Republic's Rabanco-Roosevelt Facility located in Klickitat County, Washington (a transfer station for this landfill is located at 3rd Avenue South and South Lander Street Seattle)
- Waste Management's Subtitle D Columbia Ridge landfill in Arlington, Oregon (with a transfer station at Alaska Street in Seattle)
- Waste Management's Greater Wenatchee Landfill and Recycling Center Subtitle **D** landfill in East Wenatchee, Washington (direct trucking)
- Waste Management's Subtitle **C** landfill in Arlington, Oregon, if any TCLP concentrations from the potentially hazardous contaminated soil stockpile exceed D-listed hazardous waste cutoffs (mercury: 0.2 milligrams per liter [mg/L]; lead: 5 mg/L; arsenic: 5 mg/L), and are deemed hazardous.

Disposal of **Excavated Impacted Soil** that exceeds natural background but is below MTCA Method A cleanup samples will need to be coordinated through conversations with Homestead and Aspect. The General Contractor will need to provide Homestead and Aspect locations where Impacted Soil can be transported, and final selection of a disposal facility will be approved by Homestead. A general rule is to not deposit Impacted Soil at properties with sensitive uses (high groundwater, areas near wetlands, schools, daycare facilities, etc.).

Aspect is available to assist with selection of the appropriate disposal facility if needed, and can support completion of the soil profile applications to seek acceptance approval from the selected disposal facility.

5 Order of Work

Contaminated Soil areas at the Subject Property and South-Adjacent Property will be excavated and the excavation verified through confirmation sampling and testing from the perimeter and base of the remedial excavations. The areas listed as Unknown Soil areas (i.e., beneath the substation concrete slab and duplex) will be sampled and soil samples tested to evaluate appropriate soil management categories beneath these locations. Once soil categories are established in these areas, remedial excavation will be completed for known Contaminated Soil areas, and before any Impacted or Clean Soil areas are excavated. The stepwise process to handle soil will be as follows:

1. Demolish and remove the concrete slab and duplex building
2. Composite characterization sampling and testing of soil in Unknown Soil areas (beneath the concrete slab and on the Duplex parcel)
3. Excavation of soil in contaminated areas, including the South-Adjacent Property, and stockpiling of soil into two piles (Contaminated soil and potentially Impacted Soil)

4. Confirmation sampling and testing of soil in contaminated areas including the South-Adjacent Property area and at the east property boundary where one soil sample exceeded MTCA cleanup levels
5. Additional excavation in contaminated areas as necessary, followed by more confirmation sampling and testing of soil
6. Composite sampling and testing of stockpiles
7. Soil profiling with disposal companies
8. Loading and transport off site

6 Discoveries During Mass Excavation

An Aspect environmental representative will be available to respond to the Project if field discoveries of potential environmental concern are identified (such as odorous or stained soil in unexpected areas or USTs). It will be the responsibility of the General Contractor or earthworks contractor to notify Aspect of a discovery if an environmental representative is not on-site. Contact information for Aspect representatives is provided in Section 9.

The following sections describe discoveries commonly encountered during mass excavations and the recommended protocols for each.

6.1 Suspected Contaminated Soil

During excavation, there is potential for unforeseen suspected Contaminated Soil to be discovered in uninvestigated areas. Excavated soil from any management Category or location will be considered suspect Contaminated Soil if it exhibits one or more of the following:

- Staining
- Petroleum hydrocarbon odors
- A moderate or heavy sheen when in contact with water
- Significant concentrations of organic vapors detected using a PID
- Presence of significant debris, such as large quantities of buried metal, bricks, cans or drums, etc.

If suspect Contaminated Soil is discovered, excavation or disturbance of the soil should be paused, and Aspect should be contacted immediately to mobilize to the Project. Aspect will collect soil samples to characterize the suspect Contaminated Soil to identify which disposal facility and handling requirements pertain to the discovery. If practical, areas of suspected Contaminated Soil can be delineated and quantified by potholing and field screening methods, and/or excavated and stockpiled, with Aspect's assistance while characterization results are pending receipt from the laboratory.

Section 9 of this Plan provides points of contact and contact information to be used upon discovery of suspected Contaminated Soil.

6.2 Underground Storage Tanks

There is no evidence that USTs exist on the Subject Property. If undocumented USTs are encountered during mass excavation or building demolition, generalized protocols for removal of regulated USTs are briefly outlined below. Select USTs are regulated by Ecology (depending on the size and contents of the UST) and require regulatory notification and specific removal requirements; therefore, any removal or handling of discovered USTs must be overseen by Aspect.

1. Immediately upon discovery, stop excavation in the UST area and notify Aspect points of contact to discuss next steps.
2. Prior to removal, an International Code Council (ICC)-Certified UST Site Assessor must notify Ecology of the upcoming UST closure and removal. Ecology will provide written or verbal authorization to proceed with the UST removal. Aspect will provide the UST Site Assessor for the Project.
3. Authorized closure and removal consists of several tasks, which are typically coordinated by the earthwork contractor:
    a. An ICC-Certified UST Decommissioner must empty and clean the tank of all liquids and accumulated sludges.
    b. A marine chemist must inert the tank of flammable vapors, as directed by the International Fire Code.
    c. A representative of the Seattle Fire Marshal will make a site visit to confirm that these tasks have been completed according to the International Fire Code and provide a written authorization for removal.
4. The cleaned tank may then be removed from the excavation, crushed, and transported from the Subject Property. The UST Decommissioner must check that the tank atmosphere and excavation area are regularly monitored for flammable vapor concentrations until the tank is removed from both the excavation and the Subject Property. The UST Site Assessor will photo document and visually inspect the tank prior to transport from the Subject Property.
5. The UST Site Assessor will obtain confirmation soil samples from the excavated UST pit and assist with segregation and management of suspect Contaminated Soil identified during the UST removal. A Site Check/Site Assessment Checklist will be completed and an appropriate report will be prepared for submittal to Ecology.

As stated above, Aspect will provide the ICC-Certified Site Assessor, lead communications with Ecology, and be available to coordinate and schedule the UST closure/removal with the other involved parties, if needed.

6.3 Other Excavation Discoveries

Examples of other possible excavation discoveries of environmental concern include

- an undocumented monitoring well;
- an unknown underground facility, such as utility vaults or sumps;
- utility lines exhibiting evidence of contamination;
- debris or buried waste material exhibiting evidence of contamination, such as drums, paint/oil cans, etc.;
- odors, staining, or other evidence of contamination to soil or water in the excavation; and
- buried suspect hazardous building materials, such as utilities (recently active or abandoned/unknown) that are wrapped in suspect asbestos material.

Upon discovery of any of the above, Aspect should be contacted to discuss next steps. Do not hesitate to contact Aspect's field representative or other point of contact in Section 9 upon discovery.

7 Water Management and Dewatering

Groundwater sampling and testing is not needed due to the depth to groundwater. The Subject Property is located at the top of Phinney Ridge at an elevation of 356 feet above mean sea level (ft amsl). The depth to groundwater is estimated in the RIFS CAP Report to be at a depth over 100 ft bgs. Groundwater is unlikely to be impacted by the contaminated soils found within the upper few feet at the Subject Property due to the significant depth to groundwater, the shallow depth of the contaminated soils, and the relatively low mobility of the contaminants; however, it is anticipated that runoff may be generated during mass excavation.

Construction water (typically rainwater collected in the excavation during the wet season) and stormwater management will be conducted in accordance with applicable laws and regulations and overseen by the General Contractor. Water generated from construction dewatering will likely be pumped to tanks, pretreated on-site (e.g., to remove settleable solids), and discharged to the sanitary sewer under a King County Discharge Industrial Waste (KCIW) discharge authorization.

The discharge will be monitored in accordance with the requirements of a King County Letter of Authorization. An Aspect representative can assist the General Contractor in water management design, evaluating treatment/disposal options that comply with state and local requirements, applying for a KCIW discharge authorization, on-site discharge monitoring, and reporting.

8 Environmental Training/Safety

This section provides information so that the General Contractor can prepare their own health and safety plans and deploy environmentally related construction and safety requirements at the Subject Property. Note that Aspect is not providing health and safety recommendations but is providing environmental data so that others can use this information to prepare their own health and safety plans and protocols.

Fill soil at the Subject Property should be considered hazardous materials for employee safety and training purposes. All companies performing work at the Subject Property are responsible for the health and safety of their own employees and the appropriate level of Hazardous Waste Operations and Emergency Response (HAZWOPER) training in accordance with Washington State regulations (WAC 296-843), and to be in possession of a current HAZWOPER certification card while on site if HAZWOPER training is required.

9 Contact Information

This section lists key Project contacts involved in implementation or changes to this Plan. In the event of a discovery of USTs, suspected Contaminated Soil, or other possible

conditions of environmental concern, the Aspect project managers should be notified as soon as possible. Primary and backup points of contact are provided below.

Project Team Contacts

Name		Role	Phone	Email
Environmental - Aspect Consulting				
Primary Contact	Hannah Cohen	Project Manager	206.780.7724	Hannah.cohen@aspectconsulting.com
Alternate Contact	Dave Cook	Principal	206.838.5837	Dave.cook@aspectconsulting.com
Civil Engineer – Station10 Engineering PLLC				
Primary Contact	Steve Hatzenbeler	Principal	206.419.0873	steveh@sta10engineering.com
General Contractor – Edge Developers LLC				
Primary Contact	Evan Chan	Edge Community Builders LLC	206 900-8605	evanc@edgedevelopers.net
Development Manager – Homestead Community Land Trust				
Primary Contact	Eric Pravitz	Director of Real Estate Development	206.660.7030	eric@homesteadclt.org

10 References

Aspect Consulting, LLC (Aspect), 2021, Remedial Investigation, Feasibility Study, and Cleanup Action Plan, October 4, 2021.

Booth, Derek B., Troost, K.A. Troost, and A.P. Wisher, (Booth et. al.), 2007, Geologic Map of King County, GeoMapNW, Scale 1:100,000, March 2007.

Washington State Department of Ecology (Ecology), 2009, Natural Background Soil Metals Concentrations in Washington State, Toxics Cleanup Program Publication No. 94-115, dated October 1994.

Washington State Department of Ecology (Ecology), 2022, Opinion on Proposed Cleanup of a Property Associated with a Site: Homestead Phinney Ridge CLT, March 2, 2022.

Limitations

Work for this project was performed for Homestead Community Land Trust (Client), and this report was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This report does not represent a legal opinion. No other warranty, expressed or implied, is made.

All reports prepared by Aspect Consulting for the Client apply only to the services described in the Agreement(s) with the Client. Any use or reuse by any party other than the Client is at the sole risk of that party, and without liability to Aspect Consulting. Aspect Consulting's original files/reports shall govern in the event of any dispute regarding the content of electronic documents furnished to others.

Please refer to Appendix D titled "Report Limitations and Guidelines for Use" for additional information governing the use of this report.

TABLES

Table 1. Soil Disposal/Management Categories and Thresholds

DRAFT

Project No. 210143, Former Phinney Substation, 6109 Phinney Avenue North, Seattle, Washington

Analyte	Hazardous Waste Threshold		Ecology MTCA Method A Cleanup Level (mg/kg)	Natural Background Puget Sound Concentration[2] (mg/kg)	Maximum concentration detected in surface soil samples (0-0.5 foot bgs) (mg/kg)	Average concentration in surface soil samples (0-0.5 foot bgs) (mg/kg)[3]	Maximum concentration detected in subsurface soil samples (>1 foot bgs) (mg/kg)	Average concentration in subsurface soil samples (>1 foot bgs) (mg/kg)[3]
	TCLP Limit (mg/L)	TCLP Trigger Threshold Concentration[1] (mg/kg)						
Arsenic	5.0	100	20	7	110	31	5	2.5
Lead	5.0	100	250	24	560	166	340	28
Mercury	0.2	4	2	0.07	69	9	50	0.5
Soil Disposal/*Management* Category								
Hazardous Contaminated Soil	Exceeds	Exceeds	Exceeds	Exceeds				
Non Hazardous Contaminated Soil	Does not Exceed		Exceeds	Exceeds				
Potentially Hazardous Contaminated Soil		*Exceeds*	*Exceeds*	*Exceeds*				
Likely Non-Hazardous Contaminated Soil		*Does not Exceed*	*Exceeds*	*Exceeds*				
Impacted Soil	Does not Exceed	Does not Exceed	Does not Exceed	Exceeds				
Clean Soil	Does not Exceed	Does not Exceed	Does not Exceed	Does not Exceed				

Notes:

mg/L = milligrams per liter

mg/kg = milligrams per kilogram

bgs = below ground surface

[1] TCLP = Toxicity Characteristic Leaching Procedure. Trigger thresholds are calculated using the "20 Times Rule" (multiply TCLP mg/L threshold by 20 to obtain a mg/kg threshold in soil).

[2]Washington State Department of Ecology (Ecology), 2009, Natural Background Soil Metals Concentrations in Washington State, Toxics Cleanup Program Publication No. 94-115, dated October 1994

[3] For non-detected results, used 1/2 the reporting limit in calculation of average.

Table 2. Property Boundary Soil Sampling Results

DRAFT

Project No. AS210143A, Seattle, Washington

Analyte Group			Metals			Toxic Characteristic Leaching Procedure (TCLP)	
Analyte			Arsenic	Lead	Mercury	Lead	Mercury
Units			mg/kg	mg/kg	mg/kg	mg/L	mg/L
[1]MTCA Method A Cleanup Level			20	250	2		
Sample Location	Sample Date	Sample Depth Interval					
AHA-07	04/11/2024	0 - 0.5 ft	**47**	--	--	--	--
AHA-08	04/11/2024	0 - 0.5 ft	--	**560**	--	< 1 U	--
AHA-09	04/11/2024	0 - 0.5 ft	--	**410**	**7.4**	--	--
AHA-10	04/11/2024	0 - 0.5 ft	--	--	**9.8**	--	< 0.1 U
AHA-11	04/11/2024	0 - 0.5 ft	--	**150**	--	--	--

Notes:
Bold - detected
Blue Shaded - Detected result exceeded screening level
"--" - indicates results not analyzed
mg/kg = milligrams per kilogram
MTCA = Model Toxics Control Act

Table 3. South-Adjacent Property Soil Sampling Results

DRAFT

Project No. AS210143A, Seattle, Washington

		Analyte Group	Metals	
		Analyte	Lead	Mercury
		Units	mg/kg	mg/kg
		[1]MTCA Method A Cleanup Level	250	2
Sample Location	**Sample Date**	**Sample Depth (ft)**		
AHA-12	06/21/2024	0.5	**230**	**13**
		1	**250**	**6.9**
AHA-13	06/21/2024	0.5	--	**69**
		1	--	**16**
AHA-14	06/21/2024	0.5	**440**	**2.3**
		1	**62**	< 2 U
AHA-15	06/21/2024	0.5	**460**	**6.9**
		1	**300**	**6.8**
AHA-16	06/21/2024	0.5	**180**	**3.4**
		1	**340**	**50**
AHA-17	06/21/2024	0.5	**200**	**2.1**
		1	**210**	**1.4**
AHA-18	06/21/2024	0.5	**78**	< 1 U
		1	**18**	< 1 U
AHA-19	06/21/2024	0.5	**150**	< 1 U
		1	**120**	< 1 U

Notes:

Bold - detected

Blue Shaded - Detected result exceeded screening level

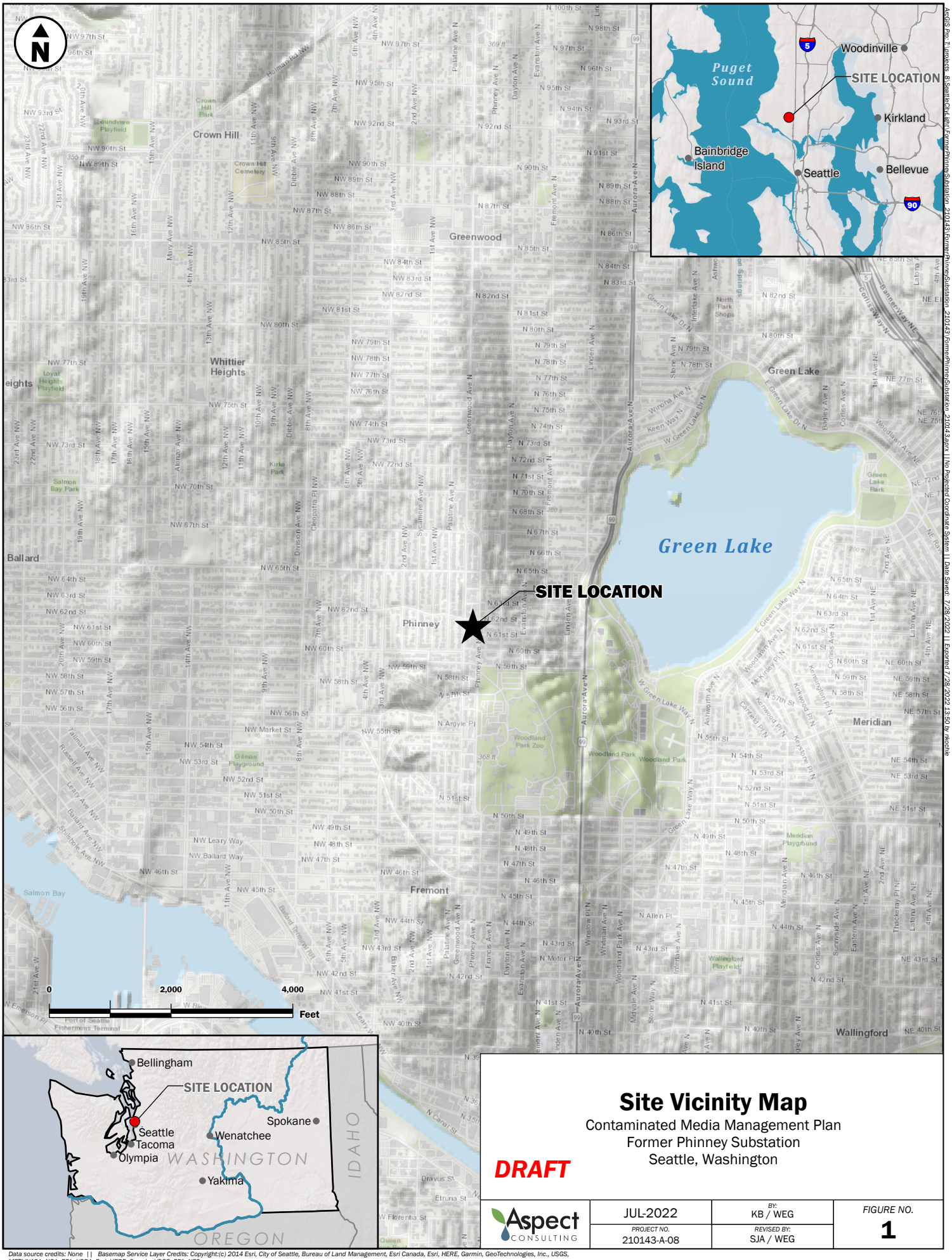
U - Analyte not detected at or above Reporting Limit (RL) shown

"--" - indicates results not available

mg/kg = milligrams per kilogram

[1]MTCA = Model Toxics Control Act

FIGURES



Site Vicinity Map

Contaminated Media Management Plan
Former Phinney Substation
Seattle, Washington

DRAFT

Aspect CONSULTING	JUL-2022	BY: KB / WEG	FIGURE NO. 1
	PROJECT NO. 210143-A-08	REVISED BY: SJA / WEG	

Data source credits: None || Basemap Service Layer Credits: Copyright:(c) 2014 Esri, City of Seattle, Bureau of Land Management, Esri Canada, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, METI/NASA, NGA, EPA, USDA, Esri, HERE, Garmin, USGS, EPA, NPS

Soil Analytical Results

- Analytes detected did not exceed MTCA Method A cleanup levels
- Analytes detected exceeded MTCA Method A cleanup levels
- 3-Point Composite Soil Samples from These Areas Did Not Exceed MTCA Method A Cleanup Levels for Any Analyte

- Test Pit
- Discrete Soil Sample
- Soil Vapor Sample
- Direct Push Boring
- Hand Auger

Soil Management Category

- Likely Non-Hazardous Contaminated Soil*
- Impacted Soil
- Unknown Soil**

- Area Requiring Remediation
- Concrete Slab
- Site Parcel
- King County Tax Parcel

**Confirmation samples will be collected after excavation at a density of 15 feet for sidewalls and on a 15-foot sampling grid for base of excavation. A minimum of one sample will be collected from each sidewall and base of excavation, for the five excavation areas.*

***Area beneath slab and on duplex property will be characterized using a 15-foot composite sampling grid after demolition.*

N

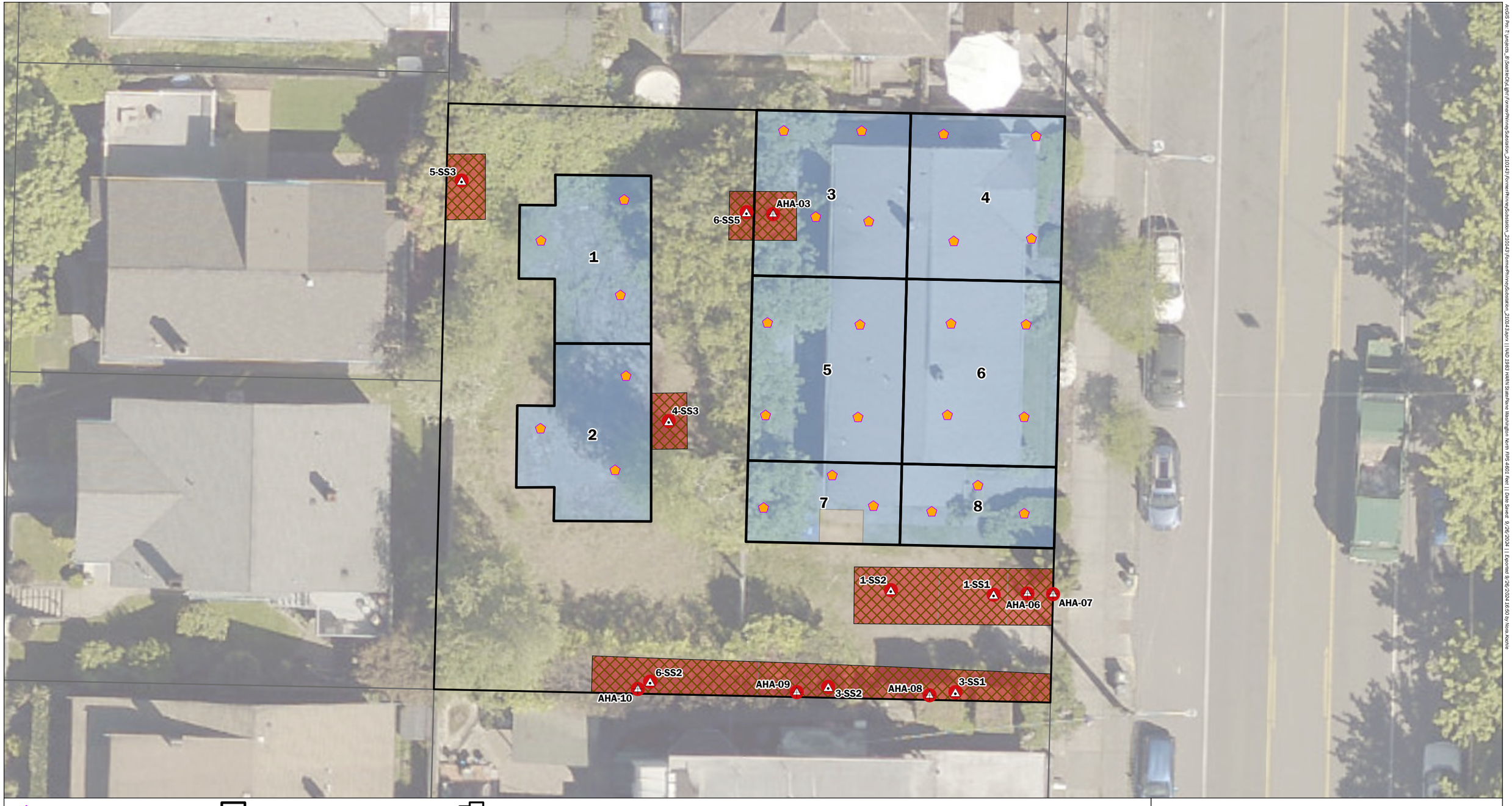
0 15 30 Feet

Subject Property and Previous Explorations

DRAFT

Contaminated Media Management Plan
Former Phinney Substation
Seattle, Washington

Aspect CONSULTING	SEP-2024	BY: KB / WEG	FIGURE NO. 2
	PROJECT NO: 210143-A-08	REVISED BY: NLK / HMD	



Confirmation Sub-Sample Location

Discrete Soil Sample

Hand Auger

Soil Analytical Results

Analytes detected exceeded MTCA Method A cleanup levels

Decision Units

Soil Management Category

Likely Non-Hazardous Contaminated Soil*

Unknown Soil**

Concrete Slab

Area Requiring Remediation

Site Parcel

**Confirmation samples will be collected after excavation at a density of 15 feet for sidewalls and on a 15-foot sampling grid for base of excavation. A minimum of one sample will be collected from each sidewall and base of excavation, for the five excavation areas.*

***Area beneath slab and on duplex property will be characterized using a 15-foot composite sampling grid after demolition.*

N

0 15 30 Feet

Characterization of Unknown Soil Areas

Contaminated Media Management Plan
Former Phinney Substation
Seattle, Washington

DRAFT

Aspect Consulting	SEP-2024	BY: HRC / HMD	FIGURE NO. 3
	PROJECT NO. 210143-A-08	REVISED BY: ---/---	

Data source credits: None | | Basemap Service Layer Credits: EagleView Technologies, Inc.

ATP-01
11-SS4
6-SS3
EBD-1
SV-1
AHA-05
8-SS1
8-SS2
8-SS3
1-SS3
1-HA-1
1-SS2
AHA-04
1-SS1
AHA-06
AHA-10
0.5 ft:
Mercury: 9.8 ppm
AHA-07
0.5 ft:
Arsenic: 47 ppm
7-SS1
EBD-6
AHA-09
0.5 ft:
Lead: 410 ppm
Mercury: 7.4 ppm
AHA-08
0.5 ft:
Lead: 560 ppm
2-SS1
7-SS2
7-SS3
2-SS3
2-SS2
6-SS1
6-SS2
6-HA-1
3-SS2
3-SS1
3-HA-1
AHA-18
AHA-12
0.5 ft:
Mercury: 13 ppm
1 ft:
Mercury: 6.9 ppm
AHA-19
AHA-13
0.5 ft:
Mercury: 69 ppm
1 ft:
Mercury: 16 ppm
AHA-15
0.5 ft:
Lead: 460 ppm
Mercury: 6.9 ppm
1 ft:
Lead: 300 mg/k
Mercury: 6.8 ppm
AHA-14
0.5 ft:
Lead: 440 ppm
Mercury: 2.3 ppm
AHA-16
0.5 ft:
Mercury: 3.4 ppm
1 ft:
Lead: 340 ppm
Mercury: 50 ppm
AHA-17
0.5 ft:
Mercury: 2.1 ppm
N
0 3 6
Feet

Soil Analytical Results

- Analytes detected exceeded MTCA Method A cleanup levels
- Analytes detected at concentrations less than MTCA Method A cleanup levels.
- Analytes not detected
- 3-Point Composite Soil Samples from These Areas Did Not Exceed MTCA Method A Cleanup Levels for Any Analyte

- Test Pit
- Discrete Soil Sample
- Soil Vapor Sample
- Direct Push Boring
- Hand Auger
- Shallow Soil Sample (0.5-foot and 1-foot depths)

- Area Requiring Remediation
- Concrete Slab

Soil Management Category

- Likely Non-Hazardous Contaminated Soil*
- Impacted Soil
- Unknown Soil**

- Site Parcel
- King County Tax Parcel
- Cleanup Area on South Adjacent Property

Site Features

- Hedge
- Building
- Steps
- Pavement
- Exploration Name
- 0.5 feet / 1 foot
- AHA-17 0.5 ft: Mercury: 2.1 ppm
- Analyte Concentration

**Confirmation samples will be collected after excavation at a density of 15 feet for sidewalls and on a 15-foot sampling grid for base of excavation. A minimum of one sample will be collected from each sidewall and base of excavation, for the five excavation areas.*

***Area beneath slab and on duplex property will be characterized using a 15-foot composite sampling grid after demolition.*

South-Adjacent Property Boundary Explorations

Contaminated Media Management Plan

DRAFT

Former Phinney Substation
Seattle, Washington

Aspect Consulting	SEP-2024	BY: HRC / HMD	FIGURE NO. 4
	PROJECT NO: 210143-A-08	REVISED BY: KMJ	

Data source credits: None | | Basemap Service Layer Credits: EagleView Technologies, Inc.

APPENDIX A

Historical Investigation Data Tables

Table 1. Summary of Composite Surface Soil Analytical Results

Project No. 210143, Former Phinney Ridge Substation, Seattle, Washington

			Location	Composite Area 1	Composite Area 2	Composite Area 3	Composite Area 4	Composite Area 5	Composite Area 6	Composite Area 6	Composite Area 7	Composite Area 8	Composite Area 9	Composite Area 10	Composite Area 11	Composite Area 12
			Date	02/13/2018	02/13/2018	02/13/2018	02/13/2018	02/13/2018	02/13/2018	02/13/2018	02/13/2018	02/13/2018	02/13/2018	02/13/2018	02/13/2018	02/13/2018
			Sample	PH-1-SS1,SS2,SS3 COMP.	PH-2-SS1,SS2,SS3 COMP.	PH-3-SS1,SS2 COMP.	PH-4-SS1,SS2,SS3 COMP.	PH-5-SS1,SS2,SS3,SS4,SS5 COMP.	PH-6-SS2,SS1 COMP.	PH-6-SS3,SS4,SS5 COMP.	PH-7-SS3,SS2,SS1 COMP.	PH-8-SS1,SS2,SS3 COMP.	PH-9-SS1,SS2,SS3 COMP.	PH-10-SS1,SS2,SS3 COMP.	PH-11-SS1,SS2,SS3,SS4 COMP.	PH-12-SS1,SS2 COMP.
			Depth	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite
Analyte	**Unit**	**MTCA Method A CUL**														
Chlor Herbicides																
2,4-D	mg/kg			< 0.011 U	< 0.011 U	< 0.013 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.011 U
2,4-DB	mg/kg			< 0.011 U	< 0.011 U	< 0.013 U	< 0.011 U	< 0.011 U	< 0.012 U	< 0.012 U	< 0.011 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.011 U	< 0.011 U
Dalapon	mg/kg			< 0.27 U	< 0.26 U	< 0.31 U	< 0.28 U	< 0.28 U	< 0.28 U	< 0.29 U	< 0.26 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.26 U
Dicamba	mg/kg			< 0.011 U	< 0.011 U	< 0.013 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.011 U
Dichloroprop	mg/kg			< 0.084 U	< 0.081 U	< 0.097 U	< 0.085 U	< 0.086 U	< 0.086 U	< 0.089 U	< 0.082 U	< 0.079 U	< 0.086 U	< 0.081 U	< 0.083 U	< 0.079 U
Dinoseb	mg/kg			< 0.011 U	< 0.011 U	< 0.013 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.011 U	--	< 0.012 U	< 0.011 U	< 0.011 U	< 0.011 U
MCPA	mg/kg			< 1.1 U	< 1.1 U	< 1.3 U	< 1.1 U	< 1.1 U	< 1.1 U	< 1.2 U	< 1.1 U	< 1 U	< 1.1 U	< 1.1 U	< 1.1 U	< 1 U
MCPP	mg/kg			< 1.1 U	< 1.1 U	< 1.3 U	< 1.1 U	< 1.1 U	< 1.1 U	< 1.2 U	< 1.1 U	< 1 U	< 1.1 U	< 1.1 U	< 1.1 U	< 1 U
Silvex	mg/kg			< 0.011 U	< 0.011 U	< 0.013 U	< 0.011 U	< 0.011 U	< 0.012 U	< 0.012 U	< 0.011 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.011 U	< 0.011 U
Conventionals																
Moisture Content	%			**16**	**13**	**27**	**17**	**17**	**18**	**21**	**13**	**10**	**18**	**13**	**15**	**11**
Metals																
Arsenic	mg/kg	20		**76**	< 11 U	< 14 U	< 12 U	< 12 U	< 12 U	< 13 U	< 12 U	< 11 U	< 12 U	< 11 U	< 12 U	< 11 U
Barium	mg/kg			**110**	**46**	**92**	**62**	**99**	**59**	**130**	**45**	**28**	**53**	**54**	**46**	**31**
Cadmium	mg/kg	2		< 0.59 U	< 0.57 U	**0.79**	**0.75**	< 0.6 U	**0.61**	< 0.63 U	< 0.58 U	< 0.56 U	< 0.61 U	< 0.57 U	**0.64**	**0.59**
Chromium	mg/kg			**29**	**16**	**32**	**27**	**22**	**17**	**27**	**24**	**15**	**15**	**15**	**15**	**15**
Lead	mg/kg	250		**87**	**100**	**300**	**190**	**140**	**120**	**160**	**100**	**61**	**81**	**80**	**74**	**72**
Mercury	mg/kg	2		< 0.3 U	< 0.29 U	**1.6**	< 0.3 U	< 0.3 U	**1**	< 0.32 U	< 0.29 U	< 0.28 U	< 0.31 U	< 0.29 U	< 0.29 U	**0.36**
Selenium	mg/kg			< 12 U	< 11 U	< 14 U	< 12 U	< 12 U	< 12 U	< 13 U	< 12 U	< 11 U	< 12 U	< 11 U	< 12 U	< 11 U
Silver	mg/kg			< 1.2 U	< 1.1 U	< 1.4 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.3 U	< 1.2 U	< 1.1 U	< 1.2 U	< 1.1 U	< 1.2 U	< 1.1 U
Other SVOCs																
Pentachlorophenol	mg/kg			< 0.0056 U	< 0.0055 U	< 0.0065 U	< 0.0057 U	< 0.0057 U	**0.0064**	< 0.006 U	< 0.0055 U	< 0.0053 U	< 0.0058 U	< 0.0054 U	< 0.0056 U	< 0.0053 U
PCBAro																
Aroclor 1016	mg/kg			< 0.059 U	< 0.057 U	< 0.069 U	< 0.06 U	< 0.06 U	< 0.061 U	< 0.063 U	< 0.058 U	< 0.056 U	< 0.061 U	< 0.057 U	< 0.059 U	< 0.056 U
Aroclor 1221	mg/kg			< 0.059 U	< 0.057 U	< 0.069 U	< 0.06 U	< 0.06 U	< 0.061 U	< 0.063 U	< 0.058 U	< 0.056 U	< 0.061 U	< 0.057 U	< 0.059 U	< 0.056 U
Aroclor 1232	mg/kg			< 0.059 U	< 0.057 U	< 0.069 U	< 0.06 U	< 0.06 U	< 0.061 U	< 0.063 U	< 0.058 U	< 0.056 U	< 0.061 U	< 0.057 U	< 0.059 U	< 0.056 U
Aroclor 1242	mg/kg			< 0.059 U	< 0.057 U	< 0.069 U	< 0.06 U	< 0.06 U	< 0.061 U	< 0.063 U	< 0.058 U	< 0.056 U	< 0.061 U	< 0.057 U	< 0.059 U	< 0.056 U
Aroclor 1248	mg/kg			< 0.059 U	< 0.057 U	< 0.069 U	< 0.06 U	< 0.06 U	< 0.061 U	< 0.063 U	< 0.058 U	< 0.056 U	< 0.061 U	< 0.057 U	< 0.059 U	< 0.056 U
Aroclor 1254	mg/kg			< 0.059 U	< 0.057 U	< 0.069 U	< 0.06 U	< 0.06 U	< 0.061 U	< 0.063 U	< 0.058 U	< 0.056 U	< 0.061 U	< 0.057 U	< 0.059 U	< 0.056 U
Aroclor 1260	mg/kg			< 0.059 U	< 0.057 U	< 0.069 U	< 0.06 U	< 0.06 U	< 0.061 U	< 0.063 U	< 0.058 U	< 0.056 U	< 0.061 U	< 0.057 U	< 0.059 U	< 0.056 U
Aroclor 1262	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1268	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs (Sum of Aroclors)	mg/kg	1		< 0.059 U	< 0.057 U	< 0.069 U	< 0.06 U	< 0.06 U	< 0.061 U	< 0.063 U	< 0.058 U	< 0.056 U	< 0.061 U	< 0.057 U	< 0.059 U	< 0.056 U

Table 1. Summary of Composite Surface Soil Analytical Results

Project No. 210143, Former Phinney Ridge Substation, Seattle, Washington

Analyte	Unit	MTCA Method A CUL	Location Date Sample Depth	Composite Area 1 02/13/2018 PH-1-SS1,SS2,SS3 COMP. Composite	Composite Area 2 02/13/2018 PH-2-SS1,SS2,SS3 COMP. Composite	Composite Area 3 02/13/2018 PH-3-SS1,SS2 COMP. Composite	Composite Area 4 02/13/2018 PH-4-SS1,SS2,SS3 COMP. Composite	Composite Area 5 02/13/2018 PH-5-SS1,SS2,SS3,SS4,SS5 COMP. Composite	Composite Area 6 02/13/2018 PH-6-SS2,SS1 COMP. Composite	Composite Area 6 02/13/2018 PH-6-SS3,SS4,SS5 COMP. Composite	Composite Area 7 02/13/2018 PH-7-SS3,SS2,SS1 COMP. Composite	Composite Area 8 02/13/2018 PH-8-SS1,SS2,SS3 COMP. Composite	Composite Area 9 02/13/2018 PH-9-SS1,SS2,SS3 COMP. Composite	Composite Area 10 02/13/2018 PH-10-SS1,SS2,SS3 COMP. Composite	Composite Area 11 02/13/2018 PH-11-SS1,SS2,SS3,SS4 COMP. Composite	Composite Area 12 02/13/2018 PH-12-SS1,SS2 COMP. Composite
Pest/Herbicides																
4,4'-DDD	mg/kg			< 0.012 U	< 0.011 U	< 0.014 U	< 0.012 U	< 0.012 U	< 0.012 U	< 0.013 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U
4,4'-DDE	mg/kg			< 0.012 U	< 0.011 U	< 0.014 U	< 0.012 U	< 0.012 U	**0.041**	< 0.013 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U
4,4'-DDT	mg/kg	3		**0.017**	**0.012**	**0.033**	**0.052**	**0.022**	**0.27**	**0.048**	**0.057**	**0.018**	**0.025**	< 0.011 U	**0.012**	< 0.011 U
Aldrin	mg/kg			< 0.0059 U	< 0.0057 U	< 0.0069 U	< 0.006 U	< 0.006 U	< 0.0061 U	< 0.0063 U	< 0.0058 U	< 0.0056 U	< 0.0061 U	< 0.0057 U	< 0.0059 U	< 0.0056 U
Alpha-BHC	mg/kg			< 0.0059 U	< 0.0057 U	< 0.0069 U	< 0.006 U	< 0.006 U	< 0.0061 U	< 0.0063 U	< 0.0058 U	< 0.0056 U	< 0.0061 U	< 0.0057 U	< 0.0059 U	< 0.0056 U
Beta-BHC	mg/kg			< 0.0059 U	< 0.0057 U	< 0.0069 U	< 0.006 U	< 0.006 U	< 0.0061 U	< 0.0063 U	< 0.0058 U	< 0.0056 U	< 0.0061 U	< 0.0057 U	< 0.0059 U	< 0.0056 U
cis-Chlordane	mg/kg			< 0.012 U	< 0.011 U	**0.041**	< 0.012 U	< 0.012 U	< 0.012 U	< 0.013 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U
Delta-BHC	mg/kg			< 0.0059 U	< 0.0057 U	< 0.0069 U	< 0.006 U	< 0.006 U	< 0.0061 U	< 0.0063 U	< 0.0058 U	< 0.0056 U	< 0.0061 U	< 0.0057 U	< 0.0059 U	< 0.0056 U
Dieldrin	mg/kg			< 0.012 U	< 0.011 U	**0.033**	< 0.012 U	< 0.012 U	< 0.012 U	< 0.013 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U
Endosulfan I	mg/kg			< 0.0059 U	< 0.0057 U	< 0.0069 U	< 0.006 U	< 0.006 U	< 0.0061 U	< 0.0063 U	< 0.0058 U	< 0.0056 U	< 0.0061 U	< 0.0057 U	< 0.0059 U	< 0.0056 U
Endosulfan II	mg/kg			< 0.012 U	< 0.011 U	< 0.014 U	< 0.012 U	< 0.012 U	< 0.012 U	< 0.013 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U
Endosulfan Sulfate	mg/kg			< 0.012 U	< 0.011 U	< 0.014 U	< 0.012 U	< 0.012 U	< 0.012 U	< 0.013 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U
Endrin	mg/kg			< 0.012 U	< 0.011 U	< 0.014 U	< 0.012 U	< 0.012 U	< 0.012 U	< 0.013 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U
Endrin Aldehyde	mg/kg			< 0.012 U	< 0.011 U	< 0.014 U	< 0.012 U	< 0.012 U	< 0.012 U	< 0.013 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U
Endrin ketone	mg/kg			< 0.012 U	< 0.011 U	< 0.014 U	< 0.012 U	< 0.012 U	< 0.012 U	< 0.013 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U
Heptachlor	mg/kg			< 0.0059 U	< 0.0057 U	< 0.0069 U	< 0.006 U	< 0.006 U	< 0.0061 U	< 0.0063 U	< 0.0058 U	< 0.0056 U	< 0.0061 U	< 0.0057 U	< 0.0059 U	< 0.0056 U
Heptachlor Epoxide	mg/kg			< 0.0059 U	< 0.0057 U	< 0.0069 U	< 0.006 U	< 0.006 U	< 0.0061 U	< 0.0063 U	< 0.0058 U	< 0.0056 U	< 0.0061 U	< 0.0057 U	< 0.0059 U	< 0.0056 U
Lindane	mg/kg	0.01		< 0.0059 U	< 0.0057 U	< 0.0069 U	< 0.006 U	< 0.006 U	< 0.0061 U	< 0.0063 U	< 0.0058 U	< 0.0056 U	< 0.0061 U	< 0.0057 U	< 0.0059 U	< 0.0056 U
Methoxychlor	mg/kg			< 0.012 U	< 0.011 U	< 0.014 U	< 0.012 U	< 0.012 U	< 0.012 U	< 0.013 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U
Toxaphene	mg/kg			< 0.059 U	< 0.057 U	< 0.069 U	< 0.06 U	< 0.06 U	< 0.061 U	< 0.063 U	< 0.058 U	< 0.056 U	< 0.061 U	< 0.057 U	< 0.059 U	< 0.056 U
trans-Chlordane	mg/kg			< 0.012 U	< 0.011 U	< 0.014 U	< 0.012 U	< 0.012 U	< 0.012 U	< 0.013 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.011 U
TPHs																
Diesel Range Organics	mg/kg	2000		--	< 29 U	**95**	**130**	**99**	--	--	--	--	--	**160**	**140**	**49**
Motor Oil Range Organics	mg/kg	2000		--	**210**	**690**	**370**	**290**	--	--	--	--	--	**420**	**270**	**72**

Notes:

MTCA = Washington State Department of Ecology Model Toxics Control Act

CUL = Cleanup Level

mg/kg = milligram per kilogram

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

Table 2. Summary of Discrete Surface Soil Analytical Results

Project No. 210143, Former Phinney Ridge Substation, Seattle, Washington

Composite Area (see Table 1)			Area 1							Area 2			Area 3	
Sample Location			1-SS1	1-SS2	1-SS3	AHA-04	AHA-05	AHA-06	ATP-01	2-SS1	2-SS2	2-SS3	3-SS1	3-SS2
Date			02/13/2018	02/13/2018	02/13/2018	07/14/2021	07/14/2021	07/14/2021	07/14/2021	02/13/2018	02/13/2018	02/13/2018	02/13/2018	02/13/2018
Sample			PH-1-SS1	PH-1-SS2	PH-1-SS3	AHA-04-0.5	AHA-05-0.5	AHA-06-0.5	ATP-01-0.5	PH-2-SS1	PH-2-SS2	PH-2-SS3	PH-3-SS1	PH-3-SS2
Depth			0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Analyte	**Unit**	**MTCA Method A CUL**												
Metals														
Arsenic	mg/kg	20	**110**	**70**	< 14 U	**2.9**	**2.55**	**32.1**	**4.84**	--	--	--	--	--
Cadmium	mg/kg	2	--	--	--	--	--	--	--	--	--	--	--	--
Lead	mg/kg	250	**65**	**66**	**250**	--	--	--	**30.2**	**40**	**140**	**98**	**270**	**320**
Mercury	mg/kg	2	--	--	--	--	--	--	--	--	--	--	**1.6**	**2.4**
Pesticides/Herbicides														
Dieldrin	mg/kg		--	--	--	--	--	--	--	--	--	--	**0.048**	< 0.015 U

Composite Area (see Table 1)			Area 4			Area 5						
Sample Location			4-SS1	4-SS2	4-SS3	5-SS1	5-SS2	5-SS3	5-SS4	5-SS5	AHA-01	AHA-02
Date			02/13/2018	02/13/2018	02/13/2018	02/13/2018	02/13/2018	02/13/2018	02/13/2018	02/13/2018	07/14/2021	07/14/2021
Sample			PH-4-SS1	PH-4-SS2	PH-4-SS3	PH-5-SS1	PH-5-SS2	PH-5-SS3	PH-5-SS4	PH-5-SS5	AHA-01-0.5	AHA-02-0.5
Depth			0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0-0.5 ft	0-0.5 ft
Analyte	**Unit**	**MTCA Method A CUL**										
Metals												
Arsenic	mg/kg	20	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/kg	2	< 0.6 U	< 0.62 U	**1.3**	--	--	--	--	--	--	--
Lead	mg/kg	250	**85**	**88**	**340**	**110**	**170**	**320**	**80**	**140**	**67.9**	**70**
Mercury	mg/kg	2	--	--	--	--	--	--	--	--	--	--
Pesticides/Herbicides												
Dieldrin	mg/kg		--	--	--	--	--	--	--	--	--	--

Composite Area (see Table 1)			Area 6						Area 7			Area 11			
Sample Location			6-SS1	6-SS2	6-SS3	6-SS4	6-SS5	AHA-03	7-SS1	7-SS2	7-SS3	11-SS1	11-SS2	11-SS3	11-SS4
Date			02/13/2018	02/13/2018	02/13/2018	02/13/2018	02/13/2018	07/14/2021	02/13/2018	02/13/2018	02/13/2018	02/13/2018	02/13/2018	02/13/2018	02/13/2018
Sample			PH-6-SS1	PH-6-SS2	PH-6-SS3	PH-6-SS4	PH-6-SS5	AHA-03-0.5	PH-7-SS1	PH-7-SS2	PH-7-SS3	PH-11-SS1	PH-11-SS2	PH-11-SS3	PH-11-SS4
Depth			0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0-0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Analyte	**Unit**	**MTCA Method A CUL**													
Metals															
Arsenic	mg/kg	20	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/kg	2	--	--	--	--	--	--	--	--	--	**1.7**	< 0.64 U	< 0.56 U	< 0.57 U
Lead	mg/kg	250	--	--	**59**	**93**	**270**	**308**	**84**	**40**	**69**	**160**	**49**	**47**	**52**
Mercury	mg/kg	2	< 0.32 U	**2.6**	--	--	--	--	--	--	--	--	--	--	--
Pesticides/Herbicides															
Dieldrin	mg/kg		--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

Discrete samples from Areas 8, 9, 10, and 12 were not submitted for chemical analysis based on the composite results from those areas (Table 1)

MTCA = Washington State Department of Ecology Model Toxics Control Act

CUL = Cleanup Level

mg/kg = milligram per kilogram

Table 3. Summary of Boring Soil Analytical Results
Project No. 210143, Former Phinney Ridge Substation, Seattle, Washington

Analyte	Unit	MTCA Method A CUL	Location	1-HA-1	1-HA-1	3-HA-1	3-HA-1	4-HA-1	4-HA-1	5-HA-1	5-HA-1	6-HA-1	6-HA-1	6-HA-2	6-HA-2	EDB-1	EDB-1	EDB-1	EDB-2	EDB-2	EDB-2	EDB-3	EDB-3	EDB-3	EDB-4	EDB-4	EDB-4	EDB-5	EDB-5	EDB-5	EDB-6	EDB-6	EDB-6
			Date	03/16/2018	03/16/2018	03/16/2018	03/16/2018	03/16/2018	03/16/2018	03/16/2018	03/16/2018	03/16/2018	03/16/2018	03/16/2018	03/16/2018	03/19/2020	03/19/2020	03/19/2020	03/19/2020	03/19/2020	03/19/2020	03/19/2020	03/19/2020	03/19/2020	03/19/2020	03/19/2020	03/19/2020	03/19/2020	03/19/2020	03/19/2020	03/19/2020	03/19/2020	03/19/2020
			Sample	PH-01-HA1-01	PH-01-HA1-02	PH-03-HA1-01	PH-03-HA1-02	PH-04-HA1-01	PH-04-HA1-02	PH-05-HA1-01	PH-05-HA1-02	PH-06-HA1-01	PH-06-HA1-02	PH-06-HA2-01	PH-06-HA2-02	EDB-1:2	EDB-1:6	EDB-1:13	EDB-2:2	EDB-2:6	EDB-2:10	EDB-3:2	EDB-3:6	EDB-3:10	EDB-4:2	EDB-4:6	EDB-4:10	EDB-5:2	EDB-5:6	EDB-5:9	EDB-6:2	EDB-6:6	EDB-6:13
			Depth	1 ft	2 ft	1 ft	2 ft	1 ft	2 ft	1 ft	2 ft	1 ft	2 ft	1 ft	2 ft	2 ft	6 ft	13 ft	2 ft	6 ft	10 ft	2 ft	6 ft	10 ft	2 ft	6 ft	10 ft	2 ft	6 ft	9 ft	2 ft	6 ft	13 ft
BTEX																																
Benzene	mg/kg	0.03		--	--	--	--	--	--	--	--	--	--	--	--	< 0.03 U	< 0.03 U	--	< 0.03 U	< 0.03 U	--	< 0.03 U	< 0.03 U	--	< 0.03 U	< 0.03 U	--	< 0.03 U	< 0.03 U	--	< 0.03 U	< 0.03 U
Toluene	mg/kg	7		--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
Ethylbenzene	mg/kg	6		--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
Total Xylenes	mg/kg	9		--	--	--	--	--	--	--	--	--	--	--	--	< 0.1 U	< 0.1 U	--	< 0.1 U	< 0.1 U	--	< 0.1 U	< 0.1 U	--	< 0.1 U	< 0.1 U	--	< 0.1 U	< 0.1 U	--	< 0.1 U	< 0.1 U
Metals																																
Arsenic	mg/kg	20		< 12 U	< 11 U	--	--	--	--	--	--	--	--	--	--	**1.97**	**1.02**	--	**1.95**	**1.9**	--	**2.01**	**1.3**	--	**5.47**	**1.66**	--	**1.98**	**1.41**	--	**1.66**	< 1 U	--
Barium	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/kg	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	mg/kg	250		--	--	**42**	**14**	**15**	< 6.1 U	**170**	**8.6**	--	--	**190**	**21**	**2.36**	**1.31**	--	**4.75**	**2.25**	--	**11.9**	**1.57**	--	**61.3**	**1.79**	--	**2.36**	**1.6**	--	**2.46**	**1.3**	--
Mercury	mg/kg	2		--	--	< 0.31 U	**0.92**	--	--	--	--	**0.94**	**0.48**	--	--	< 1 U	< 1 U	--	< 1 U	< 1 U	--	< 1 U	< 1 U	--	< 1 U	< 1 U	--	< 1 U	< 1 U	--	< 1 U	< 1 U	--
Selenium	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other SVOCs																																
Hexachlorobutadiene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U
Pentachlorophenol	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg	5		--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
PCBAro																																
Aroclor 1016	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--
Aroclor 1221	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--
Aroclor 1232	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--
Aroclor 1242	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--
Aroclor 1248	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--
Aroclor 1254	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--
Aroclor 1260	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--
Aroclor 1262	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--
Aroclor 1268	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--
Total PCBs (Sum of Aroclors)	mg/kg	1		--	--	--	--	--	--	--	--	--	--	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--	< 0.02 U	--	--
TPHs																																
Diesel Range Organics	mg/kg	2000		--	--	--	--	--	--	--	--	--	--	--	--	< 50 U	< 50 U	--	< 50 U	< 50 U	--	< 50 U	< 50 U	--	< 50 U	< 50 U	--	< 50 U	< 50 U	--	< 50 U	< 50 U
Motor Oil Range Organics	mg/kg	2000		--	--	--	--	--	--	--	--	--	--	--	--	< 250 U	< 250 U	--	< 250 U	< 250 U	--	< 250 U	< 250 U	--	< 250 U	< 250 U	--	< 250 U	< 250 U	--	< 250 U	< 250 U
VOCs																																
1,1,1,2-Tetrachloroethane	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
1,1,1-Trichloroethane	mg/kg	2		--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
1,1,2,2-Tetrachloroethane	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
1,1,2-Trichloroethane	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
1,1-Dichloroethane	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
1,1-Dichloroethene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
1,1-Dichloropropene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
1,2,3-Trichlorobenzene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U
1,2,3-Trichloropropane	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
1,2,4-Trichlorobenzene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U
1,2,4-Trimethylbenzene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
1,2-Dibromo-3-chloropropane	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U
1,2-Dibromoethane (EDB)	mg/kg	0.005		--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
1,2-Dichlorobenzene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
1,2-Dichloroethane (EDC)	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
1,2-Dichloropropane	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
1,3,5-Trimethylbenzene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
1,3-Dichlorobenzene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
1,3-Dichloropropane	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
1,4-Dichlorobenzene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
2,2-Dichloropropane	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
2-Butanone	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U
2-Chlorotoluene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
2-Hexanone	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U
4-Chlorotoluene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
4-Methyl-2-pentanone	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U
Acetone	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U
Bromobenzene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
Bromodichloromethane	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
Bromoform	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
Bromomethane	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U
Carbon Tetrachloride	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
Chlorobenzene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
Chloroethane	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U
Chloroform	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
Chloromethane	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U
cis-1,2-Dichloroethene (DCE)	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
cis-1,3-Dichloropropene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
Dibromochloromethane	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
Dibromomethane	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
Dichlorodifluoromethane	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U
Isopropylbenzene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
m,p-Xylenes	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.1 U	< 0.1 U	--	< 0.1 U	< 0.1 U	--	< 0.1 U	< 0.1 U	--	< 0.1 U	< 0.1 U	--	< 0.1 U	< 0.1 U	--	< 0.1 U	< 0.1 U
Methyl tert-butyl ether (MTBE)	mg/kg	0.1		--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
Methylene Chloride	mg/kg	0.02		--	--	--	--	--	--	--	--	--	--	--	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U
n-Hexane	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U	--	< 0.25 U	< 0.25 U
n-Propylbenzene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
o-Xylene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
p-Isopropyltoluene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
sec-Butylbenzene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
Styrene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
tert-Butylbenzene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
Tetrachloroethene (PCE)	mg/kg	0.05		--	--	--	--	--	--	--	--	--	--	--	--	< 0.025 U	< 0.025 U	--	< 0.025 U	< 0.025 U	--	< 0.025 U	< 0.025 U	--	< 0.025 U	< 0.025 U	--	< 0.025 U	< 0.025 U	--	< 0.025 U	< 0.025 U
trans-1,2-Dichloroethene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
trans-1,3-Dichloropropene	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U
Trichloroethene (TCE)	mg/kg	0.03		--	--	--	--	--	--	--	--	--	--	--	--	< 0.02 U	< 0.02 U	--	< 0.02 U	< 0.02 U	--	< 0.02 U	< 0.02 U	--	< 0.02 U	< 0.02 U	--	< 0.02 U	< 0.02 U	--	< 0.02 U	< 0.02 U
Trichlorofluoromethane	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U
Vinyl Chloride	mg/kg			--	--	--	--	--	--	--	--	--	--	--	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U

Notes:
MTCA = Washington State Department of Ecology Model Toxics Control Act
CUL = Cleanup Level
mg/kg = milligram per kilogram
Bold - detected
Blue Shaded - Detected result exceeded screening level
U - Analyte not detected at or above Reporting Limit (RL) shown

Table 4. Summary of Soil Gas Analytical Results

Project No. 210143, Former Phinney Ridge Substation, Seattle, Washington

			Location	SV-1	SV-2	SV-3
			Date	03/19/2020	03/19/2020	03/19/2020
Analyte	Unit	MTCA Method B Screening Level (Unrestricted)[2]				
APH						
C5 - C8 Aliphatic Hydrocarbons	ug/m3			**1100**	< 220 U	**280**
C9 - C12 Aliphatic Hydrocarbons	ug/m3			**740**	**370**	**570**
C9 - C10 Aromatic Hydrocarbons	ug/m3			< 240 U	< 180 U	< 180 U
Sum of Total Aromatic Hydrocarbons, ND = 0[1]	ug/m3	4700		**1840**	**370**	**850**
VOCs						
1,1,1-Trichloroethane	ug/m3	76000		< 5.2 U	< 4 U	< 4 U
1,1,2-Trichloroethane	ug/m3	3		< 1 U	< 0.81 U	< 0.8 U
1,1-Dichloroethane	ug/m3	52		< 3.8 U	< 3 U	< 3 U
1,1-Dichloroethene	ug/m3	3000		< 3.8 U	< 2.9 U	< 2.9 U
1,2-Dichloroethane (EDC)	ug/m3	3.2		< 0.38 U	< 0.3 U	< 0.3 U
Chloroethane	ug/m3	150000		< 25 U	< 20 U	< 19 U
cis-1,2-Dichloroethene (cDCE)	ug/m3			< 3.8 U	< 2.9 U	< 2.9 U
Tetrachloroethene (PCE)	ug/m3	320		< 64 U	< 50 U	< 50 U
trans-1,2-Dichloroethene	ug/m3	610		< 3.8 U	< 2.9 U	< 2.9 U
Trichloroethene (TCE)	ug/m3	11		< 2.6 U	< 2 U	< 2 U
Vinyl Chloride	ug/m3	9.5		< 2.4 U	< 1.9 U	< 1.9 U

Notes:

MTCA = Washington State Department of Ecology Model Toxics Control Act

CUL= Cleanup Level

ug/m3 = microgram per cubic meter

Bold type indicates analyte was detected above laboratory reporting limits. No analytes were detected above MTCA Method B screening levels.

[1] Total petroleum hydrocarbon concentration is the sum total of VOCs and APHs; zero was used for non-detects.

[2] Generic MTCA Method B sub-slab soil gas SL per Ecology Implementation Memo #18.

U - Analyte not detected at or above Reporting Limit (RL) shown

APPENDIX B

Sampling and Analysis Plan (SAP)

B. Sampling and Analysis Plan

This Sampling and Analysis Plan (SAP) has been prepared as Appendix B to this Cleanup Action Plan Amendment and Contaminated Media Management Plan for Construction (Plan) for work at Homestead Community Land Trust's Former Phinney Substation property. The purpose of this SAP is to outline how field sampling collection, handling, and laboratory analysis conducted during supplemental subsurface investigation will generate data to support contamination cleanup, soil management, and construction objectives. The SAP has been developed to meet the requirements of the Washington State Department of Ecology's (Ecology) Model Toxics Control Act (MTCA), outlined under WAC 173-340-820 ("Sampling and Analysis Plans").

B.1. Sample Handling Procedures

Soil, groundwater or surface water (if any), and quality control samples will be collected using hand tools during the work outlined in this Plan. All soil samples will be placed in laboratory-provided sample ware, consisting of 4- to 8-ounce glass jars and/or volatile organic analysis (VOA) containers (filled in accordance with Environmental Protection Agency [EPA] Method 5035A). Groundwater samples are unlikely to be obtained due to the depth of groundwater beneath this site, but if surface water samples are obtained, they will be placed in laboratory-provided sample ware consisting of 250-milliliter polyurethane bottles both with and without nitric acid (HNO_3) preservative.

Filled sample jars will be placed on ice in coolers with internal temperatures maintained at 4 degrees Celsius (°C). Sample coolers will be transported by field personnel or courier to the laboratory under standard chain-of-custody procedures.

All reusable sampling equipment will be decontaminated between samples using an Alconox wash and clean water rinse.

B.1.1. Sample Identification

Each sample container will be labeled with the following using permanent, nonvolatile ink: unique sample identification, date, time, and project number.

- ***Investigation soil sample nomenclature.*** The unique sample identification format is "AB-YY-ZZ" for which AB represents the exploration type (AB for soil borings and AMW for monitoring wells), Y is a sequential two-digit ID number starting with AB-04 for soil borings and AMW-12 for monitoring wells, and ZZ is the depth in feet below ground surface (bgs).
- ***Excavation soil sample nomenclature.*** The unique sample identification format is "AB-YY-ZZ" for which AB represents the excavation location, Y is a sequential two-digit ID number, and ZZ is the depth in feet bgs.

- ***Surface Water or Groundwater sample nomenclature.*** Each water sample will be assigned a unique sample identification number that includes the sample location (or well number in the event that shallow dewatering or excavation water management is needed) and the six-digit date on which the sample was collected. For example, a water sample collected from storage tank 1 on October 5, 2023, would be identified as ST-1-100523.

B.1.2. Sample Custody

After collection, samples will be maintained in Aspect's custody until formally transferred to the analytical laboratory. A chain-of-custody record provided by the laboratory will be initiated at the time of sampling for all samples collected and signed by the field representative and all others who subsequently take custody of the samples, including the laboratory representative who receives the sample cooler.

B.1.3. Field Documentation

While conducting fieldwork, the field representative will document pertinent observations and events on field forms and/or in a field notebook and provide photographic documentation, as needed. Field notes will include a description of the field activities, sample descriptions, and associated details such as date, time, and field conditions.

Horizontal coordinates for each exploration or excavation soil sampling location will be recorded using a hand-held GPS instrument with real-time differential correction. The horizontal coordinates and elevations of monitoring wells (unlikely, but if any) will be surveyed by a licensed surveyor relative to Washington State Plan coordinates (horizontal) and NAVD88 (vertical). Monitoring well top-of-casing and groundwater surface elevations will be surveyed to the nearest 0.01 foot, and horizontal coordinates to the nearest 0.1 foot, or better. Each well will be surveyed at the marked spot on the top of the PVC well casing from which depth-to-water measurements are collected.

B.2. Quality Assurance/Quality Control Plan

Field quality control (QC) samples will be collected and submitted for chemical analysis to monitor the precision and accuracy associated with the field procedures. For the work outlined in this Plan, the QC samples consist of trip blanks and field duplicates. Trip blank samples will be prepared and supplied by the laboratory and will accompany the volatile organic compounds (VOCs) samples through the entire transportation process. One trip blank for each cooler containing VOC samples will be collected. Field duplicates will be collected at a frequency of 10 percent, or one for every 20 samples.

Samples will be collected such that data will support future remedial action objectives and meet the data quality objectives in accordance with MTCA requirements (WAC 173-340-350). Chemical analysis of the samples will be conducted by a laboratory accredited by Ecology, using MTCA-required analytical methods as outlined in Ecology's *Guidelines for Preparation of Quality Assurance Project Plans for Environmental Studies* (Ecology, 2016), as follows:

- EPA 6000/7000 Series for metals

The quality control procedures specified by these methods will be implemented by the laboratory in accordance with their internal QC standards (lab method blanks, spikes, etc.) so that the analytical results are of known quality. The laboratory will qualify results to identify QC concerns and upon receipt of the data, Aspect will review the analytical results and laboratory qualifiers in accordance with Aspect's internal data Quality Review (DQR) procedures so that data is appropriate to meet project objectives. Laboratory results will be managed in a controlled database environment for data integrity and consistency.

APPENDIX C

Quality Assurance/Quality Control Project Plan (QAPP)

C. Quality Assurance/Quality Control Project Plan

This Quality Assurance Project Plan (QAPP) identifies quality assurance and quality control (QA/QC) procedures and criteria required so that data collected during the subsurface investigation are of known quality and acceptable to achieve project objectives. Specific protocols and criteria are also set forth in this QAPP for data quality evaluation, upon the completion of data collection, to determine the level of completeness and usability of the data. It is the responsibility of the Project personnel performing or overseeing the sampling and analysis activities to adhere to the requirements of this QAPP.

C.1. Purpose of the QAPP

As stated in Washington State Department of Ecology (Ecology) *Guidelines for Preparation of Quality Assurance Project Plans for Environmental Studies* (Ecology, 2016), specific goals of this QAPP are as follows:

- Focus project manager and project team to factors affecting data quality during the planning stage of the Project.
- Facilitate communication among field, laboratory, and management staff as the project progresses.
- Document the planning, implementation, and assessment procedures for QA/QC activities for the investigation.
- Achieve data quality objectives (DQOs).
- Provide a record of the project to facilitate final report preparation.

The DQOs for the Project include both qualitative and quantitative objectives, which define the appropriate type of data, and specify the tolerable levels of potential decision errors that will be used as a basis for establishing the quality and quantity of data needed to support the environmental assessment. This QAPP describes both quantitative and qualitative measures of data so that the DQOs are achieved. DQOs dictate data collection rationale, sample collection procedures, and sampling and analysis designs that are presented in the main body of this Cleanup Action Plan Amendment and Contaminated Media Management Plan for Construction (Plan).

C.2. Data Quality Objectives

DQOs, including the Measurement Quality Indicators (MQIs)—precision, accuracy, representativeness, comparability, completeness, and sensitivity (namely PARCCS parameters)—and sample-specific reporting limits (RLs) are dictated by the project

requirements and intended uses of the data. For this Project, the analytical data must be of sufficient technical quality to determine whether contaminants are present and, if present, whether their concentrations are greater than or less than applicable screening criteria, based on protection of human health and the environment.

The quality of data generated through this subsurface investigation will be assessed against the MQIs set forth in this QAPP. Specific MQI goals and evaluation criteria, including method detection limits (MDLs), RLs, percent recovery (%R) for accuracy measurements, and relative percent difference (RPD) for precision measurements, are defined below.

C.2.1. Precision

Precision measures the reproducibility of measurements under a given set of conditions. Specifically, it is a quantitative measure of the variability of a group of measurements compared with their average values. Analytical precision is measured through matrix spike/matrix spike duplicate (MS/MSD) samples and laboratory control samples/laboratory control sample duplicate (LCS/LCSD) for organic analysis and through laboratory duplicate samples for inorganic analyses.

Analytical precision is quantitatively expressed as the RPD between the LCS/LCSD, MS/MSD, or laboratory duplicate pairs and is calculated with the following formula:

$$RPD\ (\%) = 100 \times \frac{|S - D|}{(S + D)/2}$$

where:

S = analyte concentration in sample
D = analyte concentration in duplicate sample

C.2.2. Accuracy

Accuracy measures the closeness of the measured value to the true value. The accuracy of chemical test results is assessed by "spiking" samples with known standards (surrogates, blank spikes, or matrix spikes) and establishing the average recovery. Accuracy is quantified as the %R. The closer the %R is to 100 percent, the more accurate the data.

Surrogate recovery will be calculated as follows:

$$\text{Recovery}\ (\%) = \frac{MC}{SC} \times 100$$

where:

SC = spiked concentration
MC = measured concentration

MS percent recovery will be calculated as follows:

$$\text{Recovery (\%)} = \frac{MC - USC}{SC} \times 100$$

where:

SC = spiked concentration
MC = measured concentration
USC = unspiked sample concentration

C.2.3. Representativeness

Representativeness measures how closely the measured results reflect the actual concentration or distribution of the chemical compounds in the matrix sampled. The sampling techniques and sample-handling protocols, including storage, preservation, and use of blanks, have been developed to collect representative samples. Only representative data will be used in the compliance sampling. The subsurface investigation field sampling procedures are described in the SAP (Appendix B).

C.2.4. Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another. This goal will be achieved using standard techniques to collect samples, U.S. Environmental Protection Agency-approved (EPA) standard methods to analyze samples, and consistent units to report analytical results. Data comparability also depends on data quality. Data of unknown quality cannot be compared.

C.2.5. Sensitivity

Sensitivity depicts the level of ability that an analytical system—such as sample preparation and instrumental analysis—has for detecting a target component in a given sample matrix with a defined level of confidence. Factors affecting the sensitivity of an analytical system include analytical system background (laboratory artifact or method blank contamination), sample matrix (mass spectrometry ion ratio change, coelution of peaks, or baseline elevation), and instrument instability.

C.3. Quality Control Procedures

Field and laboratory QC procedures are outlined below.

C.3.1. Field Quality Control

Beyond use of standard sampling protocols defined in the field sampling plan, field QC procedures include maintaining the field instrumentation used. Field instruments, including a photo ionization detector (PID) for evaluating presence of volatile organic compounds (VOCs) in soil and the portable x-ray fluorescence (XRF) spectrum analyzer for evaluating presence and approximate concentrations of arsenic, lead, and mercury in

soil, are maintained and calibrated regularly prior to use, in accordance with manufacturer recommendations.

In addition, field QC samples will be collected and submitted for analyses to monitor the precision and accuracy associated with field procedures. Field QC samples to be collected and analyzed for this subsurface investigation are trip blanks and field duplicates. The definition and sampling requirements for field QC samples are presented below.

C.3.1.1. Field Duplicates

Field duplicate samples are used to check for sampling and analysis reproducibility; however, the field duplicate sample results include variability introduced during both field sampling and laboratory preparation and analysis, and EPA data validation guidance provides no specific evaluation criteria for field duplicate samples. Advisory evaluation criteria are set forth at 35 percent for RPD (if both results are greater than five times the RL) and two times the RLs for concentration difference (if either result is less than five times the RL) between the original and field duplicate results.

Field duplicates will be submitted "blind" to the laboratory as discrete samples (i.e., given unique sample identifiers to keep the duplicate identity unknown to the laboratory), but will be clearly identified in the field log. Field duplicate samples will be collected at a frequency of 5 percent (1 per 20) of soil samples.

C.3.2. Laboratory Quality Control

The laboratory's analytical procedures must meet requirements specified in the respective analytical methods or approved laboratory standard operating procedures (SOPs), including instrument performance check, initial calibration, calibration check, blanks, surrogate spikes, internal standards, and/or labeled compound spikes. Specific laboratory QC analyses required for this Project will consist of the following at a minimum:

- Instrument tuning, instrument initial calibration, and calibration verification analyses, as required in the analytical methods and the laboratory standard operating procedures (SOPs).
- Laboratory and/or instrument method blank measurements at a minimum frequency of 5 percent (1 per 20 samples) or in accordance with method requirements, whichever is more frequent.
- Accuracy and precision measurements at a minimum frequency of 5 percent (1 per 20 samples) or in accordance with method requirements.

The laboratory's QA officers are responsible for ensuring that the laboratory implements the internal QC and QA procedures detailed in their Quality Assurance Manual.

C.4. Corrective Actions

If routine QC audits by the laboratory result in detection of unacceptable conditions or data, corrective actions specified in the laboratory SOPs will be taken. Specific corrective actions are outlined in each SOP used and can include the following:

- Identifying the source of the violation
- Reanalyzing samples if holding-time criteria permit
- Resampling and analyzing
- Evaluating and amending sampling and analytical procedures
- Accepting but qualifying data to indicate the level of uncertainty

If unacceptable conditions occur, the laboratory will contact Aspect's project manager to discuss the issues and determine the appropriate corrective action. Corrective actions taken by the laboratory during analysis of samples for this Project will be documented by the laboratory in the case narrative associated with the affected samples.

In addition, the project data quality manager will review the laboratory data generated for this investigation and verify that project DQOs are met. If the review indicates that nonconformances in the data have resulted from field sampling, laboratory analytical, or documentation procedures, the impact of those nonconformances on the overall project data usability will be assessed. Appropriate actions, including resampling and/or reanalysis of samples, may be recommended to the project manager to achieve project objectives.

C.5. Data Reduction, Quality Review, and Reporting

All data will undergo a QA/QC evaluation at the laboratory, which will then be reviewed by the Aspect database manager and the project data quality manager. Initial data reduction, evaluation, and reporting at the laboratory will be carried out in full compliance with the method requirement and laboratory SOPs. The laboratory internal review will include verification (for correctness and completeness) of the electronic data deliverable (EDD) accompanied with each laboratory report. The Aspect database manager will verify the completeness and correctness of all laboratory deliverables, including the laboratory report and EDDs.

C.5.1. Minimum Data Reporting Requirements

The following sections specify general and specific requirements for analytical data reporting to provide sufficient deliverables for project documentation and data quality assessment.

C.5.1.1. General Requirements

The following requirements apply to laboratory reports for all types of analyses:

- Include a cover page signed by the laboratory director, the laboratory QA officer, or their designee to certify the eligibility of the reported contents and the conformance with applicable analytical methodology.
- Include definitions of abbreviations, data flags, and data qualifiers used in the report.

- Include cross-reference of field sample names and laboratory sample identity for all samples in the sample delivery group (SDG).
- Include completed chain-of-custody (COC) document signed and dated by parties who acquired and received samples.
- Include completed sample receipt document with record of cooler temperature and sample conditions upon receipt at the laboratory. Anomalies, such as inadequate sample preservation, inconsistent bottle counts, and sample container breakage, along with a communication record and corrective actions in response to the anomalies will be documented and incorporated in the sample receipt document. The document will be initialed and dated by personnel that complete the document.
- Include a case narrative that addresses any anomalies or QC outliers in relation to sample receiving, sample preparation, and sample analysis on samples in the SDG. The narrative will be presented separately for each analytical method and each sample matrix.
- All pages in the report are to be paginated. Any insertion of pages after the laboratory report is issued will be paginated with starting page number suffixed with letters. For example, pages inserted between pages 134 and 135 should be paginated as 134A, 134B, and so on.
- Any resubmitted or revised report pages will be submitted to Aspect with a cover page stating the reason(s) and scope of resubmission or revision, and signed by laboratory director, QA officer, or the designee.

C.5.1.2. Specific Requirements

The following presents specific requirements for laboratory reports:

- Sample results: Sample results will be evaluated and reported down to the MDLs. Detections at levels greater than the MDLs, but less than the RLs, will be reported and flagged with "J." Results less than the MDLs (or EDLs) will be reported at the RLs and flagged with "U." All soil sample results will be reported on a dry-weight basis. The report pages for sample results (namely Form 1s) will, at minimum, include sample results, RLs, unit, proper data flags, dates of sample collection, preparation, and analysis, dilution factor, percent moisture (for solid samples), and sample volume (used for analysis).
- Instrument run log: The run log will list, in chronological order, all analytical runs on field samples, QC samples, calibrations, and calibration verification analyses in the SDG with data file name (and/or legible laboratory codes) and analysis date/time for each analytical run.
- Original sample preparation and analyst worksheet: Initialed and dated by analyst and reviewer.
- GC/MS and inductively coupled plasma (ICP)/MS tune report: Including ion abundance ratios and criteria for all required ions.

- Initial calibration summary: Including data file name for each calibration standard file; response factor (RF) or calibration factor (CF) for each calibration standard and each target and surrogate compound; average RF or CF, percent relative standard deviation (%RSD), correlation coefficient, or coefficient of determination; and absolute and relative retention times and ion ratios for High Resolution Gas Chromatography/High Resolution Mass Spectrometry (HRGC/HRMS) methods for each target compound and surrogate (labeled) compounds. As applicable and if required by the methods, initial calibrations should be verified with a second-source standard (namely the initial calibration verification [ICV]) at the mid-point concentration of the initial calibration. ICV results should be reported as part of the initial calibration.
- Calibration verification summary: Including true amount, calculated amount, and percent difference (%D), or percent drift (%D$_f$) as applicable, for target compounds.
- Method blank and calibration blank (as applicable such as metals analyses) results.
- LCS and LCSD (if matrix spike duplicate analysis is not performed) results with laboratory acceptance criteria for %R and RPD.
- Surrogate spike results with laboratory acceptance criteria for %R.
- MS and MSD results with laboratory acceptance criteria for %R and RPD. In cases where MS/MSD analyses were not performed on a project sample, LCS/LCSD analyses should be performed and reported instead.
- Internal standard (as applicable) results: Internal standard absolute retention times and response areas in field samples, QC analyses, and associated calibration verification analyses.
- Labeled compound (HRGC/HRMS methodology only) results, ion abundance ratios, and recovery.

C.6. Data Quality Verification and Validation

Reported analytical results will be qualified by the laboratory to identify QC concerns in accordance with the specifications of the analytical methods. Additional laboratory data qualifiers may be defined and reported by the laboratory to more completely explain QC concerns regarding a particular sample result. All data qualifiers will be defined in the laboratory's narrative reports associated with each case.

In cases of multiple analyses (such as an undiluted and a diluted analysis) performed on one sample, the optimal result will be determined and only the determined result will be reported for the sample.

C.7. Preventative Maintenance Procedures and Schedules

Preventative maintenance in the laboratory will be the responsibility of the laboratory personnel and analysts. This maintenance includes routine care and cleaning of instruments and inspection and monitoring of carrier gases, solvents, and glassware used in analyses. Details of the maintenance procedures are addressed in the respective laboratory SOPs (provided upon request).

Precision and accuracy data are examined for trends and excursions beyond control limits to determine evidence of instrument malfunction. Maintenance will be performed when an instrument begins to change as indicated by the degradation of peak resolution, shift in calibration curves, decrease in sensitivity, or failure to meet one or another of the method-specific QC criteria.

Maintenance and calibration of instruments used in the field for sampling (PID and YSI meter) will be conducted regularly in accordance with manufacturer recommendations prior to use.

C.8. Performance and System Audits

The Aspect project manager is responsible for reviewing the performance of the laboratory QA program; this review will be achieved through regular contact with the analytical laboratory's project manager. So that data is comparable, all samples of a given matrix to be analyzed by each specified analytical method will be processed consistently by the same analytical laboratory.

C.9. Data and Records Management

Records will be maintained documenting all activities and data related to field sampling and chemical analyses.

C.9.1. Field Documentation

Inspection and monitoring results will be documented on field report forms and/or in field notebooks. Adequate records will be maintained for each sample collected. The field representative will document pertinent observations and events specific to each activity and specific to each sample collected and, when warranted, provide photographic documentation of specific sampling efforts. Field notes will include the following:

- Date, time, weather conditions, project location, and sampler's name
- Sample location, sample type, and sample number
- Description of the field activity
- Sample descriptions and sampling method
- Size, type, and quantity of sample containers
- Field equipment used
- Field parameters

Pertinent observations of the sample condition that are worthy of noting in the field documentation include the following:

- Sample color
- Sedimentation or turbidity
- Oil or sheen
- Separate phase liquids
- Odor
- Effervescence
- Beginning canister vacuum (soil gas samples only)
- Ending canister vacuum (soil gas samples only)

Other information to be included in the field notebook includes the following:

- Reason for sampling
- Problems encountered due to unusual conditions
- Communications with Ecology, laboratory, or field staff

C.9.2. Analytical Data Management

Raw data received from the analytical laboratory will be reviewed, entered into a computerized database, and verified for consistency and correctness. The database will be updated based on data review and independent validation, if necessary.

The following field data will be included in the database:

- Sample location coordinates
- Sample type (groundwater, surface- or storm- water, soil, or soil gas)
- Soil, soil gas, or groundwater sampling depth interval

Information regarding whether concentrations represent total phase (unfiltered samples) or dissolved phase (filtered samples) will be compiled and stored in the database. Data will be reviewed, validated, and maintained to facilitate future submittals to Ecology's Environmental Information Management (EIM) database.

C.10. References

Washington State Department of Ecology (Ecology) 2016, Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies, Publication No. 04-03-030, December 2016.

APPENDIX D

Report Limitations and Guidelines for Use

REPORT LIMITATIONS AND USE GUIDELINES

Reliance Conditions for Third Parties

This report was prepared for the exclusive use of the Client. No other party may rely on this report or the product of our services without the express written consent of Aspect Consulting, LLC (Aspect). This limitation is to provide our firm with reasonable protection against liability claims by third parties with whom there would otherwise be no contractual conditions or limitations and guidelines governing their use of the report. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and recognized standards of professionals in the same locality and involving similar conditions.

Services for Specific Purposes, Persons and Projects

Aspect has performed the services in general accordance with the scope and limitations of our Agreement. This report has been prepared for the exclusive use of the Client and their authorized third parties, approved in writing by Aspect. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

This report is not, and should not, be construed as a warranty or guarantee regarding the presence or absence of hazardous substances or petroleum products that may affect the subject property. The report is not intended to make any representation concerning title or ownership to the subject property. If real property records were reviewed, they were reviewed for the sole purpose of determining the subject property's historical uses. All findings, conclusions, and recommendations stated in this report are based on the data and information provided to Aspect, current use of the subject property, and observations and conditions that existed on the date and time of the report.

Aspect structures its services to meet the specific needs of our clients. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and subject property. This report should not be applied for any purpose or project except the purpose described in the Agreement.

This Report Is Project-Specific

Aspect considered a number of unique, project-specific factors when establishing the Scope of Work for this project and report. You should not rely on this report if it was:

- Not prepared for you
- Not prepared for the specific purpose identified in the Agreement
- Not prepared for the specific real property assessed
- Completed before important changes occurred concerning the subject property, project or governmental regulatory actions

If changes are made to the project or subject property after the date of this report, Aspect should be retained to assess the impact of the changes with respect to the conclusions contained in the report.

Geoscience Interpretations

The geoscience practices (geotechnical engineering, geology, and environmental science) require interpretation of spatial information that can make them less exact than other engineering and natural science disciplines. It is important to recognize this limitation in evaluating the content of the report. If you are unclear how these "Report Limitations and Use Guidelines" apply to your project or site, you should contact Aspect.

Discipline-Specific Reports Are Not Interchangeable

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually address any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding the subject property.

Environmental Regulations Are Not Static

Some hazardous substances or petroleum products may be present near the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or petroleum products or do not otherwise present potential liability. Changes may occur in the standards for appropriate inquiry or regulatory definitions of hazardous substance and petroleum products; therefore, this report has a limited useful life.

Property Conditions Change Over Time

This report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time (for example, Phase I ESA reports are applicable for 180 days), by events such as a change in property use or occupancy, or by natural events, such as floods, earthquakes, slope failure or groundwater fluctuations. If more than six months have passed since issuance of our report, or if any of the described events may have occurred following the issuance of the report, you should contact Aspect so that we may evaluate whether changed conditions affect the continued reliability or applicability of our conclusions and recommendations.

Phase I ESAs – Uncertainty Remains After Completion

Aspect has performed the services in general accordance with the scope and limitations of our Agreement and the current version of the "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process", ASTM E1527, and U.S. Environmental Protection Agency (EPA)'s Federal Standard 40 CFR Part 312 "Innocent Landowners, Standards for Conducting All Appropriate Inquiries".

No ESA can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with subject property. Performance of an ESA study is intended to reduce, but not eliminate, uncertainty regarding the potential for environmental conditions affecting the subject property. There is always a potential that areas with contamination that were not identified during this ESA exist at the subject property or in the study area. Further evaluation of such potential would require additional research, subsurface exploration, sampling and/or testing.

Historical Information Provided by Others

Aspect has relied upon information provided by others in our description of historical conditions and in our review of regulatory databases and files. The available data does not provide definitive information with regard to all past uses, operations or incidents affecting the subject property or adjacent properties. Aspect makes no warranties or guarantees regarding the accuracy or completeness of information provided or compiled by others.

Exclusion of Mold, Fungus, Radon, Lead, and HBM

Aspect's services do not include the investigation, detection, prevention or assessment of the presence of molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts. Accordingly, this report does not include any interpretations, recommendations, findings, or conclusions regarding the detection, assessment, prevention or abatement of molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts. Aspect's services also do not include the investigation or assessment of hazardous building materials (HBM) such as asbestos, polychlorinated biphenyls (PCBs) in light ballasts, lead based paint, asbestos-containing building materials, urea-formaldehyde insulation in on-site structures or debris or any other HBMs. Aspect's services do not include an evaluation of radon or lead in drinking water, unless specifically requested.