

Site-Specific Sampling and Analysis Plan

Former USPS Processing & Distribution Center Property, Portland, Oregon, DEQ ECSI #2183

May 4, 2023

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This document entitled, Site-Specific Sampling and Analysis Plan (SSSAP), Former USPS Processing & Distribution Center Property, Portland, Oregon was prepared by Stantec Consulting Services Inc. (Stantec) for Prosper Portland (Prosper) for the Former USPS Processing & Distribution Center Property, located at 715 NW Hoyt Street in Portland, Oregon. The material in it reflects Stantec's best judgment considering the information available at the time of preparation. Any use which a third party makes of this SSSAP, or any reliance on or decisions made based on it, are the responsibilities of such third parties. Stantec accepts no responsibility for damages, if any, suffered by any third party because of decisions made or actions based on this document. This document was prepared under the supervision and direction of the staff identified below.

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Introduction May 4, 2023

1.0 INTRODUCTION

On behalf of Prosper Portland (Prosper), Stantec Consulting Services Inc. (Stantec) has prepared this Site-Specific Sampling and Analysis Plan (SSSAP) for a Focused Phase II Environmental Site Assessment (ESA) at the Former United States Postal Service (USPS) Processing and Distribution Center (P&DC) Property located at 715 NW Hoyt Street in Portland, Oregon (Property). All work described herein will be completed in accordance with the Master Quality Assurance Project Plan (QAPP) dated May 2020 (Stantec 2020a).

1.1 PROPERTY LOCATION AND DESCRIPTION

The Property is an approximately 13.4-acre, rectangular-shaped parcel located within the Pearl District in Portland, Oregon. The Property is comprised of tax lots 100 and 200 on Multnomah County tax map 1N 1E 34BC. The Property is bounded by the Lovejoy Street Ramp to the Broadway Bridge to the north, by the NW Broadway Ramp to the Broadway Bridge to the east, NW Hoyt Street to the south, and NW 9th Avenue to the west.

The Property previously processed all outgoing mail for the state of Oregon and includes a 398,000-square-foot former processing and distribution center (P&DC) building (currently being demolished), a 10,025-square-foot Vehicle Maintenance Facility (VMF) with a fuel island and 10,000-gallon diesel UST (demolished in 2020), a 157,400-square-foot multi-story parking structure, and surface parking and maneuvering areas for postal vehicles (**Figure 1**). The entire Property was previously covered by either structures or hardscape (pavement and sidewalk), with the exception of several landscaped areas along the southern Property boundary adjacent to NW Hoyt Street and along the western Property boundary adjacent to NW 9th Avenue. Previous demolition and cleanup activities have occurred on the Property as documented in the Phase 1 and Phase 2 Remedial Action Closure Reports (Stantec 2022 and Stantec 2023, respectively). Previous cleanup activities were conducted according to the Expanded Contaminated Media Management Plan that presents Property-specific information to conduct the hot spot cleanups, decommission Property monitoring wells and manage known and unknown environmental conditions on the Property (Stantec 2020b). A temporary cap has been or will be installed where cleanup activities have occurred or where buildings have been demolished to prohibit receptors from accessing contaminated soil on the Property. Public access is restricted to all portions of the Property.

The Property is zoned EXd (Central Employment), as is property to the immediate north and west. Surrounding properties to the immediate east and south are zoned CXd (Commercial). Both the EXd and CXd zones allow for residential development. The nearest surface water body is the Willamette River, located approximately 700 feet to the northeast.

1.2 PROBLEM DEFINITION

Prosper is in the process of demolishing the P&DC building and preparing the site for redevelopment. Likely future redevelopment will include a mixed use development with open space (parks, rights of way, sidewalks, etc).



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This SSSAP will focus on soil conditions beneath the former P&DC building as the soil beneath this building has not been evaluated for contaminants during previous investigations.

1.3 DATA USE OBJECTIVES

Data collected for this project will be used to:

- Support Property redevelopment;
- Assess environmental conditions beneath the former P&DC building to evaluate potential risk to current and future human receptors;
- Locate and identify potential sources of contamination; and
- Formulate remediation strategies and estimate remediation costs;



Scope of Work May 4, 2023

2.0 SCOPE OF WORK

The scope of work described in this SSSAP includes a Focused Phase II ESA, to evaluate likely future redevelopment areas as described above in **Section 1.3**. Standard operating procedures (SOPs) for the work tasks identified below are presented in the USEPA-approved QAPP (Stantec 2020a).

2.1 CONCEPTUAL SITE MODEL

The Conceptual Site Model (CSM) for the Property is based on the land use and beneficial water use determinations described below. The CSM is outlined in **Table 1**.

2.1.1 Land Use Determination

The Property is zoned EXd (Central Employment), as is property to the immediate north and west. Surrounding properties to the immediate east and south are zoned CXd (Commercial). Surrounding sites are generally industrial, commercial, or residential in use. Likely future development will include mixed use redevelopment with open park space.

2.1.2 Beneficial Water Use Determination

There are no public or private water supply wells on the Property. Potable water is supplied to the Property and immediate area by the City of Portland Water Bureau, and future water supply to the Property is assumed to be the same; therefore, groundwater is not anticipated to be accessed for drinking or other purposes. Groundwater was previously evaluated on the Property with a network of monitoring wells that were abandoned in 2020 during the Phase 1 cleanup activities.

2.1.3 Potentially Complete Exposure Pathways

Based on the current commercial use and planned commercial/residential use of the Property, the following exposure pathways are considered potentially complete or reasonably likely to be complete at the Property in the future:

- 1. Direct contact with soil within 3 feet of the ground surface (urban residential, occupational workers and construction/excavation workers);
- 2. Direct contact with soil greater than 3 feet below ground surface (bgs) (construction and excavation workers); and,
- 3. Inhalation of indoor and outdoor vapors from volatile contaminants (residential and occupational workers).

Analytical data gathered during the Focused Phase II ESA will be evaluated against DEQ Risk-Based Concentrations (RBCs) for these potentially complete exposure pathways to assess potential risks to human health.

2.2 PRE-FIELDWORK ACTIVITIES

Prior to field activities, Stantec will perform the following:



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- Update a previously prepared a site-specific HASP in accordance with OSHA guidelines and Stantec protocols;
- Request the Utility Notification Center to mark underground utilities on the Property;
- Contract with a private utility locate service provider to identify potential underground utilities/structures at the planned boring locations;
- Contract with Apex Labs for analytical testing services; and
- Contract with a licensed driller for the advancement of borings for the purpose of soil sampling.

A health and safety briefing will be conducted daily by field personnel in coordination with subcontractors prior to beginning of field activities and will focus on anticipated work hazards and controls.

2.3 FOCUSED PHASE II ESA

The Phase II ESA described in this SSSAP will be focused on soil beneath the former USPS P&DC building to evaluate subsurface soil conditions after the slab, pile caps, tunnels and other building foundation features are removed. Stantec will oversee subsurface investigation activities after the demolition contractor completes their work and the building is backfilled to an established grade surface consistent with the remainder of the Property. Backfill materials are anticipated to be composed of crushed concrete from the building demolition, soil that has been visually inspected and sifted to remove large debris (bricks, metal, etc.), and imported crushed rock. The backfilled surface of the demolition area will be composed of ¾-inch minus crushed rock to maintain the protective temporary cap on the Property.

2.3.1 Soil Sampling Methodology

To evaluate subsurface conditions within the footprint of the former P&DC building, Stantec will subcontract with an Oregon-licensed driller to facilitate the collection of soil samples. Temporary borings will be advanced using direct-push technology with a clear acetate liner and a hollow stainless-steel drill rod, advanced by a hydraulically driven hammer to collect relatively undisturbed soil cores. Collected soil will be logged using the Unified Soil Classification System and screened for visual/olfactory characteristics and for volatile organic compounds (VOCs) using a photoionization detector (PID) equipped with a 10.6 electron-volt lamp. Soil classification, visual/olfactory observations of soil conditions, and PID results will be documented in the project notebook or on field data sheets.

Soil samples will be collected from 23 proposed locations as shown on **Figure 2**. Proposed borings are located at the center of 23 grids that are measured at 10,000 square feet (100 feet by 100 feet) spatially distributed across the footprint of the former P&DC building. (Note: the former P&DC building is irregularly shaped and therefore not all grids fit precisely within the building footprint). Boring locations may require adjustment in the field based on field conditions. If shallow refusal is encountered or there is significant backfilled material (greater than 5 feet bgs) boring locations may be adjusted to another location within the grid as determined by the Stantec field manager in consultation with Prosper.

Composite samples will be collected from two intervals in each proposed boring. A shallow composite sample will be collected from 0-3 feet bgs to evaluate potential direct contact exposure to residential and occupational receptors. A deeper composite sample will be collected from 3 feet bgs to first encountered groundwater or 10 feet bgs (if groundwater is located deeper than 10 feet bgs) to evaluate potential exposure risk for construction /excavation workers. If material in the boring is recently placed fill (i.e.



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crushed rock) a sample will not be collected from that interval. Soil from the entire composite interval (0-3 feet bgs or 3-10 feet bgs) will be sampled by first collecting aliquots for gasoline range organics (GRO) and VOCs using a Terra Core (or similar sampling device) from the open core liner and then placing the remainder of the collected material and into a clean decontaminated stainless-steel mixing bowl to homogenize prior to placing into laboratory-supplied containers.

2.3.2 Soil Sampling Analysis

Soil samples will be handled and submitted for laboratory analysis to Apex Labs under standard chain of custody procedures in accordance with the QAPP, and analyzed for the following:

- Gasoline range organics (GRO) by USEPA Methods 5035 (field methanol preservation) and Method NWTPH-Gx;
- Diesel Range Organics (DRO) / Oil Range Organics (ORO) by Method NWTPH-Dx;
- VOCs by USEPA Methods 5035 and 8260C;
- Polycyclic aromatic hydrocarbons (PAHs) by USEPA Method 8270 SIM;
- Polychlorinated biphenyls (PCBs) by USEPA Method 8082; and,
- Resource Conservation and Recovery Act (RCRA) Eight Metals (Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver) by USEPA Method 6020/7471.

In accordance with QAPP SOP-02, samples selected for VOC and GRO analysis will be collected first using USEPA Method 5035 (field methanol preservation). VOC and GRO soil samples will be collected using a pre-cleaned, disposable, small-diameter core sampler (i.e., Terra Core, Easy-Draw Syringe, or Power-Stop Handle) as quickly as possible after the soil is removed from the subsurface, from as undisturbed a portion of the soil as possible or from a freshly exposed part of the sample. Samples for other analytical methods will be collected subsequently using a disposable nitrile gloved hand. Nitrile gloves will be changed out between sampling locations.

The soil sampling design and rationale is summarized in **Table 2**.

2.3.3 Quality Assurance/Quality Control

All quality control samples will be collected, handled, and submitted for analysis in accordance with the project-specific QAPP (Stantec, 2020), as summarized below.

- One field duplicate will be collected (one for every 20 samples per sample matrix). If there are fewer than 20 samples per matrix, one field duplicate per matrix will be submitted.
- Equipment blanks will be collected by pouring laboratory-prepared water or distilled water over or through the field sampling equipment and collecting the rinsate for laboratory analysis. One equipment blank will be submitted to the laboratory with investigative samples and analyzed for the same parameters as the investigative samples.
- One trip blank will be submitted for laboratory VOC analysis.
- Additional soil sample volume will be collected and submitted for laboratory matrix spike (MS)/ matrix spike duplicate (MSD) analysis. An MS/MSD sample will be collected for organic and inorganic analyses at a minimum frequency of one per 20 or fewer samples per matrix.



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2.3.4 Boring Abandonment and Investigation-Derived Waste

Each boring will be abandoned using granular bentonite to a depth of 8 inches below surface grade hydrated in-place in accordance with Oregon Water Resources Department (OWRD) requirements. The uppermost 8 inches of the boring will be filled with surface material (crushed rock) to restore the Property's temporary protective cap.

Soil cuttings, purge water and driller's decontamination water (i.e. investigation-derived waste or IDW) will be segregated and stored on the Property in labeled Department of Transportation approved drums. The soil and groundwater analytical results from the investigation will be used to characterize the IDW for disposal at a permitted waste disposal facility. IDW will be temporarily stored on the Property until it is properly permitted for disposal.

2.3.5 Documentation and Reporting

The field activities will be documented in a bound field notebook with sequentially numbered pages and on Stantec field forms in accordance with applicable Stantec field sampling SOPs contained in the project QAPP (Stantec 2021). Following receipt of final laboratory analytical results, Stantec will prepare a written Supplemental Phase II ESA report documenting the sampling. The reports will include, at a minimum, the following:

- A description of the sampling activities;
- Figures/diagrams illustrating sampling locations;
- Boring logs;
- Data summary tables;
- Data validation memorandum; and,
- Comparison of laboratory analytical data to applicable DEQ RBCs for evaluation of potential risk to human health and the environment.

The reports will include recommendations, as appropriate. The reports also will discuss any deviations from the procedures described in this SSSAP.



Schedule May 4, 2023

3.0 SCHEDULE

Field sampling activities are expected to occur in October 2023 and will take 4-5 days to complete. The standard laboratory turnaround time for laboratory analysis of samples is 10 business days. Reporting will be completed within three weeks of the receipt and validation of laboratory testing data.



Limitations May 4, 2023

4.0 LIMITATIONS

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Stantec 2023. Phase 1 Remedial Action Closure Report – Electric Utility Vault Hot Spot Cleanup. Former USPS Processing & Distribution Center Property, Portland, Oregon, DEQ ECSI #2183. March 22, 2023.



TABLES



Table 1 Conceptual Site Model

Former USPS P&DC Building Portland, Oregon

Potential Receptor	Potentially Complete Current and Future Exposure Pathways					
Potential Receptor	Soil - Direct Contact	Soil - Volatilization to Outdoor Air	Soil - Vapor Intrusion			
Urban Residential	Potentially complete	Potentially complete	Potentially complete			
Occupational	Potentially complete	Potentially complete	Potentially complete			
Construction Workers	Potentially complete	Not applicable	Not applicable			
Excavation Workers	Potentially complete	Not applicable	Not applicable			
Ecological Receptors	Not complete*	Not applicable	Not applicable			

Notes:

^{*}Current and likely future land use: Residential / Commercial. The property will not be developed as habitat.

Table 2 Sampling Design and Rationale Former USPS P&DC Building

Portland, Oregon

				Petroleum Hydrocarbons					
Sample ID	Sample Type	Sample Depth (feet below ground surface)	Rationale	Gasoline-Range Organics (NWTPH- Gx)	Diesel- and Oil- Range Organics (NWTPH-Dx)	Volatile Organic Compounds (USEPA 8260)	Polycyclic Aromatic Hydrocarbons (USEPA 8270)	Poly-chlorinated biphenyls (USEPA 8082)	RCRA 8 Total Metals (USEPA 6020 / 7471 / 7470)
				Soil Samples				•	
SB-1	Composite	0 - 3		1	1	1	1	1	1
SB-1	Composite	3-10*		1	1	1	1	1	1
SB-2	Composite	0 - 3		1	1	1	1	1	1
SB-2	Composite	3-10*		1	1	1	1	1	1
SB-3	Composite	0 - 3		1	1	1	1	1	1
SB-3	Composite	3-10*		1	1	1	1	1	1
SB-4	Composite	0 - 3		1	1	1	1	1	1
SB-4	Composite	3-10*		1	1	1	1	1	1
SB-5	Composite	0 - 3		1	1	1	1	1	1
SB-5	Composite	3-10*		1	1	1	1	1	1
SB-6	Composite	0 - 3		1	1	1	1	1	1
SB-6	Composite	3-10*		1	1	1	1	1	1
SB-7	Composite	0 - 3		1	1	1	1	1	1
SB-7	Composite	3-10*		1	1	1	1	1	1
SB-8	Composite	0 - 3		1	1	1	1	1	1
SB-8	Composite	3-10*		1	1	1	1	1	1
SB-9	Composite	0 - 3		1	1	1	1	1	1
SB-9	Composite	3-10*		1	1	1	1	1	1
SB-10	Composite	0 - 3		1	1	1	1	1	1
SB-10	Composite	3-10*		1	1	1	1	1	1
SB-11	Composite	0 - 3		1	1	1	1	1	1
SB-11	Composite	3-10*	Evaluate soil contaminants	1	1	1	1	1	1
SB-12	Composite	0 - 3	beneath former P&DC building	1	1	1	1	1	1
SB-12	Composite	3-10*	footprint to determine risk to current and future receptors	1	1	1	1	1	1
SB-13	Composite	0 - 3		1	1	1	1	1	1
SB-13	Composite	3-10*		1	1	1	1	1	1
SB-14	Composite	0 - 3		1	1	1	1	1	1
SB-14	Composite	3-10*		1	1	1	1	1	1
SB-15	Composite	0 - 3		1	1	1	1	1	1
SB-15	Composite	3-10*		1	1	1	1	1	1
SB-16	Composite	0 - 3		1	1	1	1	1	1
SB-16	Composite	3-10*		1	1	1	1	1	1
SB-17	Composite	0 - 3		1	1	1	1	1	1
SB-17	Composite	3-10*		1	1	1	1	1	1
SB-18	Composite	0 - 3		1	1	1	1	1	1
SB-18	Composite	3-10*		1	1	1	1	1	1
SB-19	Composite	0 - 3		1	1	1	1	1	1
SB-19	Composite	3-10*		1	1	1	1	1	1
SB-20	Composite	0 - 3		1	1	1	1	1	1
SB-20	Composite	3-10*		1	1	1	1	1	1
SB-21	Composite	0 - 3		1	1	1	1	1	1
SB-21	Composite	3-10*		1	1	1	1	1	1
SB-22	Composite	0 - 3		1	1	1	1	1	1
SB-22	Composite	3-10*		1	1	1	1	1	1
SB-23	Composite	0 - 3		1	1	1	1	1	1
SB-23	Composite	3-10*		1	1	1	1	1	1
20.17				Quality Control Samp					
SB-X	Discrete Sample	TBD	Duplicate Soil Sample	2	2	2	2	2	2
EB-X ^[1] TB-X	Equipment Blank Trip Blank		Equipment Blank Trip Blank	1	0	1	0	0	0
					U	1 1	()		. ()

Equipment blank samples will be a water sample collected from non-disposable sampling equipment.

RCRA = Resource Conservation and Recovery Act

USEPA = United States Environmental Protection Agency

* = Deeper composite sample will be collected from 3-10 feet bgs unless groundwater is indentified in a shallower interval. If groundwater is identified shallower than 10 feet bgs then the deeper composite sample will be collected from 3 to the depth of first-encountered groundwater.

FIGURES



