CITY OF PORTLAND
ENVIRONMENTAL SERVICES
1120 SW Fifth Ave, Suite 613, Portland, Oregon 97204 ▪ Mingus Mapps, Commissioner ▪ Dawn Uchiyama, Director

M E M O R A N D U M

May 25, 2023

TO: Franziska Landes, Oregon Department of Environmental Quality

FROM: Kyle Haggart, Bureau of Environmental Services

RE: Cathedral Park Surface Soil Sampling

INTRODUCTION

The City of Portland (City) Bureau of Environmental Services (BES) prepared this memorandum to present the scope of work for surface soil sampling at Cathedral Park in Portland, Oregon. The Oregon Department of Environmental Quality (DEQ) is negotiating a consent order with Peninsula Iron Works (PIW), which includes collecting samples to delineate the extent of impacts in Cathedral Park and remediate the contamination from the PIW facility.

Surface soil samples collected in the vicinity of PIW and in portions of Cathedral Park have confirmed that polychlorinated biphenyl (PCB) impacted soil is migrating downgradient of PIW towards the Willamette River. DEQ stated that the park needs to be further characterize, but PIW has been reluctant to cooperate and is delaying the process. The City sent a letter to PIW dated July 29, 2022 that demanded immediate investigation and remediation of Cathedral Park. PIW responded with a letter dated August 3, 2022 indicating they were working with DEQ. The City sent another letter to PIW dated May 17, 2023 requiring PIW to state their intent by May 24, 2023 to immediately sample the Park. PIW failed to respond.

The purpose of this sampling is to collect surface soil data in the portion of the park downgradient of the known impacts. This data will be provided to DEQ and Oregon Health Authority to evaluate 1) if impacts are migrating to the Willamette River, 2) to evaluate potential risk to park users, and 3) to facilitate the efficient remediation by PIW.

BACKGROUND

Background information on sampling conducted in and around Cathedral Park can be found in the reports listed in the Reference and Background Reports section of this memorandum. A summary of the known contamination in Cathedral Park is discussed in this section.

Maul Foster Alongi (MFA) collected surface soil samples from Cathedral Park under the direction and oversight of DEQ in 2022. The surface soil samples were collected because of concerns raised by community members associated with polychlorinated biphenyls (PCB) contamination identified the railroad right-of-way (ROW) in 2012. Surface soil samples were collected in accordance with a DEQ approved work plan (MFA, 2022a), which consisted of using an Incremental Sampling Methodology (ISM) (Interstate Technology Regulatory Council [ITRC], 2020) approach to collected representative surface soil samples. The portions of Cathedral Park adjacent to the PIW facility were divided into 11 Decision Units (DUs) and 1 composite sample area. Each ISM and composite consisted of 50 increments, with triplicate samples being collected from one of the DU's. Total PCBs were detected in one area of Cathedral Park (samples DU10 and COMP09) at concentrations of 3.45 and 2.67 milligrams per kilogram (mg/kg), respectively (MFA, 2022b). These concentrations are greater than the site-specific recreation user screening level for direct contact of 0.52 mg/kg, which was developed by DEQ. Total PCBs were not detected in the remaining samples collected from Cathedral Park at concentrations greater than 0.52 mg/kg.

In 2022, PIW and Union Pacific Railroad collected soil samples adjacent to PIW and in the railroad ROW, but additional samples were not collected from the park to further delineate the riverward extent of contamination.

SCOPE OF WORK

BES will contract with Groundwater Solutions Inc. (GSI) to collect the surface soil samples from Cathedral Park. Surface soil samples will be collected using ISM procedures in accordance with the DEQ-approved MFA work plan (MFA, 2022a) for the 2022 sampling conducted in the park, the updated DEQ Guidance (DEQ, 2020), and ITRCs' 2022 ISM Update (ITRC, 2020). ISM sampling will be conducted as follows:

- The portions of Cathedral Park downslope from DU10 are divided into five roughly equally sized decision units (DU13 through DU17), as shown on Figure 1.
- Each ISM sample will consist of 50 soil increments collected from each DU. The ISM surface soil areas of each DU will be divided into a grid pattern consisting of 50 equally sized grid cells, depending on if replicates are being obtained from the DU or not (see below). An increment will be collected from within each of the grid cells, on a systematic random grid pattern, as described in the DEQ's *Decision Unit Characterization* Internal Management Directive (DEQ, 2020). The increment locations are shown on Figure 1.
- The pre-defined coordinates of each increment location will be flagged in the field with a real-time kinematic-global position system unit capable of real time accuracy of 0.1 to 3 feet. Coordinates will be recorded using the North American Datum of 1983, State Plane Coordinate System, Oregon North Zone.
- If obstructions (structures, trees, etc.) interfere with the planned increment locations, the increment will be moved to the nearest location clear of the obstruction and the coordinates of the new location will be recorded if the increment is moved more than 5 feet.

- Increments will be collected from 0 to 2 inches below ground surface, immediately below vegetation using hand tools (e.g., hand auger). Sampling equipment will be decontaminated between sampling each DU but not between increments.
- Surface vegetation, significant root mass debris, trash, and/or larger gravels and cobbles will be removed from the increments. The increment sample will be placed into a decontaminated stainless-steel bowl and homogenized with a decontaminated stainless-steel spoon.
- Field personnel will then collect approximately equal volume of soil (approximately 35-40 grams) from the homogenized increment. Soil from each increment will be placed into a common certified clean laboratory-provided jar with other increments from that DU. Excess soil from the increment location will be returned to the hole from which it was obtained.
- Field replicates will be collected from DU16 in accordance with DEQ's *Decision Unit Characterization* Internal Management Directive (DEQ, 2020). To collect duplicate and triplicate samples, a total of three increment samples will be collected from each grid square. The initial 50-increment sample will be completed before returning to each grid to collect soil for the duplicate sample (increments for the duplicate will be obtained within the same grid cell but at unique systematic grid locations). Following collection of the duplicate sample, the triplicate sample increments will then be collected within the same grid cell again, but at new systematic grid locations. The replicate sampling locations are shown on Figure 1.
- One equipment rinsate blank will be collected to assess the efficiency of field equipment decontamination procedures.
- ISM samples will be processed by Apex Laboratories LLC, in accordance with ISM Laboratory Site-Specific Sampling and Analysis Plan included in the MFA Work Plan (MFA, 2022a).
- All ISM samples and the equipment rinsate blank will be processed by Apex Laboratories, for PCBs Aroclors by U.S. Environmental Protection Agency Method 8082A.

REPORTING

BES will provide DEQ and OHA the laboratory data once it is received. Additionally, a brief memorandum documenting the field procedures, any deviations, and tabulated analytical results will be prepared and submitted to DEQ.

REFERENCES AND BACKGROUND REPORTS

BES. 2012a. *Outfall Basin 52 Source Investigation Report, City of Portland Outfall Project ECSI No. 2425.* City of Portland, Bureau of Environmental Services. May 2012

BES. 2012b. *Industrial Source Control Memo, Subject: Wet Weather Field Observations on 1/19/12, Vicinity of Peninsula Iron Works – 6618 N Alta.* City of Portland, Bureau of Environmental Services. March 16. 2012

DEQ. 2020. *Decision Unit Characterization*. Oregon Department of Environmental Quality, Land Quality Division, Cleanup Program. September 14, 2020.

ENW. 2022. *Work Plan Focused Surface Soil Investigation, Peninsula Iron Works Facility Building 2.* Evren Northwest Inc. August 9, 2022

ENW. 2023. *Draft Focused Surface Soil Investigation, Peninsula Iron Works Facility Building 2.* Evren Northwest Inc. March 28, 2023

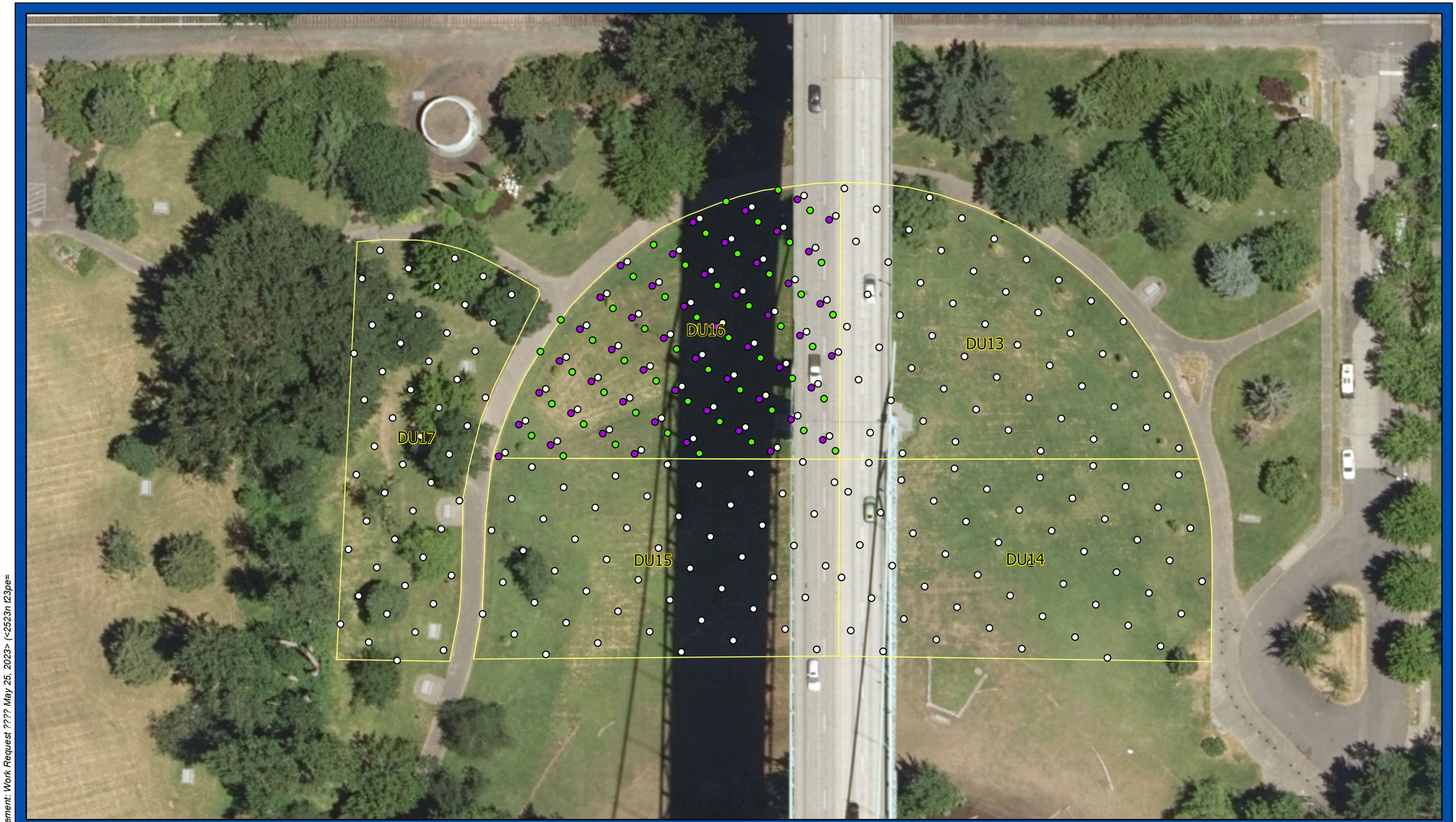
ITRC. 2020. *Technical and Regulatory Guidance. Incremental Sampling Methodology Update.* Interstate Technology and Regulatory Council. October 2020.

Jacobs. 2022. *Revised Investigation Work Plan, PCB Areawide – N. Bradford Street Right-of-Way, Portland, Oregon. ECSI No. 6480.* Jacobs Solutions, Inc. September 13, 2022.

Jacobs. 2023. *Draft Site Investigation Report, PCB Areawide – N. Bradford Street Right-of-Way, Portland, Oregon. ECSI No. 6480.* Jacobs Solutions, Inc. March 2023

MFA. 2022a. *Site-Specific Assessment Report, Cathedral Park Site*. Maul Foster Alongi. June 24, 2022.

MFA 2022b. *Site-Specific Assessment Work Plan, Cathedral Park Site*. Maul Foster Alongi. May 12, 2022.



Overview

Legend

- Primary Incremental Sample
- Duplicate Incremental Sample
- Triplicate Incremental Sample
- Decision Unit (DU)

Proposed ISM Sampling Locations

N E S W

0 50 100 Feet

ENVIRONMENTAL SERVICES
CITY OF PORTLAND
working for clean rivers

Project No.
N Bradford Cleanup

Figure	*Date*
1	**5/25/2023**

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