Oregon
Kate Brown, Governor

Department of Environmental Quality
Northwest Region
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Portland, OR 97232
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TTY 711

April 14, 2022

Lauren Mancuso
Union Pacific Railroad
1408 Middle Harbor Road
Oakland, CA 94607

Re: PCB Areawide – N Bradford St. ROW, Portland, Oregon
ECSI ID# 6480

Dear Ms. Mancuso:

The Oregon Department of Environmental Quality (DEQ) reviewed the February 25, 2022 *Investigation Work Plan*, prepared by Jacobs on behalf of Union Pacific Railroad (UPRR). The work plan describes sampling along the UPRR right-of-way (ROW) along North Bradford Street in Portland, Oregon (ECSI #6480) to delineate the extent of polychlorinated biphenyls (PCBs) detected along the ROW.

DEQ's comments on the work plan are presented below. Please submit a final *Investigation Work Plan*, incorporating these comments within 30 days.

Coring and Soil Sampling

1. Expand the sampling effort north along the ROW to N Baltimore Avenue, and south to N Pittsburg Avenue (see attachment 1). The expanded sampling area will further determine the extent of PCB contamination present in the railroad ROW and assist with determining the location(s) of potential source area(s) of PCBs.

2. DEQ will be assessing risk to park users walking along the ROW. To assist with that evaluation, please collect surface soil samples using the incremental soil sampling methodology.

3. Please clarify the procedure when hand auguring meets refusal before 3 ft bgs but after the 0 to 0.5 ft interval has been collected. DEQ recommends maintaining the shallow sample interval even if there is refusal at depth.

4. Due to the presence of larger rocks in and around the railroad tracks, the workplan should describe how samples will be field screened prior to placement in sample containers. Regardless of the field screening approach, all samples should be sieved in the lab consistent with ISM methodology (<2 mm). Please attach the field sampling and laboratory processing and subsampling procedures.

5. Given the historical activities along the railroad, DEQ recommends expanding the analyte list to include total petroleum hydrocarbons (TPH), metals, and polycyclic aromatic hydrocarbons (PAHs), in addition to PCB Aroclors (EPA method 8082). Please archive

all collected samples to allow for potential future follow-up analyses.

6. In order to determine if chemical weathering has impacted the accuracy of EPA method 8082, DEQ requests that laboratory chromatograms be provided for all samples and a portion of the samples be analyzed by both EPA method 8082 and EPA method 1668 (PCB congeners). This should include at least two samples at the high, medium, and low range of detected PCBs.

Please contact me at (503) 229-5538 or franziska.landes@deq.oregon.gov if you have any questions.

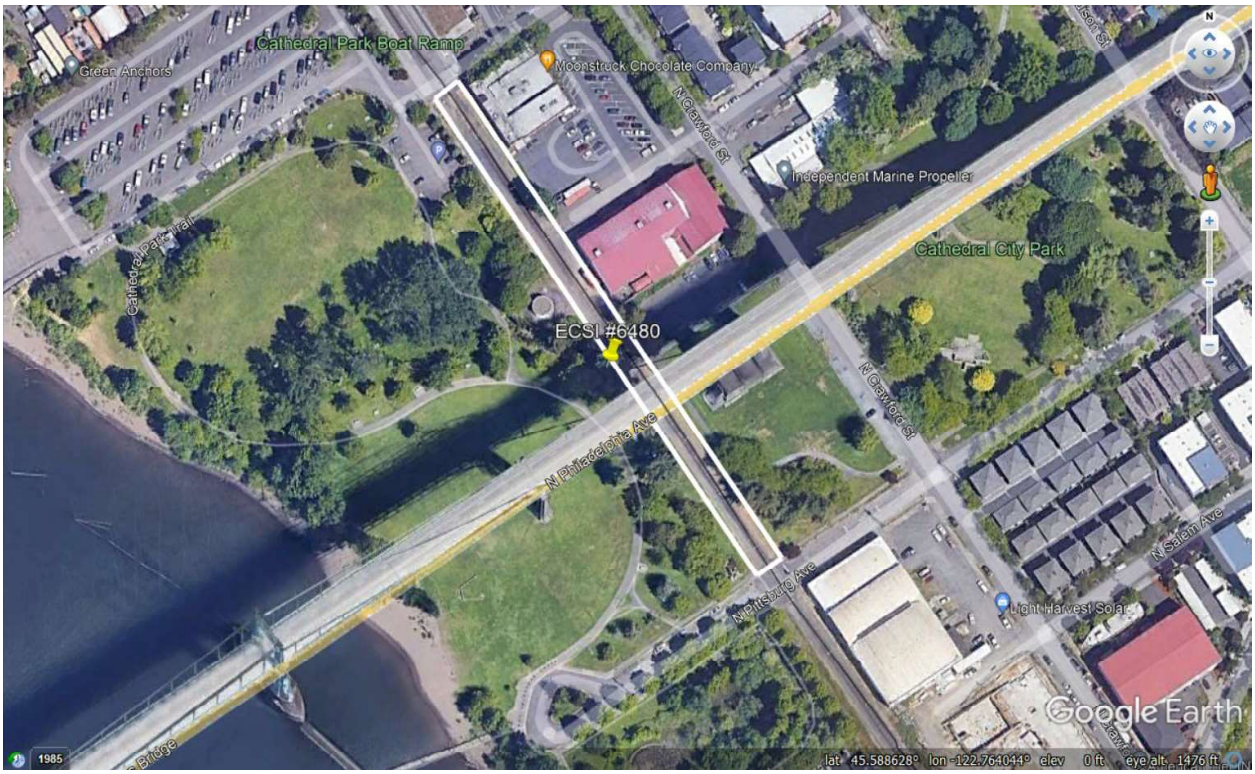
Sincerely,

F. Landes

Franziska Landes
Project Manager and Data Analyst
Northwest Region Cleanup Section

Ec: David Hodson, Jacobs
Katie Daugherty, DEQ
Kevin Parrett, DEQ
Todd Hudson, Oregon Health Authority

Attachment 1: Figure with white line showing sampling area.



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February 25, 2022

Franziska Landes
Oregon Department of Environmental Quality
Northwest Region
700 NE Multnomah Street, Suite 600
Portland, OR 97232

Subject: Investigation Work Plan, PCB Areawide – N Bradford Street Right-of-Way, Portland, Oregon (ECSI No. 6480)

Dear Franziska,

On behalf of Union Pacific Railroad (UPRR), Jacobs Engineering Group Inc. (Jacobs) prepared this work plan in response to the Oregon Department of Environmental Quality (ODEQ) October 11, 2021 letter outlining options related to polychlorinated biphenyls (PCBs) contamination in the N. Bradford Street right-of-way (ROW) in Portland, Oregon (site), (Figure 1). This work plan presents the methodology to conduct soil sampling within the UPRR ROW on N. Bradford Street to evaluate the current concentrations of PCBs in surface and shallow subsurface soil at the site.

Site Background

The site is located along the ROW of N. Bradford Street in north Portland, Oregon, and is bound to the north by N. Baltimore Avenue, and to the south by N. Philadelphia Avenue. The UPRR ROW, including active railroad tracks, is approximately 65 feet wide and located along N. Bradford Street, which separates Peninsula Iron Works, Inc. to the east from Cathedral Park to the west (Figure 2). Peninsula Iron Works has operated as a foundry and machining shop at this location for over 100 years[1].

The City of Portland investigated PCB contamination at the site in 2011 as part of its source tracing activities for outfall basin 52. During the 2011 investigation, composite and discrete surface soil samples were collected along the N. Bradford Street/UPRR ROW and areas within Cathedral Park, and subsurface soil samples were collected from soil borings under pavement in a City-owned parking lot adjacent to the site (Figure 2). Total PCB aroclor concentrations in surface soil ranged from 147 micrograms per kilogram (µg/kg) to 21,700 µg/kg, and concentrations in soil borings ranged from non-detect to 1,050 µg/kg. PCBs were also detected in catch basin, manhole, and inline solids at concentrations ranging from 11 µg/kg to 8,160 µg/kg. Accumulated solids were subsequently removed from stormwater conveyance lines along the ROW between N. Baltimore Avenue and N. Alta Avenue.

On October 11, 2021, ODEQ issued a letter to UPRR outlining options related to PCB contamination in soil along the UPRR ROW in the N. Bradford Street ROW and identified UPRR as a potential responsible party

[1] City of Portland, Environmental Services. 2011. Request for DEQ Site Assessment of Peninsula Iron Works at 6618 N. Alta Avenue. December 13.

for historical and/or ongoing releases of hazardous substances at the site. Options included (1) to conduct a site investigation and remedial action under the ODEQ Voluntary Cleanup Program, or (2) wait for ODEQ to place UPRR under an enforcement order. In the letter, ODEQ assigned a high priority to the site for further investigation and remedial action.

A review of UPRR's available historical records for its operations at the site and in the Portland area in general indicate there was no use of PCBs that could have resulted in releases at the site. In addition, there are no records of derailments, spills, or leaks from UPRR trains in this area, and fueling, maintenance, and repair activities are not conducted at the site.

Although the City of Portland concluded[2] that offsite migration of contaminants from Peninsula Iron Works operations may have resulted in observed contamination in the ROW and City property, UPRR proposes to conduct investigation activities under the ODEQ Voluntary Cleanup Program.

Investigation Objectives

The objective of this site investigation is to collect soil samples to evaluate the current distribution of PCB concentrations in surface and shallow subsurface soils along the N. Bradford Street ROW (Figure 1). The data may, in combination with previously collected data, be used to support an evaluation of the potential sources of PCBs observed at the site. This work plan describes field activities to be conducted at the site to achieve the investigation objective.

Field Methods and Procedures

This section discusses investigation activities and methods proposed to achieve the investigation.

Scope of Work

This site investigation will consist of the following components:

- Site visits will be conducted to observe site conditions, points of access, and ground conditions at proposed sampling locations (soil, gravel, and concrete/asphalt).
- Utility locates will be performed at each proposed soil boring location and across the greater site area.
- Hand auger borings will be advanced to 3 feet below ground surface (bgs) at 20 locations along 2 transects (Figure 2). Sampling locations are spaced on 30-foot centers approximately 10 to 15 feet from centerline of the tracks.
- Soil samples will be collected from 0.0 to 0.5 foot bgs and 2.5 to 3.0 feet bgs at each boring location. Samples will be analyzed for PCBs by U.S. Environmental Protection Agency (EPA) Method 8082 at Pace Analytical Laboratories on a normal turnaround time.
- Boreholes will be backfilled with a cement-bentonite grout in compliance with Oregon Water Resources Department Rule 690-240-0475.
- Investigation-derived waste (soil cuttings and decontamination fluid) will be containerized for staging and characterized for disposal.

[2] City of Portland, Environmental Services. 2011. Request for DEQ Site Assessment of Peninsula Iron Works at 6618 N. Alta Avenue. December 13.

- Sample locations will be captured using a tablet and R1 Global Positioning System unit.

Field Preparation

Before advancing hand auger borings, the Oregon One Call Utility Coordinating Service and UPRR fiber locating will be contacted a minimum of 48 hours before the start of work to locate public underground utilities and fiber optic cables, respectively. In addition, an independent utility verification survey will be performed to confirm the absence of underground utilities at each boring location.

No additional permits are required to advance borings along the ROW.

Coring and Soil Sampling

Soil sampling will be conducted as follows:

- Hand auger soil sampling locations will generally be spaced at 30-foot intervals along 2 parallel transects on the east and west sides of the UPRR tracks (Figure 2). Target sampling locations are planned to extend approximately 175 feet northwest and 120 feet southeast of Peninsula Iron Works, and be 10 to 15 feet away from the centerline of the UPRR tracks.
- The presence of asphalt or gravel on the ground surface will influence whether hand auger sampling can be accomplished at all proposed locations. Field crews may need to move some small material to access sampling locations. If asphalt is obstructing access to a sampling location, asphalt cutting methods may be used to access sub-asphalt soil.
- If hand auger refusal is met before 3 feet bgs at the target location, sample locations will be relocated. Locations may be adjusted by up to 10 feet on either side of the designated location along the sampling transect and between 10 and 15 feet away from the UPRR tracks to the extent practicable, so that the appropriate material (that is, less than 2-millimeter diameter material) is sampled.
- At each boring location, surface soil samples will be collected from 0.0 to 0.5 foot bgs, and subsurface soil samples will be collected from 2.5 to 3.0 feet bgs. A total of 20 surface and 20 subsurface soil samples, plus quality assurance (QA)/quality control (QC) samples will be collected.
- The QA/QC samples will consist of field duplicate samples and equipment blanks. Field duplicates will be collected at a rate of 10 percent (1 per every 10 primary samples). One equipment blank will be collected from each reusable piece of field equipment (for example, hand auger).
- Samples will be collected using a single-use stainless-steel spoon from the specified depth interval and placed into the appropriate containers provided by Pace Analytical Laboratories. After sample jars are filled, samples will be placed in an iced chest for storage.
- Sample containers will be properly labeled with the following information:
  - Sample ID – unique identification for each sample
  - Date sampled
  - Time sampled (24-hour clock)
  - Initials of sampler(s)
  - Preservative in the sample container, if any
  - Requested analysis
- Each field sample collected during the investigation will be assigned a unique sample ID. The sample ID will indicate the sampling location and type using the following components:

  - **Sampling matrix:** SB for soil borings
  - **Sampling location:** 01, 02, 03, etc.
  - **Sample depth:** 0.0-0.5, 2.5-3.0
  - **Month year of sample:** 0422, two-digit month and two-digit year
  - **Example sample ID:** SB01-0.0-0.5-0422
- For QA/QC samples, a unique identifier will be added after the sample location designation. The following designations will be used.
  - D = field duplicate sample
  - EB = equipment blank
- Following collection of soil samples, boreholes will be abandoned in accordance with Oregon Water Resources Department requirements.
- Photographs and lithologic descriptions will be recorded for each sample and boring location. Soil samples will be visually characterized for soil type, color, moisture content, texture, grain size and shape, sheen/odor, consistency, visible evidence of staining, and any other observation. Olfactory observations will be recorded on the soil boring log.
- Field personnel will use a project notebook to record pertinent information and to describe sampling procedures. A bound Rite-in-the-Rain field survey book will be used as a project notebook. Personnel will update the project notebook daily during field activities. Notes will include sketches of boring location,; visual and olfactory characteristics of the soil sampled, time of sample collection, and other relevant information. In addition to the investigation data, the following site activity records will be recorded in the project notebooks:
  - Time and arrival and departure from the site
  - Project personnel onsite
  - Health and safety monitoring records
- Photographs will be taken throughout the investigation to document site activities, soil boring locations, and other pertinent information.
- Soil and all associated QA/QC samples will be shipped to Pace Analytical Laboratory under chain-of-custody control. All samples will be analyzed for PCBs by EPA Method 8082, expressed as concentrations as Aroclors (1016, 1221, 1232, 1242, 1248, 1254, and 1260). To minimize the potential for sample degradation and to maintain a temperature from 0 to 6 degrees Celsius, soil samples will be shipped in a chilled cooler with ice or gel packs in resealable plastic bags. The chain-of-custody form and a QA sample form will be filled out in indelible ink, placed in a resealable bag, and taped to the inside lid of the shipping cooler. Samples will be shipped to the following address:

Pace National
Sample Receiving
12605 Lebanon Road
Mt. Juliet, TN 37122
615-758-5858

Field Health and Safety Procedures

All field activities will be conducted according to UPRR and the Jacobs health, safety, and environment program requirements, which include project-specific field safety instructions. In accordance with Jacobs

policy, all Jacobs field team members and subcontractors must successfully satisfy all Jacobs and site-specific health and safety requirements before working on the site, including Drug-Free Workplace training, wearing required personal protective equipment (PPE), and other requirements of the field safety instructions. Employees working over or near water will be provided with U.S. Coast Guard-approved life jackets or buoyant work vests.

A project specific health and safety plan (HSP) (which includes an emergency response plan) will be developed prior to the field event.

Below are COVID-19 precautions to be enacted during the field event (which will be outlined in the HSP):

1) Review and follow Jacobs Global Security Companywide Travel Restriction, Preparedness Pamphlet, and FAQs[3]

1) Review signs and symptoms of COVID-19 with all field staff. Use Centers for Disease Control and Prevention (CDC) guidance document to review COVID-19 awareness information
2) If a project team member has specific COVID-19 concerns (for example, in high-risk category or high-risk locations), speak with the project manager (PM) and supervisor. Accommodations will be made by the PM and supervisor
3) If showing signs of COVID-19 (fever, dry cough, or shortness of breath), do not report to the project site for work, and contact project Safety Liaison, WorkCare (if it is suspected to be work-related), supervisor, PM, health and safety manager
4) Contact personal care physician for COVID-19 symptom reporting
5) Monitor local public health agencies communications. Follow all local agency guidance and restrictions
6) Ensure Field Team Lead and Safety Liaison has cell phone number of all field staff for communication to project teams
7) Conduct frequent hand washing with soap and water. Hand washing facilities are typically required at temporary job locations (for example, at porta-potty and field office). If a handwashing sink is not feasible (for example, mobile staff), use disinfectant hand wipes or hand sanitizer
8) Be familiar with cough and sneeze etiquette and avoid touching eyes, nose, and mouth
9) Avoid sharing personal items with co-workers (for example, cups)
10) Use disinfectant to frequently clean shared surfaces including, but not limited to, rental cars, hotel room touch points, and temporary office trailer touch points (for example, door handles and workstations)
11) If entering residential project site locations—ask occupants if they have signs of illness prior to entry. Do not enter residential locations with occupants with signs/symptoms

Note: All references are frequently updated. Jacobs and CDC COVID-19 webpages will be checked frequently for updates.

[3] https://jacobsconnect.jacobs.com/community/company/global-security/coronavirus-ncov

Decontamination Procedures

Decontamination of sampling equipment will be conducted consistently to minimize the potential for cross-contamination. At a minimum, a deionized water rinse will be performed between each sample location. If there is field evidence that indicates contamination is present, additional decontamination of sampling equipment will be performed using the following decontamination procedure:

- Physically remove visible debris, to the extent practicable
- Nonionic detergent wash
- Potable water rinse
- Triple rinse with distilled/deionized water
- Air dry

This decontamination procedure will be used between sampling locations. Disposable sampling equipment will be used as much as practical including nitrile gloves. Decontamination liquids and solids will be collected and staged in drums for disposal.

Waste Management

Waste generated during this investigation will consist primarily of decontamination water; PPE; disposable materials used for sample collection and processing; and soil, asphalt, and/or concrete from boreholes. Containerized solid wastes will be placed in appropriately sized and rated containers, characterized, and disposed of at an appropriate waste facility. PPE and disposable sampling materials will be placed into containers with soil, asphalt, and concrete for management and disposal.

The sole identified contaminant at this location is PCBs and analytical results from previous in-situ samples indicate PCB concentrations in soil are less than 50 milligrams per kilogram. Existing in situ analytical results indicate soil generated as a part of this investigation is classified as nonhazardous. A nonhazardous label will be used on waste containers, however, waste characterization samples will be collected and analyzed to make a final waste determination per ODEQ 340-101-0001.

Following completion of the investigation, waste containers will be placed in the waste staging area of UPRR Albina railyard.

Solid and liquid wastes (decontamination water) will be containerized in drums at the waste staging area. PPE will be disposed of in drums with soil and disposable materials associated with nonhazardous wastes will be put into black trash bags and disposed of in a municipal waste bin onsite.

Waste sampling will be performed and managed in accordance with applicable local, state, and federal regulations. Representative waste samples will be submitted to a certified laboratory for analysis using U.S. EPA Method 8082 for PCBs.

The waste disposal subcontractor will provide services including, but not limited to, preparation of profiles and manifests and transportation and waste disposal.

Field Variances

Any deviation from this work plan will be documented in the field logbook with an explanation for the deviation.

Schedule and Reporting

Soil sampling are anticipated to be conducted within 60 days following the approval of this work plan. Tentatively, soil sampling is anticipated to be conducted in May 2022.

A site investigation report documenting the results of the soil sampling will be written following receipt of analytical results and will be provided to ODEQ. The report will, at a minimum, include the following components:

- A discussion of the field activities completed, including any modifications made to the revised work plan
- Soil analytical results
- Recommendations, if applicable
- Figures showing sampling locations and results
- Tables summarizing the analytical results
- Appendices, including analytical laboratory results, data validation reports, and field documents

If there are any questions or comments regarding the content of this work plan, please contact me at (510) 316-2323 or via email at david.hodson@jacobs.com.

Sincerely,
Jacobs Engineering Group Inc.

David Hodson, P.E.
Project Manager

Enclosures:

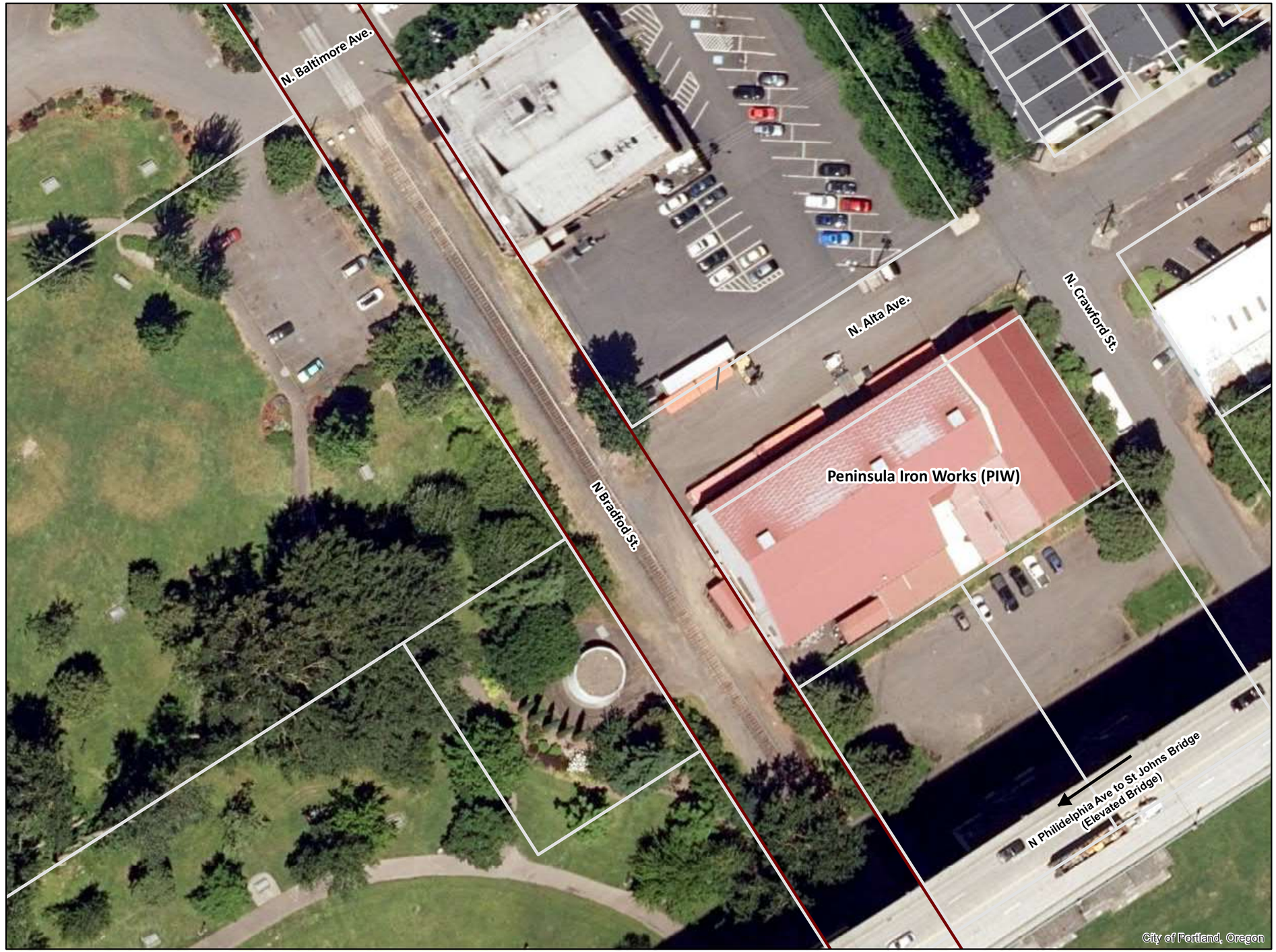
Figures

1 Project Area
2 2011 Sample Results and Proposed Sample Locations

Copy to (with enclosure):

Electronic copy only:

Lauren Mancuso/UPRR



Legend

Taxlot

Railroad Right-of-Way

N

0 25 50 100 Ft

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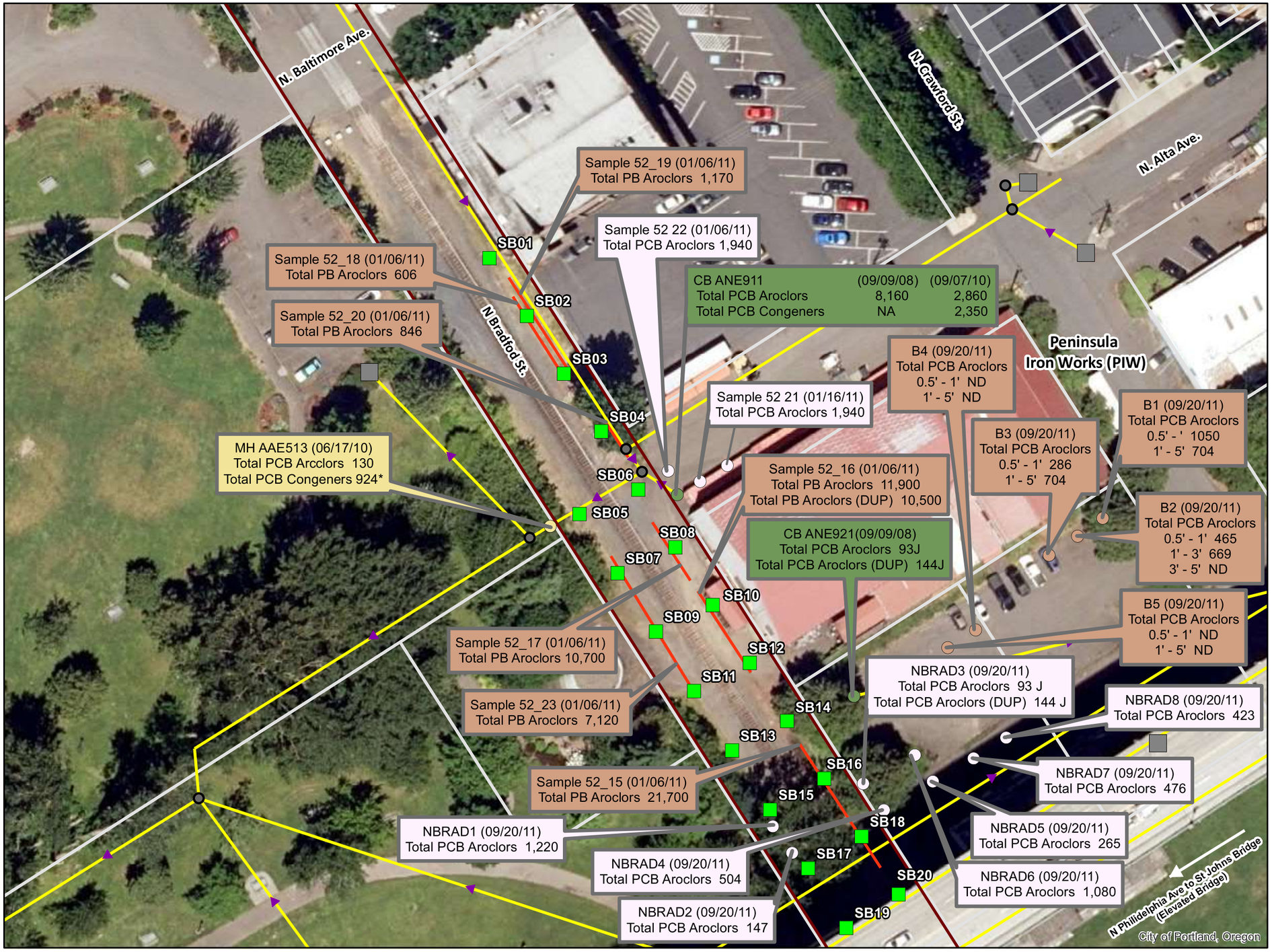
Figure 1
Project Area
N. Bradford Street Right-of-Way
Portland, Oregon

Jacobs



Legend

- Taxlot
- Catch Basin
- Manhole
- Proposed Sample Location
- Railroad Right-of-Way
- Storm Line

2011 Sample Locations

- Inline Solids Sample
- Sediment Trap Sample
- Subsurface Soil Sample
- Surface Soil Sample
- Composite Sample (Surface Soil Sample)

N

0 25 50 100 Ft

Figure 2
2011 Sample Results and
Proposed Sample Locations
N. Bradford Street Right-of-Way
Portland, Oregon

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