

# **USPS Processing and Distribution Center Demolition Air Sampling And Analysis Plan**

USPS Processing Facility  
715 NW Hoyt Street  
Portland, Oregon

Prepared for:  
Prosper Portland  
222 NW 5th Avenue  
Portland, Oregon 97209

January, 2023  
PBS Project 27025.000 Phase 0006



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### EXHIBITS

Exhibit A      NVL Laboratory’s QA/QC Program

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## 1.0 INTRODUCTION

PBS Engineering and Environmental Inc. (PBS) prepared this Sampling and Analysis Plan (SAP) for the purpose of the collection and analysis of air samples during the demolition of structures on site. A demolition plan and permit has been submitted; the SAP is intended to verify the effectiveness of planned engineering controls. The former USPS processing and distribution facility located at 715 NW Hoyt Street in Portland, Oregon is anticipated to be demolished in its entirety.

## 2.0 BACKGROUND INFORMATION

The USPS processing and distribution facility was built in 1962, contains 398,000 square feet of space over 4 stories, and is primarily constructed of concrete. Prior to the building's complete demolition, all asbestos-containing building materials will be abated, and all light bulbs will be removed.

In anticipation of building demolition and disposal, PBS executed a comprehensive sampling effort that characterized the various waste streams expected during demolition. Sampling showed the presence of polychlorinated biphenyls (PCBs), additional laboratory results indicate the presence of arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver which are 8 metals regulated under the Resource Conservation and Recovery Act (RCRA 8).

## 3.0 DATA USE OBJECTIVES

The objective is to produce sufficient perimeter ambient air sampling and analysis during structural demolition to compare airborne total dust, PCBs, and RCRA 8 metals to Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs). This sampling and analysis will be used to assess the effectiveness of engineering controls used during structural demolition. A table of OSHA PELs associated with this sampling effort is below:

Table of OSHA PELs

Contaminant	OSHA PEL
Total Dust	15 mg/m <sup>3</sup>
Polychlorinated biphenyls (PCBs)	0.5 mg/m <sup>3</sup>
Arsenic	10 µg/m <sup>3</sup>
Barium	0.5 mg/m <sup>3</sup>
Cadmium	5.0 µg/m <sup>3</sup>
Chromium	5.0 µg/m <sup>3</sup>
Lead	50 µg/m <sup>3</sup>
Mercury	0.1 mg/m <sup>3</sup>
Selenium	0.2 mg/m <sup>3</sup>
Silver	0.01 mg/m <sup>3</sup>

### Exceedances

If laboratory results indicate airborne concentrations of any of the subject contaminants exceed an OSHA PEL, DEQ, Prosper Portland, and Northwest Demolition will be notified immediately. Demolition processes will be stopped, and site conditions assessed by the project Industrial Hygienist. Remedies to engineering controls will be made by the General Contractor and/or their subcontractors. Following the implementation of any corrective action, air sampling will be conducted to confirm the adequacy.

### **Limitations**

It is important to note that this SAP is not intended to, nor does it address OSHA Exposure Assessment requirements because the samples will not be collected directly from the workers breathing zone.

## **4.0 QUALITY ASSURANCE OBJECTIVES**

Quality Assurance and Quality Control (QA/QC) will be conducted in accordance with PBS' QA/QC procedures and NVL Laboratories QA/QC procedures. Quality Control (QC) samples associated with the analysis will be included in the laboratory reports and chain of custody provided to the Contracting Officer (Government).

## **5.0 SAMPLING METHODOLOGY**

This section presents the Field Sampling Plan (FSP) for this investigation. The FSP includes the methods and procedures that will be used to conduct the field activities. In addition, the FSP describes the sample types, quantities, locations, and analyses that will be performed.

### **5.1 Field Sampling**

#### **Method**

Air samples will be collected from the jobsite perimeter, RCRA 8 metals, total dust, and PCBs, i.e., one air sample per contaminant class. Each one of the following types of samples will be collected at each sample site:

- Airborne arsenic, barium, cadmium, chromium, lead, selenium, and silver will be sampled using low volume pumps fitted with 37 mm, 0.8µm pore size mixed cellulose ester membrane (MCE) filters.
- Airborne mercury will be sampled using low volume pumps and sorbent tubes.
- Airborne dust will be sampled using low volume pumps and tared 37 mm, 0.8µm pore size mixed cellulose ester membrane (MCE) filters.
- Airborne PCBs will be sampled utilizing NIOSH method 5503 and low volume pumps.

#### **Timing and Frequency**

- Baseline samples will be collected prior to demolition to establish current conditions.
- Sampling will occur Wednesday (first day of demolition), Friday, and Monday at the beginning of structural demolition.
- Assuming data from the three days of demolition sampling shows good air quality, sampling will occur once each subsequent week. It is understood that flexibility around the demolition schedule will be required.

#### **Shipping and Laboratory Turnaround Times**

Pre-demolition background samples will be collected and submitted for laboratory analysis with a standard turnaround delivery schedule. The first three days of sampling; samples will be shipped overnight to the laboratory and rush turnaround of analysis requested. Samples collected from subsequent weekly sampling will be shipped and analyzed on the laboratories standard turnaround schedule unless otherwise requested by Prosper Portland.

Sample collection, shipping, and analysis of any emergency sampling will be rushed.

#### **Visual Airborne Dust Monitoring**

The demolition contractor will routinely visually monitor for airborne dust during each work shift. The conditions will be noted in the demolition contractor's daily log. The demolition contractor's daily logs will include observations associated with visual emissions, weather conditions, including ambient temperature,

wind direction, and approximate wind velocity. These logs will be used to inform placement of ambient air sampling equipment as mentioned in the air Sampling Locations section below.

### ***Sampling Locations***

Samples will be collected from the north, south, east, and west perimeters of the site. If heavier than usual concentrations are anticipated from a specific area of the site, sample locations will be adjusted to characterize those conditions.

## **5.2 Chain Of Custody, Labeling and Field Notes**

Chain-of-custody procedures will be used to maintain a verifiable record of sample handling during sample collection and analysis. Field sample data sheets, sample labels, chain-of-custody documents, and other analytical records will be kept by NVL and PBS.

Field records will be completed at the time samples are collected. All field records will be initialed by the sample collector and will include the sample identification, the date, time, and location the sample was collected.

## **6.0 QA/QC REQUIREMENTS**

QC samples associated with the analysis will be included in the laboratory reports provided. The following is a listing of the quality control samples used by NVL (see Exhibit B for NVL Laboratory's QA/QC Program).

- Blank Analyses – Contamination can be introduced into a sample from many sources during the process of sample collection, transport, storage, and analysis. Contamination of the sample from the laboratory or the field can be determined by analysis of the appropriate blank. The blanks used by NVL include Initial Calibration Blank, Continuing Calibration Blank, Method Blank and Field Blank.
- Standard Analyses – Method performance is defined and verified using standards, which are volumes of solutions of known concentration of target analytes. The types of standards used at NVL include Instrument Calibration Standards, Initial Calibration Verification Standard, Continuing Calibration Verification Standard and Laboratory Control Sample.
- Spike Sample Analyses – Spiked samples are analyzed to assess the precision of the analytical method of the spiked sample. NVL uses both pre-matrix spike and post-matrix spike samples.
- Duplicate Analyses – Duplicate samples are analyzed to assess the precision of the analytical method of the spiked sample. Two portions of a field sample are simultaneously analyzed and the relative percent difference between the two results is calculated and must meet method-specified criteria. Duplicate samples are analyzed at a minimum frequency of 1 per 20 samples or batch (5%).
- In addition to internal QC analysis, NVL also participates in the American Industrial Hygiene Association Environmental Lead Proficiency Analytical Testing and Proficiency Analytical Testing programs for as many of the analyses performed by NVL that have samples available.

## **7.0 DELIVERABLES**

A letter report containing laboratory results and interpretations will be delivered as laboratory data is available.

## **8.0 DATA VALIDATION**

Laboratory results will first be reviewed by the laboratory analyst at NVL. The laboratory reports are then reviewed and signed off by NVL's laboratory manager.

Laboratory data is reviewed and validated by a Certified Industrial Hygienist. All PBS reports are also reviewed by the project manager and operations manager or QA/QC manager in accordance with PBS's Corporate QA/QC procedures.

# **Exhibit A**

NVL Laboratory's QA/QC Program



**AIHA Laboratory Accreditation Programs, LLC**

*acknowledges that*

**NVL Laboratories, Inc.**

**4708 Aurora Ave N, Seattle, WA 98103-6516**

**Laboratory ID: LAP-101861**

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2017 international standard, General Requirements for the Competence of Testing and Calibration Laboratories in the following:

**LABORATORY ACCREDITATION PROGRAMS**

<input checked="" type="checkbox"/>	<b>INDUSTRIAL HYGIENE</b>	Accreditation Expires: June 01, 2023
<input checked="" type="checkbox"/>	<b>ENVIRONMENTAL LEAD</b>	Accreditation Expires: June 01, 2023
<input checked="" type="checkbox"/>	<b>ENVIRONMENTAL MICROBIOLOGY</b>	Accreditation Expires: June 01, 2023
<input type="checkbox"/>	<b>FOOD</b>	Accreditation Expires:
<input checked="" type="checkbox"/>	<b>UNIQUE SCOPES</b>	Accreditation Expires: June 01, 2023

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached Scope of Accreditation. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2017 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached Scope of Accreditation. Please review the AIHA-LAP, LLC website ([www.aihaaccreditedlabs.org](http://www.aihaaccreditedlabs.org)) for the most current Scope.

*Cheryl O Morton*  
Managing Director, AIHA Laboratory Accreditation Programs, LLC





# AIHA Laboratory Accreditation Programs, LLC

## SCOPE OF ACCREDITATION

### NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103-6516

Laboratory ID: LAP-101861

Issue Date: 04/30/2021

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

### Industrial Hygiene Laboratory Accreditation Program (IHLAP)

**Initial Accreditation Date: 02/07/1997**

IHLAP Scope Category	Field of Testing (FOT)	Technology sub-type/Detector	Published Reference Method/Title of In-house Method	Component, parameter or characteristic tested
Asbestos/Fiber Microscopy Core	Phase Contrast Microscopy (PCM)	-	NIOSH 7400	Asbestos/Fibers
Miscellaneous Core	Gravimetric	-	NIOSH 0500	Total Dust
Miscellaneous Core	Gravimetric	-	NIOSH 0600	Respirable Dust
Spectrometry Core	Atomic Absorption	FAA	NIOSH 7082	Lead
Spectrometry Core	Inductively-Coupled Plasma	ICP/AES	NIOSH 7300	RCRA Metals
Spectrometry Core	X-ray Diffraction (XRD)	-	NIOSH 7500	Silica

A complete listing of currently accredited IHLAP laboratories is available on the AIHA-LAP, LLC website at: <http://www.aihaaccreditedlabs.org>



# AIHA Laboratory Accreditation Programs, LLC

## SCOPE OF ACCREDITATION

### NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103-6516

Laboratory ID: LAP-101861

Issue Date: 04/30/2021

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

The EPA recognizes the AIHA-LAP, LLC ELLAP program as meeting the requirements of the National Lead Laboratory Accreditation Program (NLLAP) established under Title X of the Residential Lead-Based Paint Hazard Reduction Act of 1992 and includes paint, soil and dust wipe analysis. Air and composited wipes analyses are not included as part of the NLLAP.

### Environmental Lead Laboratory Accreditation Program (ELLAP)

**Initial Accreditation Date: 04/01/1997**

Component, parameter or characteristic tested	Technology sub-type/Detector	Method	Method Description <i>(for internal methods only)</i>
Airborne Dust	AA	EPA SW-846 3051A	N/A
		EPA SW-846 7000B	N/A
Paint	AA	EPA SW-846 3051A	N/A
		EPA SW-846 7000B	N/A
Settled Dust by Wipe	AA	EPA SW-846 3051A	N/A
		EPA SW-846 7000B	N/A
Soil	AA	EPA SW-846 3051A	N/A
		EPA SW-846 7000B	N/A

A complete listing of currently accredited ELLAP laboratories is available on the AIHA-LAP, LLC website at: <http://www.aihaaccreditedlabs.org>



# AIHA Laboratory Accreditation Programs, LLC

## SCOPE OF ACCREDITATION

### **NVL Laboratories, Inc.**

4708 Aurora Ave N, Seattle, WA 98103-6516

**Laboratory ID: LAP-101861**

Issue Date: 04/30/2021

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

### **Environmental Microbiology Laboratory Accreditation Program (EMLAP)**

**Initial Accreditation Date: 02/07/1997**

<b>EMLAP Scope Category</b>	<b>Field of Testing (FOT)</b>	<b>Component, parameter or characteristic tested</b>	<b>Method</b>	<b>Method Description (for internal methods only)</b>
Fungal	Air - Direct Examination	Spore Trap	SOP 12.133	In House: Analysis of Spore Trap
Fungal	Bulk - Direct Examination	Bulk	SOP 12.133	In House: Analysis of Spore Trap
Fungal	Surface - Direct Examination	Surface Wipe	SOP 12.133	In House: Analysis of Spore Trap

A complete listing of currently accredited EMLAP laboratories is available on the AIHA-LAP, LLC website at: <http://www.aihaaccreditedlabs.org>



# AIHA Laboratory Accreditation Programs, LLC

## SCOPE OF ACCREDITATION

### NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103-6516

Laboratory ID: LAP-101861

Issue Date: 04/30/2021

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

### Unique Scopes Laboratory Accreditation Programs (Unique Scopes)

Initial Accreditation Date: 04/01/2013

Unique Scopes Scope Category	Field of Testing (FOT)	Component, parameter or characteristic tested	Method	Method Description <i>(for internal methods only)</i>
Consumer Product Testing	Lead in Paint and Other Similar Surface Coatings	Surface paint	CPSC-CH-E1003-09	-
	Total Lead in Metal Children's Products	Metallic jewelry	CPSC-CH-E1001-08	-
	Total Lead in Non-Metal Children's Products	Non-metallic	CPSC-CH-E1002-08	-

A complete listing of currently accredited Unique Scopes laboratories is available on the AIHA-LAP, LLC website at: <http://www.aihaaccreditedlabs.org>



# PERRY JOHNSON LABORATORY ACCREDITATION, INC.

## Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc.  
has assessed the Organization of:

***NVL Laboratories***  
***4708 Aurora Avenue, Seattle, WA 98103***

*(Hereinafter called the Organization) and hereby declares that Organization has met the requirements of ISO/IEC 17025:2017 General Requirements for the competence of Testing and Calibration Laboratories and the United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP) requirements identified within the DoD/DOE Quality Systems Manual (DoD/DOE QSM) Version 5.4 October 2021 and is accredited in accordance with the:*

### **United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP)**

This accreditation demonstrates the technical competence for the defined scope and the operation of a laboratory quality management system  
(as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

### ***Environmental Testing*** ***(As detailed in the supplement)***

Accreditation claims for such activities shall only be made from the addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation Body's duty to observe and comply with the said rules.

For PJLA	<i>Initial Accreditation Date:</i> April 08, 2012	<i>Issue Date:</i> February 02, 2022	<i>Expiration Date:</i> May 31, 2024
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Tracy Szerszen  
President

*Accreditation No:* 72200      *Certificate No:* L22-128

Perry Johnson Laboratory  
Accreditation, Inc. (PJLA)  
755 W. Big Beaver, Suite 1325  
Troy, Michigan 48084

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: [www.pjlabs.com](http://www.pjlabs.com)



# Certificate of Accreditation: Supplement

## NVL Laboratories

4708 Aurora Avenue, Seattle, WA 98103  
Contact Name: Nick Ly Phone: 206-547-0100

*Accreditation is granted to the facility to perform the following testing:*

	Code
<b>Asbestos</b>	
<b>CARB M435 by Polarized Light Microscopy (PLM)</b>	10294583
<b>Solid</b>	
Asbestos	1520
<b>EPA 600/M4-82/020 by Polarized Light Microscopy (PLM)</b>	10294583
<b>Solid</b>	
Asbestos	1520
<b>EPA 600/R-93/116 by Polarized Light Microscopy (PLM)</b>	10294583
<b>Solid</b>	
Asbestos	1520
<b>NIOSH 7400 by Phase Contrast Microscopy (PCM)</b>	90018001
<b>Air</b>	
Asbestos	1520
<b>Inorganic</b>	
<b>EPA 6010D by Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP/AES)</b>	10155949
<b>Solid</b>	
Arsenic	1010
Barium	1015
Cadmium	1030
Chromium	1040
Copper	1055
Lead	1075
Nickel	1105
Selenium	1140
Silver	1150
Zinc	1190
<b>EPA 7000B by Flame Atomic Absorption Spectrophotometry (FAAS)</b>	10157707
<b>Solid</b>	
Lead	1075
<b>EPA 7471B by Cold Vapor Atomic Absorption Spectrophotometry (CVAAS)</b>	10166402
<b>Solid</b>	
Mercury	1095
<b>NIOSH 7082 by Flame Atomic Absorption Spectrophotometry (FAAS)</b>	90012230
<b>Air</b>	
Lead	1075
<b>NIOSH 7300 by Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP/AES)</b>	90012401
<b>Air</b>	
Arsenic	1010
Barium	1015





# Certificate of Accreditation: Supplement

## NVL Laboratories

4708 Aurora Avenue, Seattle, WA 98103  
Contact Name: Nick Ly Phone: 206-547-0100

Accreditation is granted to the facility to perform the following testing:

Code

### Inorganic

**NIOSH 7300 by Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP/AES)** 90012401

#### Air

Cadmium 1030

Chromium 1040

Copper 1055

Lead 1075

Nickel 1105

Selenium 1140

Silver 1150

Zinc 1190

### Preparation

#### Air

EPA 3051 Acid Digestion for Metals

#### Solid

EPA 1311 Toxicity Characteristic Leaching Procedure (TCLP)

EPA 3050B Acid Digestion for Metals

#### Footnotes:

> Method codes are typically based on The NELAC Institute (TNI) Laboratory Accreditation Management System (LAMS) and are used to compare to the laboratory reported Performance Test (PT) results. Although the method code may not represent the specific method version, it is the method code used to represent the method/technology used to report PTs. (NC = No Code)