USPS Processing and Distribution Center Demolition Sampling and Analysis Plan

USPS Processing Facility
715 NW Hoyt Street
Portland, Oregon

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

September, 2022
PBS Project 27025.000 Phase 0003

PBS
4412 S CORBETT AVENUE
PORTLAND, OR 97239
503.248.1939 MAIN
866.727.0140 FAX
PBSUSA.COM

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EXHIBITS

1.0 INTRODUCTION

PBS Engineering and Environmental Inc. (PBS) prepared this Sampling and Analysis Plan (SAP) for the collection and analysis of 57 polychlorinated biphenyl (PCB) bulk samples, and 40 arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver (Resource Conservation and Recovery Act [RCRA] 8 metals) Toxicity Characteristic Leaching Procedure (TCLP) samples, including the substrate, and 40 RCRA 8 bulk paint chip samples. In addition, 6 samples of unpainted concrete will be collected and submitted for TLCP of all RICRA 8 metals. A total of 143 samples are anticipated to be collected. The sampling will be performed for the designation of debris to be generated by the demolition of the USPS processing and distribution facility located at 715 NW Hoyt Street in Portland, Oregon.

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. The entire building is scheduled for demolition, unpainted clean concrete will be reused, asbestos will be abated, light bulbs removed, and all other building components disposed of at a subtitle D landfill.

3.0 DATA USE OBJECTIVES

The objective is to collect and analyze waste characterization samples of the anticipated waste streams for the presence of the RCRA 8 metals and PCBs. The purpose of the waste characterization sampling is to comply with solid waste disposal requirements addressed by 40 CFR Part 258 and 40 CFR Part 761. The data collected in this investigation is intended for use by PBS to characterize the waste prior to disposal.

The information collected during this proposed sampling effort is intended to supplement the existing Pre-Demolition Hazardous Building Materials Survey (HBMS) Report dated March 2022.

Prior to the building's demolition, all asbestos-containing materials will be abated and all light bulbs will be removed.

The first floor concrete slab on grade, grade beams, pile caps, and conveyor building walls, slab, and grade beams are all unpainted clean concrete. These building components are scheduled for crushing and reuse. Although the concrete is unpainted; out of an abondance of caution, the unpainted concrete will be characterized for RCRA 8 metals by way of TCLP analysis.

This proposed sampling plan is intended to add additional characterization of the remaining building components for the sake of disposal.

The TCLP thresholds for the determination of hazardous classification of RCRA 8 metals is as follows:

- Arsenic 5.0 ppm (mg/L)
- Barium 100.0 ppm (mg/L)
- Cadmium 1.0 ppm (mg/L)
- Chromium 5.0 ppm (mg/L)
- Lead 5.0 ppm (mg/L)
- Mercury 0.2 ppm (mg/L)
- Selenium 1.0 ppm (mg/L)
- Silver 5.0 ppm (mg/L)

The EPA threshold for PCB bulk product waste is ≥50 ppm.

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 and locations; analyses that will be conducted; and decontamination procedures.

5.1 Field Sampling

Painted Building Components Characterization

The purpose of the sampling is to characterize the building's waste stream at the rate of approximately one characterization per 1,000 cubic yards of waste. It is estimated the waste from the building will be approximately 35,000 cubic yards total. This sampling plan is intended to be conservative, consequently 40 separate characterizations are proposed. The following is a list of the number of samples and building materials to be characterized. Demolition engineering estimates the waste to consist of 25,000 cubic yards of painted concrete and ceramic tile and 10,000 cubic yards of wood, sheetrock, roofing, fiberglass insulation, metal, carpet, cabinetry, and glass.

- Twenty (25) components made of concrete will be characterized.
- Five (5) components made of gypsum and/or plaster will be characterized.
- Five (5) components made of metal will be characterized.
- Five (5) components made of ceramic tile will be characterized.

Each of the 40 separate characterization will entail the following:

- A bulk sample will be collected of the painted surface only and submitted for analysis of RCRA 8 metals using EPA method 3050B/6010C/7471A/7471A.
- A bulk sample will be collected of the painted building component that includes the entire representative substrate. The sample will be submitted for TCLP analysis of RCRA 8 metals using EPA method 1311.
- A bulk sample of the painted surface will be collected and submitted for PCB analysis using EPA method 8082A

The resulting data will show specifically what concentrations of RCRA 8 metals and PCBs are present in the paint, and if the leachate from the waste stream will designate the waste as hazardous with regards to RCRA 8 metals. Concentrations of PCBs in the paint will dictate whether the demolition debris will be disposed of as PCB bulk product waste or not.

Unpainted Concrete Characterization

5,500 cubic yards of unpainted concrete will be removed, crushed and reused. In keeping with one sample per 1000 cubic yards, six locations will be sampled. All samples will be analyzed for RCRA 8 metals by way of TCLP.

TCLP Sampling Procedure

TCLP samples will be collected by extracting a core sample of the building material using a coring bit and electric drill for demolition procedures. To preclude potential cross-contamination, the lead inspector will wear

new non-sterilized, non-powdered nitrile gloves to collect each TCLP sample. The sampling equipment, such as a coring drill bit or chisel, used to collect the TCLP samples will be cleaned with pre-wetted wipes after each sampling episode.

Upon completion of the field investigation, the sample collected will be sent with appropriate and identifying chain of custody documentation to the laboratory for analysis.

The sample will be analyzed by NVL. The samples will be extracted using Environmental Protection Agency (EPA) Method 1311 for the RCRA 8 metals and copper, nickel and zinc, and analyzed in accordance with EPA publication SW-846 "Test Methods for Evaluation Solid Wastes."

Except as noted specifically herein, analytical results will be reported according to standard laboratory practices. The practical quantification limit for each analytical result will not be greater than the laboratory reporting limit for that analyte.

Caulk Sampling for PCBs

Seventeen samples of caulk will be collected from representative applications throughout the building. The samples will be submitted for analysis of PCBs. Laboratory results of these materials will dictate if the material will be designated as a PCB bulk product waste.

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 and the date and time the sample was collected. Field sample data sheets shall also include sample locations sample substrate, color of surface layer of paint, sampler's name and pertinent field data. Sample labels will be identified by a unique printed number that will be used for sample tracking and identification during collection and analysis.

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 by the use of 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 will be developed that includes a summary, table of findings, drawings depicting sample locations and the locations of painted and unpainted concrete, chain-of-custody documentation, and the laboratory reports.

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 PBS trained lead inspector and risk assessor. 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

Site Plans/Proposed Sample Locations

GENERAL NOTES

1. THIS DRAWING IS DIAGRAMMATIC. IT SHOULD BE USED FOR GENERAL INFORMATION AND SAMPLE LOCATIONS.

LEGEND

100 ROOM NUMBERS

LOCATIONS OF UNPAINTED CONCRETE

PROPOSED SAMPLE SYMBOLS

⊗ PCB-# PCB BULK SAMPLE OF CAULK LOCATION

◎ PCB BULK PAINT, RCRA8 BULK, AND RCRA8 TCLP SAMPLE LOCATION

INVENTORY OF TCLP SAMPLES

SAMPLE NUMBER	FIELD CODE	LAB RESULT (mg/kg)	MATERIAL DESCRIPTION
◑ 3001	27025.000-3001	<0.0500	TCLP ON COLUMN 21 H CONCRETE
◑ 3002	27025.000-3002	<0.0500	TCLP ON COLUMN 22 H CONCRETE
◑ 3003	27025.000-3003	<0.0500	TCLP ON NW EXTERIOR TILE
◑ 3004	27025.000-3004	<0.0500	TCLP ON CMU WALL AT ROOM 1026
◑ 3005	27025.000-3005	<0.0500	TCLP ON WEST EXTERIOR TILE
◑ 3006	27025.000-3006	SEE ATTACHED LABORATORY RESULTS	TCLP ON FIRST FLOOR; COLUMN 21G, CONCRETE, WHITE, GOOD CONDITION
◑ 3007	27025.000-3007	SEE ATTACHED LABORATORY RESULTS	TCLP ON FIRST FLOOR; COLUMN 10H, CONCRETE, WHITE, GOOD CONDITION
◑ 3008	27025.000-3008	SEE ATTACHED LABORATORY RESULTS	TCLP ON FIRST FLOOR; ROOM 1019, WALL, CONCRETE, BLUE/WHITE, GOOD CONDITION
◑ 3009	27025.000-3009	SEE ATTACHED LABORATORY RESULTS	TCLP ON FIRST FLOOR; BREAKROOM WALL, CONCRETE, WHITE, GOOD CONDITION

LEAD SAMPLE SYMBOLS

△ 0007 — DRAWING REFERENCE TO LEAD SAMPLE FIELD CODE, SEE INVENTORY OF SAMPLES
MATERIAL SYMBOL

▲ LEAD DETECTED.

△ BELOW THE LIMIT OF DETECTION.

INVENTORY OF AA LEAD SAMPLES (JULY 2008)

SAMPLE NUMBER	FIELD CODE	LAB RESULT (ppm)	MATERIAL DESCRIPTION
▲ 1001	21193.001- 1001	118	SAFETY RAILING NEAR ROOM 151; 1ST FLOOR; METAL; YELLOW; FAIR/POOR CONDITION
▲ 1002	21193.001- 1002	993	NEAR ROOM 151; 1ST FLOOR; BLUE; WALL; METAL; BLUE; FAIR CONDITION
▲ 1003	21193.001- 1003	159	MECHANICAL ROOM; 1ST FLOOR; ROOM 171; WALL; CONCRETE; BLACK; GOOD CONDITION
▲ 1004	21193.001- 1004	42,500	1ST FLOOR; NEAR ROOM 151; RED DOOR; DOOR JAMB; METAL; RED; GOOD CONDITION

INVENTORY OF AA LEAD SAMPLES (JULY 2008)

SAMPLE NUMBER	FIELD CODE	LAB RESULT (ppm)	MATERIAL DESCRIPTION
△ 1005	21193.001- 1005	<97.5	1ST FLOOR; NEAR ROOM 151; POST; POST; METAL; ORANGE; FAIR CONDITION
▲ 1006	21193.001- 1006	518	1ST FLOOR; ROOM 130; COLUMN 21G; CONCRETE; WHITE; FAIR CONDITION
▲ 1007	21193.001- 1007	2690	1ST FLOOR; ROOM 135A; CORNER; WALL; CONCRETE; LIGHT BLUE; FAIR CONDITION
▲ 1008	21193.001- 1008	2390	1ST FLOOR; ROOM 130; TRUCK LOADING; DOORWAY; METAL; GREEN; FAIR CONDITION
▲ 1009	21193.001- 1009	33,500	EXTERIOR; SE CORNER; ROOM 130; BUILDING CORNER; METAL; WHITE; POOR CONDITION
▲ 1010	21193.001- 1010	27,000	EXTERIOR; SE CORNER ROOM 130; POST; METAL; YELLOW; FAIR CONDITION
△ 1011	21193.001- 1011	<52.1	EXTERIOR; WEST END LOADING DOCK; COLUMN; CERAMIC GLAZE; FAIR CONDITION
△ 1012	21193.001- 1012	<98.2	1ST FLOOR; ROOM 130; WEST OF LOADING DOCK; 1'X2' PANEL FLOORING; FLOOR; BLACK; GOOD CONDITION

PCB SAMPLE INVENTORY

SAMPLE NUMBER	PRIJECT NUMBER	LAB RESULT[1]	REGULATORY LIMIT[1]
⊗ PCB-001	27025.000-001	32	50 ppm PCB BULK PRODUCT WASTE UNDER THE TOXIC SUBSTANCES CONTROL ACT (40 CFR PART 761)
⊗ PCB-002	27025.000-002	161	
⊗ PCB-003	27025.000-003	48	
⊗ PCB-004	27025.000-004	18.5	
⊗ PCB-005	27025.000-005	26.8	

[1]RESULTS AND REGULATORY LIMIT PRESENTED IN PARTS PER MILLION (PPM);

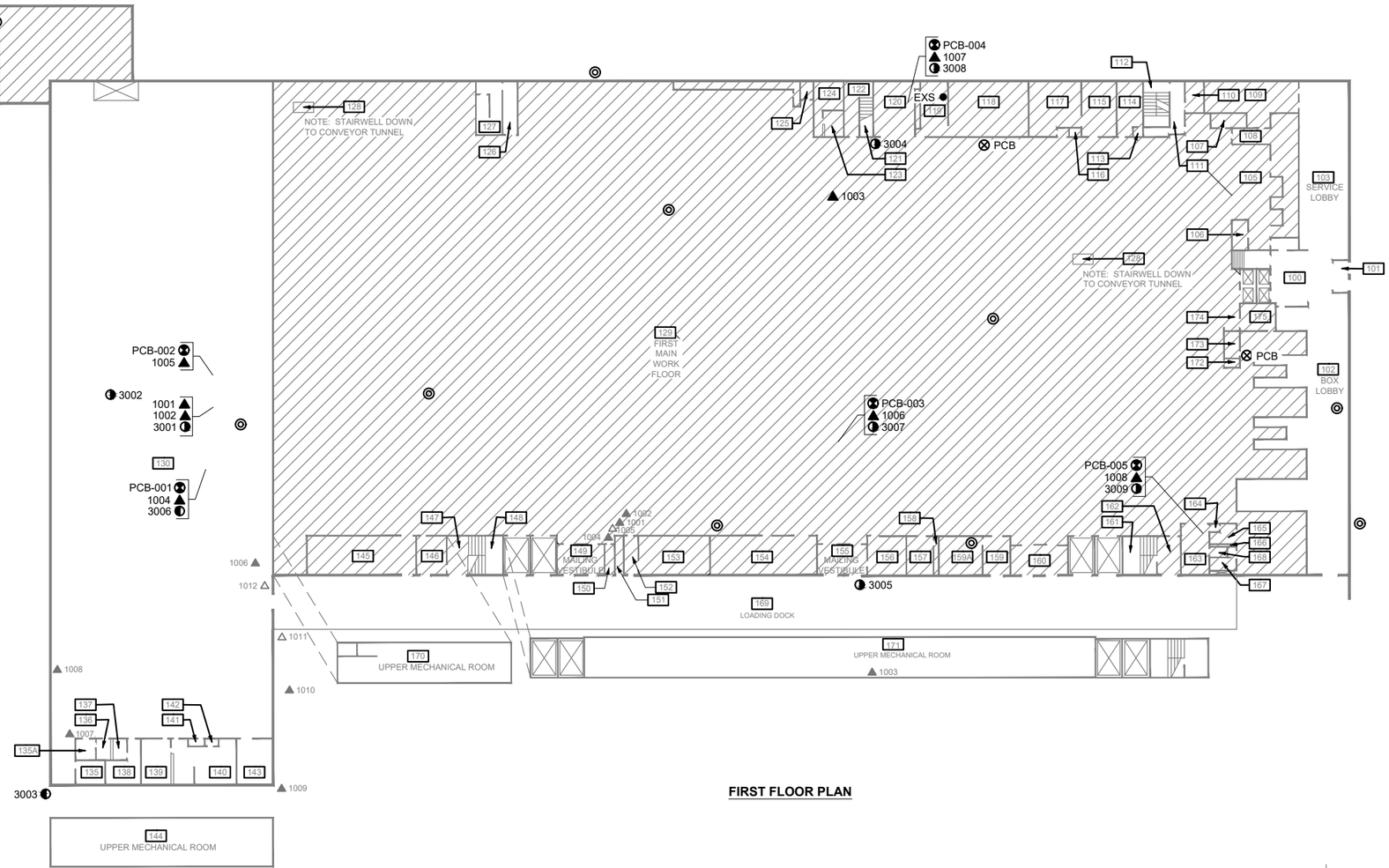
LEAD SAMPLE SYMBOLS

△ 1007 — DRAWING REFERENCE TO LEAD SAMPLE FIELD CODE, SEE INVENTORY OF SAMPLES
MATERIAL SYMBOL

▲ LEAD DETECTED △ BELOW THE LIMIT OF DETECTION

INVENTORY OF AA LEAD SAMPLES

SAMPLE NUMBER	FIELD CODE	LAB RESULT (ppm)	MATERIAL DESCRIPTION
▲1001	27025.000-1001	379	PAINT ON COLUMN 21 H
▲1002	27025.000-1002	315	PAINT ON CEILING AT COLUMN 21 H
▲1003	27025.000-1003	2190	PAINT ON COLUMN 10 M
▲1004	27025.000-1004	SEE ATTACHED LABORATORY RESULTS	PAINT ON FIRST FLOOR; COLUMN 21G, CONCRETE, WHITE, GOOD CONDITION
▲1005	27025.000-1005	SEE ATTACHED LABORATORY RESULTS	PAINT ON FIRST FLOOR; NEXT TO COLUMN 21J, CEILING, CONCRETE, OFF-WHITE, GOOD CONDITION
▲1006	27025.000-1006	SEE ATTACHED LABORATORY RESULTS	PAINT ON FIRST FLOOR; COLUMN 10H, CONCRETE, WHITE, GOOD CONDITION
▲1007	27025.000-1007	SEE ATTACHED LABORATORY RESULTS	PAINT ON FIRST FLOOR; ROOM 1019, WALL, CONCRETE, BLUE/WHITE, GOOD CONDITIO
▲1008	27025.000-1008	SEE ATTACHED LABORATORY RESULTS	PAINT ON FIRST FLOOR; BREAK ROOM, WALL, CONCRETE, WHITE, GOOD CONDITION



FIRST FLOOR PLAN

SCALE: 1" = 30'
0 15' 30' 60'

PREPARED FOR: PROSPER PORTLAND

FULL SIZE SHEET FORMAT IS 24X36; IF PRINTED SIZE IS NOT 24X36, THEN THIS SHEET FORMAT HAS BEEN MODIFIED & INDICATED DRAWING SCALE IS NOT ACCURATE.

PBS Engineering and Environmental Inc.
4412 SW Corbett Avenue
Portland, OR 97239
503.248.1939
pbsusa.com

HAZARDOUS METALS AND PCB PLAN
USPS PROCESSING AND DISTRIBUTION FACILITY
715 NW HOYT STREET, PORTLAND, OREGON

NO	REVISION	DATE	BY	APP'D

DRAWN BY: JAB
CHECKED: CN
DATE: SEPTEMBER 2022
PROJECT NUMBER: 27025.000 0003 003
FIGURE: HM1
SHEET 1 OF 4

GENERAL NOTES

1. THIS DRAWING IS DIAGRAMMATIC. IT SHOULD BE USED FOR GENERAL INFORMATION AND SAMPLE LOCATIONS.

LEGEND

100 ROOM NUMBERS

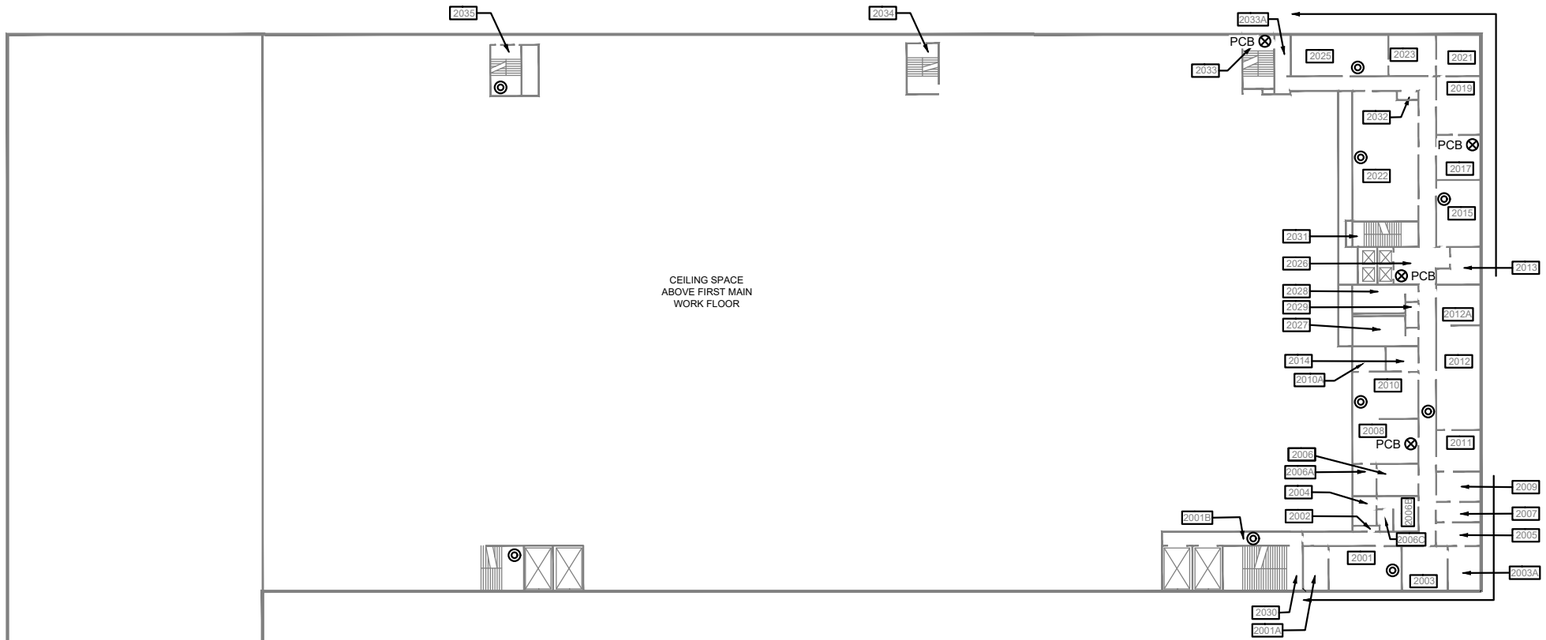
PROPOSED SAMPLE SYMBOLS

⊗ PCB-# PCB BULK SAMPLE OF CAULK LOCATION

◎ PCB BULK PAINT, RCRA8 BULK, AND RCRA8 TCLP SAMPLE LOCATION

INVENTORY OF 2022 SAMPLES

● EXS LOCATION OF EXISTING SAMPLE



SECOND FLOOR PLAN

SCALE: 1" = 30'

0 15' 30' 60'

PREPARED FOR: PROSPER PORTLAND

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Portland, OR 97239
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HAZARDOUS METALS AND PCB PLAN
USPS PROCESSING AND DISTRIBUTION FACILITY
715 NW HOYT STREET, PORTLAND, OREGON

NO	REVISION	DATE	BY	APP'D

DRAWN BY: JAB
CHECKED: CN
DATE: SEPTEMBER 2022
PROJECT NUMBER: 27025.000 0003 003

FIGURE
HM2

SHEET 2 OF 4

FULL SIZE SHEET FORMAT IS 24X36; IF PRINTED SIZE IS NOT 24X36, THEN THIS SHEET FORMAT HAS BEEN MODIFIED & INDICATED DRAWING SCALE IS NOT ACCURATE.

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GENERAL NOTES

1. THIS DRAWING IS DIAGRAMMATIC. IT SHOULD BE USED FOR GENERAL INFORMATION AND SAMPLE LOCATIONS.

LEGEND

100 ROOM NUMBERS

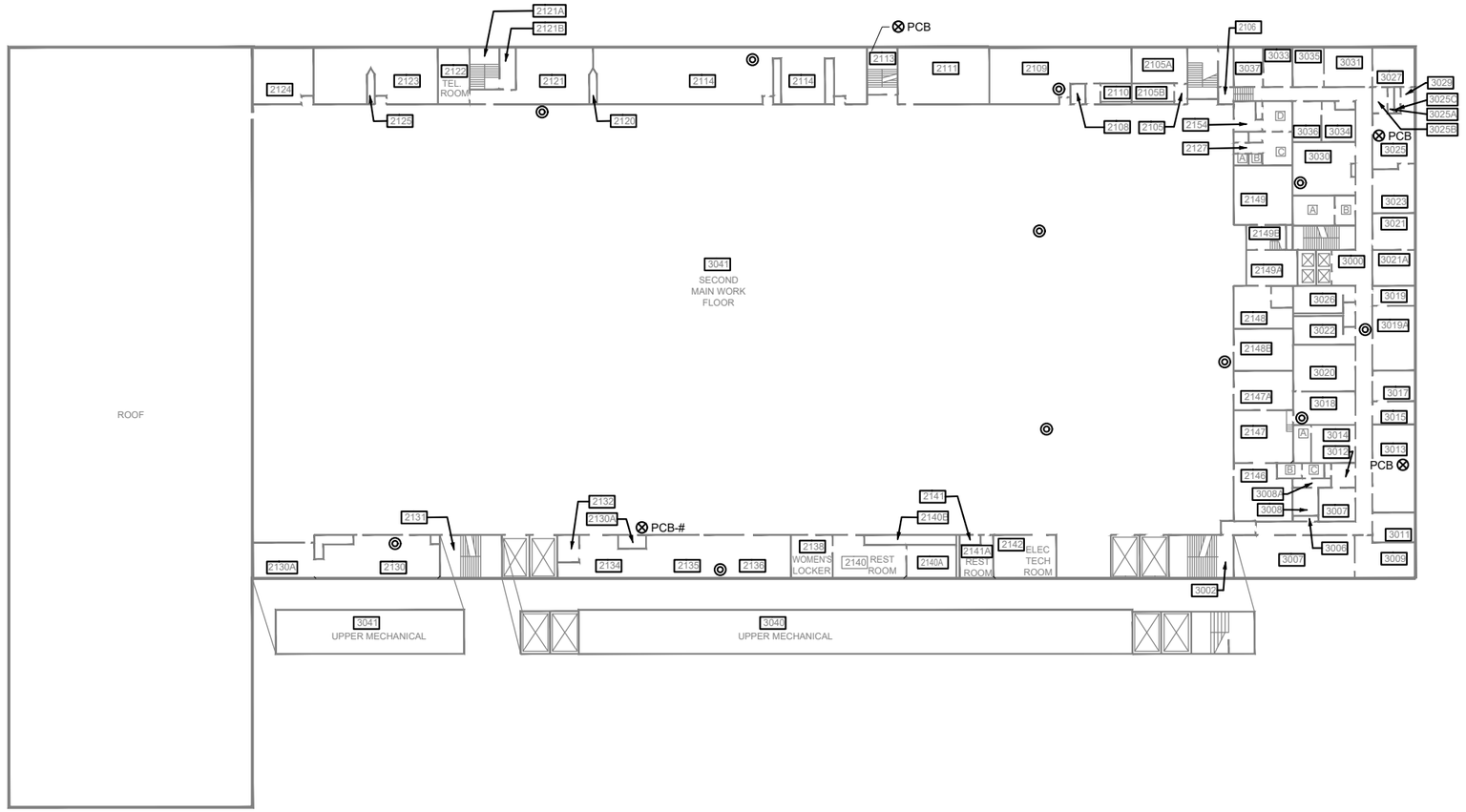
PROPOSED SAMPLE SYMBOLS

⊗PCB-# PCB BULK SAMPLE OF CAULK LOCATION

◎ PCB BULK PAINT, RCRA8 BULK, AND RCRA8 TCLP SAMPLE LOCATION

INVENTORY OF 2022 SAMPLES

● EXS LOCATION OF EXISTING SAMPLE



THIRD FLOOR PLAN

SCALE: 1" = 30'

0 15' 30' 60'

PREPARED FOR: PROSPER PORTLAND

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4412 SW Corbett Avenue
Portland, OR 97239
503.248.1939
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USPS PROCESSING AND DISTRIBUTION FACILITY
715 NW HOYT STREET, PORTLAND, OREGON

NO	REVISION	DATE	BY	APP'D

DRAWN BY: JAB
CHECKED: CN
DATE: SEPTEMBER 2022
PROJECT NUMBER: 27025.000_0003_003
FIGURE: HM3
SHEET 3 OF 4

FULL SIZE SHEET FORMAT IS 24X36; IF PRINTED SIZE IS NOT 24X36, THEN THIS SHEET FORMAT HAS BEEN MODIFIED & INDICATED DRAWING SCALE IS NOT ACCURATE.

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GENERAL NOTES

1. THIS DRAWING IS DIAGRAMMATIC. IT SHOULD BE USED FOR GENERAL INFORMATION AND SAMPLE LOCATIONS.

LEGEND

100 ROOM NUMBERS

ACCESS HATCH

PROPOSED SAMPLE SYMBOLS

⊗ PCB-# PCB BULK SAMPLE OF CAULK LOCATION

◎ PCB BULK PAINT, RCRA8 BULK, AND RCRA8 TCLP SAMPLE LOCATION

LEAD SAMPLE SYMBOLS

△ 0007 — DRAWING REFERENCE TO LEAD SAMPLE FIELD CODE, SEE INVENTORY OF SAMPLES
MATERIAL SYMBOL

▲ LEAD DETECTED.

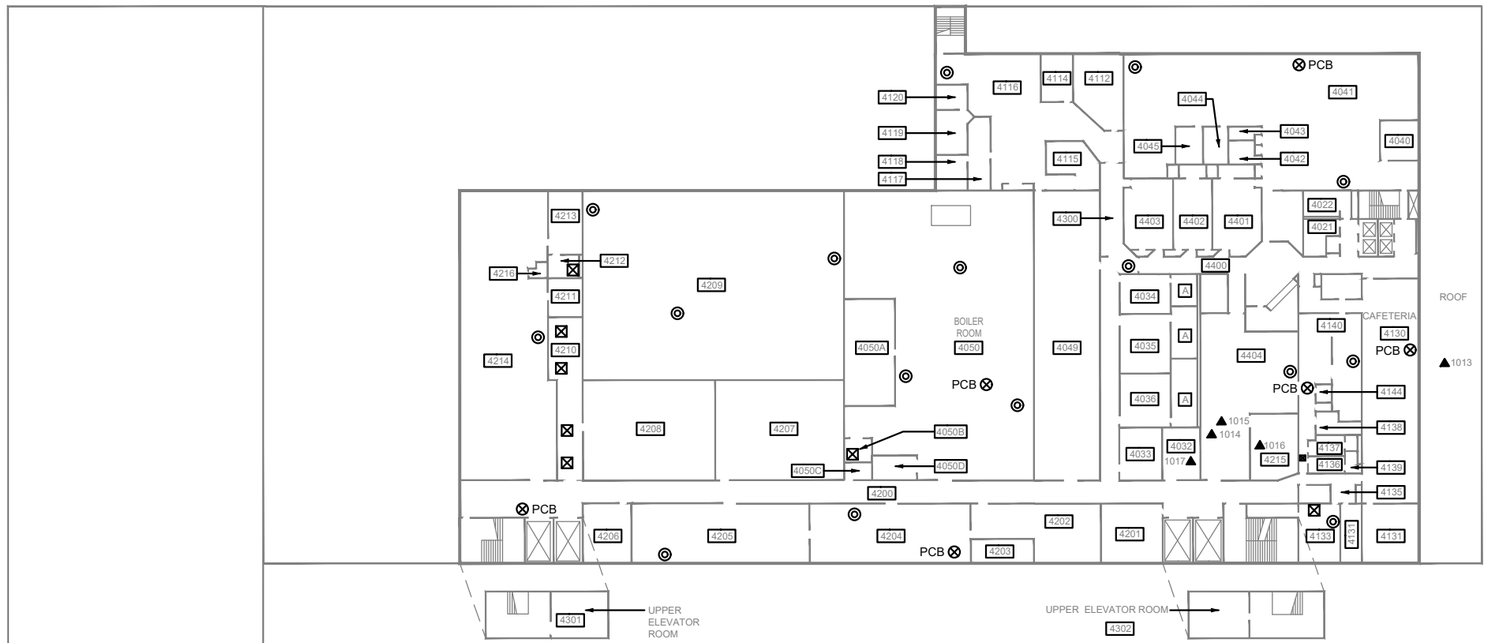
△ BELOW THE LIMIT OF DETECTION.

INVENTORY OF AA LEAD SAMPLES (MARCH 2022)

SAMPLE NUMBER	FIELD CODE	LAB RESULT (ppm)	MATERIAL DESCRIPTION
▲ 1013	21193.001-1013	1900 ppm	4TH FLOOR CAFETERIA; ROOM 4130; HEATER; METAL; WHITE; GOOD CONDITION
▲ 1014	21193.001-1014	7950 ppm	4TH FLOOR HALL AT ROOM 4032; DOOR; METAL; TAN; GOOD CONDITION
▲ 1015	21193.001-1015	778 ppm	4TH FLOOR HALL AT ROOM 4032; WALL; CMU; WHITE; GOOD CONDITION
▲ 1016	21193.001-1016	33,900 ppm	4TH FLOOR DOOR TO STAIRS AT ROOM 4032; DOOR FRAME; METAL; RED; GOOD CONDITION
▲ 1017	21193.001-1017	5040 ppm	4TH FLOOR; ROOM 4201; DOOR FRAME; METAL; BLUE; GOOD CONDITION

INVENTORY OF 2022 SAMPLES

● EXS LOCATION OF EXISTING SAMPLE



FOURTH FLOOR PLAN

SCALE: 1" = 30'

0 15' 30' 60'

PREPARED FOR: PROSPER PORTLAND

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PBS

HAZARDOUS METALS AND PCB PLAN

USPS PROCESSING AND DISTRIBUTION FACILITY

715 NW HOYT STREET, PORTLAND, OREGON

NO	REVISION	DATE	BY	APP'D

DRAWN BY: JAB
CHECKED: CN
DATE: SEPTEMBER 2022
PROJECT NUMBER: 27025.000_0003_003

FIGURE
HM4

SHEET 4 OF 4

FULL SIZE SHEET FORMAT IS 24X36; IF PRINTED SIZE IS NOT 24X36, THEN THIS SHEET FORMAT HAS BEEN MODIFIED & INDICATED DRAWING SCALE IS NOT ACCURATE.

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Exhibit B

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

☑	**INDUSTRIAL HYGIENE**	Accreditation Expires: June 01, 2023
☑	**ENVIRONMENTAL LEAD**	Accreditation Expires: June 01, 2023
☑	**ENVIRONMENTAL MICROBIOLOGY**	Accreditation Expires: June 01, 2023
☐	**FOOD**	Accreditation Expires:
☑	**UNIQUE SCOPES**	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) for the most current Scope.

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

Revision19: 09/01/2020

Date Issued: 04/30/2021

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 *(for internal methods only)*
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

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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

EMLAP Scope Category	Field of Testing (FOT)	Component, parameter or characteristic tested	Method	Method Description *(for internal methods only)*
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 *(for internal methods only)*
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.

	Initial Accreditation Date:	*Issue Date:*	*Expiration Date*
For PJLA	April 08, 2012	February 02, 2022	May 31, 2024

Tracy Szerszen
President

Accreditation No:	*Certificate No:*
72200	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**

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

Certificate of Accreditation: Supplement

PJLA

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)