APPENDIX C

Regulated Materials Survey

Targeted Regulated Building Materials Assessment Report
Targeted Regulated Building Materials Assessment Report

S1 Parking Garage Electrical Systems Project (207036)
S1 Parking Garage
University of Washington Campus
Seattle, Washington
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Project Title: Targeted Regulated Building Materials Assessment Report
S1 Parking Garage Electrical Systems Project (207036)
University of Washington Campus
Seattle, Washington 98001

Prepared for: Mr. Jon Ericson
Project Manager
University of Washington
Capital Planning and Development Office
Seattle, Washington 98195-2205

Assessment Conducted by: AECOM Technical Services
1111 3rd Avenue, Suite 1600
Seattle, Washington 98101-3241

AECOM Project Number: 60613702.4

Assessment Personnel: Mr. Mike Kosoff
AHERA-Accredited Building Inspector
Number 178882 (exp. 9/9/2021)

Assessment Date: November 5, 2020

Report Prepared by: Mike Kosoff
Environmental Scientist
AECOM Technical Services, Inc.

Report Reviewed by: Aaron Heath
Project Manager
AECOM Technical Services, Inc.

Report Issue Date: November 13, 2020
EXECUTIVE SUMMARY

The University of Washington retained AECOM Technical Services, Inc. (AECOM), to conduct a targeted regulated building materials (RBM) assessment of the materials anticipated to be impacted by the Electrical Systems Upgrade Project (the Project Area) in S1 Parking Garage located at University of Washington Campus in Seattle, Washington. AECOM’s representative, Mr. Mike Kosoff, conducted the assessment on November 5, 2020. This assessment included the building materials anticipated to be impacted by renovations and excluded all other areas of the buildings and campus.

AECOM assessed the Project Area for the following:

- Asbestos-containing materials (ACM);
- Assumed asbestos-containing materials;
- Lead-containing coatings (paints);
- Mercury-containing light tubes, switches, and thermostats; and
- Suspected PCB-containing sources.

Thirteen bulk samples of suspect asbestos-containing materials were collected and analyzed using Polarized Light Microscopy (PLM). One of the materials was found to contain greater than one percent asbestos, one of the materials was assumed to contain asbestos, and none of the materials were found to contain less than one percent asbestos. In addition, two materials were visually assessed and determined to be non-suspect.

Three paint chip samples were collected and analyzed for total lead content. All of the paint chip samples were found to contain detectable levels of lead.

Mercury-containing fluorescent light tubes and High-Intensity Discharge (HID) lamps were identified in the Project Area. Light ballasts were inaccessible at time of the inspection and are assumed to be PCB-containing.
1.0 INTRODUCTION

The University of Washington retained AECOM Technical Services, Inc. (AECOM), to conduct a targeted regulated building materials (RBM) assessment of the materials anticipated to be impacted by the Electrical Systems Upgrade Project (the Project Area) in S1 Parking Garage located at University of Washington Campus in Seattle, Washington. AECOM’s representative, Mr. Mike Kosoff, conducted the assessment on November 5, 2020. This assessment included the building materials anticipated to be impacted by renovations and excluded all other areas of the buildings and campus.

AECOM assessed the Project Area for the following:

- Asbestos-containing materials (ACM);
- Assumed asbestos-containing materials;
- Lead-containing coatings (paints);
- Mercury-containing light tubes, switches, and thermostats; and
- Suspected PCB-containing sources.

1.1 Project Background

This report presents the results of our targeted regulated building materials assessment conducted of the Project Area located at University of Washington Campus in Seattle, Washington. Other suspect building materials outside of the Project Area were excluded from the scope of the assessment. AECOM’s assessment included the materials anticipated to be impacted by the project based on communication from the client and drawings provided by University of Washington.

The purpose of the assessment was to provide information to assist University of Washington with communicating the presence of lead-containing coatings, PCB-containing sources, mercury-containing sources, and presence, location, and quantity of ACMs and assumed ACMs to employees, vendors, and contractors working in the Project Area and to meet the requirements for an asbestos survey for the Puget Sound Clean Air Agency (PSCAA) and US Occupational Safety and Health (OSHA) regulations and a good faith inspection as required by the Washington State Department of Labor and Industries’ Division of Occupational Safety and Health (DOSH) prior to renovation.

1.2 Sources of Information

During the course of the assessment, the following personnel and documents provided assistance to the AECOM inspector:

- Mr. Reginald Hampton, Project Manager, Project Delivery Group, University of Washington
- Mr. Jon Ericson, Construction Manager, Project Delivery Group, University of Washington
- University of Washington Construction Documents, South Campus S1 Parking Garage Repairs – Electrical Systems, prepared by Sazan Group, dated October 16, 2020
- S1 Parking Garage Topping Repair Regulated Building Materials Assessment Report, prepared by AECOM, dated August 29, 2019

1.3 Project Description

The S1 Parking Garage is a three level, steel-reinforced concrete parking structure located southwest of the Magnuson Health Science Center on the University of Washington Campus in Seattle, Washington. The project consists of replacing the light fixtures and wiring throughout the parking garage.

2.0 ASBESTOS ASSESSMENT

2.1 Building Assessment

Mr. Kosoff, an Asbestos Hazard Emergency Response Act (AHERA)-accredited building inspector, (Certification 178882, expiration date: 9/9/2021), from AECOM, performed the sampling on November 5, 2020. The AECOM inspector collected 13 samples of materials identified as suspect ACM.
This assessment was conducted using a modified protocol adapted from AHERA. The protocol is as follows:

- Identify suspect asbestos-containing materials.
- Group materials into homogeneous sampling areas/materials.
- Quantify each homogeneous material and collect representative samples. The number of samples collected of miscellaneous materials was determined by the inspector.
- Samples of each material were taken to the substrate, ensuring that all components and layers of the material were included.
- Sample locations are referenced on the field data forms according to sample number.
- Sampling was performed by an AHERA-accredited building inspector, and the use of proper protective equipment and procedures was followed.

### 2.2 Sampling Procedures

This sampling was conducted using the following procedures:

1. Spread the plastic drop cloth (if needed) and set up other equipment, e.g., ladder.
2. Don protective equipment (respirator and protective clothing if needed).
3. Label sample container with its identification number and record number. Record sample location and type of material sampled on a sampling data form.
4. Moisten area where sample is to be extracted (spray the immediate area with water).
5. Extract sample using a clean knife, drill capsule, or cork boring tool to cut out or scrape off approximately one tablespoon of the material. Penetrate all layers of material.
6. Place sample in a container and tightly seal it.
7. Wipe the exterior of the container with a wet wipe to remove any material that may have adhered to it during sampling.
8. Clean tools with wet wipes and wet mop; or vacuum area with HEPA vacuum to clean all debris.
9. Discard protective clothing, wet wipes and rags, cartridge filters, and drop cloth in a labeled plastic waste bag.

### 2.3 Analytical Methodology

Suspect ACMs were sampled in general accordance with 40 CFR 763.86 by an Environmental Protection Agency (EPA) AHERA-accredited building inspector. Each sample was collected and stored in a heavy-duty, self-sealing plastic bag, and delivered to NVL Laboratories in Seattle, Washington. Samples were analyzed via polarized light microscopy (PLM) in accordance with EPA/600/R-93/116. NVL Laboratories is accredited to perform PLM analysis by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NVLAP).

### 2.4 Asbestos Sampling Results

Table 2.4-1 provides a list of suspect homogeneous sampling area (HSA) material descriptions, material locations, and results for this sampling. ACMs are presented in bold. Refer to the attached Figures in Appendix A for sample locations and Photographs in Appendix B for additional material information.

<table>
<thead>
<tr>
<th>HSA ID, Material Description, and AHERA Classification</th>
<th>Material Location</th>
<th>HSA Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Gray CMU with mortar and paint (M)</td>
<td>Walls in F-Wing Level 2 electrical room</td>
<td>ND</td>
</tr>
<tr>
<td>2: Tan/gray cementitious fire stop sealant (M)</td>
<td>At conduit penetrations in places throughout the Project Area</td>
<td>ND</td>
</tr>
</tbody>
</table>
Table 2.4-1. Results of Bulk Sample Analyses

<table>
<thead>
<tr>
<th>HSA ID, Material Description, and AHERA Classification</th>
<th>Material Location</th>
<th>HSA Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>3: Red fire stop sealant (M)</td>
<td>At conduit penetrations in places throughout the Project Area</td>
<td>ND</td>
</tr>
<tr>
<td>4: Black/yellow woven fibrous outer wrap wire insulation with white rubber inner wrap wire insulation and embedded copper wire (M)</td>
<td>Wire insulation in places throughout the Project Area</td>
<td>ND</td>
</tr>
<tr>
<td>5: Black woven fibrous outer wrap wire insulation with white rubber inner wrap wire insulation and embedded copper wire (M)</td>
<td>Wire insulation in places throughout the Project Area</td>
<td>ND</td>
</tr>
<tr>
<td>6: Brown crumbly sealant (M)</td>
<td>At perimeter of door frame to garage main electric room on Minus 1 Level</td>
<td>6% chrysotile</td>
</tr>
<tr>
<td>7: Black asphaltic material (M)</td>
<td>On concrete ceiling in places of Minus 1 Level</td>
<td>ND</td>
</tr>
<tr>
<td>8: Thermoplastic wire insulation (M)</td>
<td>Observed predominant wire insulation throughout the Project Area</td>
<td>Visually assessed and determined to be non-suspect</td>
</tr>
<tr>
<td>9: Newer electrical panels (M)</td>
<td>Predominant electrical panels throughout the Project Area</td>
<td>Visually assessed and determined to be non-suspect</td>
</tr>
<tr>
<td>10: Older electrical panels (M)</td>
<td>Electrical panels in places throughout the Project Area</td>
<td>Assumed to contain asbestos</td>
</tr>
</tbody>
</table>

ND: none detected, HSA: material that is uniform in color, texture, general appearance, and construction and application date; M: Miscellaneous material per AHERA

Additional suspect ACMs may be present in inaccessible or concealed spaces. These spaces include, but are not limited to, areas not assessed, areas not accessible at the time of the assessment, fire doors, electrical systems, pipe chases, spaces between wall/ceiling/door/floor cavities, interior of mechanical components, beneath foundation pads, etc. If future maintenance, renovation, and/or demolition activities make these areas accessible, AECOM recommends that a thorough assessment of these spaces be conducted at that time to identify and confirm the presence or absence of additional suspect ACMs. Until then, all such unidentified materials must be treated as assumed ACMs in accordance with applicable federal, state, and local regulations.

If the analytical results indicate that all the samples collected per HSA do not contain asbestos, then the HSA (material) is considered a non-ACM. If the analytical results of one or more of the samples collected per HSA indicate that asbestos is present in quantities of greater than one percent asbestos as defined by the EPA, all of the HSA (material) is considered to be an ACM regardless of any other analytical results.

Any material that contains greater than one percent asbestos is considered an ACM and must be handled according to Occupational Safety and Health Administration (OSHA), EPA, and applicable state and local regulations. The EPA National Emission Standard for Hazardous Air Pollutants (NESHAP) 40 CFR 61, Subparts A and M has a requirement related to assessment of suspect ACM in buildings. When the asbestos content of a friable material is visually estimated by PLM to be detectable but less than ten percent, your firm may elect to (1) assume the amount is greater than one percent and treat the material as asbestos-containing or (2) require verification of the amount by the PLM point counting technique. If the results obtained by point counting and visual estimation are different, the point count result must be used. When no asbestos is detected by PLM, point counting is not required.
3.0 LEAD ASSESSMENT

3.1 Sampling Methodology
Homogeneous painted surfaces were defined by substrate, application, and color. The paint chip samples were collected to the substrate to ensure that all layers present on the substrate were included in the laboratory analysis. The samples were collected and stored in a heavy-duty, self-sealing plastic bag and delivered to NVL Laboratories in Seattle, Washington. The samples were analyzed via Atomic Absorption Spectrophotometry in accordance with Method EPA 7000B. NVL Laboratories in Seattle, Washington is accredited by American Industrial Hygiene Association (AIHA) for lead analysis.

3.2 Lead Sampling Results
Three paint chip samples were collected and analyzed. All of the samples were found to contain reportable levels of lead. The result of the analysis is presented in Table 3.2-1.

Table 3.2-1. Paint Chip Sample Result

<table>
<thead>
<tr>
<th>Sample Number and Description</th>
<th>Paint Location</th>
<th>Sample Result in parts per million (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pb1: Beige paint on CMU</td>
<td>Walls in F-Wing Level 2 electrical room</td>
<td>300</td>
</tr>
<tr>
<td>Pb2: White paint on concrete</td>
<td>Ceilings at entrances to tunnels on Minus 1 Level</td>
<td>67</td>
</tr>
<tr>
<td>Pb3: White paint on concrete</td>
<td>Ceilings and lower walls throughout Minus 2 Level</td>
<td>65</td>
</tr>
</tbody>
</table>

4.0 OTHER REGULATED BUILDING MATERIALS

4.1 Methodology
An inventory of fluorescent light tubes, HID lamps, and potential PCB-containing ballasts was conducted in accessible areas of the Project Area.

Where fluorescent light fixtures were accessible, the ballast covers were removed, and the ballast labels were visually examined. Different types of fluorescent fixtures were distinguished by shield shape, fixture dimension, diffuser type, and the manner in which the ballast covers were connected to the fixture. Inspectors attempted to visually inspect at least two of each type of fluorescent light fixture.

Where fluorescent light fixtures could not be visually examined, the number of potential PCB-containing ballasts in each fixture was estimated based on the following assumptions:

- Each single light tube fluorescent fixture contains one ballast;
- Each multiple light tube fluorescent fixture contains one ballast for every pair of light tubes; and
- All light ballasts are assumed to contain PCBs even if labelled as “No-PCBs” unless the ballasts are electronic.

4.2 Results
Mercury-containing fluorescent light tubes and HID lamps were identified in the Project Area. Light ballasts were inaccessible at time of the inspection and are assumed to be PCB-containing. The result of the inventory is presented in Table 4.2-1.

Table 4.2-1. Other Regulated Building Materials Findings

<table>
<thead>
<tr>
<th>Sample Number and Description</th>
<th>Material Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mercury-containing fluorescent light tubes (4’ length)</td>
<td>62 Each</td>
</tr>
</tbody>
</table>
Table 4.2-1. Other Regulated Building Materials Findings

<table>
<thead>
<tr>
<th>Sample Number and Description Material Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>HID lamps</td>
<td>472 Each</td>
</tr>
<tr>
<td>PCB-containing ballasts</td>
<td>534 Each</td>
</tr>
</tbody>
</table>

5.0 CONCLUSIONS AND RECOMMENDATIONS

On November 5, 2020, AECOM conducted a targeted regulated building materials assessment of suspect regulated building materials associated with the S1 Parking Garage Electrical Systems Project located at University of Washington Campus in Seattle, Washington.

5.1 Asbestos

The following table identifies the confirmed and assumed ACM.

Table 5.1-1. ACM and Assumed ACM

<table>
<thead>
<tr>
<th>HSA ID, Material Description, and AHERA Classification</th>
<th>Material Location</th>
<th>HSA Quantity (approximate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6: Asbestos-containing brown crumbly sealant (M)</td>
<td>At perimeter of door frame to garage main electric room on Minus 1 Level</td>
<td>20 LF</td>
</tr>
<tr>
<td>10: Assumed asbestos-containing older electrical panels (M)</td>
<td>Electrical panels in places throughout the Project Area</td>
<td>6 EA</td>
</tr>
</tbody>
</table>

HSA: material that is uniform in color, texture, general appearance, and construction and application date, M: Miscellaneous material per AHERA, LF: Linear feet; EA: Each

5.2 Lead

Three paint chip samples were collected and analyzed for total lead content. All of the samples were found to contain reportable levels of lead. If lead-containing paint is impacted, the Washington State Department of Labor and Industries requires an exposure assessment be conducted during operations that may disturb the lead paint in such a way that the airborne exposure may reach or exceed the Action level of 30 micrograms per cubic meter (µg/m³) or the Permissible Exposure Limit of 50 µg/m³. The worker protection requirements of WAC 296-155 "Lead in Construction" and 29 CFR 1926.62 Lead may apply.

5.3 Other Regulated Building Materials

Mercury-containing fluorescent light tubes, HID lamps, and PCB-containing light ballasts were identified in the Project Area. Fluorescent light tubes, switches, and thermostats may contain mercury. Fluorescent light ballasts and HID lamp ballasts may contain PCBs. In Washington State, even non-electronic (magnetic) ballasts labeled with "No PCBs" may have regulated amounts of PCBs and therefore should be handled in accordance with Washington Department of Ecology requirements. Employers must inform their employees of mercury and PCB hazards in accordance with WAC 296-800-170.

Fluorescent light tubes, HID lamps, switches, thermostats, and light ballasts must be removed and recycled or disposed of prior to building demolition as per 40 CFR 262, 40 CFR 265, and WAC 173-303.
6.0 LIMITING CONDITIONS

AECOM’s assessment was limited to observation and minimal destructive sampling and analysis of potentially regulated building materials in accessible portions of the Project Area. However, common construction techniques render portions of any building inaccessible. As a result, additional asbestos-containing building materials or lead-containing coatings may be present in inaccessible areas (i.e., between walls, ceiling spaces enclosed by wallboard, interior of fire doors, etc.) of the Project Area that were not observed during the assessment. Inaccessible areas should be assumed to contain asbestos until extensive destructive sampling is performed in those areas.

6.1 Limitations of the Assessment

The conclusions of this report are AECOM’s professional opinions, based solely upon visual site observations and interpretations of laboratory analyses, as described in this report. The opinions presented herein apply to the site conditions existing at the time of AECOM’s assessment and interpretation of current regulations pertaining to asbestos, lead-containing paint, mercury-containing sources, and PCB-containing sources. Therefore, AECOM’s opinions and recommendations may not apply to future conditions that may exist at the site which we have not had the opportunity to evaluate. All applicable state, federal, and local regulations should always be verified prior to any work that will disturb materials containing asbestos.

AECOM has performed the services set forth in the Scope of Work in accordance with generally accepted industrial hygiene practices in the same or similar localities, related to the nature of the work accomplished, at the time the services were performed.

Suspect regulated building materials located at S1 Parking Garage that are outside the Project Area and/or are not included in this regulated building materials assessment are assumed to be asbestos-containing unless they are sampled by an AHERA-accredited asbestos building inspector and analyzed by a NVLAP-accredited laboratory to confirm the presence of asbestos prior to the disturbing of such materials.

The regulated building materials and conditions presented in this report represent those observed on the dates we conducted the sampling. This sampling is intended for the exclusive use of University of Washington for specific application to the S1 Parking Garage Electrical Systems Project renovations. This assessment is not intended to replace construction or demolition plans, specifications, or bidding documents. This report is not meant to represent a legal opinion.

Prepared by:  
Mike Kosoff  
Environmental Scientist  
AECOM Technical Services, Inc.

Reviewed by:  
Aaron Heath  
Project Manager  
AECOM Technical Services, Inc.
Appendix A. Figures
Figure 1

S1 Parking Garage
Minus 1 Level

Approximate Asbestos and Lead Sample Locations

Legend
ELE-HSA#-## = Asbestos sample location

Job Number: 60613702.4  Not to scale

University of Washington
Seattle, Washington
Figure 2
S1 Parking Garage
Minus 1 Level

Approximate Asbestos and Lead Sample Locations

Legend
ELE-Pb#-## = Lead sample location

Job Number: 60613702.4  Not to scale
Figure 3
S1 Parking Garage
Minus 2 Level
Approximate Asbestos and Lead Sample Locations

Legend
ELE-Pb#-## = Lead sample location

Job Number: 60613702.4 Not to scale

University of Washington
Seattle, Washington
Figure 4
S1 Parking Garage
F-Wing Level 2 Electrical Room
Approximate Asbestos and Lead Sample Locations

Legend
ELE-HSA#-## = Asbestos sample location
ELE-Pb#-## = Lead sample location

Job Number: 60613702.4 Not to scale
Figure 5
S1 Parking Garage
Minus 1 Level
Approximate ACM Locations

LEGEND

HSA 10: Assumed asbestos-containing older electrical panels (M)

Drawing should be printed in color
LEGEND

HSA 6: Asbestos-containing brown crumbly sealant at perimeter of door frame to main electrical room (M)

HSA 10: Assumed asbestos-containing older electrical panels (M)

Drawing should be printed in color
Appendix B. Photographs
HSA 1. Gray CMU with mortar and paint (M)

HSA 2. Tan/gray cementitious fire stop sealant (M)
HSA 3. Red fire stop sealant (M)

HSA 4. Black/yellow woven fibrous outer wrap wire insulation with white rubber inner wrap wire insulation and embedded copper wire (M)
HSA 5. Black woven fibrous outer wrap wire insulation with white rubber inner wrap wire insulation and embedded copper wire (M)

HSA 6. Brown crumbly sealant (M)
HSA 7. Black asphaltic material (M)

HSA 8. Thermoplastic wire insulation (M)
HSA 9. Newer electrical panels (M)

HSA 10. Older electrical panels (M)
Appendix C. Asbestos Analytical Results
Dear Mr. Heath,

Enclosed please find test results for the 13 sample(s) submitted to our laboratory for analysis on 11/10/2020.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with U. S. EPA 40 CFR Appendix E to Subpart E of Part 763, Interim Method for the Determination of Asbestos in Bulk Insulation Samples and EPA 600/R-93/116, Method for the Determination of Asbestos in Bulk Building Materials.

For samples containing more than one separable layer of materials, the report will include findings for each layer (labeled Layer 1 and Layer 2, etc. for each individual layer). The asbestos concentration in the sample is determined by calibrated visual estimation.

For those samples with asbestos concentrations between 1 and 10 percent based on visual estimation, the EPA recommends a procedure known as point counting (NESHAPS, 40 CFR Part 61). Point counting is a statistically more accurate means of quantification for samples with low concentrations of asbestos.

The detection limit for the calibrated visual estimation is <1%, 400 point counts is 0.25% and 1000 point counts is 0.1%

Samples are archived for two weeks following analysis. Samples that are not retrieved by the client are discarded after two weeks.

Thank you for using our laboratory services. Please do not hesitate to call if there is anything further we can assist you with.

Sincerely,

Nick Ly, Technical Director

Enc.: Sample Results
# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: AECOM-Seattle  
Address: 1111 3rd Avenue Ste. 1600  
Seattle, WA 98101

Attention: Mr. Aaron Heath  
Project Location: S1 Electrical Systems (207036)

## Lab ID: 20118198  
Client Sample #: ELE-1-01  
Location: S1 Electrical Systems (207036)

<table>
<thead>
<tr>
<th>Layer 1 of 1</th>
<th>Description: White sandy crumbly material with paint</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Fibrous Materials: Calcareous binder, Sand, Paint</td>
</tr>
<tr>
<td></td>
<td>Fine grains, Mineral grains, Fine particles</td>
</tr>
<tr>
<td></td>
<td>Organic debris</td>
</tr>
<tr>
<td>Other Fibrous Materials:</td>
<td>Spider silk 5%</td>
</tr>
<tr>
<td>Asbestos Type:</td>
<td>None Detected ND</td>
</tr>
</tbody>
</table>

## Lab ID: 20118199  
Client Sample #: ELE-2-01  
Location: S1 Electrical Systems (207036)

<table>
<thead>
<tr>
<th>Layer 1 of 1</th>
<th>Description: Tan/grey brittle material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Fibrous Materials: Putty Compound, Rust, Fine grains</td>
</tr>
<tr>
<td></td>
<td>Organic debris, Fine particles</td>
</tr>
<tr>
<td>Other Fibrous Materials:</td>
<td>Spider silk &lt;1%</td>
</tr>
<tr>
<td>Asbestos Type:</td>
<td>None Detected ND</td>
</tr>
</tbody>
</table>

## Lab ID: 20118200  
Client Sample #: ELE-2-02  
Location: S1 Electrical Systems (207036)

<table>
<thead>
<tr>
<th>Layer 1 of 1</th>
<th>Description: Grey brittle material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Fibrous Materials: Putty Compound, Fine grains, Fine particles</td>
</tr>
<tr>
<td></td>
<td>Calcareous particles</td>
</tr>
<tr>
<td>Other Fibrous Materials:</td>
<td>None Detected ND</td>
</tr>
<tr>
<td>Asbestos Type:</td>
<td>None Detected ND</td>
</tr>
</tbody>
</table>

## Lab ID: 20118201  
Client Sample #: ELE-3-01  
Location: S1 Electrical Systems (207036)

<table>
<thead>
<tr>
<th>Layer 1 of 1</th>
<th>Description: Soft red material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Fibrous Materials: Binder/Filler, Fine grains, Fine particles</td>
</tr>
<tr>
<td>Other Fibrous Materials:</td>
<td>Glass fibers 12%</td>
</tr>
<tr>
<td>Asbestos Type:</td>
<td>None Detected ND</td>
</tr>
</tbody>
</table>

---

Sampled by: Client  
Analyzed by: Matt Macfarlane  
Reviewed by: Nick Ly  
Date: 11/12/2020  
Date: 11/12/2020  
Nick Ly, Technical Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government.
## Bulk Asbestos Fibers Analysis
By Polarized Light Microscopy

**Client:** AECOM-Seattle  
**Address:** 1111 3rd Avenue Ste. 1600  
Seattle, WA 98101  

**Attention:** Mr. Aaron Heath  
Project Location: S1 Electrical Systems (207036)

**Batch #:** 2018709.00  
**Client Project #:** 60613702.4  
**Date Received:** 11/10/2020  
**Samples Received:** 13  
**Samples Analyzed:** 13  
**Method:** EPA/600/R-93/116

### Lab ID: 20118202  
**Client Sample #:** ELE-3-02  
**Location:** S1 Electrical Systems (207036)

<table>
<thead>
<tr>
<th>Description</th>
<th>Organic debris</th>
<th>Cellulose</th>
<th>1%</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Layer 1 of 1</em></td>
<td><em>Non-Fibrous Materials:</em> Binder/Filler, Fine grains, Fine particles</td>
<td><em>Other Fibrous Materials:</em> Glass fibers</td>
<td><em>Asbestos Type:</em> None Detected ND</td>
</tr>
</tbody>
</table>

### Lab ID: 20118203  
**Client Sample #:** ELE-4-01  
**Location:** S1 Electrical Systems (207036)

<table>
<thead>
<tr>
<th>Description</th>
<th>Organic debris</th>
<th>Cellulose</th>
<th>1%</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Layer 1 of 1</em></td>
<td><em>Non-Fibrous Materials:</em> Rubber/Binder, Fine particles, Wire</td>
<td><em>Other Fibrous Materials:</em> Glass fibers</td>
<td><em>Asbestos Type:</em> None Detected ND</td>
</tr>
</tbody>
</table>

### Lab ID: 20118204  
**Client Sample #:** ELE-4-02  
**Location:** S1 Electrical Systems (207036)

<table>
<thead>
<tr>
<th>Description</th>
<th>Organic debris</th>
<th>Cellulose</th>
<th>1%</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Layer 1 of 1</em></td>
<td><em>Non-Fibrous Materials:</em> Rubber/Binder, Fine particles, Wire</td>
<td><em>Other Fibrous Materials:</em> Glass fibers</td>
<td><em>Asbestos Type:</em> None Detected ND</td>
</tr>
</tbody>
</table>

### Lab ID: 20118205  
**Client Sample #:** ELE-5-01  
**Location:** S1 Electrical Systems (207036)

<table>
<thead>
<tr>
<th>Description</th>
<th>Organic debris</th>
<th>Cellulose</th>
<th>1%</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Layer 1 of 1</em></td>
<td><em>Non-Fibrous Materials:</em> Rubber/Binder, Fine particles, Wire</td>
<td><em>Other Fibrous Materials:</em> Glass fibers</td>
<td><em>Asbestos Type:</em> None Detected ND</td>
</tr>
</tbody>
</table>

---

**Sampled by:** Client  
**Analyzed by:** Matt Macfarlane  
**Reviewed by:** Nick Ly  
**Date:** 11/12/2020

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government.
## Bulk Asbestos Fibers Analysis

**By Polarized Light Microscopy**

Client: AECOM-Seattle  
Address: 1111 3rd Avenue Ste. 1600  
Seattle, WA 98101

Attention: Mr. Aaron Heath  
Project Location: S1 Electrical Systems (207036)

---

### Lab ID: 20118206  
**Client Sample #:** ELE-5-02  
**Location:** S1 Electrical Systems (207036)

**Layer 1 of 1**  
**Description:** White rubbery material with grey woven mesh and embedded metal wire

<table>
<thead>
<tr>
<th>Non-Fibrous Materials:</th>
<th>Other Fibrous Materials:</th>
<th>Asbestos Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rubber/Binder, Fine particles, Wire</td>
<td>Glass fibers</td>
<td>None Detected ND</td>
</tr>
</tbody>
</table>

### Lab ID: 20118207  
**Client Sample #:** ELE-6-01  
**Location:** S1 Electrical Systems (207036)

**Layer 1 of 1**  
**Description:** Soft brown crumbly material

<table>
<thead>
<tr>
<th>Non-Fibrous Materials:</th>
<th>Other Fibrous Materials:</th>
<th>Asbestos Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Putty Compound, Fine particles</td>
<td>Cellulose</td>
<td>Chrysotile 6%</td>
</tr>
</tbody>
</table>

### Lab ID: 20118208  
**Client Sample #:** ELE-7-01  
**Location:** S1 Electrical Systems (207036)

**Layer 1 of 1**  
**Description:** Loose black crumbly material

<table>
<thead>
<tr>
<th>Non-Fibrous Materials:</th>
<th>Other Fibrous Materials:</th>
<th>Asbestos Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Binder/Filler, Fine particles, Miscellaneous particles</td>
<td>Cellulose</td>
<td>None Detected ND</td>
</tr>
</tbody>
</table>

### Lab ID: 20118209  
**Client Sample #:** ELE-7-02  
**Location:** S1 Electrical Systems (207036)

**Layer 1 of 1**  
**Description:** Loose crumbly black asphaltic material

<table>
<thead>
<tr>
<th>Non-Fibrous Materials:</th>
<th>Other Fibrous Materials:</th>
<th>Asbestos Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt/Binder, Fine particles, Fine grains</td>
<td>Cellulose</td>
<td>None Detected ND</td>
</tr>
</tbody>
</table>

### Lab ID: 20118210  
**Client Sample #:** ELE-7-03  
**Location:** S1 Electrical Systems (207036)

**Layer 1 of 1**  
**Description:** Loose crumbly black asphaltic material

<table>
<thead>
<tr>
<th>Non-Fibrous Materials:</th>
<th>Other Fibrous Materials:</th>
<th>Asbestos Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt/Binder, Fine particles, Fine grains</td>
<td>Cellulose</td>
<td>None Detected ND</td>
</tr>
</tbody>
</table>

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**Note:** If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government.

---

**Sampled by:** Client  
**Analyzed by:** Matt Macfarlane  
**Reviewed by:** Nick Ly  
**Date:** 11/12/2020

---

ASB-02

---

page 4 of 6
Company: AECOM-Seattle
Address: 1111 3rd Avenue Ste. 1600
Seattle, WA 98101

Project Manager: Mr. Aaron Heath
Phone: (206) 438-2700

Project Name/Number: 60613702.4  Project Location: S1 Electrical Systems (207036)

Subcategory: PLM Bulk  Item Code: ASB-02  EPA 600/R-93-116 Asbestos by PLM <bulk>

Total Number of Samples: 13  Rush Samples: 

<table>
<thead>
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<th>Sample ID</th>
<th>Description</th>
<th>A/R</th>
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<td>1 20118198</td>
<td>ELE-1-01</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>2 20118199</td>
<td>ELE-2-01</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>3 20118200</td>
<td>ELE-2-02</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>4 20118201</td>
<td>ELE-3-01</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>5 20118202</td>
<td>ELE-3-02</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>6 20118203</td>
<td>ELE-4-01</td>
<td></td>
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</tr>
<tr>
<td>7 20118204</td>
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<td>8 20118205</td>
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<td>9 20118206</td>
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<tr>
<td>10 20118207</td>
<td>ELE-6-01</td>
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<tr>
<td>11 20118208</td>
<td>ELE-7-01</td>
<td></td>
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</tr>
<tr>
<td>12 20118209</td>
<td>ELE-7-02</td>
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</tr>
<tr>
<td>13 20118210</td>
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<td>A</td>
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</tbody>
</table>

Print Name: Kelly AuVu
Signature:  
Company: NVL
Date: 11/10/20
Time: 4:15 PM

Sampled by: Client
Relinquished by: UPS

Received by: Kelly AuVu  analyzed by Matt Macfarlane
Results Called by: NVL  11/10/20  1610

Faxed:  Emailed:

Special Instructions: 

Date: 11/10/2020
Time: 4:15 PM
Entered By: Kelly AuVu
**ASBESTOS CHAIN OF CUSTODY**

**Company**: AECOM  
**Address**: 1111 3rd Ave, Suite 1600, Seattle, WA 98101  
**Phone**: 206-438-2700

**Project Manager**: Aaron Heath  
**Cell**:  
**Email**:  
**Fax**:  

**Project Name/Number**: 60613702.4  
**Project Location**: S1 Electrical Systems (207036)

- [ ] PCM Air (NIOSH 7400)  
- [X] TEM (NIOSH 7402)  
- [ ] TEM (AHERA)  
- [ ] TEM (EPA Level II Modified)  
- [X] PLM (EPA 600/R-93-116)  
- [ ] EPA 400 Points (600/R-93-116)  
- [ ] EPA 1000 Points (600/R-93-116)  
- [ ] PLM Gravimetry (600/R-93-116)  
- [ ] Asbestos in Vermiculite (EPA 600/R-04/004)  
- [ ] Asbestos in Sediment (EPA 1900 Points)  
- [ ] Other  

**Reporting Instructions**
- [ ] Call ( ) -  
- [ ] Fax ( ) -  
- [X] Email mike.kosoff@aecom.com

---

**Total Number of Samples**: 13

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Description</th>
<th>A/R</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ELE-1-01</td>
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<tr>
<td>2</td>
<td>ELE-2-01</td>
<td></td>
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<tr>
<td>3</td>
<td>ELE-2-02</td>
<td></td>
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<td>4</td>
<td>ELE-3-01</td>
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<td>5</td>
<td>ELE-3-02</td>
<td></td>
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<td>ELE-4-01</td>
<td></td>
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<td>7</td>
<td>ELE-4-02</td>
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<td></td>
<td></td>
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<tr>
<td>15</td>
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</tbody>
</table>

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**Sampled by**: Mike Kosoff  
**Relinquish by**: Mike Kosoff  
**Company**: AECOM  
**Date**: 11/5/2020  
**Time**: 11:00

---

**Office Use Only**

<table>
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<th>Company</th>
<th>Date</th>
<th>Time</th>
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<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

---

[Handwritten notes]
Appendix D. Lead Analytical Results
November 12, 2020

Aaron Heath
AECOM-Seattle
1111 3rd Avenue Ste. 1600
Seattle, WA 98101

NVL Batch # 2018710.00

RE: Total Metal Analysis
Method: EPA 7000B Lead by FAA <paint>
Item Code: FAA-02

Client Project: 60613702.4
Location: S1 Electrical Systems (207036)

Dear Mr. Heath,

NVL Labs received 3 sample(s) for the said project on 11/10/2020. Preparation of these samples was conducted following protocol outlined in EPA 3051/7000B, unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with EPA 7000B Lead by FAA <paint>. The results are usually expressed in mg/Kg and percentage (%). Test results are not blank corrected.

For recent regulation updates pertaining to current regulatory levels or permissible exposure levels, please call your local regulatory agencies for more detail.

At NVL Labs all analyses are performed under strict guidelines of the Quality Assurance Program. This report is considered highly confidential and will not be released without your approval. Samples are archived after two weeks from the analysis date. Please feel free to contact us at 206-547-0100, in case you have any questions or concerns.

Sincerely,

Nick Ly, Technical Director

Enc.: Sample results
## Analysis Report
### Total Lead (Pb)

**Client:** AECOM-Seattle  
**Address:** 1111 3rd Avenue Ste. 1600  
Seattle, WA 98101

**Attention:** Mr. Aaron Heath  
Project Location: S1 Electrical Systems (207036)

**Batch #: 2018710.00**  
**Matrix:** Paint  
**Method:** EPA 3051/7000B  
**Client Project #:** 60613702.4  
**Date Received:** 11/10/2020  
**Samples Received:** 3  
**Samples Analyzed:** 3

<table>
<thead>
<tr>
<th>Lab ID</th>
<th>Client Sample #</th>
<th>Sample Weight (g)</th>
<th>RL in mg/Kg</th>
<th>Results in mg/Kg</th>
<th>Results in percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>20118211</td>
<td>ELE-Pb1-01</td>
<td>0.2078</td>
<td>48</td>
<td>300</td>
<td>0.030</td>
</tr>
<tr>
<td>20118212</td>
<td>ELE-Pb2-01</td>
<td>0.1814</td>
<td>55</td>
<td>67</td>
<td>0.0067</td>
</tr>
<tr>
<td>20118213</td>
<td>ELE-Pb3-01</td>
<td>0.2169</td>
<td>46</td>
<td>65</td>
<td>0.0065</td>
</tr>
</tbody>
</table>

---

**Sampled by:** Client  
**Analyzed by:** Shalini Patel  
**Reviewed by:** Nick Ly  
**Date Analyzed:** 11/11/2020  
**Date Issued:** 11/12/2020  
**Nick Ly, Technical Director**

- mg/ Kg = Milligrams per kilogram  
- RL = Reporting Limit  
- Percent = Milligrams per kilogram / 10000  
- '<' = Below the reporting Limit  
- Note: Method QC results are acceptable unless stated otherwise. Unless otherwise indicated, the condition of all samples was acceptable at time of receipt.

**Bench Run No:** 2020-1111-07  
**FAA-02**

---

page 2 of 4
**Company:** AECOM-Seattle  
**Address:** 1111 3rd Avenue Ste. 1600  
               Seattle, WA 98101  
**Project Manager:** Mr. Aaron Heath  
**Phone:** (206) 438-2700  
**Cell:** (206) 438-2700

**NVL Batch Number:** 2018710.00  
**TAT:** 3 Days  
**AH No:**  
**Rush TAT:**  
**Due Date:** 11/13/2020  
**Time:** 4:10 PM  
**Email:** Aaron.heath@aecom.com  
**Fax:** (866) 495-5288

**Project Name/Number:** 60613702.4  
**Project Location:** S1 Electrical Systems (207036)

Subcategory: Flame AA (FAA)  
**Item Code:** FAA-02  
**Description:** EPA 7000B Lead by FAA <paint>

**Total Number of Samples:** 3  
Rush Samples: No

<table>
<thead>
<tr>
<th>Lab ID</th>
<th>Sample ID</th>
<th>Description</th>
<th>A/R</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20118211</td>
<td>ELE-Pb1-01</td>
<td>A</td>
</tr>
<tr>
<td>2</td>
<td>20118212</td>
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<tr>
<td>3</td>
<td>20118213</td>
<td>ELE-Pb3-01</td>
<td>A</td>
</tr>
</tbody>
</table>

---

**Sampled by:** Client  
**Relinquished by:** UPS

Office Use Only  
**Received by:** Kelly AuVu  
**Analyzed by:** Shalini Patel  
**Results Called by:** NVL  
**Date:** 11/10/20  
**Time:** 1610

**Fax**  
**Emailed**

**Special Instructions:**

---

Date: 11/10/2020  
Time: 4:25 PM  
Entered By: Kelly AuVu

---

page 3 of 4
## METALS CHAIN OF CUSTODY

**Company:** AECOM  
**Address:** 1111 3rd Avenue, Suite 1600  
Seattle, WA 98101  
**Phone:** 206-438-2700  
**Project Manager:** Aaron Heath  
**Cell:**  
**Email:**  
**Fax:**  

**Project Name/Number:** 60613702.4  
**Project Location:** S1 Electrical Systems (207036)  

<table>
<thead>
<tr>
<th>Total Metals</th>
<th>TCLP</th>
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</thead>
<tbody>
<tr>
<td>FAA (ppm)</td>
<td>ICP (PPM)</td>
<td></td>
</tr>
<tr>
<td>Air Filter</td>
<td>GFAA (ppb)</td>
<td></td>
</tr>
<tr>
<td>Paint Chips (%)</td>
<td>CVAA (ppb)</td>
<td></td>
</tr>
<tr>
<td>Soil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barium</td>
<td>Chromium</td>
<td>Silver</td>
</tr>
<tr>
<td>Arsenic</td>
<td>Mercury</td>
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<tr>
<td>Selenium</td>
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<tr>
<td>Other</td>
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<td></td>
<td></td>
<td>Other</td>
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</tbody>
</table>

**Reporting Instructions:**  
- Call ( ) -  
- Fax ( ) -  
- Email mike.kosoff@aecom.com

### Total Number of Samples

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Description</th>
<th>A/R</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ELE-Pb1-01</td>
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</tr>
<tr>
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<td>ELE-Pb2-01</td>
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</tr>
<tr>
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<td>ELE-Pb3-01</td>
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**Sampled by:** Mike Kosoff  
**Relinquish by:** Mike Kosoff

**Office Use Only**

<table>
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<tr>
<th>Received by</th>
<th>Analyzed by</th>
<th>Called by</th>
<th>Faxed/Email by</th>
<th>Print Name</th>
<th>Signature</th>
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<th>Date</th>
<th>Time</th>
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</table>

**Print Name:**  
**Signature:**  
**Company:** AECOM  
**Date:** 11/5/2020  
**Time:** 11:00

**Print Name:**  
**Signature:**  
**Company:** AECOM  
**Date:** 11/9/2020  
**Time:** 11:00

**Print Name:**  
**Signature:**  
**Company:**  
**Date:** 11/12/2020  
**Time:** 11:00
Appendix E. Personnel and Laboratory Accreditations
Certificate of Completion

This is to certify that

Mike A. Kosoff

has satisfactorily completed
4 hours of online refresher training as an
AHERA Building Inspector

to comply with the training requirements of
TSCA Title II, 40 CFR 763 (AHERA)

EPA Provider # 1085

Certificate Number 178882

Instructor: Andre Zwanenburg

Exam Score: N/A (if applicable)

ARGUS PACIFIC, INC / 21905 64th AVE W, SUITE 100 / MOUNTLAKE TERRACE, WASHINGTON 98043 / 206.285.3373 / ARGUSPACIFIC.COM

Date(s) of Training

Sep 9, 2020
Expires in 1 year.
United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 102063-0

NVL Laboratories, Inc.
Seattle, WA

is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2020-07-23 through 2021-09-30

Effective Dates

For the National Voluntary Laboratory Accreditation Program
SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

NVL Laboratories, Inc.
4708 Aurora Avenue N.
Seattle, WA 98103
Mr. Nghiep Vi Ly
Phone: 206-547-0100  Fax: 206-634-1936
Email: nick.l@nvlabs.com
http://www.nvlabs.com

ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 102063-0

Bulk Asbestos Analysis

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>18/A01</td>
<td>EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples</td>
</tr>
<tr>
<td>18/A03</td>
<td>EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials</td>
</tr>
</tbody>
</table>

For the National Voluntary Laboratory Accreditation Program

Effective 2020-07-23 through 2021-09-30
March 29, 2019

Nghiep Vi Ly
NVL Laboratories, Inc.
4708 Aurora Avenue N.
Seattle, WA 98103

Dear Mr./Ms. Ly:

Congratulations! The AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC’s Analytical Accreditation Board (AAB) has approved NVL Laboratories, Inc. as an accredited Industrial Hygiene, Environmental Lead, Environmental Microbiology and Unique Scope laboratory.

Accreditation documentation includes the IHLAP, ELLAP, EMLAP and Unique Scopes accreditation certificate, scope of accreditation document and a copy of the current AIHA-LAP, LLC license agreement (if your completed agreement is not on file at AIHA-LAP, LLC). The accreditation symbol has been designed for use by all AIHA-LAP, LLC accredited laboratories. If your laboratory chooses to use the symbol in its advertising the laboratory’s accreditation, you must complete and return the AIHA-LAP, LLC license agreement to a Laboratory Accreditation Specialist. Once submitted, an electronic copy of the accreditation symbol will be sent to you.

Laboratory accreditation shall be maintained by continued compliance with IHLAP, ELLAP, EMLAP and Unique Scopes requirements (see Policy Modules 2B, 2C, 2D, 2E, and 6), which includes proficient participation in AIHA-LAP, LLC approved proficiency testing, demonstration of competency, or round robin program as indicated on the AIHA-LAP “Approved PT and Round Robin” webpage, its associated Scope/PT table, and as required in Policy Module 6, for all Fields of Testing (FoTs) for which the laboratory is accredited. An accredited laboratory that wishes to expand into a new FoT must submit an updated accreditation application to AIHA-LAP, LLC for review by the AAB.

Any changes in ownership, laboratory location, personnel, FoTs/Methods, or significant procedural changes shall be reported to AIHA-LAP, LLC in writing within twenty (20) business days of the change.

The accreditation certificate is the property of AIHA-LAP, LLC and must be returned to us should your laboratory withdraw or be removed from the IHLAP, ELLAP, EMLAP and Unique Scopes.

Again, congratulations. If you have any questions, please contact Lauren Schnack, Laboratory Accreditation Specialist, at (703) 846-0716.

Sincerely,

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

acknowledges that

NVL Laboratories, Inc.
4708 Aurora Avenue N., Seattle, WA 98103
Laboratory ID: 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**

<table>
<thead>
<tr>
<th>Field</th>
<th>Accreditation Expires</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDUSTRIAL HYGIENE</td>
<td>June 01, 2021</td>
</tr>
<tr>
<td>ENVIRONMENTAL LEAD</td>
<td>June 01, 2021</td>
</tr>
<tr>
<td>ENVIRONMENTAL MICROBIOLOGY</td>
<td>June 01, 2021</td>
</tr>
<tr>
<td>FOOD</td>
<td></td>
</tr>
<tr>
<td>UNIQUE SCOPES</td>
<td>June 01, 2021</td>
</tr>
</tbody>
</table>

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.

Elizabeth Bair
Chairperson, Analytical Accreditation Board

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

Revision 17 – 09/11/2018

Date Issued: 03/29/2019
AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

NVL Laboratories, Inc.  
4708 Aurora Avenue N., Seattle, WA 98103  
Laboratory ID: 101861  
Issue Date: 03/29/2019

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: 04/01/1997**

| IHLAP Scope Category | Field of Testing (FoT)  
|                       | (FoTs cover all relevant  
|                       | IH matrices)  
|                       | Technology  
|                       | sub-type/  
|                       | Detector  
|                       | Published Reference  
|                       | Method/Title of In-  
|                       | house Method  
|                       | Method Description  
|                       | or Analyte  
|                       | (for internal methods  
|                       | only)  
| Spectrometry Core    | Atomic Absorption  
|                       | FAA  
|                       | NIOSH 7082  
|                       | Inductively-Coupled  
|                       | Plasma  
|                       | ICP/AES  
|                       | NIOSH 7300  
|                       | X-ray Diffraction (XRD)  
|                       | NIOSH 7500  
| Asbestos/Fiber  
| Microscopy Core     | Phase Contrast  
|                       | Microscopy (PCM)  
|                       | NIOSH 7400  
| Miscellaneous Core  | Gravimetric  
|                       | NIOSH 0500  
|                       | NIOSH 0600  

A complete listing of currently accredited Industrial Hygiene laboratories is available on the AIHA-LAP, LLC website at:  
[http://www.aihaaccreditedlabs.org](http://www.aihaaccreditedlabs.org)
AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

NVL Laboratories, Inc. Laboratory ID: 101861
4708 Aurora Avenue N., Seattle, WA 98103 Issue Date: 03/29/2019

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: 02/07/1997

<table>
<thead>
<tr>
<th>Field of Testing (FoT)</th>
<th>Technology sub-type/Detector</th>
<th>Method</th>
<th>Method Description (for internal methods only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paint</td>
<td></td>
<td>EPA SW-846 3051</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>EPA SW-846 7000B</td>
<td></td>
</tr>
<tr>
<td>Soil</td>
<td></td>
<td>EPA SW-846 3051</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>EPA SW-846 7000B</td>
<td></td>
</tr>
<tr>
<td>Settled Dust by Wipe</td>
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<td>EPA SW-846 3051</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>EPA SW-846 7000B</td>
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</tr>
<tr>
<td>Airborne Dust</td>
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<td>NIOSH 7082</td>
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</tbody>
</table>

A complete listing of currently accredited Environmental Lead laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org
About AECOM

AECOM (NYSE: ACM) is a global provider of professional technical and management support services to a broad range of markets, including transportation, facilities, environmental, energy, water and government. With approximately 45,000 employees around the world, AECOM is a leader in all of the key markets that it serves. AECOM provides a blend of global reach, local knowledge, innovation, and collaborative technical excellence in delivering solutions that enhance and sustain the world’s built, natural, and social environments. A Fortune 500 company, AECOM serves clients in more than 100 countries and has annual revenue in excess of $6 billion.

More information on AECOM and its services can be found at www.aecom.com.