Hazardous Materials Survey Report
Summary of Findings/Good Faith Survey

SOM T/A Wing CEDI & Academic Affairs Upgrades
HSC F Wing
UW 206164
UW, Seattle, Washington

Prepared for:
University of Washington
Facilities - Project Delivery Group
Facilities Services Admin. Bldg. (FSAB)
Box 352205
Seattle, WA 98195-2205

December 24, 2020
PBS Project No. 40035.897
TABLE OF CONTENTS

1 PROJECT BACKGROUND ............................................................................................................................. 2

2 SURVEY PROCESS......................................................................................................................................... 2

3 FINDINGS...................................................................................................................................................... 2
   3.1 Asbestos Containing Materials.................................................................................................................. 2
   3.2 Lead-Containing Paint (LCP) and Mortar .................................................................................................. 3
   3.3 PCB-Containing Components .................................................................................................................... 4
   3.4 Mercury-Containing Components & P-Traps ............................................................................................ 4
   3.5 Fume hood and Associated Ductwork ...................................................................................................... 4
   3.6 Silica-Containing Materials ..................................................................................................................... 4

4 RECOMMENDATIONS.................................................................................................................................. 4
   4.1 Asbestos-Containing Materials (ACM) ..................................................................................................... 4
   4.2 Lead-Containing Paint (LCP) .................................................................................................................... 5
   4.3 PCB-Containing Components .................................................................................................................... 5
   4.4 Mercury-Containing Components & P-Traps ............................................................................................ 5
   4.5 Fume Hood Exhaust Ductwork .................................................................................................................. 6
   4.6 Silica-Containing Materials ..................................................................................................................... 6

5 LIMITATIONS................................................................................................................................................ 6

APPENDICES

APPENDIX A: Photo Documentation & PLM Bulk Sampling Information
PLM Bulk Sample Inventory
PLM Bulk Sample Laboratory Data Sheets
PLM Bulk Sample Chain of Custody Documentation

APPENDIX B: AA Lead Paint Chip Sampling Information
AA Lead Sample Inventory
AA Lead Laboratory Data Sheets
AA Lead Chain of Custody Documentation

APPENDIX C: Certifications

©2020 PBS Engineering and Environmental Inc.
1 PROJECT BACKGROUND
PBS Engineering and Environmental Inc. performed a limited hazardous materials survey as part of the planned existing lab on the F wing 2nd floor of the University of Washington HSC. The general project scope includes:

- Labs F 218, F 218A and F 216 tenant improvements and the floor below (Lab piping demolition and capping in F 106).

Areas inspected were determined through communication with the UW PDG and the preliminary scope design write. It is the intent of this investigation to comply with applicable regulatory requirements for the identification of ACMs prior to renovation activities, and to identify selected other regulated materials as indicated that may exist in areas of the project to be impacted.

At the request of Jennifer Reynolds of UW Facilities Project Delivery Group, all accessible areas of the laboratory and offices in the project scope were inspected for the presence of asbestos-containing materials (ACM) and lead-containing paint (LCP), polychlorinated biphenyls (PCBs), and mercury-containing components.

2 SURVEY PROCESS
Accessible areas included in the project scope were inspected by AHERA-Certified Building Inspector Janet Murphy (Cert. Number IMR-20-8300A Exp. 3/19/2021) in November 2020. The survey was limited and involved non-destructive sampling. Inaccessible spaces are defined as those requiring selective demolition (such as chases), fall protection, or confined-space entry protocols to gain access. When observed, suspect asbestos-containing materials were sampled, assigned a unique identification number, and transmitted for analysis to Seattle Asbestos Test (NVLAP # 201057-0) under chain-of-custody protocols.

Samples were analyzed according to EPA Method 600R-93/116 using Polarized Light Microscopy (PLM), which has a reliable limit of quantification of 1% asbestos by volume. PBS endeavors to determine the presence and estimate the condition of suspect materials in all accessible areas included in the scope of work. PBS reviewed limited previous inspection surveys and data obtained from the project areas as available, and pertinent information is incorporated into this report and are attached.

3 FINDINGS
3.1 Asbestos Containing Materials
Federal and state regulations define an asbestos-containing material (ACM) per PLM analysis as any material that contains greater than 1% asbestos. ACMs are identified below per location.

Labs F 218, F 218A and F 216

- ACM pipe insulation and mudded pipe fittings including the spaces below the F wing Labs. (approximately 180 linear feet) - no damage noted on existing ACM pipe and fitting insulation. ACMs are associated with heating radiator pipes at ceiling level and potentially in lab cabinets (lab potable water lines). Other pipe insulation in the 3 Labs is fiberglass insulation wrapped. ACM is presumed present on the 1st floor (F 106 shop space).
- Assumed ACM floor pipe penetrations associated with Lab piping (approx. 30 LF).
- ACM Black mastic under non-ACM 12” vinyl floor tiles – (approx. 1,700 SF). ACM flooring is assumed present in adjacent hallways/corridors (approx. 2,000 SF).
• ACM fume hood liners and countertop gray cement boards associated with four fume hoods. Total approx. 800 SF.
• ACM drying cement rack, dark gray approx. 8 SF (in Lab F 218A).
• Window frame with ACM putty (west facing windows) of F 218. Total approximately 100 LF.
• Assumed ACM sinks with undercoating (total of 4 sinks).
• Assumed ACM lining in fire doors to F 218 (one door).
• Assumed ACM mastic/glue used as lab cabinet and shelving unit adhesives (assumed 20 SF) in F218A and F216.

**Advisory Notice - ACM Caution (Hidden Materials):** The possibility exist that suspect ACM may be present at concealed locations in wall and ceiling cavities, within HVAC equipment and potentially in other concealed areas and the space below and above. These may include, but are not limited to wall mastics, caulking, and sealants on HVAC equipment, construction adhesives, wiring and electrical insulators, pipe covering and insulation and vapor barriers. Stop work immediately and promptly inform the UW if suspect materials are noted.

**Non-ACMs:** The following materials were sampled by PBS and do not contain asbestos in detectible concentrations:

• Composite joint compound and wallboard – throughout Labs
• 12” vinyl floor tile (beige with streaks)
• 6” baseboard (brown) and mastic (brown)
• Duct sealants (beige) around metal ductwork
• Brown pressed boards/lining under sink cabinets and used as lab drawer lining
• Brown lab cabinet caulking at joint seams
• Cement ceiling patch (painted white)
• Concrete block mortar (painted off-white) – soft loose material
• Pipe patching at pipe ends associated with fiberglass pipe insulation (lab piping)
• Lab cabinet countertop (laminate boards and glue)

For locations and laboratory results, see Appendix A.

### 3.2 Lead-Containing Paint (LCP) and Mortar

Representative painted coatings and one (1) mortar from the project areas were collected by PBS and analyzed for lead content. The samples were assigned unique identification numbers and transmitted to NVL Laboratories, Inc. (AIHA IH #101861) in Seattle, Washington under chain-of-custody protocols for analysis using Flame Atomic Absorption (FAA).

Per analytical method via FAA, Lead was detected in three of the samples collected. The following is a list of samples collected and general location:

• Yellow paint on metal window frames (0.048% lead) in west windows of F 218
• Off-white/white paint on concrete ceilings and walls (0.020% lead) – in all 3 labs
• Mortar of concrete block walls – in all 3 labs (0.018% lead)

Samples determined NOT to contain lead above detectable limits include:

• White paint on Gypsum Wallboard Walls – F 218 and F 218A

Dec 24, 2020

PBS Project No. 40035.897
For locations and results of paint sampling see Appendix B.

3.3 PCB-Containing Components
PBS inspected representative fluorescent light fixture ballasts that are to be removed to facilitate the planned demolition. Three fluorescent light fixtures at the site in F 218 were inspected and found to contain electronic ballasts. Electronic ballasts do not contain suspect PCB compound. Older magnetic ballasts (4 ballast) are assumed in F 216 and F 218A.

3.4 Mercury-Containing Components & P-Traps
Compact fluorescent light tubes and compact fluorescent lights (CFL) are present throughout the work areas. All light tubes and CFL within the areas of work are presumed to contain mercury vapors in small concentrations. Approximately 50 tubes and CFL were observed in the work area.

Lab P-Traps: Suspect laboratory sinks with p-traps and associated waste line plumbing potentially containing residual mercury, regulated metals, residual chemicals, and other suspect products were observed within the project area (Labs F218 and F218A).

A mercury vapor screen sampling (in Lab sink cabinets and lab countertops) was completed by PBS in as part of this assessment. A mercury analyzer (Jerome J-505) was used to analyze the ambient air in sink cabinets and lab countertops for potential mercury spill or contamination. All readings obtained from the laboratories were 0.00 ug/m³ and based on the direct read vapor analyzer results; no mercury in the environment was detected in the sink cabinets and lab countertops at the project site. However, other regulated materials and conditions such as residual metals may be present in p-traps.

3.5 Fume hood and Associated Ductwork
Four fume hoods are located in the 2 Labs spaces and residual regulated metals and other chemicals may be present within fume hoods and associated exhaust ductwork as well. Chemicals, regulated metals, and other hazardous materials agents were used in the laboratory. Owner may decommission laboratory cabinets, benches and fume hood per UW EHS requirements (UW form 1800 – Notice of Laboratory Move out).

3.6 Silica-Containing Materials
Certain building materials, including but not limited to fireproofing, concrete panels, plaster walls/ceilings, wall blocks, mortar, ceiling tiles and gypsum walls may contain silica. PBS performed visual observations for silica-containing materials. Based on the field observations and the scope of work, the following materials are assumed to contain silica:
- Concrete, CMU and masonry brick walls and concrete floor/ceiling deck
- Mortar associated with concrete ceiling and CMU walls
- Wallboard system (with mud/tape)

4 RECOMMENDATIONS
4.1 Asbestos-Containing Materials (ACM)
ACMs are present in the areas to be impacted by the project.
PBS recommends that all ACMs that may be impacted by qualified Washington State licensed asbestos abatement contractor according to applicable local, state and federal regulations (such as Washington State Labor and Industries regulations for Asbestos WAC 296-62-077).

Advisory Notice - ACM Caution (Hidden Materials): The possibility exist that suspect ACM may be present at concealed locations in wall and ceiling cavities, within HVAC equipment and potentially in other select concealed areas. These may include, but are not limited to waterproofing membrane, vapor barriers, internal gasketing, mastics, caulking, and sealants on HVAC equipment, construction adhesives, electrical insulators, below grade pipe covering and insulation.

In the event that suspect ACMs not included in this report are encountered during construction, contractors should stop work immediately and inform the Owner promptly for confirmation testing. All untested materials should be presumed asbestos-containing or tested for asbestos content prior to impact during construction.

4.2 Lead-Containing Paint (LCP)
Representative painted coatings from the project locations were found to contain lead by laboratory analysis.

Impact of painted surfaces with detectable concentrations of Lead requires construction activities to be performed according to Washington Labor and Industries regulations for Lead in Construction (WAC 296-155-176). Workers impacting LCP should be Lead/Metals-trained, provided the proper personal protective equipment and use proper work methods to limit occupational and environmental exposure to lead until an initial exposure assessment has been conducted. Handling/managing of painted coatings that contain lead content must be in accordance with 40 CFR Part 745 Lead and WAC 296-155-176. Disposal of components that contain lead must be performed in accordance with WAC 173-303.

Painted coatings may exist in inaccessible areas of the work area or in secondary coatings. Any previously unidentified painted coatings should be considered lead-containing until sampled and proven otherwise. Dust control and housekeeping is crucial in preventing worker and occupant exposure.

4.3 PCB-Containing Components
PBS recommends all light ballasts be inspected prior to disposal. Magnetic ballasts should be presumed to contain PCBs and properly removed, stored, transported and disposed of in accordance with Washington Administrative Code (WAC) 173-303 Dangerous Waste Regulations and 40 CFR Part 761 Subpart D.

Electronic ballasts do not contain PCB’s and can be disposed of as general debris in compliance with applicable codes and endpoint facility requirements.

4.4 Mercury-Containing Components & P-Traps
All compact fluorescent lights (bulbs and tubes) are presumed to be mercury-containing. Mercury is known to be toxic and requires special handling and proper disposal, ideally through recycling. PBS recommends that fluorescent light tubes and compact lights be properly handled, managed, and recycled in accordance with applicable regulations and the Owner’s policy during demolition/renovation activities.

Lab Sink P-Traps: PBS recommends that laboratory P-trap including waste plumbing lines be properly handled, removed and packaged into UW supplied containers in accordance with applicable regulations and University policy during laboratory demolition activities.
4.5 **Fume Hood Exhaust Ductwork**

Chemicals, regulated metals, and other agents are known to be used in the laboratories within the project site. Laboratory fume hoods, canopy, and associated exhaust ductwork may also contain low-level residual concentrations of regulated metals and chemicals. In accordance with UW protocol, cleaning of the fume hood and associated exhaust ductwork and as well as the provision of proper worker protection, environmental and infection controls, and proper disposal, may be part of the scope. The project contractor may be responsible for proper handling, decontamination, and cleanup as necessary of all fume hood exhaust ductwork to be impacted and address worker protection, environmental controls, temporary storage, waste load-out from the building and proper disposal of “decontaminated” ductwork.

4.6 **Silica-Containing Materials**

Suspect silica-containing materials are assumed to be in concrete walls, CMU walls, and concrete floor/ceiling deck, and wallboard system.

Construction activities including, but not limited to, chipping, sawing and jack hammering require control of potentially airborne silica dust. Impact of these building materials with detectable concentrations of silica should be performed according to Washington Labor and Industries regulations for Silica in Construction (WAC 296-840 and 296-841 - Airborne Contaminants).

Workers impacting these building materials should be crystalline Silica trained, provided the proper personal protective equipment and use proper work methods and engineering controls to limit occupational and environmental exposure to silica until an initial exposure assessment has been conducted.

5 **LIMITATIONS**

Suspect materials (regulated lead-containing paint or asbestos) may exist in inaccessible areas at the project site, such as in ceiling/wall cavities and in interstitial spaces.

PBS endeavors to determine the presence and estimate the condition of suspect materials in all accessible areas included in the scope of work. In the event suspect materials are uncovered during construction, contractor should contact immediately the UW and PBS for associated asbestos or other regulated hazardous materials confirmation testing.

**Report prepared by:**

PBS Engineering and Environmental Inc.

Prepared by:
Janet Murphy
AHERA Building Inspector
Cert. No. IMR-20-8300A Exp. 3/19/2021

Willem Mager
Sr. Project Mgr., AHERA Building Inspector
Cert. #176599, exp. 1/22/2021
APPENDIX A

Photo Documentation
PLM Asbestos Sample Inventory
PLM Asbestos Laboratory Analysis
PLM Asbestos Sample Chain of Custody
Asbestos-containing black mastic under 12" floor tiles

Photo 1: Labs F218, F218A and F216 with ACM black mastic, ACM fume hood liners and ACM window frame putty.

Photo 2: Labs F218A with ACM black floor mastic, ACM fume hood liners and ACM drying rack. Shelving units and behind cabinets may have suspect mastic on walls.

Photo 3: Labs F218, F218A and F216 with ACM pipe insulation and mudded pipe fittings at ceiling level piping. Lead paint identified in ceilings and walls.
Photo 4: Assumed ACM floor tile and mastic in hallways adjacent to Labs F218, F218A and F216.

Photo 5: ACM window frame putty between joints of ceramic tile window sills and metal frames.
<table>
<thead>
<tr>
<th>PBS Sample #</th>
<th>Material Type</th>
<th>Sample Location F wing</th>
<th>Lab Description</th>
<th>Lab Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>40035.897 -1</td>
<td>Straight run insulation / TSI</td>
<td>F218 by windows at ceiling</td>
<td>Layer 1: White powdery fibrous material with paint and fibrous mesh</td>
<td>40% Chrysotile 20% Amosite</td>
</tr>
<tr>
<td>40035.897 -2</td>
<td>Sink undercoat (black)</td>
<td>F218A - sink cabinet</td>
<td>Layer 1: Black asphaltic material</td>
<td>NAD</td>
</tr>
<tr>
<td>40035.897 -3</td>
<td>12” Floor tile (beige) Black mastic</td>
<td>F218 by floor radiators</td>
<td>Layer 1: White compacted powdery material and fibrous debris Layer 2: White vinyl Layer 3: Black asphalctic mastic</td>
<td>NAD 6% Chrysotile</td>
</tr>
<tr>
<td>40035.897 -4</td>
<td>12” Floor tile (beige)</td>
<td>F218A by Fumehood</td>
<td>Layer 1: Brown brittle mastic Layer 2: White vinyl Layer 3: Black asphalctic mastic with debris</td>
<td>NAD 8% Chrysotile</td>
</tr>
<tr>
<td>40035.897 -5</td>
<td>Gray hood liner</td>
<td>F218 South fume hood</td>
<td>Layer 1: Gray cementitious fibrous material</td>
<td>50% Chrysotile</td>
</tr>
<tr>
<td>40035.897 -6</td>
<td>Gypsum wallboard Joint compound wall</td>
<td>F218 South wallboard</td>
<td>Layer 1: White compacted powdery material with paint Layer 2: White chalky material with paper and paint</td>
<td>NAD</td>
</tr>
<tr>
<td>40035.897 -7</td>
<td>Gypsum wallboard Joint compound wall</td>
<td>F218A South wall</td>
<td>Layer 1: White compacted powdery material with paint Layer 2: White chalky material with paper and paint</td>
<td>NAD</td>
</tr>
<tr>
<td>40035.897 -8</td>
<td>Brown baseboard Brown mastic</td>
<td>F218 West wall 7” baseboard</td>
<td>Layer 1: Brown rubbery material Layer 2: Brown brittle mastic</td>
<td>NAD</td>
</tr>
<tr>
<td>40035.897 -9</td>
<td>Brown baseboard Brown mastic</td>
<td>F216 East wall</td>
<td>Layer 1: Brown rubbery material Layer 2: Brown brittle mastic</td>
<td>NAD</td>
</tr>
<tr>
<td>40035.897 -10</td>
<td>Duct / Beige sealant</td>
<td>F218A metal ductwork at joints</td>
<td>Layer 1: Light gray soft/elastic material</td>
<td>NAD</td>
</tr>
<tr>
<td>40035.897 -11</td>
<td>Brown pressed board / Liner</td>
<td>F218 under lab bench cabinet</td>
<td>Layer 1: Brown compressed fibrous material</td>
<td>NAD</td>
</tr>
<tr>
<td>40035.897 -12</td>
<td>Brown lab bench caulk</td>
<td>F218A lab bench joint sealant</td>
<td>Layer 1: Black soft/elastic material with debris</td>
<td>NAD</td>
</tr>
<tr>
<td>40035.897 -13</td>
<td>Ceiling patch with white paint</td>
<td>F218 concrete ceiling patch</td>
<td>Layer 1: Gray cementitious material with paint</td>
<td>NAD</td>
</tr>
</tbody>
</table>

Dec 24, 2020

NAD - No Asbestos Detected
<table>
<thead>
<tr>
<th>PBS Sample #</th>
<th>Material Type</th>
<th>Sample Location F wing</th>
<th>Lab Description</th>
<th>Lab Result</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>40035.897 -14</td>
<td>Pipe patch at straight runs</td>
<td>F218 at ceiling level</td>
<td>Layer 1: Off-white compressed fibrous material with paint</td>
<td>NAD</td>
<td>NVL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Layer 2: Light brown soft mastic with metal foil and fibrous mesh</td>
<td>NAD</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Layer 3: Yellow fibrous material</td>
<td>NAD</td>
<td></td>
</tr>
<tr>
<td>40035.897 -15</td>
<td>Concrete masonry unit mortar,</td>
<td>F218A North wall</td>
<td>Layer 1: Gray cementitious material with paint</td>
<td>NAD</td>
<td>NVL</td>
</tr>
<tr>
<td></td>
<td>loose crumbly with white paint</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40035.897 -16</td>
<td>Pipe patch / Lab piping</td>
<td>F218 behind lab scale</td>
<td>Layer 1: White soft material</td>
<td>NAD</td>
<td>NVL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Layer 2: Off-white compressed fibrous material</td>
<td>NAD</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Layer 3: Light orange soft mastic with fibrous mesh and metal foil</td>
<td>NAD</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Layer 4: Yellow fibrous material</td>
<td>NAD</td>
<td></td>
</tr>
<tr>
<td>40035.897 -17</td>
<td>Window putty at metal frame joints</td>
<td>F218 West window frames</td>
<td>Layer 1: Light gray soft putty material with debris</td>
<td>7% Chrysotile</td>
<td>NVL</td>
</tr>
<tr>
<td>40035.897 -18</td>
<td>Lab cabinet countertop (laminate)</td>
<td>F218 lab cabinet</td>
<td>Layer 1: Brown and black compressed fibrous vinyl material</td>
<td>NAD</td>
<td>NVL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Layer 2: Light red soft adhesive</td>
<td>NAD</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Layer 3: Brown compressed fibrous material</td>
<td>NAD</td>
<td></td>
</tr>
</tbody>
</table>
November 23, 2020

Willem Mager  
PBS Environmental - Seattle  
214 E Galer St. Suite. 300  
Seattle, WA 98102

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 2019174.00

Client Project: 40035.897  
Location: HSC SOM TA EDIA / 206164

Dear Mr. Mager,

Enclosed please find test results for the 18 sample(s) submitted to our laboratory for analysis on 11/18/2020.

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,

Matt Macfarlane, Asbestos Lab Supervisor
### Lab ID: 20120861  
**Client Sample #: 40035.897-1**  
**Location:** HSC SOM TA EDIA / 206164

**Layer 1 of 1**  
**Description:** White powdery fibrous material with paint and fibrous mesh

<table>
<thead>
<tr>
<th>Non-Fibrous Materials:</th>
<th>Other Fibrous Materials:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Binder/Filler, Paint, Fine particles</td>
<td>Cellulose 30%</td>
</tr>
</tbody>
</table>

**Asbestos Type:** %

- **Chrysotile 40%**
- **Amosite 20%**

---

### Lab ID: 20120862  
**Client Sample #: 40035.897-2**  
**Location:** HSC SOM TA EDIA / 206164

**Layer 1 of 1**  
**Description:** Black asphaltic material

<table>
<thead>
<tr>
<th>Non-Fibrous Materials:</th>
<th>Other Fibrous Materials:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt/Binder, Debris, Fine particles</td>
<td>Cellulose 2%</td>
</tr>
</tbody>
</table>

**Asbestos Type:** %

- None Detected ND

---

### Lab ID: 20120863  
**Client Sample #: 40035.897-3**  
**Location:** HSC SOM TA EDIA / 206164

**Layer 1 of 3**  
**Description:** White compacted powdery material and fibrous debris

<table>
<thead>
<tr>
<th>Non-Fibrous Materials:</th>
<th>Other Fibrous Materials:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Binder/Filler, Calcareous particles, Debris</td>
<td>Synthetic fibers 7%</td>
</tr>
<tr>
<td>Fine particles</td>
<td>Cellulose 3%</td>
</tr>
</tbody>
</table>

**Layer 2 of 3**  
**Description:** White vinyl

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

**Layer 3 of 3**  
**Description:** Black asphaltic mastic

<table>
<thead>
<tr>
<th>Non-Fibrous Materials:</th>
<th>Other Fibrous Materials:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt/Binder, Fine particles</td>
<td>Cellulose 3%</td>
</tr>
</tbody>
</table>

**Asbestos Type:** %

- Chrysotile 6%

---

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.
### Lab ID: 20120864  Client Sample #: 40035.897-4
**Location:** HSC SOM TA EDIA / 206164

<table>
<thead>
<tr>
<th>Layer 1 of 3</th>
<th>Description</th>
<th>Non-Fibrous Materials</th>
<th>Other Fibrous Materials: %</th>
<th>Asbestos Type: %</th>
<th>Asbestos Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Layer 1</td>
<td>Brown brittle mastic</td>
<td>Mastic/Binder, Fine particles</td>
<td>Wollastonite 6%</td>
<td></td>
<td>None Detected ND</td>
</tr>
<tr>
<td>Layer 2</td>
<td>White vinyl</td>
<td>Non-Fibrous Materials:</td>
<td>Other Fibrous Materials: %</td>
<td>Asbestos Type: %</td>
<td>None Detected ND</td>
</tr>
<tr>
<td>Layer 3</td>
<td>Black asphaltic mastic with debris</td>
<td>Adhesive/Binder, Fine particles, Debris</td>
<td>Other Fibrous Materials:</td>
<td>Asbestos Type: %</td>
<td>Chrysotile 8%</td>
</tr>
</tbody>
</table>

### Lab ID: 20120865  Client Sample #: 40035.897-5
**Location:** HSC SOM TA EDIA / 206164

<table>
<thead>
<tr>
<th>Layer 1 of 1</th>
<th>Description</th>
<th>Non-Fibrous Materials</th>
<th>Other Fibrous Materials: %</th>
<th>Asbestos Type: %</th>
<th>Asbestos Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Layer 1</td>
<td>Gray cementitious fibrous material</td>
<td>Cement/Binder, Fine particles</td>
<td>None Detected ND</td>
<td></td>
<td>Chrysotile 50%</td>
</tr>
</tbody>
</table>

### Lab ID: 20120866  Client Sample #: 40035.897-6
**Location:** HSC SOM TA EDIA / 206164

<table>
<thead>
<tr>
<th>Layer 1 of 2</th>
<th>Description</th>
<th>Non-Fibrous Materials</th>
<th>Other Fibrous Materials: %</th>
<th>Asbestos Type: %</th>
<th>Asbestos Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Layer 1</td>
<td>White compacted powdery material with paint</td>
<td>Paint, Calcareous binder, Calcareous particles</td>
<td>None Detected ND</td>
<td></td>
<td>None Detected ND</td>
</tr>
<tr>
<td>Layer 2</td>
<td>White chalky material with paper and paint</td>
<td>Gypsum/Binder, Paint, Fine particles</td>
<td>Other Fibrous Materials:</td>
<td></td>
<td>None Detected ND</td>
</tr>
</tbody>
</table>

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.
### Lab ID: 20120867  Client Sample #: 40035.897-7

**Location:** HSC SOM TA EDIA / 206164

<table>
<thead>
<tr>
<th>Layer 1 of 2</th>
<th>Description</th>
<th>Non-Fibrous Materials</th>
<th>Other Fibrous Materials</th>
<th>Asbestos Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White compacted powdery material with paint</td>
<td>Paint, Calcareous binder, Calcareous particles</td>
<td>None Detected</td>
<td>ND</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Layer 2 of 2</th>
<th>Description</th>
<th>Non-Fibrous Materials</th>
<th>Other Fibrous Materials</th>
<th>Asbestos Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White chalky material with paper and paint</td>
<td>Gypsum/Binder, Paint, Fine particles</td>
<td>Cellulose</td>
<td>34%</td>
</tr>
</tbody>
</table>

### Lab ID: 20120868  Client Sample #: 40035.897-8

**Location:** HSC SOM TA EDIA / 206164

<table>
<thead>
<tr>
<th>Layer 1 of 2</th>
<th>Description</th>
<th>Non-Fibrous Materials</th>
<th>Other Fibrous Materials</th>
<th>Asbestos Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brown rubbery material</td>
<td>Rubber/Binder, Fine grains, Fine particles</td>
<td>None Detected</td>
<td>ND</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Layer 2 of 2</th>
<th>Description</th>
<th>Non-Fibrous Materials</th>
<th>Other Fibrous Materials</th>
<th>Asbestos Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brown brittle mastic</td>
<td>Mastic/Binder, Fine particles</td>
<td>Wollastonite</td>
<td>5%</td>
</tr>
</tbody>
</table>

### Lab ID: 20120869  Client Sample #: 40035.897-9

**Location:** HSC SOM TA EDIA / 206164

<table>
<thead>
<tr>
<th>Layer 1 of 2</th>
<th>Description</th>
<th>Non-Fibrous Materials</th>
<th>Other Fibrous Materials</th>
<th>Asbestos Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brown rubbery material</td>
<td>Rubber/Binder, Fine grains, Fine particles</td>
<td>None Detected</td>
<td>ND</td>
</tr>
</tbody>
</table>

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:** PBS Environmental - Seattle  
**Address:** 214 E Galer St. Suite. 300  
Seattle, WA 98102

**Attention:** Mr. Willem Mager  
Project Location: HSC SOM TA EDIA / 206164

**Batch #: 2019174.00**  
Client Project #: 40035.897  
Date Received: 11/18/2020  
Samples Received: 18  
Samples Analyzed: 18  
Method: EPA/600/R-93/116

### Layers and Description

<table>
<thead>
<tr>
<th>Layer</th>
<th>Description</th>
<th>Non-Fibrous Materials</th>
<th>Other Fibrous Materials</th>
<th>Asbestos Type</th>
<th>Sampled by</th>
<th>Analyzed by</th>
<th>Reviewed by</th>
<th>Sampled Date</th>
<th>Analyzed Date</th>
<th>Project Location</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Light gray soft/elastic material</td>
<td>CAULKING COMPOUND, DEBRIS, FINE PARTICLES</td>
<td>None Detected</td>
<td>ND</td>
<td></td>
<td>Michael Jenkins</td>
<td>Matt Macfarlane</td>
<td>11/23/2020</td>
<td>11/23/2020</td>
<td>HSC SOM TA EDIA / 206164</td>
<td>Location</td>
</tr>
</tbody>
</table>

**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/M-4-82-020 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.

---

ASB-02

---

page 5 of 9
Client: PBS Environmental - Seattle  
Address: 214 E Galer St. Suite. 300  
Seattle, WA 98102

Attention: Mr. Willem Mager  
Project Location: HSC SOM TA EDIA / 206164

---

### Layer 1 of 3
**Description:** Off-white compressed fibrous material with paint  
- **Non-Fibrous Materials:** Paint, Binder/Filler, Fine particles  
- **Other Fibrous Materials:** Cellulose 98%

### Layer 2 of 3
**Description:** Light brown soft mastic with metal foil and fibrous mesh  
- **Non-Fibrous Materials:** Mastic/Binder, Metal foil, Fine particles  
- **Other Fibrous Materials:** Glass fibers 30%

### Layer 3 of 3
**Description:** Yellow fibrous material  
- **Non-Fibrous Materials:** Binder/Filler, Fine particles  
- **Other Fibrous Materials:** Glass fibers 98%

---

**Lab ID:** 20120875  
**Client Sample #:** 40035.897-15

**Location:** HSC SOM TA EDIA / 206164  
**Layer 1 of 1**
- **Description:** Gray cementitious material with paint  
- **Non-Fibrous Materials:** Cement/Binder, Sand, Paint  
- **Other Fibrous Materials:** None Detected ND

---

**Lab ID:** 20120876  
**Client Sample #:** 40035.897-16

**Location:** HSC SOM TA EDIA / 206164

**Layer 1 of 4**
- **Description:** White soft material  
- **Non-Fibrous Materials:** Binder/Filler, Fine particles  
- **Other Fibrous Materials:** None Detected ND

**Layer 2 of 4**
- **Description:** Off-white compressed fibrous material  
- **Non-Fibrous Materials:** Binder/Filler, Fine particles  
- **Other Fibrous Materials:** Cellulose 98%

**Layer 3 of 4**
- **Description:** Light orange soft mastic with fibrous mesh and metal foil  
- **Non-Fibrous Materials:** Mastic/Binder, Metal foil, Fine particles  
- **Other Fibrous Materials:** Glass fibers 30%

---

**Sampled by:** Client  
**Reviewed by:** Matt Macfarlane  
**Analyzed by:** Michael Jenkins  
**Date:** 11/23/2020  
**Reviewed by:** Matt Macfarlane, Asbestos Lab Supervisor  
**Date:** 11/23/2020

**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:** PBS Environmental - Seattle  
**Address:** 214 E Galer St. Suite. 300  
**Seattle, WA 98102**

**Attention:** Mr. Willem Mager  
**Project Location:** HSC SOM TA EDIA / 206164

**Batch #: 2019174.00**  
**Client Project #: 40035.897**  
**Date Received:** 11/18/2020  
**Samples Received:** 18  
**Samples Analyzed:** 18  
**Method:** EPA/600/R-93/116

<table>
<thead>
<tr>
<th>Layer 4 of 4</th>
<th>Description</th>
<th>Non-Fibrous Materials:</th>
<th>Other Fibrous Materials:</th>
<th>Asbestos Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yellow fibrous material</td>
<td>Binder/Filler, Fine particles</td>
<td>Glass fibers</td>
<td>98%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Layer 1 of 1</th>
<th>Description</th>
<th>Non-Fibrous Materials:</th>
<th>Other Fibrous Materials:</th>
<th>Asbestos Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Light gray soft putty material with debris</td>
<td>Putty Compound, Debris, Fine particles</td>
<td>None Detected</td>
<td>ND</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Layer 1 of 3</th>
<th>Description</th>
<th>Non-Fibrous Materials:</th>
<th>Other Fibrous Materials:</th>
<th>Asbestos Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brown and black compressed fibrous vinyl material</td>
<td>Vinyl/Binder, Fine particles</td>
<td>Cellulose</td>
<td>65%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Layer 2 of 3</th>
<th>Description</th>
<th>Non-Fibrous Materials:</th>
<th>Other Fibrous Materials:</th>
<th>Asbestos Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Light red soft adhesive</td>
<td>Adhesive/Binder, Fine particles</td>
<td>None Detected</td>
<td>ND</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Layer 3 of 3</th>
<th>Description</th>
<th>Non-Fibrous Materials:</th>
<th>Other Fibrous Materials:</th>
<th>Asbestos Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brown compressed fibrous material</td>
<td>Binder/Filler, Fine particles</td>
<td>Wood fibers</td>
<td>98%</td>
</tr>
</tbody>
</table>

**Lab ID:** 20120877  
**Client Sample #:** 40035.897-17  
**Location:** HSC SOM TA EDIA / 206164

**Lab ID:** 20120878  
**Client Sample #:** 40035.897-18  
**Location:** HSC SOM TA EDIA / 206164

**Sampled by:** Client  
**Analyzed by:** Michael Jenkins  
**Reviewed by:** Matt Macfarlane  
**Date:** 11/23/2020  
**Date:** 11/23/2020  
**Signature:**

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.
**ASBESTOS LABORATORY SERVICES**

**Company**: PBS Environmental - Seattle  
**Address**: 214 E Galer St. Suite. 300 Seattle, WA 98102  
**Project Manager**: Mr. Willem Mager  
**Phone**: (206) 233-9639  
**Office**: (800) 628-9639

**NVL Batch Number**: 2019174.00  
**TAT**: 3 Days  
**Due Date**: 11/23/2020  
**Time**: 3:20 PM

**Email**: willem.mager@pbsusa.com  
**Fax**: (866) 727-0140

**NVL Batch Number**: 2019174.00  
**Subcategory**: PLM Bulk  
**Item Code**: ASB-02

**Total Number of Samples**: 18  
**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>20120861</td>
<td>40035.897-1</td>
<td>A</td>
</tr>
<tr>
<td>2</td>
<td>20120862</td>
<td>40035.897-2</td>
<td>A</td>
</tr>
<tr>
<td>3</td>
<td>20120863</td>
<td>40035.897-3</td>
<td>A</td>
</tr>
<tr>
<td>4</td>
<td>20120864</td>
<td>40035.897-4</td>
<td>A</td>
</tr>
<tr>
<td>5</td>
<td>20120865</td>
<td>40035.897-5</td>
<td>A</td>
</tr>
<tr>
<td>6</td>
<td>20120866</td>
<td>40035.897-6</td>
<td>A</td>
</tr>
<tr>
<td>7</td>
<td>20120867</td>
<td>40035.897-7</td>
<td>A</td>
</tr>
<tr>
<td>8</td>
<td>20120868</td>
<td>40035.897-8</td>
<td>A</td>
</tr>
<tr>
<td>9</td>
<td>20120869</td>
<td>40035.897-9</td>
<td>A</td>
</tr>
<tr>
<td>10</td>
<td>20120870</td>
<td>40035.897-10</td>
<td>A</td>
</tr>
<tr>
<td>11</td>
<td>20120871</td>
<td>40035.897-11</td>
<td>A</td>
</tr>
<tr>
<td>12</td>
<td>20120872</td>
<td>40035.897-12</td>
<td>A</td>
</tr>
<tr>
<td>13</td>
<td>20120873</td>
<td>40035.897-13</td>
<td>A</td>
</tr>
<tr>
<td>14</td>
<td>20120874</td>
<td>40035.897-14</td>
<td>A</td>
</tr>
<tr>
<td>15</td>
<td>20120875</td>
<td>40035.897-15</td>
<td>A</td>
</tr>
<tr>
<td>16</td>
<td>20120876</td>
<td>40035.897-16</td>
<td>A</td>
</tr>
<tr>
<td>17</td>
<td>20120877</td>
<td>40035.897-17</td>
<td>A</td>
</tr>
<tr>
<td>18</td>
<td>20120878</td>
<td>40035.897-18</td>
<td>A</td>
</tr>
</tbody>
</table>

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

**Received by**: Fatima Khan  
**Analyzed by**: Michael Jenkins

**Results Called by**: NVL  
**Date**: 11/18/20  
**Time**: 1520

**Fax**:  
**Emailed**:  

**Special Instructions**:  

**Date**: 11/18/2020  
**Time**: 3:18 PM  
**Entered By**: Fatima Khan
<table>
<thead>
<tr>
<th>Sample #</th>
<th>Material</th>
<th>Location</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>897-1</td>
<td>St. run insulation/T5I</td>
<td>F218 by window &amp; Ceiling</td>
<td></td>
</tr>
<tr>
<td>897-2</td>
<td>Sink undercoat (black)</td>
<td>F218A - Sink cabinet</td>
<td></td>
</tr>
<tr>
<td>-3</td>
<td>12&quot; Floor tile (beige)/black</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Gray hood liner</td>
<td>F218 S. Range hood</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>GVB + joint compound wall</td>
<td>F218 S. Wallboard</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Brown baseboard/brown mastic</td>
<td>F218 W. Wall 7&quot; bare</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Duct-beige sealant</td>
<td>F218A ductwork-stair joint</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Brown pressed board/liner</td>
<td>F218 under Lab bench/cabinet</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Brown Lab bench caulking</td>
<td>F218A Lab bench joint sealant</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Ceiling patch/w white paint</td>
<td>F218A 6004 concrete ceiling</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Pipe patch straight run</td>
<td>F218 A - N. wall</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>CMU mortar/100% white paint</td>
<td>F218 behind Lab sink</td>
<td></td>
</tr>
<tr>
<td>4007-6/2</td>
<td>Pipe patch/Lab piping</td>
<td>F218 - W. Window frames</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Window frame (bl) putty</td>
<td>F218 - Lab cabinet</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lab cabinet (crete to)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX B

FAA Lead Paint Chip Sample Inventory
FAA Lead Paint Chip Laboratory Analysis
FAA Lead Paint Chip Sample Chain of Custody
## AA LEAD PAINT CHIP SAMPLE INVENTORY

<table>
<thead>
<tr>
<th>PBS Sample #</th>
<th>Paint Color / Component or Substrate</th>
<th>Sample Location F wing</th>
<th>Results (mg/kg)</th>
<th>Results (%)</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>40035.897 -L1</td>
<td>White/Off-white / Gypsum wallboard / Wall</td>
<td>F218 North wall (gypsum)</td>
<td>&lt;45</td>
<td>&lt;0.0045</td>
<td>NVL</td>
</tr>
<tr>
<td>40035.897 -L2</td>
<td>White/Off-white / Concrete masonry unit / Wall</td>
<td>F218A - West wall</td>
<td>&lt;61</td>
<td>&lt;0.0061</td>
<td>NVL</td>
</tr>
<tr>
<td>40035.897 -L3</td>
<td>Yellow/white / Ceramic tile sill / Windows</td>
<td>F218 - West window - metal frames</td>
<td>480</td>
<td>0.048</td>
<td>NVL</td>
</tr>
<tr>
<td>40035.897 -L4</td>
<td>Off-white / Concrete / Ceiling</td>
<td>F218 / 218A</td>
<td>200</td>
<td>0.020</td>
<td>NVL</td>
</tr>
<tr>
<td>40035.897 -L5</td>
<td>Concrete masonry unit mortar with paint / Wall</td>
<td>F218A / 216 wall mortar and paint</td>
<td>180</td>
<td>0.018</td>
<td>NVL</td>
</tr>
</tbody>
</table>

**mg/kg = Milligrams per kilogram**

< = Less than the Limit of Detection

Dec 24, 2020
November 20, 2020

Willem Mager
PBS Environmental - Seattle
214 E Galer St. Suite. 300
Seattle, WA 98102

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

Client Project: 40035.897
Location: HSC SOM TA EDIA / 206164

Dear Mr. Mager,

NVL Labs received 5 sample(s) for the said project on 11/18/2020. 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)**

**Batch #: 2019175.00**

**Matrix:** Paint  
**Method:** EPA 3051/7000B  
**Client Project #:** 40035.897  
**Date Received:** 11/18/2020  
**Samples Received:** 5  
**Samples Analyzed:** 5

**Client:** PBS Environmental - Seattle  
**Address:** 214 E Galer St. Suite. 300  
Seattle, WA 98102

**Attention:** Mr. Willem Mager  
**Project Location:** HSC SOM TA EDIA / 206164

---

<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>20120879</td>
<td>40035.897-L1</td>
<td>0.2204</td>
<td>45</td>
<td>&lt; 45</td>
<td>&lt;0.0045</td>
</tr>
<tr>
<td>20120880</td>
<td>40035.897-L2</td>
<td>0.1650</td>
<td>61</td>
<td>&lt; 61</td>
<td>&lt;0.0061</td>
</tr>
<tr>
<td>20120881</td>
<td>40035.897-L3</td>
<td>0.2227</td>
<td>45</td>
<td>480</td>
<td>0.048</td>
</tr>
<tr>
<td>20120882</td>
<td>40035.897-L4</td>
<td>0.2167</td>
<td>46</td>
<td>200</td>
<td>0.020</td>
</tr>
<tr>
<td>20120883</td>
<td>40035.897-L5</td>
<td>0.2170</td>
<td>46</td>
<td>180</td>
<td>0.018</td>
</tr>
</tbody>
</table>

---

**Sampled by:** Client  
**Analyzed by:** Shalini Patel  
**Reviewed by:** Nick Ly  
**Date Analyzed:** 11/19/2020  
**Date Issued:** 11/20/2020  
**Bench Run No:** 2020-1119-05  
**FAA-02**

**mg/Kg = Milligrams per kilogram**  
**RL = Reporting Limit**  
**'<' = 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.
### Project Information

**Project Name/Number:** 40035.897  
**Project Location:** HSC SOM TA EDIA / 206164

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

### Total Number of Samples

<table>
<thead>
<tr>
<th>Lab ID</th>
<th>Sample ID</th>
<th>Description</th>
<th>A/R</th>
</tr>
</thead>
<tbody>
<tr>
<td>20120879</td>
<td>40035.897-L1</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>20120880</td>
<td>40035.897-L2</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>20120881</td>
<td>40035.897-L3</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>20120882</td>
<td>40035.897-L4</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>20120883</td>
<td>40035.897-L5</td>
<td></td>
<td>A</td>
</tr>
</tbody>
</table>

| Rush Samples | No |

### Special Instructions:

- Client: Fatima Khan
- NVL: Shalini Patel
- NVL: 11/19/20 1520

---

**Date:** 11/18/2020  
**Time:** 3:24 PM  
**Entered By:** Fatima Khan
<table>
<thead>
<tr>
<th>Sample #</th>
<th>Material</th>
<th>Location</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>40035.897</td>
<td>Work / off-white / GNB / WCM</td>
<td>F218 N. wall (GYB)</td>
<td></td>
</tr>
<tr>
<td>40035.897</td>
<td>CMU / wall</td>
<td>F218A - W. wall</td>
<td></td>
</tr>
<tr>
<td>40035.897</td>
<td>Yellow / white / ceramic tile / window</td>
<td>F218 - W. window wall</td>
<td></td>
</tr>
<tr>
<td>40035.897</td>
<td>off-white / window / tile</td>
<td>F218 / 218A</td>
<td></td>
</tr>
<tr>
<td>40035.897</td>
<td>CMU mortar / paint / white</td>
<td>F218A / 216 wall</td>
<td></td>
</tr>
<tr>
<td>40035.897</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX C
Certifications
THIS IS TO CERTIFY THAT

JANET MURPHY

HAS SUCCESSFULLY COMPLETED THE TRAINING COURSE for

ASBESTOS INSPECTOR / MANAGEMENT PLANNER REFRESHER

In accordance with TSCA Title II, Part 763, Subpart E, Appendix C of 40 CFR

Course Date: 03/19/2020
Course Location: Portland, OR
Certificate: IMR-20-8300A

Expiration Date: 03/19/2021

AHERA is the Asbestos Hazard Emergency Response Act enacting Title II of Toxic Substance Control Act (TSCA)

For verification of the authenticity of this certificate contact
PBS Environmental
4412 SW Corbett Avenue
Portland, OR 97239
(503) 248-1939

Andy Fridley, Instructor
THIS IS TO CERTIFY THAT

RYAN HUNTER

HAS SUCCESSFULLY COMPLETED THE TRAINING COURSE

for

ONLINE AHERA ASBESTOS INSPECTOR REFRESHER

CCB #SRA0615 4-Hr Training

Course Date: 03/05/2020
Course Location: Portland, OR
Certificate: IRO-20-7254B

4-Hour Online AHERA Inspector Refresher Training; AHERA is the Asbestos Hazard Emergency Response Act enacting Title II of Toxic Substance Control Act (TSCA)
Expiration Date: 03/05/2021

For verification of the authenticity of this certificate contact:
PBS Environmental
4412 SW Corbett Avenue
Portland, OR 97239
(503) 248-1939

Andy Fridley, Instructor
Certificate of Completion

This is to certify that

Willem A. Mager

has satisfactorily completed 4 hours of 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 17659

Date(s) of Training

Jan 22, 2020

Exam Score: N/A

Expirates in 1 year

Instructor

ARGUS PACIFIC INC. / 21955 64th Ave W. Suite 100 / MOUNTLAKE TERRACE, WASHINGTON 98043 / 206-283-3373 / ARGUS@ARGUS.COM