

INVITATION TO BIDS

BLOCK 7 SOUTH ABATEMENT AND DEMOLITION Solicitation No. 5143

ADDENDUM NO. 3
Issue Date: January 25, 2019

This Addendum containing the following revisions, additions, deletions and/or clarifications, is hereby made a part of this solicitation and Contract Documents for the above-named project. Bidders shall take this Addendum into consideration when preparing and submitting their response to this solicitation.

This Addendum attaches Hazardous Materials Surveys and associated documents (see Item 1 below), provides updated pre-bid walkthrough and question dates (see Item 2 below) and updates the Washington State prevailing wage rates.

Item 1. The following are attached to and hereby made a part of this Addendum No 3.

Add Hazardous Materials Surveys:

“Hazardous Materials Survey, Building #18”, NVL Labs, dated January 7, 2019
“Hazardous Materials Survey, Building #19”, NVL Labs, dated January 9, 2019
“Hazardous Materials Survey, Building #20”, NVL Labs, dated January 11, 2019
“Hazardous Materials Survey, Building #21”, NVL Labs, dated January 14, 2019
“Hazardous Materials Survey, Building #22”, NVL Labs, dated January 15, 2019

Add Technical Specifications:

Division 2 – Sitework
Section 02 80 00 – Existing Conditions Assessment
Section 02 82 00 – Asbestos Abatement
Section 02 83 00 – Lead Containing Paint Work Plan
Section 02 84 00 – Disposal of Asbestos Containing Materials
Section 02 90 00 – Removal and Disposal of PCB Light Ballasts and Mercury
Containing Fluorescent Light Tubes

Add Drawings

“Drawings: NVL Project 2018-0913”, by NVL Labs dated January 2, 2019

Item 2. The following dates are hereby added:

- A pre-bid walkthrough will be held at **11:00 AM, on January 31, 2019**, at the corner of 8th Ave S. and Yesler Way, Seattle, WA 98122. Bidders attending should meet at the corner. All prospective bidders are strongly encouraged to attend. Non-attendance on the part of the Bidder shall not relieve the bidder of

any responsibility for adherence to any of the provisions of the bid documents or any Addenda.

- Technical questions regarding the additional information released must be received in writing no later than **3:00 PM, on February 1, 2019** and addressed to:

Mel Henley, Sr. Contracts Administrator
Email: mel.henley@seattlehousing.org
Fax: (206) 615-3410

Item 3. The following are attached to and hereby made a part of this Addendum No 3.

Section 00830 REMOVE AND REPLACE Section 00830 Wage Rate Schedule with the attached schedule Washington State Prevailing Wages, effective date 2/11/2019

Section 00210 Supplemental Bidder Responsibility Criteria - Add the following:

B.2 Specialty Work Activity 'D' – Certified Asbestos Abatement Supervisor Qualifications:

Criteria: Specialty Subcontractor for this Specialty Work Activity D, through self-performance shall have 'A full-time General Superintendent who is experienced in administration and supervision of asbestos abatement project including work practices, protective measures for building and personnel, disposal procedures, etc. This person must be a Current Certified Asbestos Supervisor as required by L&I' as required by the contract documents for this project.

Definition: For the purposes of meeting the criteria, the Owner has determined that *Certified Asbestos Abatement Supervisor Qualification* means:

- The designated Certified Asbestos Abatement Supervisor shall have current certification.
- Experienced with a minimum of three projects of similar nature

Documentation: To demonstrate meeting the criteria, the Bidder shall submit, on the Owner provided Supplemental Bidder Responsibility Criteria Form – Part B.1, the following information:

- Submit copy of certification verifying current certification.
- Identified by the designee's certification in the CSECP/TESC Plan submittal.
- As noted above, list a minimum of 3 projects in the last 5 years of similar size and scope to this project (see above for definition of similar in size and scope).

The information about each project shall include:

- project name
- location
- year constructed
- owner contact name and phone number.

END OF ADDENDUM NO. 3

Revised 09-15-17



Hazardous Materials Survey

"Building #18"
121 8th Avenue
Seattle, WA 98104



Prepared For
Mr. George Barlet
Seattle Housing Authority
190 Queen Anne Avenue N
Seattle, WA 98109

Project Number:	2018-0913
Inspection Date:	January 2, 2019
Report Date:	January 7, 2019
Inspected By	Derrick Gallard / Jason Lindahl
AHERA Certification	# 169720 / 167717
Certification Expiration Date	October 10, 2019 / May 23, 2019

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APPENDICIES

- A** Sample Locations (Floor Plan)
- B** Laboratory Analysis Results
- C** AHERA Certifications & Laboratory Qualifications

1.0 SCOPE OF WORK

A Hazardous Materials Survey was conducted on an apartment building #18 located at 121 8th Avenue Seattle, WA 98104 on January 2, 2019.

Derrick Gallard and Jason Lindahl (AHERA Building Inspectors and WA – Commerce Certified Lead Inspectors), conducted this survey at the request of Mr. George Barlet of Seattle Housing Authority.

The purpose of this survey was to identify suspect asbestos containing building materials, lead paint coatings, and Mercury (Hg) / PCB containing devices which would be impacted by the planned demolition of the structure. Destructive sampling methods were utilized to collect samples of suspect building materials. No soft/limited demolition was performed during this inspection. Hidden materials may exist within the structure, and all suspect materials must be treated as hazardous until testing proves otherwise.

This survey constitutes a survey of accessible suspect ACM in the project area and was conducted in accordance with:

The National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 Code of Federal Regulations (CFR) Part 61, Subpart M requires a survey by an accredited asbestos inspector prior to demolition of a structure.

This asbestos survey also satisfies the requirements for "Good Faith" inspection outlined in Washington Administrative Code (WAC) 296-62-07721 (2) Communication of hazards, which requires the owner of a structure to provide contractors with a written report identifying the asbestos-containing materials expected to be disturbed during renovation or demolition.

The asbestos survey section is written to comply with the AHERA asbestos sampling procedure as stated in 40 CFR 763.86. This protocol is required under the Puget Sound Clean Air Agency (PSCAA) Regulation III, Article IV, rev. March 26, 2009) for all asbestos surveys prior to a building demolition.

Recommendations have been included for compliance with WAC 296-155-176 "Lead in Construction" and WAC 173-090 "Waste Disposal Regulations". The Lead in Construction regulations are designed to protect workers from lead hazards during construction and demolition activities.

Fluorescent light tubes, HID lamps, and thermostats contain Mercury (Hg) are classified as universal waste by the EPA and Washington Department of Ecology. Recommendations have been included for compliance with WAC 173-303-573, "The Universal Waste Rule for Dangerous Waste".

A floor plan indicating locations of samples collected by NVL personnel has been included in **Appendix A**.

2.0 SURVEY METHOD

Asbestos Survey Method

The NVL Labs field inspector is an Asbestos Building Inspector, certified under the requirements of the United States Environmental Protection Agency (EPA) Asbestos Hazard Emergency Response Act (AHERA) regulation 40 CFR 763, Subpart E. A copy of his certificate is provided in Appendix C.

The AHERA Guidelines dictate the following:

The inspector must determine *homogenous areas*, which are defined as an area of Thermal System Insulation, Surfacing Material, or Miscellaneous Material that is uniform in texture and color.

Once homogenous areas have been determined, the inspector must determine whether or not material is friable or non-friable. **Friable** is defined as a material, that when dry, can be crushed, pulverized, or reduced to dust using hand pressure, and **non-friable** material is defined as a material, that when dry, *cannot* be crushed pulverized or reduced to dust using hand pressure. Materials normally defined as non-friable can become friable by definition if sufficiently damaged.

Once friability has been determined, the materials suspected of containing asbestos are divided into one of three categories: Thermal System Insulation (TSI), Surfacing Material (SM), or Miscellaneous Material (MM). Generally speaking, TSI and SM are considered to be friable, with the exception of TSI where the structural integrity of the insulation is intact and the protective out wrap is undamaged.

Once materials are divided into one of the categories, samples are collected in the following manner:

Friable Thermal System Insulation:

1. Inspector shall collect three (3) randomly distributed samples;
2. Inspector shall collect a minimum of one sample of each TSI materials that appears to have been used as a patch, as long as the patch is less than 6 linear feet or 6 square feet;
3. Inspector shall collect in a manner sufficient, samples from areas of TSI applied to fittings, tees, and joints.

Friable Surfacing Material:

1. Inspector shall collect samples in random manner of surfacing materials as follows:
 - a. Collect three bulk samples from an area believed to be homogeneous (defined as a material that appears to be the same or similar and was installed at the same time) that is 1,000 square feet or less in size;
 - b. Collect five bulk samples from an area believed to be homogeneous that is greater than 1,000 square feet in size, but less than 5,000 square feet in size;
 - c. Collect seven bulk samples from an area believed to be homogeneous that is greater than 5,000 square feet.

2.0 SURVEY METHOD (continued)

Miscellaneous Materials:

1. Inspector shall collect samples in a manner and number sufficient to determine if the material is asbestos-containing or not.

All Materials Determined to Be Non-Friable:

1. Inspector shall collect samples in a manner and number sufficient to determine if the material is asbestos containing or not.

In addition to these sampling requirements, the AHERA Building Inspector is required to assess the following of each material that is found to be positive for asbestos:

1. The condition of each material;
2. Accessibility;
3. Possibility for air erosion.

Once the samples have been collected, they must be analyzed by an accredited laboratory, and they must be analyzed using polarized light microscopy methods, commonly referred to as EPA Method 600/R-93/116.

NVL Labs collected samples and obtained analytical data for suspect asbestos-containing materials identified in the building. Once collected, each bulk sample was sealed in an unadulterated plastic bag to eliminate the possibility of cross-contamination. "Chain-of-Custody" tracking was followed to maintain sample integrity during handling and data reporting at NVL Labs.

A walk-through inspection of all accessible areas of the structures was performed to identify potential asbestos-containing materials. The walk-through inspection included a review of the internal and external aspects of the structures. The locations and types of potential asbestos-containing materials were noted.

Homogeneous Materials

Homogeneous materials are defined as an area of asbestos-containing material or presumed asbestos-containing material which appears similar throughout in terms of color, texture, and date of material application. The report listing for homogenous materials will appear as follows:

Sample Number	Material Description by Layer	Location	Asbestos	Quantity	Friable
#	Layer 1 is not asbestos-containing Layer 2 is asbestos-containing	Location description	1. % 2. %	"X" LF/ft ²	Yes/No

Lead Survey Method

NVL Labs collected representative samples of paint from the interior and exterior of the building within the project scope. Once collected, each bulk sample was sealed in an unadulterated plastic bag to eliminate the possibility of cross-contamination. "Chain-of-Custody" tracking was followed to maintain sample integrity during handling and data reporting at NVL Labs. Sampling was representative of all layers of paint. Copies of laboratory reports and field data forms for lead paint are in Appendix B.

2.0 SURVEY METHOD (continued)

TCLP Sampling Method

A representative composite sample of the proportionate components which make up the areas to be demolished was collected and analyzed according to ASTM Standard. E 1908-97, as suggested by the Washington State Department of Ecology. Waste Characterization Plan number three of this standard, "Composite Sample and Demolish", was used to access the lead (Pb) content of the total debris.

3.0 LABORATORY INFORMATION

Laboratory Analysis: Asbestos

In accordance with 40 CFR Chapter 1 (7-01-07 Edition) Part 763, Subpart E, Appendix E, asbestos samples are analyzed at NVL Labs using polarized light microscopy (PLM) with dispersion staining. If samples are not homogeneous, then sub-samples of the components are analyzed separately. All bulk samples are analyzed using EPA Method 600/R-93/116 with the following measurement uncertainties for reported % asbestos: 1%=0-3%, 5%≥1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%. Only materials containing more than 1% total asbestos were classified as "asbestos-containing" based on EPA, state, and local regulations.

Findings for samples containing more than one separable layer of materials are reported for each layer. The asbestos concentration in the sample is determined by visual estimation.

NVL Labs is accredited by the National Institute of Standards and Technology (NIST) under the National Volunteer Laboratory Accreditation Program (NVLAP) program for bulk asbestos fiber analysis; *NVLAP Lab Code 102063-0*

Laboratory Analysis: Lead (Pb)

Samples are analyzed for the presence of inorganic lead using atomic absorption spectroscopy (AAS) in accordance with method EPA 3051/7000B. This method reports results in milligrams per kilogram (mg/kg) or its equivalent, parts per million (ppm).

Laboratory Accreditation

Professional accreditations for NVL Laboratories, Inc. include the following:

NVL Laboratories, Inc. is currently accredited by the National Institute of Standards and Technology (NIST) under the National Volunteer Laboratory Accreditation Program (NVLAP) program for bulk asbestos fiber analysis.

NVLAP Lab Code 102063-0

NVL Laboratories, Inc. is approved by the American Industrial Hygiene Association (AIHA) Asbestos Analysts Registry (AAR) program for airborne asbestos fiber analysis.

AAR Counter ID 7412

NVL Laboratories, Inc. is currently accredited by the American Industrial Hygiene Association (AIHA) under the Industrial Hygiene Laboratory Accreditation Program (IHLAP). The IHLAP program is designed specifically for laboratories involved in analyzing samples to evaluate workplace exposure. *IHLAP Certification Number 563*

4.0 BUILDING DESCRIPTION

General Building Type	This is a two-story 4-unit apartment building of traditional wood framed construction.
Primary External Components	The exterior of the building has vinyl and wood siding.
Foundation Type	The building has an on-grade concrete foundation.
Roofing Material(s)	The building has tri-tab shingle and rolled asphalt roofing.
Window Type(s)	The building has vinyl framed windows with exterior caulking.
Flooring	The building has vinyl tiles, and sheet vinyl flooring.
Thermal Systems with Insulation	The building has baseboard heating system, with no visible suspect thermal insulation.
Finishing	The building is finished with drywall, and plaster.

5.0 FINDINGS

Inventory of Suspect Asbestos-Containing Materials

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0913-1-1	1: Plaster with paint 2: Drywall	Lower level, ceiling	1: ND 2: ND		
2018-0913-1-2	1: Plaster with paint 2: Drywall	Main floor, room 4, wall	1: ND 2: ND		
2018-0913-1-3	1: Plaster with paint 2: Drywall 3: Fiberglass insulation with mastic	Upper level, room 8, ceiling	1: ND 2: ND 3: ND		
2018-0913-1-4	1: Plaster with paint 2: Drywall	Main floor, room 13, ceiling	1: ND 2: ND		
2018-0913-1-5	1: Plaster with paint 2: Drywall	Main floor, room 21, wall	1: ND 2: ND		
2018-0913-1-6	1: Plaster with paint 2: Drywall	Main floor, room 29, ceiling	1: ND 2: ND		
2018-0913-1-7	1: Plaster with paint 2: Drywall	Upper level, room 34, wall	1: ND 2: ND		
2018-0913-3-1	1: Joint compound with paint 2: Drywall	Main floor, room 5, wall joint	1: ND 2: ND		
2018-0913-3-2	Drywall with paint	Main floor, room 4, ceiling	ND		
2018-0913-3-3	CMU block / mortar	Lower level, room 1, walls	ND		
2018-0913-3-4	1: Brick 2: Mortar	Lower level, room 2, walls	1: ND 2: ND		
2018-0913-3-5	1: Black asphaltic paper 2: Fiberglass insulation	Lower level, crawlspace	1: ND 2: ND		
2018-0913-3-6	1: 12x12 White tile 2: Yellow mastic 3: Beige vinyl tile 4: Black backing 5: Black mastic 6: Brown mastic	Main floor, room 3, floor (stair landing)	1: ND 2: ND 3: 3% 4: ND 5: ND 6: ND	20 ft ²	No

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

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5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0913-3-7	1: Brown sheet vinyl 2: White backing with paint 3: Black mastic	Main floor, room 3 & 19, steps	1: ND 2: 38% 3: 3%	70 ft ²	Yes
2018-0913-3-8	1: 5" Brown vinyl cove base 2: Yellow mastic	Main floor, room 3 & 19, riser	1: ND 2: ND		
2018-0913-3-9	1: 12x12 White vinyl tile 2: Black felt with adhesive & paint	Main floor, room 4, floor	1: ND 2: ND		
2018-0913-3-10	1: 12x12 White vinyl tile 2: Black felt with adhesive 3: Leveler with mastic 4: Black asphaltic material	Main floor, room 5, floor	1: ND 2: ND 3: ND 4: ND		
2018-0913-3-11	1: Yellow mastic 2: White laminate with adhesive	Main floor, room 5, 22, counter	1: ND 2: ND		
2018-0913-3-12	Black sink undercoat	Main floor, room 5, 30, sink	3%	2 sinks	No
2018-0913-3-13	White laminate with adhesive	Upper level, room 6, window stool	ND		
2018-0913-3-14	1: 12x12 White vinyl tile 2: Yellow mastic 3: Beige vinyl tile 4: Black backing with mastic 5: Black mastic 6: Brown mastic	Upper level, room 6, floor (including closet)	1: ND 2: ND 3: 10% 4: ND 5: 5% 6: ND	140 ft ²	No
2018-0913-3-15	1: Cream sheet vinyl 2: White backing with mastic	Upper level, room 6, 23, closet shelf floor	1: ND 2: 29%	45 ft ²	Yes
2018-0913-3-16	1: 12x12 White vinyl tile 2: Black backing with mastic	Upper level, room 7, 8, 9, floor	1: 2% 2: ND	175 ft ²	No
2018-0913-3-17	1: 3" Brown vinyl cove base 2: Tan mastic	Upper level, room 6 thru 10, wall base	1: ND 2: ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0913-3-18	1: Tan sheet vinyl 2: White backing 3: Cream sheet vinyl 4: White backing with mastic	Upper level, room 10 & 18, floor	1: ND 2: ND 3: ND 4: 26%	75 ft ²	Yes
2018-0913-3-19	1: 12x12 White vinyl tile 2: Beige vinyl tile 3: Black mastic 4: Black backing with mastic	Main floor, room 11, floor (stair landing)	1: ND 2: 3% 3: ND 4: ND	25 ft ²	No
2018-0913-3-20	1: Brown sheet vinyl 2: White backing 3: Black mastic with paint	Main floor, room 11 & 27, steps	1: ND 2: 30% 3: 3%	70 ft ²	Yes
2018-0913-3-21	1: 6" Brown vinyl cove base 2: Beige mastic	Main floor, room 11 & 27, risers	1: ND 2: ND		
2018-0913-3-22	1: 12x12 White vinyl tile 2: Yellow mastic 3: Beige vinyl tile 4: Yellow mastic 5: Black backing with mastic	Main floor, room 12 & 13, floor	1: ND 2: ND 3: 2% 4: ND 5: ND	230 ft ²	No
2018-0913-3-23	1: 12x12 White vinyl tile 2: Brown adhesive 3: Black felt with mastic 4: Leveling compound	Main floor, room 14, floor	1: ND 2: ND 3: ND 4: ND		
2018-0913-3-24	1: White laminate 2: Red mastic	Main floor, room 14 & 30, counter	1: ND 2: ND		
2018-0913-3-25	Black sink undercoat	Main floor, room 14, sink	6%	1 sink	No
2018-0913-3-26	1: Cream sheet vinyl 2: Gray backing with tan mastic	Upper level, room 15, closet shelf floor	1: ND 2: 55%	25 ft ²	Yes

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0913-3-27	1: 12x12 White vinyl tile 2: Yellow mastic 3: Beige vinyl tile 4: Black mastic 5: Black backing with mastic	Upper level, room 15, 16, 17, floor	1: ND 2: ND 3: 5% 4: ND 5: ND	300 ft ²	No
2018-0913-3-28	1: 3" Brown vinyl cove base 2: Brown mastic	Upper level, room 15 thru 18, wall base	1: ND 2: ND		
2018-0913-3-29	1: White laminate 2: Yellow mastic	Upper level, room 15 thru 17, window stools	1: ND 2: ND		
2018-0913-3-30	1: Tan sheet vinyl 2: White backing with mastic 3: Brown material	Upper level, room 26, floor	1: ND 2: ND 3: ND		
2018-0913-3-31	1: Beige laminate 2: White mastic 3: Foamy board with mastic	Upper level, room 18, 26, 32, tub surround	1: ND 2: ND 3: ND		
2018-0913-3-32	1: 12x12 White vinyl tile 2: Yellow mastic with leveler 3: Beige vinyl tile 4: Black mastic 5: Black felt with mastic	Main floor, room 19, floor (stair landing)	1: ND 2: ND 3: 4% 4: ND 5: ND	25 ft ²	No
2018-0913-3-33	1: 12x12 White vinyl tile 2: Yellow mastic 3: Black felt with mastic	Main floor, room 20 & 21, floor	1: ND 2: ND 3: ND		
2018-0913-3-34	1: Tan sheet vinyl 2: Off-white backing with mastic	Main floor, room 22, floor	1: ND 2: ND		
2018-0913-3-35	1: 12x12 White vinyl tile 2: Yellow mastic with leveler 3: Beige vinyl tile 4: Black felt with mastic	Upper level, room 23 thru 25, floor	1: ND 2: ND 3: 4% 4: ND	300 ft ²	No

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0913-3-36	1: 12x12 White vinyl tile 2: Black mastic 3: Black felt with mastic	Main floor, room 27 thru 30, floor	1: ND 2: ND 3: ND		
2018-0913-3-37	1: Cream sheet vinyl 2: Tan backing with tan mastic 3: Leveler	Upper level, room 31 shelf floor & room 32 floor	1: ND 2: 55% 3: ND	55 ft²	Yes
2018-0913-3-38	1: 12x12 White vinyl tile 2: Yellow mastic 3: Black felt with mastic	Upper level, room 31, 33, 34, floor	1: ND 2: ND 3: ND		
2018-0913-3-39	Brown GWB	Behind exterior vinyl siding	ND		
2018-0913-3-40	Exterior window perimeter caulking	Around exterior window frames	ND		
2018-0913-3-41	1: Tri-tab asphaltic shingle 2: Black asphaltic mastic 3: Black asphaltic felt	Porch pitched roof	1: ND 2: ND 3: ND		
2018-0913-3-42	1: Rolled black asphaltic sheeting 2: Black asphaltic mastic	Flat roof	1: ND 2: ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

Any suspect material(s) not identified above should not be disturbed and should be tested immediately. The suspect material must be treated as asbestos-containing until testing proves otherwise.

Inventory of Suspect Lead-Containing Paint Coatings

Sample Number	Material Description	Location	Lead in mg/kg	Lead in %
2018-0913-Pb-1	White paint on GWB	Interior walls / ceilings	<51	<0.0051
2018-0913-Pb-2	White paint on plaster	Interior walls / ceilings	<52	<0.0052
2018-0913-Pb-3	Brown paint on wood	Interior railings / stair stringers / door & closet components	1300	0.13
2018-0913-Pb-4	White paint on wood	Exterior siding walls / soffit / columns & fascia	3100	0.31
2018-0913-Pb-5	Beige paint on wood	Exterior siding (behind vinyl siding)	7100	0.71
2018-0913-Pb-6	Red paint on metal	Exterior door components	<95	<0.0095

< Lead content of material analyzed is below the Lower Detection Limit.

Samples in bold contain lead in excess of detectable levels

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5.0 FINDINGS (continued)

Mercury

A visual inspection was conducted to identify Mercury and Poly Chlorinated Biphenyls (PCB) containing devices. This includes Mercury thermostats, HID lamps, florescent light tubes (including the newer "green tubes" which still contain low levels of Mercury) and PCB containing light ballasts. Following devices were identified and assumed to contain Mercury and Poly Chlorinated Biphenyls (PCB).

Material	Location	Quantity
HID lamp	Exterior North Elevation	4 lamps
HID lamp	Exterior East Elevation	2 lamps
HID lamp	Exterior West Elevation	1 lamp

Poly Chlorinated Biphenyls (PCB) Light Ballasts

Material	Location	Quantity
HID light ballast	Exterior North Elevation	4 ballasts
HID light ballast	Exterior East Elevation	2 ballasts
HID light ballast	Exterior West Elevation	1 ballast

Location of Mercury and Poly Chlorinated Biphenyls (PCB) containing HID lamps are highlighted with green in the attached floor plan.

TCLP Sampling

Sample Number	Sample Location	Results in ppm
2018-0913-TCLP	"Building #18" 121 8th Avenue, Seattle, WA 98104	< 0.5

6.0 CONCLUSIONS AND RECOMMENDATIONS

The following is an inventory of asbestos-containing building materials identified during the Hazardous Materials Survey of building #18 located at 121 8th Avenue, Seattle, WA 98104.

1. Beige vinyl floor tiles (Non-friable)

Sample numbers: 2018-0913-3-6, 3-19,
3-22, 3-27, 3-32, 3-35



There is approximately 900 square feet of asbestos-containing beige vinyl floor tiles located under 12x12 white vinyl tile flooring in room 3, 11, 12, 13, 15, 16, 17, 19, and 23 thru 25 of building #18. The associated mastic is not asbestos containing. The substrate is wood.

2. Brown sheet vinyl backing / black mastic (Friable)

Sample numbers: 2018-0913-3-7, 3-20



There is approximately 140 square feet of asbestos-containing white backing with black mastic associated with brown sheet vinyl flooring / steps located in room 3, 11, 19, and 27 of building #18. The substrate is wood.

3. Black sink undercoating (Non-friable)

Sample numbers: 2018-0913-3-12 & 3-25



There is a total of three (3) aluminum sinks with asbestos containing black undercoating located in room 5, 14, and 30 of building #18.

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

4. Beige vinyl tiles / black mastic (Non-friable)

Sample number: 2018-0913-3-14



There is approximately 140 square feet of asbestos-containing beige vinyl floor tiles with black mastic located under 12x12 white vinyl tile flooring in room 6 (including the closet) of building #18. The substrate is wood.

5. Cream sheet vinyl backing / mastic (Friable)

Sample numbers: 2018-0913-3-15, 3-18, 3-26, 3-37



There is approximately 200 square feet of asbestos-containing backing with mastic associated with cream sheet vinyl flooring and shelf flooring located in room 6 (closet), 15, 23, 31, 32, and under tan sheet vinyl in room 10 & 18 of building #18. The substrate is wood.

6. 12x12 White vinyl floor tiles (Non-friable)

Sample number: 2018-0913-3-16



There is approximately 175 square feet of asbestos-containing 12x12 white vinyl floor tiles located in room 7, 8, and 9 of building #18. The associated mastic is not asbestos containing. The substrate is wood.

Contractors should be aware that concealed suspect asbestos-containing building materials may be uncovered during the course of demolition or renovation work. Contractors should have contingency plans that include stopping work, evacuation of the immediate area and sampling by a certified AHERA Building Inspector whenever these materials are found. Concealed suspect materials may include but are not limited to: non-fiberglass pipe or roof drain insulation; spray-applied coatings; cement board; asphalt or paper vapor barriers; floorings and adhesives.

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

If discovered, all asbestos-containing materials that will be disturbed as a natural part of renovation and/or demolition are required to be removed and disposed of in accordance with Washington State regulations. Washington State Department of Labor and Industries and PSCAA requires that the Abatement be performed using Certified Asbestos Workers under the direct on-site supervision by a Certified Asbestos Supervisor. Further, NVL suggests that an AHERA inspector review this property after abatement to ensure all asbestos-containing materials have been removed by the contractor.

NVL recommends that an AHERA inspector/project manager be on site at the time of demolition to ensure that any potentially asbestos-containing materials uncovered during the process of renovation/demolition be dealt with properly.

NVL Labs, Inc. is making the following recommendations regarding asbestos:

1. A copy of this inspection report should be maintained at the project site during the duration of renovation / demolition.
2. A copy of this inspection report should be provided to the General Contractor and any Sub Contractors working on the renovation / demolition project.
3. The inspection report is not intended to serve as a design / bidding document, or scope of work prior to renovation / demolition.
4. Abatement specifications should be prepared by a Hazardous Materials Consulting firm covering the regulated building materials that will be impacted by the renovations / demolition, and these specifications should be part of any contract documents prepared for this project.
5. A licensed asbestos abatement contractor must be utilized to remove any asbestos-containing materials that will be impacted by the planned renovation / demolition.
6. A Hazardous Materials Consulting Firm should provide project oversight and air monitoring during the removal of the asbestos-containing materials.

Lead

Lead-containing paint **was** identified in the following paint samples. Worker protection protocols are applicable for this project.

1. Brown paint: interior railings / stair stringers / door & closet components. (approx. 525 ft²)
2. White paint: exterior siding walls / soffit, columns & fascia. (approx. 420 ft²)
3. Beige paint: exterior wood siding, behind vinyl siding. (approx. 4100 ft²)

The Federal Occupational Safety & Health Administration's (OSHA) interim lead safety standard (29 CFR 1926.59) for the construction industry became effective on June 3, 1993. Lead exposure in construction is regulated in Washington State by WAC 296-155-176. These regulations protect workers disturbing building surfaces with lead containing paints. Paint with "any detectable level" of lead is classified as a lead containing paint by federal and state regulations and the applicable worker safety provisions must be implemented.

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

WORKER EXPOSURE

WAC 296-155-176, Lead (Pb), applies to all construction work where an employee may be occupationally exposed to Lead (Pb). Construction work includes activities such as demolition or salvage, removal or encapsulation, and renovation of materials that contain Lead (Pb). When an employee may be occupationally exposed to Lead (Pb), the employer must perform an exposure assessment according to WAC 296-155-176.

The exposure assessment consists of personal air monitoring to determine representative Lead (Pb) exposure levels for the work being performed. During the exposure assessment, the employer must provide the following:

- As a minimum, a half mask air purifying respirators equipped with high efficiency particulate air (HEPA) filters in accordance with WAC 296-155-17613.
- Appropriate personal protective clothing / equipment in accordance with WAC 296-155-17615.
- A designated change area which allows for separate storage areas for work and street clothing to prevent cross contamination in accordance with WAC 296-155-17619(2).
- Hand washing facilities to wash their hands and faces WAC 296-155-17619(5).
- Biological monitoring in the form of blood survey and analysis for Lead (Pb) and zinc protoporphyrin levels in accordance with WAC 296-155-17621 (1) (a).
- Training to include hazard communication, safety, and the limitations, proper use, and maintenance of respirators in accordance with WAC 296-155-100.

In addition to the protective equipment and hygiene requirements, the employer must attempt to reduce the levels of airborne Lead (Pb) through engineering controls such as ventilation and wet methods.

Mercury

Seven (7) HID lamps were identified and assumed to contain Mercury (Hg) at building #18.

Fluorescent light tubes, HID lamps, and thermostats contain mercury (Hg) are classified as universal waste by the EPA and Ecology. The Universal Waste Rule for Dangerous Waste Lamps (WAC 173-303-573) included the following requirements:

- Immediately place lamps showing evidence of leakage, damage, etc. in a container following removal;
- Containerize in closed, structurally sound, compatible containers;
- Cardboard containers may be used for inside storage only;
- Labeling container required: "Waste Lamps," or "Universal Waste Lamps;"
- Track the length of time since waste lamp generation. Acceptable methods of proof include: date on label, inventory system, etc.
- Respond immediately to potential releases. If determined to be a release, contain and determine if it designates as a dangerous waste. If so, manage the release as specified in WAC 173-303;

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

- Disposal of universal waste as general or construction debris is not permitted;
- The crushing of fluorescent light tubes on-site is not allowed. In addition, measures should be taken to prevent breakage of fluorescent light tubes while the light tubes are in transit to their destination.
- Provide training to employees on the proper handling and emergency procedures of universal waste lamps;
- Track shipments of universal waste lamps with records (invoice, manifest, etc.) kept for a minimum of 3 years.

Poly Chlorinated Biphenyls (PCB) Light Ballasts

Seven (7) HID light ballasts were identified and assumed to contain Poly Chlorinated Biphenyls (PCB).

The Washington statutes definition of a PCB-containing material require that any material with more than 2 parts per million (ppm) to be treated as PCB-containing material. Federal regulations dictated that any material with less than 50 ppm PCBs could be labeled as a non-PCB containing material. Because of this regulatory change, NVL recommends that all light ballasts be observed, removed, handled, and disposed of in an appropriate manner. The ballasts labeled with "PCB Free" and "Non-PCB" shall be packaged for recycle by an approved recycling facility.

TCLP

The TCLP sample result is below the threshold of 5.0 ppm. Thus, the solid waste stream of the demolition debris from the structure is considered as regular demolition debris.

A solid waste exhibits the characteristic of toxicity if, using the *Toxicity Characteristic Leaching Procedure* (TCLP) testing method, as incorporated in WAC 173-303-090, the extract from a representative sample of the waste contains lead (Pb) contaminants equal to or greater than 5.0 ppm. A material "fails" the TCLP when there is 5.0 parts per million or greater of lead (Pb) in the leachate.

7.0 LIMITATIONS OF SURVEY

The purpose of this hazardous materials survey report is to document asbestos containing building materials, lead paint coatings and Mercury / PCB containing devices discovered at "Building #18" 121 8th Avenue, Seattle, WA 98104.

The purpose of this survey was to identify suspect asbestos containing building materials, lead paint coatings, and Mercury (Hg) / PCB containing devices which would be impacted by the planned demolition of the structure. Destructive sampling methods were utilized to collect samples of suspect building materials. No soft/limited demolition was performed during this inspection. Hidden materials may exist within the structure, and all suspect materials must be treated as hazardous until testing proves otherwise.

As hazardous material surveys are non-comprehensive by nature, NVL Laboratories, Inc. cannot be held liable for materials which require destructive means to access, materials which are hidden from sight (e.g. materials hidden behind walls), materials which cannot be found due to their obscure nature, or which otherwise cannot be discovered with reasonable diligence.

This document is the sole property of NVL Laboratories and the property owner, or his agent, authorizing this survey.

Inspected By



Derrick Gallard
AHERA Building Inspector
AHERA Certification: 169720
Expiration Date : October 10, 2019

Prepared By



Tanveer Khan
Project Manager
AHERA Certification: 167087
Expiration Date: April 25, 2019

Inspected By



Jason Lindahl
AHERA Building Inspector
AHERA Certification: 167717
Expiration Date : May 23, 2019

Reviewed By



Syed Hasan
Manager Field Services
AHERA Certification: # 168599
Expiration Date: July 18, 2019



Appendix A

Sample Locations (Floor Plan)



L A B S

INDUSTRIAL
HYGIENE
SERVICES

Laboratory | Management | Training

NVL Project # 2018-0913

Client Seattle Housing Authority - George Barlet

Location "Building 18" 121 8th Ave.

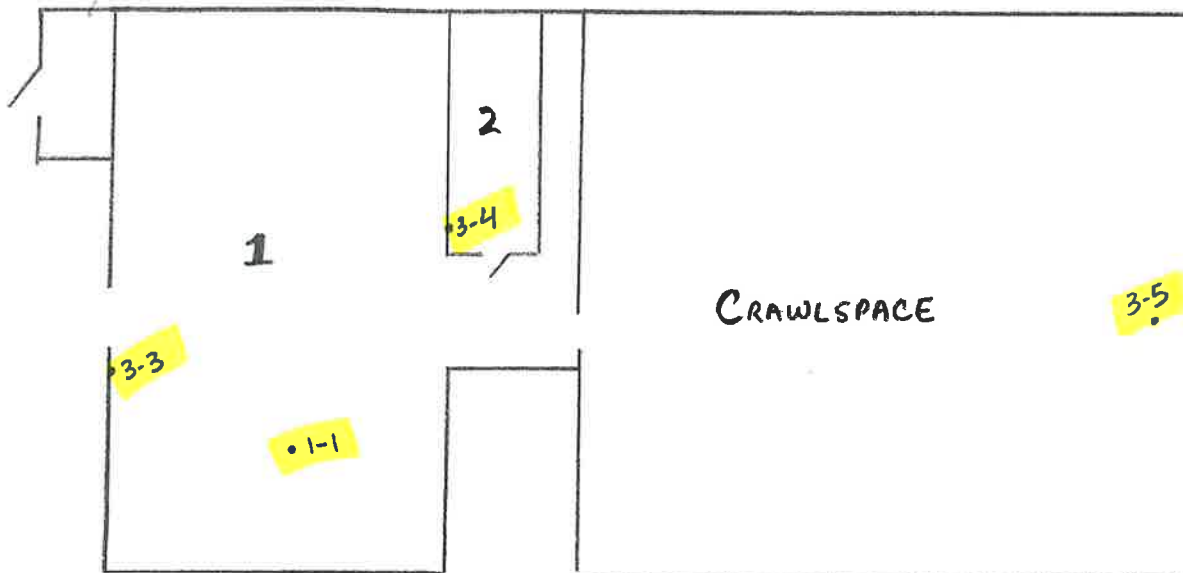
City Seattle

Page 1 of 12

Date 1/2/2019

Made by Derrick Gallard

LOWER LEVEL



• SUSPECT ASBESTOS SAMPLES

(NOT TO SCALE)



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Client Seattle Housing Authority - George Barlet

Location "Building 18" 121 8th Ave.

City Seattle

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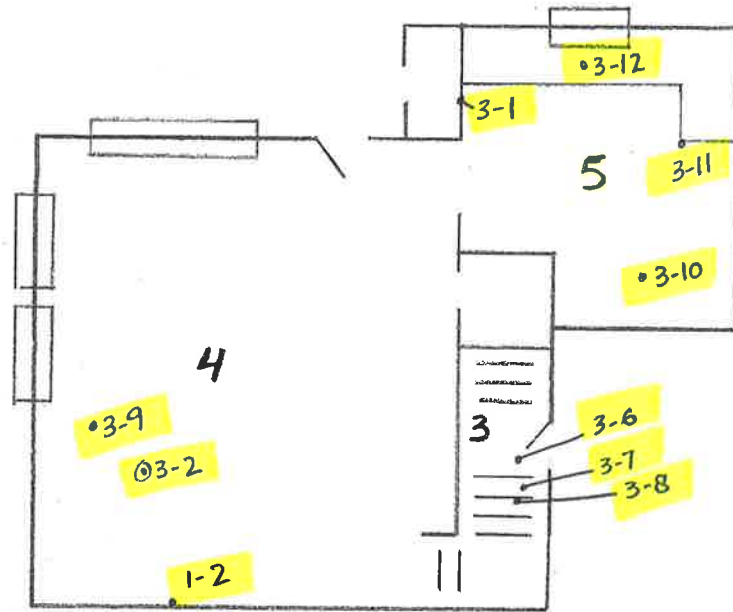
Date 1/2/2019

Made by Derrick Gallard

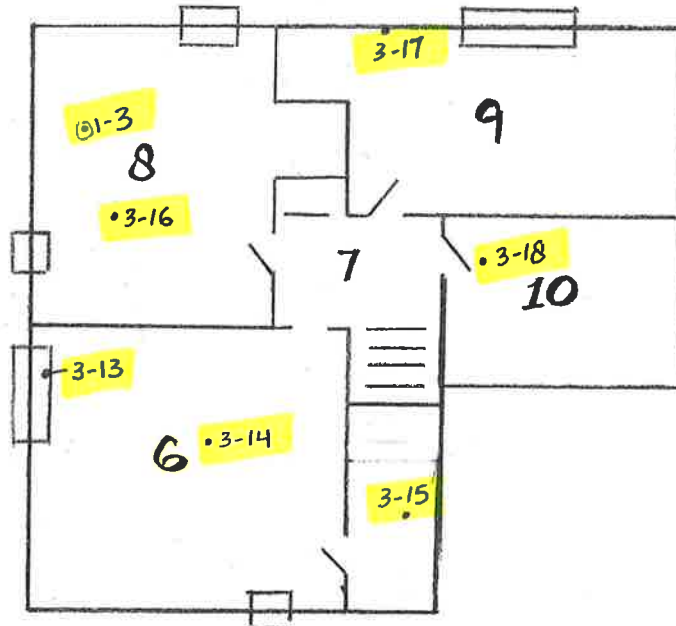
UNIT 165



MAIN FLOOR



UPPER LEVEL



(NOT TO SCALE)

• SUSPECT ASBESTOS SAMPLES

Phone: 206.547.0100 | Fax: 206.634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516



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Client Seattle Housing Authority - George Barlet

Location "Building 18" 121 8th Ave.

City Seattle

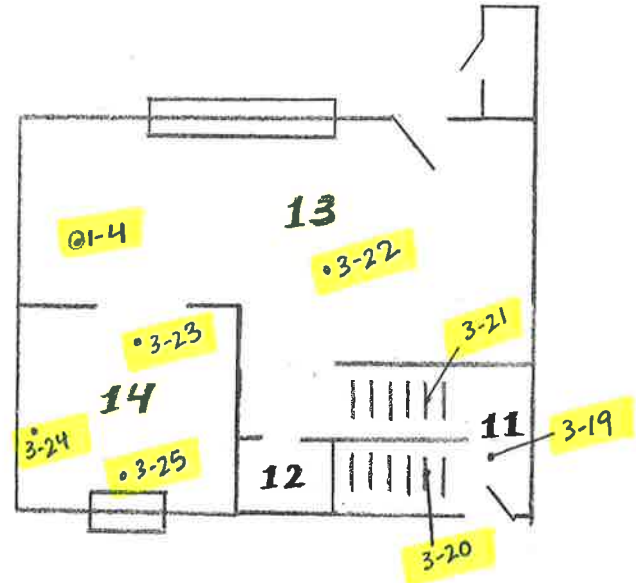
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Date 1/2/2019

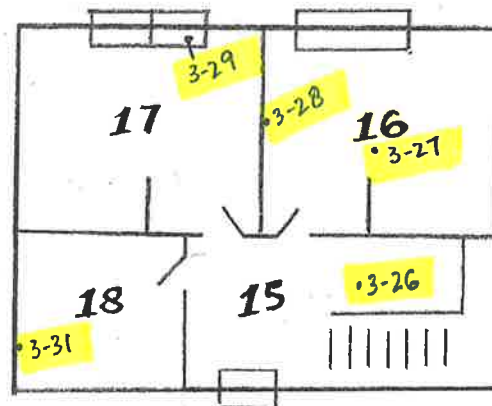
Made by Derrick Gallard

UNIT 166

MAIN FLOOR



UPPER LEVEL



(NOT TO SCALE)

• **SUSPECT ASBESTOS SAMPLES**



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Location "Building 18" 121 8th Ave.

City Seattle

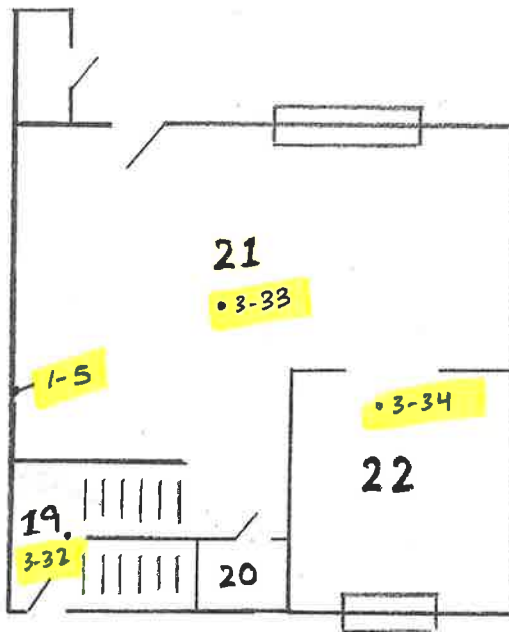
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Date 1/2/2019

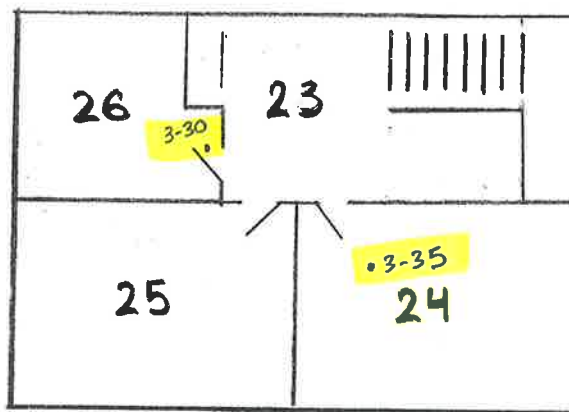
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UNIT 167

MAIN FLOOR



UPPER LEVEL



(NOT TO SCALE)

• SUSPECT ASBESTOS SAMPLES

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4708 Aurora Avenue North | Seattle, WA 98103-6516



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Location "Building 18" 121 8th Ave.

City Seattle

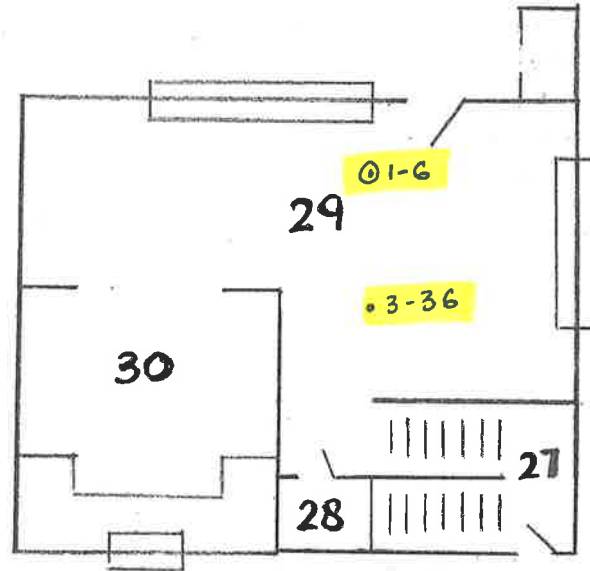
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Date 1/2/2019

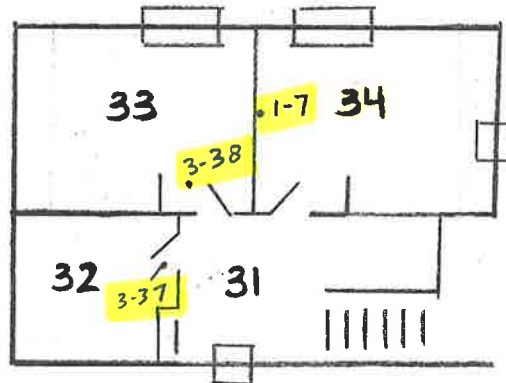
Made by Derrick Gallard

UNIT 168

MAIN FLOOR



UPPER LEVEL



(NOT TO SCALE)

• SUSPECT ASBESTOS SAMPLES

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Client Seattle Housing Authority - George Barlet

Location "Building 18" 121 8th Ave.

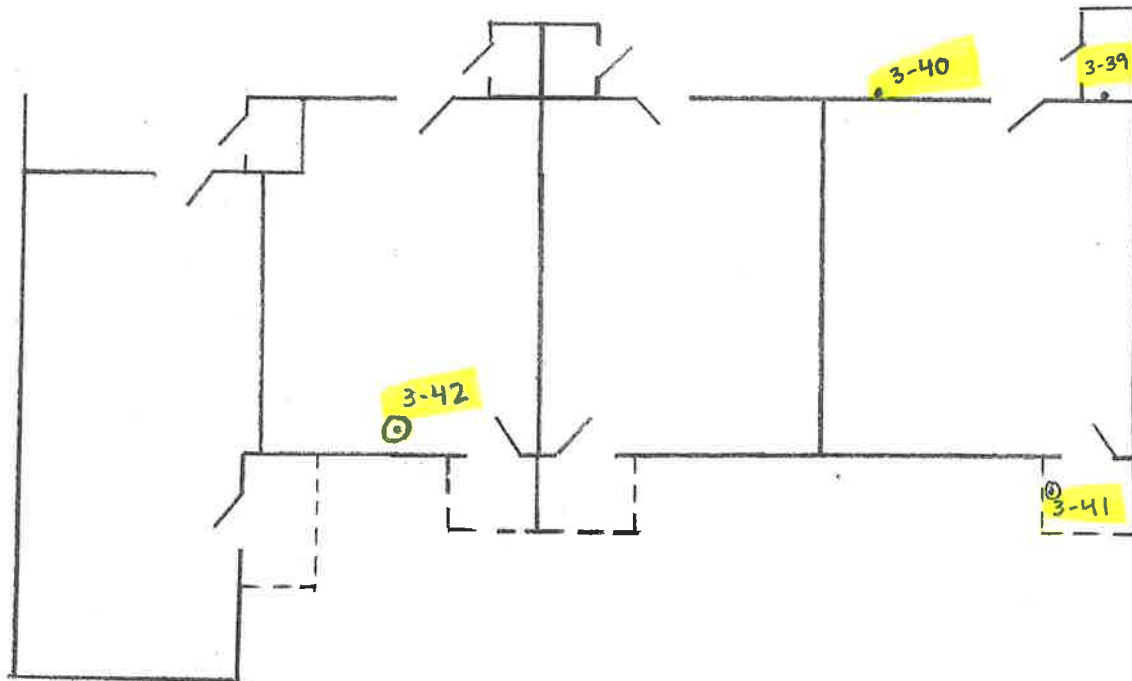
City Seattle

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Date 1/2/2019

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EXTERIOR



(NOT TO SCALE)

• SUSPECT ABESTOS SAMPLES

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Client Seattle Housing Authority - George Barlet

Location "Building 18" 121 8th Ave.

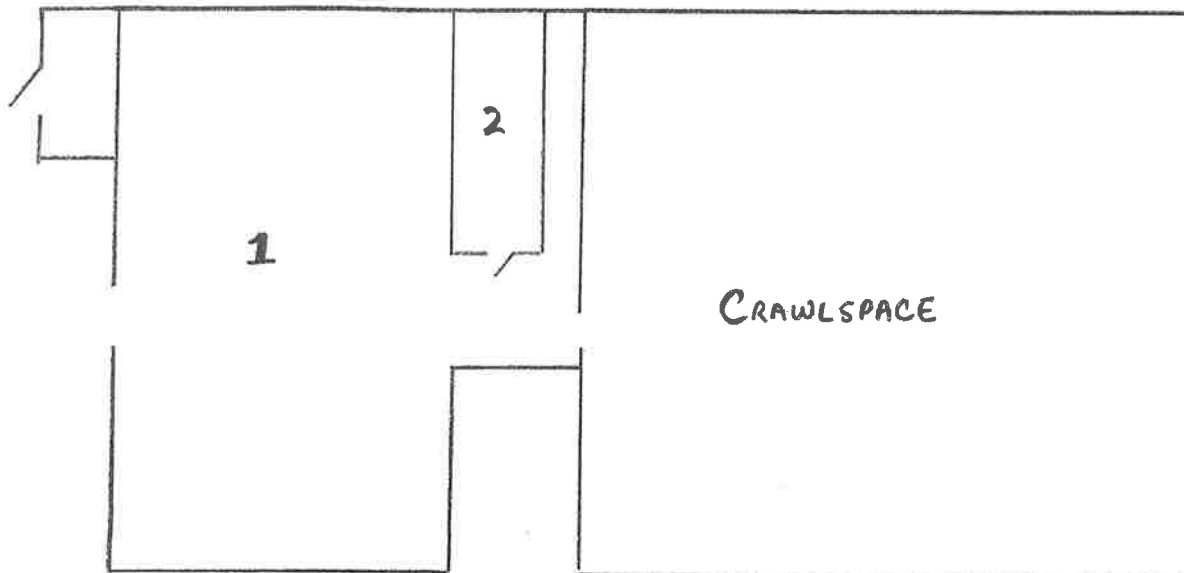
City Seattle

Page 7 of 12

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LOWER LEVEL



• LEAD PAINT SAMPLES

(NOT TO SCALE)



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Client Seattle Housing Authority - George Barlet

Location "Building 18" 121 8th Ave.

City Seattle

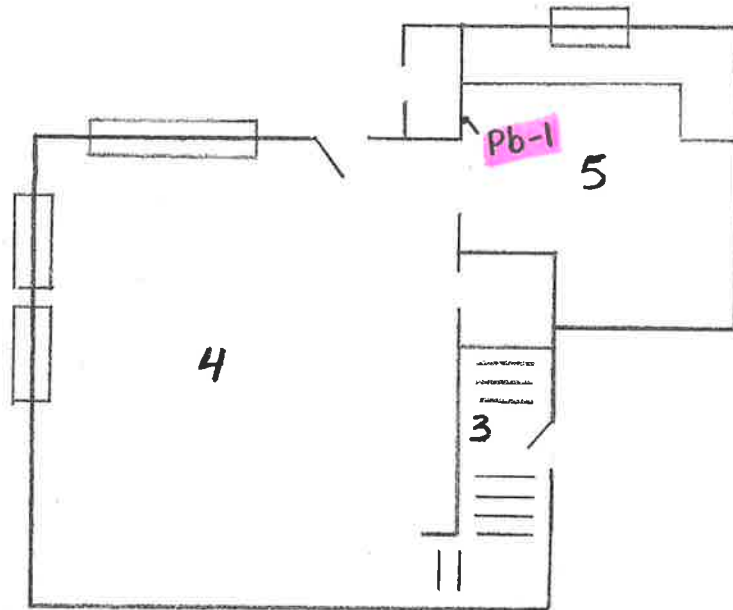
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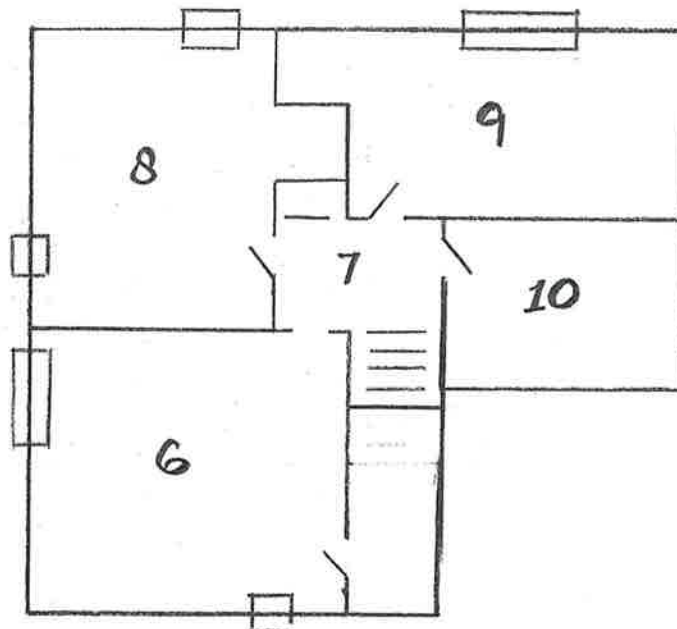
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UNIT 165

MAIN FLOOR



UPPER LEVEL



(NOT TO SCALE)

• LEAD PAINT SAMPLES

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516



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NVL Project # 2018-0913

Client Seattle Housing Authority - George Barlet

Location "Building 18" 121 8th Ave.

City Seattle

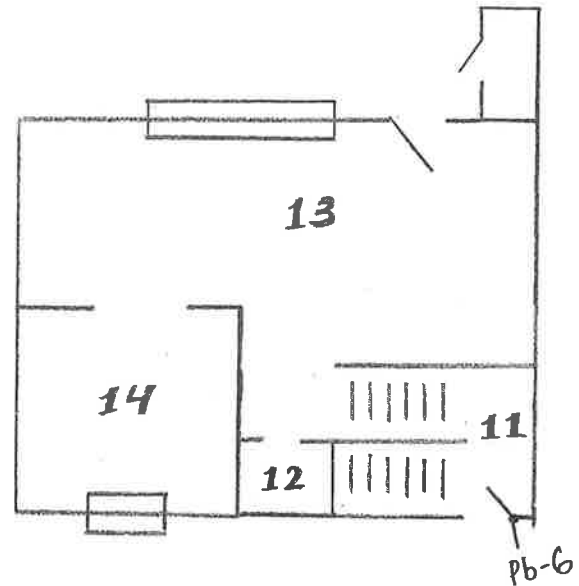
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Date 1/2/2019

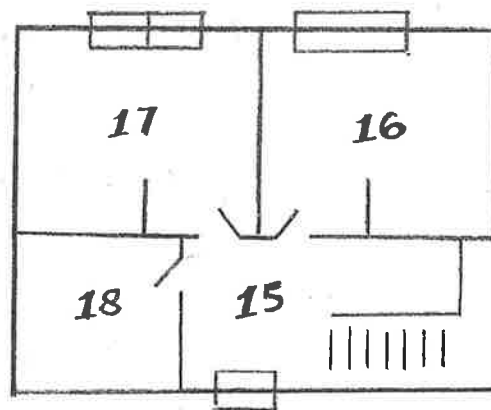
Made by Derrick Gallard

UNIT 166

MAIN FLOOR



UPPER LEVEL



• LEAD PAINT SAMPLES

(NOT TO SCALE)



L A B S

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NVL Project # 2018-0913

Client Seattle Housing Authority - George Barlet

Location "Building 18" 121 8th Ave.

City Seattle

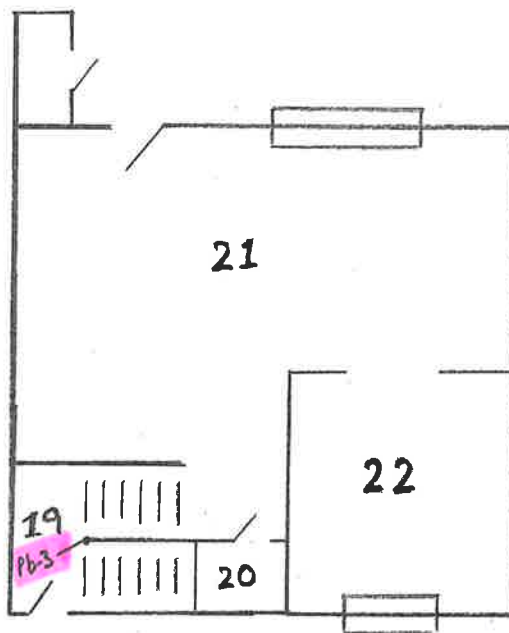
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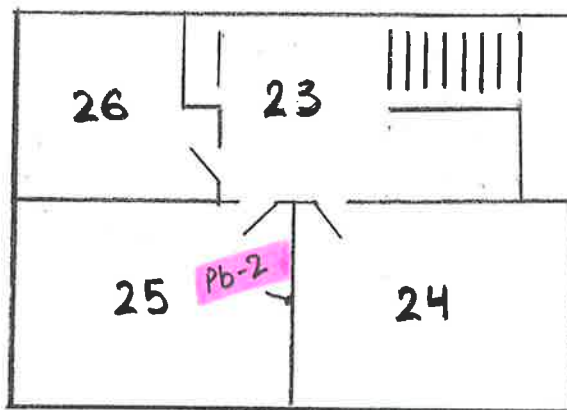
Made by Derrick Gallard

UNIT 167

MAIN FLOOR



UPPER LEVEL



(NOT TO SCALE)

• LEAD PAINT SAMPLES



L A B S

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NVL Project # 2018-0913

Client Seattle Housing Authority - George Barlet

Location "Building 18" 121 8th Ave.

City Seattle

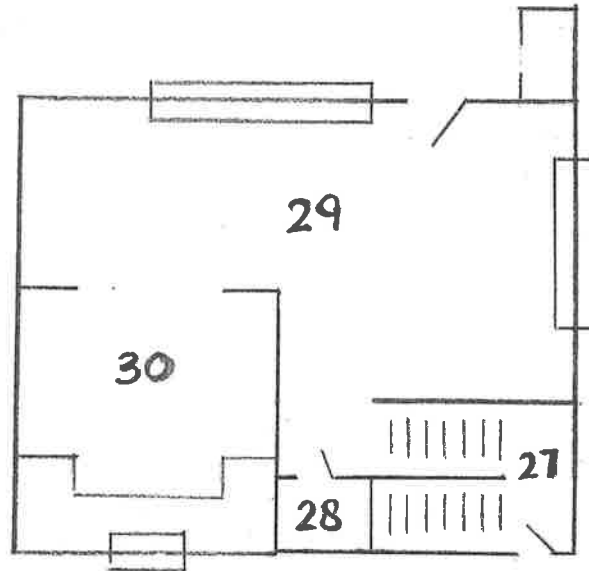
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Date 1/2/2019

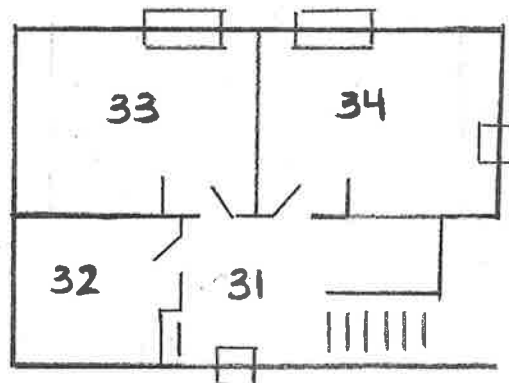
Made by Derrick Gallard

UNIT 168

MAIN FLOOR



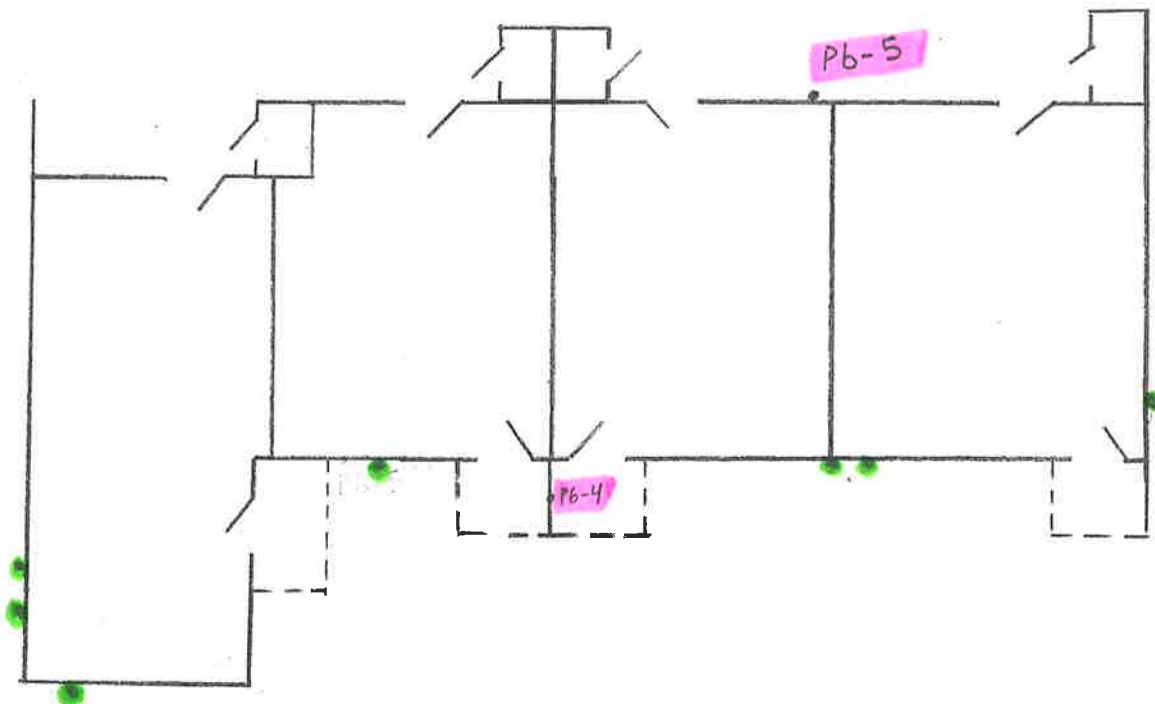
UPPER LEVEL



• LEAD PAINT SAMPLES

(NOT TO SCALE)

EXTERIOR



• LEAD PAINT SAMPLES
MERCURY & PCB DEVICES ARE HIGHLIGHTED IN GREEN (NOT TO SCALE)



Appendix B

Laboratory Analysis Results

January 7, 2019



Derrick Gallard
NVL Field Services Division
4708 Aurora Ave. N.
Seattle, WA 98103

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1900167.00

Client Project: 2018-0913
Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Dear Mr. Gallard,

Enclosed please find test results for the 30 sample(s) submitted to our laboratory for analysis on 1/2/2019.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, 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,

A handwritten signature in black ink, appearing to read "Nick Ly".

Nick Ly, Technical Director

The logo for NVLAP (National Voluntary Laboratory Accreditation Program). It features the letters "NVLAP" in a stylized, outlined font. The "A" is slightly larger and more prominent.

Lab Code: 102063-0

Enc.: Sample Results

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900167.00

Client Project #: 2018-0913

Date Received: 1/2/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Lab ID: 19000429 Client Sample #: 2018-0913-1-1

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: White sandy brittle material with paint

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Binder/Filler, Mineral grains, Fine grains	Cellulose 4%	
Sand, Wood flakes, Paint		

Layer 2 of 2 Description: White chalky material with paper

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 17%	

Lab ID: 19000430 Client Sample #: 2018-0913-1-2

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: White sandy brittle material with paint

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Binder/Filler, Mineral grains, Fine grains	Cellulose 6%	
Sand, Wood flakes, Paint		

Layer 2 of 2 Description: White chalky material with paper

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 17%	

Lab ID: 19000431 Client Sample #: 2018-0913-1-3

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 3 Description: White sandy brittle material with paint

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Binder/Filler, Mineral grains, Fine grains	Cellulose 5%	
Sand, Wood flakes, Paint		

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900167.00

Client Project #: 2018-0913

Date Received: 1/2/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 2 of 3	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 18%		None Detected ND

Layer 3 of 3	Description: Beige fibrous material with paper and mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder	Glass fibers 92%		None Detected ND

Lab ID: 19000432 **Client Sample #: 2018-0913-1-4**

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: White sandy brittle material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mineral grains, Fine grains	Cellulose 5%		None Detected ND
	Sand, Wood flakes, Paint			

Layer 2 of 2	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 17%		None Detected ND

Lab ID: 19000433 **Client Sample #: 2018-0913-1-5**

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: White sandy brittle material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mineral grains, Fine grains	Cellulose 3%		None Detected ND
	Sand, Wood flakes, Paint			

Layer 2 of 2	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 17%		None Detected ND

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019



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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900167.00

Client Project #: 2018-0913

Date Received: 1/2/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Lab ID: 19000434 Client Sample #: 2018-0913-1-6

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: White sandy brittle material with paint

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Binder/Filler, Mineral grains, Fine grains	Cellulose 4%	
Sand, Wood flakes, Paint		

Layer 2 of 2 Description: White chalky material with paper

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 18%	

Lab ID: 19000435 Client Sample #: 2018-0913-1-7

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: White sandy brittle material with paint

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Binder/Filler, Mineral grains, Fine grains	Cellulose 5%	
Sand, Wood flakes, Paint		

Layer 2 of 2 Description: White chalky material with paper

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 18%	

Lab ID: 19000436 Client Sample #: 2018-0913-3-1

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: White compacted powdery material with paint

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Binder/Filler, Fine grains, Fine particles	Cellulose 2%	
Paint		

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019

Nick Ly, Technical Director

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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900167.00

Client Project #: 2018-0913

Date Received: 1/2/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 2 of 2 Description: White chalky material with paper

Non-Fibrous Materials:	Other Fibrous Materials:%
Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 16%
	Glass fibers 2%

Asbestos Type: %
None Detected ND

Lab ID: 19000437 Client Sample #: 2018-0913-3-2

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 1 Description: White chalky material with paper and paint

Non-Fibrous Materials:	Other Fibrous Materials:%
Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 16%
Mica	Glass fibers 3%

Asbestos Type: %
None Detected ND

Lab ID: 19000438 Client Sample #: 2018-0913-3-3

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 1 Description: White sandy brittle material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Mineral grains, Pumice	None Detected ND
Fine grains, Sand, Paint	

Asbestos Type: %
None Detected ND

Lab ID: 19000439 Client Sample #: 2018-0913-3-4

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: Brown red crumbly material

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Fine grains, Fine particles	None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 2 Description: White sandy brittle material

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Mineral grains, Fine grains	None Detected ND

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019



Nick Ly, Technical Director

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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900167.00
Client Project #: 2018-0913
Date Received: 1/2/2019
Samples Received: 30
Samples Analyzed: 30
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard
Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Sand

Lab ID: 19000440 **Client Sample #: 2018-0913-3-5**

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2 **Description:** Black asphaltic material with paper

Non-Fibrous Materials:	Other Fibrous Materials:%
Asphalt/Binder	Cellulose 12%
	Glass fibers 4%

Asbestos Type: %
None Detected ND

Layer 2 of 2 **Description:** Pink fibrous material

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler	Glass fibers 98%

Asbestos Type: %
None Detected ND

Lab ID: 19000441 **Client Sample #: 2018-0913-3-6**

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 6 **Description:** White vinyl tile

Non-Fibrous Materials:	Other Fibrous Materials:%
Vinyl/Binder, Fine grains, Fine particles	None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 6 **Description:** Yellow brittle mastic

Non-Fibrous Materials:	Other Fibrous Materials:%
Mastic/Binder, Fine grains, Fine particles	None Detected ND

Asbestos Type: %
None Detected ND

Layer 3 of 6 **Description:** Beige vinyl tile

Non-Fibrous Materials:	Other Fibrous Materials:%
Vinyl/Binder, Fine grains, Fine particles	None Detected ND

Asbestos Type: %
Chrysotile 3%

Layer 4 of 6 **Description:** Black asphaltic fibrous backing

Non-Fibrous Materials:	Other Fibrous Materials:%
Asphalt/Binder, Fine particles, Asphalt/Binder	Cellulose 29%

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019

Nick Ly, Technical Director

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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

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Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900167.00

Client Project #: 2018-0913

Date Received: 1/2/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

		Wood flakes	Synthetic fibers	3%	
Layer 5 of 6	Description: Black asphaltic mastic				
	Non-Fibrous Materials:		Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Fine particles		Cellulose	4%	None Detected ND
Layer 6 of 6	Description: Brown soft mastic (on wood)				
	Non-Fibrous Materials:		Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Fine grains, Fine particles		Cellulose	8%	None Detected ND
		Wood flakes			
<hr/>					
Lab ID: 19000442	Client Sample #: 2018-0913-3-7				
	Location: "Building 18" 121 8th Ave. Seattle, WA 98104				
Layer 1 of 3	Description: Tan patterned vinyl				
	Non-Fibrous Materials:		Other Fibrous Materials:%		Asbestos Type: %
	Vinyl/Binder, Fine grains, Fine particles		None Detected	ND	None Detected ND
Layer 2 of 3	Description: White fibrous material with paint				
	Non-Fibrous Materials:		Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Fine grains, Fine particles		None Detected	ND	Chrysotile 38%
	Paint				
Layer 3 of 3	Description: Black asphaltic mastic (on wood)				
	Non-Fibrous Materials:		Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Fine particles, Wood flakes		Cellulose	6%	Chrysotile 3%

Lab ID: 19000443 **Client Sample #: 2018-0913-3-8**

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019

Nick Ly, Technical Director

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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900167.00

Client Project #: 2018-0913

Date Received: 1/2/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Brown rubbery material with trace of paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
	Rubber/Binder, Fine grains, Fine particles	None Detected ND	None Detected ND	
	Paint			

Layer 2 of 2	Description: Yellow brittle mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
	Mastic/Binder, Fine particles	None Detected ND	None Detected ND	

Lab ID: 19000444 Client Sample #: 2018-0913-3-9

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: White vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
	Vinyl/Binder, Fine grains, Fine particles	None Detected ND	None Detected ND	

Layer 2 of 2	Description: Black asphaltic fibrous material with brown adhesive and paint (on wood)			
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
	Asphalt/Binder, Fine grains, Fine particles	Cellulose 29%	None Detected ND	
	Adhesive/Binder, Paint, Wood flakes			

Lab ID: 19000445 Client Sample #: 2018-0913-3-10

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: White vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
	Vinyl/Binder, Fine grains, Fine particles	None Detected ND	None Detected ND	

Layer 2 of 4	Description: Black asphaltic fibrous material with brown soft adhesive			
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
	Asphalt/Binder, Fine particles, Adhesive/Binder	Cellulose 27%	None Detected ND	

Sampled by: Client

Analyzed by: Akane Yoshikawa

Date: 01/04/2019

Reviewed by: Nick Ly

Date: 01/07/2019

Nick Ly, Technical Director



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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

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Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900167.00

Client Project #: 2018-0913

Date Received: 1/2/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 3 of 4	Description: White crumbly material with yellow brittle mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Fine grains, Fine particles	Cellulose 4%		None Detected ND
	Mastic/Binder, Wood flakes			

Layer 4 of 4	Description: Black asphaltic material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Asphalt/Binder, Fine particles	Cellulose 12%		None Detected ND

Lab ID: 19000446 **Client Sample #: 2018-0913-3-11**

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Yellow soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder, Fine grains, Fine particles	Cellulose 5%		None Detected ND
		Synthetic fibers 2%		

Layer 2 of 2	Description: Tan compressed fibrous material with brown soft adhesive and paint			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Fine particles, Adhesive/Binder	Cellulose 29%		None Detected ND
	Paint			

Lab ID: 19000447 **Client Sample #: 2018-0913-3-12**

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 1	Description: Black asphaltic flaky material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Asphalt/Binder, Fine grains, Fine particles	None Detected ND		Chrysotile 3%
	Metallic flakes			

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019



Nick Ly, Technical Director

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Seattle, WA 98103

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Samples Analyzed: 30

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Lab ID: 19000448 Client Sample #: 2018-0913-3-13

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 1 Description: Tan compressed fibrous material with beige soft adhesive and paint

Non-Fibrous Materials:	Other Fibrous Materials: %
Binder/Filler, Fine particles, Adhesive/Binder	Cellulose 28%
Paint	

Asbestos Type: %
None Detected ND

Lab ID: 19000449 Client Sample #: 2018-0913-3-14

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 6 Description: White vinyl tile

Non-Fibrous Materials:	Other Fibrous Materials: %
Vinyl/Binder, Fine grains, Fine particles	None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 6 Description: Yellow brittle mastic

Non-Fibrous Materials:	Other Fibrous Materials: %
Mastic/Binder, Fine grains, Fine particles	None Detected ND

Asbestos Type: %
None Detected ND

Layer 3 of 6 Description: Beige vinyl tile

Non-Fibrous Materials:	Other Fibrous Materials: %
Vinyl/Binder, Fine grains, Fine particles	None Detected ND

Asbestos Type: %
Chrysotile 10%

Layer 4 of 6 Description: Black asphaltic fibrous backing with brown brittle mastic

Non-Fibrous Materials:	Other Fibrous Materials: %
Asphalt/Binder, Fine particles, Mastic/Binder	Cellulose 36%
Wood flakes	

Asbestos Type: %
None Detected ND

Layer 5 of 6 Description: Black asphaltic mastic

Non-Fibrous Materials:	Other Fibrous Materials: %
Asphalt/Binder, Fine particles	None Detected ND

Asbestos Type: %
Chrysotile 5%

Sampled by: Client

Analyzed by: Akane Yoshikawa

Date: 01/04/2019

Reviewed by: Nick Ly

Date: 01/07/2019

Nick Ly, Technical Director

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Seattle, WA 98103

Batch #: 1900167.00

Client Project #: 2018-0913

Date Received: 1/2/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 6 of 6	Description: Brown brittle mastic (on wood)			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Fine grains, Fine particles	Cellulose 8%		None Detected ND
	Wood flakes			

Lab ID: 19000450 Client Sample #: 2018-0913-3-15

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Cream vinyl			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Vinyl/Binder, Fine grains, Fine particles	None Detected ND		None Detected ND

Layer 2 of 2	Description: White fibrous material with beige mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Fine grains, Fine particles	None Detected ND		Chrysotile 29%
	Mastic/Binder			

Lab ID: 19000451 Client Sample #: 2018-0913-3-16

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: White vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Vinyl/Binder, Fine grains, Fine particles	None Detected ND		Chrysotile 2%

Layer 2 of 2	Description: Black asphaltic fibrous backing with brown mastic (on wood)			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Fine grains, Fine particles	Cellulose 28%		None Detected ND
	Mastic/Binder, Wood flakes			

Lab ID: 19000452 Client Sample #: 2018-0913-3-17

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019

Nick Ly, Technical Director

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Seattle, WA 98103

Batch #: 1900167.00

Client Project #: 2018-0913

Date Received: 1/2/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Brown rubbery material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Rubber/Binder, Fine grains, Fine particles	None Detected ND	
Layer 2 of 2	Description: Tan brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder, Fine grains, Fine particles	None Detected ND	
Lab ID: 19000453 Client Sample #: 2018-0913-3-18				
Location: "Building 18" 121 8th Ave. Seattle, WA 98104				
Layer 1 of 4	Description: Beige patterned vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Vinyl/Binder, Fine grains, Fine particles	None Detected ND	
Layer 2 of 4	Description: White fibrous material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Binder/Filler, Fine grains, Fine particles	Cellulose 27%	
			Glass fibers 3%	
Layer 3 of 4	Description: Cream vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Vinyl/Binder, Fine grains, Fine particles	None Detected ND	
Layer 4 of 4	Description: White fibrous material with beige mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Binder/Filler, Fine grains, Fine particles	Cellulose 4%	
		Wood flakes		

Lab ID: 19000454 Client Sample #: 2018-0913-3-19

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019

Nick Ly, Technical Director

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Client Project #: 2018-0913

Date Received: 1/2/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: White vinyl tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Vinyl/Binder, Fine grains, Fine particles		None Detected ND	None Detected ND
Layer 2 of 4	Description: Beige vinyl tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Vinyl/Binder, Fine grains, Fine particles		None Detected ND	Chrysotile 3%
Layer 3 of 4	Description: Black soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Mastic/Binder, Fine particles		Cellulose 5%	None Detected ND
Layer 4 of 4	Description: Black asphaltic fibrous backing with brown mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Asphalt/Binder, Fine grains, Fine particles		Cellulose 25%	None Detected ND
	Wood flakes, Mastic/Binder			

Lab ID: 19000455 **Client Sample #: 2018-0913-3-20**

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Tan patterned vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Vinyl/Binder, Fine grains, Fine particles		None Detected ND	None Detected ND
Layer 2 of 3	Description: White fibrous material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Fine grains, Fine particles		None Detected ND	Chrysotile 30%
Layer 3 of 3	Description: Black asphaltic mastic with paint (on wood)	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Asphalt/Binder, Fine particles, Paint		Cellulose 6%	Chrysotile 3%

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019

Nick Ly, Technical Director

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Date Received: 1/2/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Lab ID: 19000456 Client Sample #: 2018-0913-3-21

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: Brown rubbery material

Non-Fibrous Materials:
Rubber/Binder, Fine grains, Fine particles

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 2 Description: Beige brittle mastic

Non-Fibrous Materials:
Mastic/Binder, Fine grains, Fine particles

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Lab ID: 19000457 Client Sample #: 2018-0913-3-22

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 5 Description: White vinyl tile

Non-Fibrous Materials:
Vinyl/Binder, Fine grains, Fine particles

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 5 Description: Yellow brittle mastic

Non-Fibrous Materials:
Mastic/Binder, Fine grains, Fine particles

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Layer 3 of 5 Description: Brown brittle material

Non-Fibrous Materials:
Binder/Filler, Fine grains, Fine particles

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
Chrysotile 2%

Layer 4 of 5 Description: Yellow brittle mastic

Non-Fibrous Materials:
Mastic/Binder, Fine grains, Fine particles

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Layer 5 of 5 Description: Black asphaltic fibrous backing with brown mastic

Non-Fibrous Materials:
Asphalt/Binder, Fine particles, Mastic/Binder

Other Fibrous Materials:%
Cellulose 27%

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900167.00

Client Project #: 2018-0913

Date Received: 1/2/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard
Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Lab ID: 19000458 **Client Sample #: 2018-0913-3-23**

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: White vinyl tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Vinyl/Binder, Fine grains, Fine particles	None Detected ND	
Layer 2 of 4	Description: Brown soft adhesive	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Adhesive/Binder, Fine particles	Cellulose 7%	
Layer 3 of 4	Description: Black asphaltic fibrous material with yellow mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Asphalt/Binder, Fine particles, Mastic/Binder	Cellulose 28%	
Layer 4 of 4	Description: White crumbly material with trace of wood flake	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Binder/Filler, Fine grains, Fine particles	Cellulose 6%	
		Wood flakes		

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019



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

ASBESTOS LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Derrick Gallard
Phone (206) 547-0100
Cell (206) 707-3236
NVL Batch Number 1900167.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/4/2019 **Time** 4:30 PM
Email derrick.g@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0913 **Project Location:** "Building 18" 121 8th Ave. Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 30

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19000429	2018-0913-1-1		A
2	19000430	2018-0913-1-2		A
3	19000431	2018-0913-1-3		A
4	19000432	2018-0913-1-4		A
5	19000433	2018-0913-1-5		A
6	19000434	2018-0913-1-6		A
7	19000435	2018-0913-1-7		A
8	19000436	2018-0913-3-1	Composite	A
9	19000437	2018-0913-3-2		A
10	19000438	2018-0913-3-3		A
11	19000439	2018-0913-3-4		A
12	19000440	2018-0913-3-5		A
13	19000441	2018-0913-3-6		A
14	19000442	2018-0913-3-7		A
15	19000443	2018-0913-3-8		A
16	19000444	2018-0913-3-9		A
17	19000445	2018-0913-3-10		A
18	19000446	2018-0913-3-11		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/2/19	1630
Analyzed by	Akane Yoshikawa		NVL	1/4/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/2/2019
 Time: 4:58 PM
 Entered By: Shaina Mitchell

ASBESTOS LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Derrick Gallard
Phone (206) 547-0100
Cell (206) 707-3236
NVL Batch Number 1900167.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/4/2019 **Time** 4:30 PM
Email derrick.g@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0913 **Project Location:** "Building 18" 121 8th Ave. Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 30

Rush Samples

	Lab ID	Sample ID	Description	A/R
19	19000447	2018-0913-3-12		A
20	19000448	2018-0913-3-13		A
21	19000449	2018-0913-3-14		A
22	19000450	2018-0913-3-15		A
23	19000451	2018-0913-3-16		A
24	19000452	2018-0913-3-17		A
25	19000453	2018-0913-3-18		A
26	19000454	2018-0913-3-19		A
27	19000455	2018-0913-3-20		A
28	19000456	2018-0913-3-21		A
29	19000457	2018-0913-3-22		A
30	19000458	2018-0913-3-23		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/2/19	1630
Analyzed by	Akane Yoshikawa		NVL	1/4/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/2/2019
 Time: 4:58 PM
 Entered By: Shaina Mitchell

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**CHAIN of CUSTODY
SAMPLE LOG****1900167**

Client NVL Laboratories Inc

Street 4708 Aurora Ave N

Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 18" 121 8th Ave.
Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0913

Total Samples **30**Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Asbestos Bulk	<input checked="" type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	<input type="checkbox"/> All 8	Other Metals
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)	<input type="checkbox"/> All 3
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input type="checkbox"/> Lead (Pb)	<input type="checkbox"/> Copper (Cu)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Nickel (Ni)
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify) _____		
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		20180913-1-1		
2		-1-2		
3		-1-3		
4		-1-4		
5		-1-5		
6		-1-6		
7		-1-7		
8		-3-1	COMPOSITE	
9		-3-2		
10		-3-3		
11		-3-4		
12		-3-5		
13		-3-6		
14		-3-7		
15		-3-8		

	Print Below	Sign Below	Company	Date	Time
Sampled by	DEEPIK		NVL	11/21/19	7:30
Relinquished by	DEEPIK		NVL	11/21/19	4:30
Received by	S. Mitchell		NVL	11/21/19	1630
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

TAN

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900167



Client NVL Laboratories Inc

Street 4708 Aurora Ave N

Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 18" 121 8th Ave.

Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0913

Total Samples 30

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Asbestos Bulk	<input checked="" type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	All 8	Other Metals
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)	<input type="checkbox"/> All 3
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input type="checkbox"/> Lead (Pb)	<input type="checkbox"/> Copper (Cu)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Nickel (Ni)
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify)		<input type="checkbox"/> Zinc (Zn)
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0913-39		
2		-3-10		
3		-3-11		
4		-3-12		
5		-3-13		
6		-3-14		
7		-3-15		
8		-3-16		
9		-3-17		
10		-3-18		
11		-3-19		
12		-3-20		
13		-3-21		
14		-3-22		
15		-3-23		

Print Below	Sign Below	Company	Date	Time
Sampled by DEERICK		NVL	7/2/19	7:30
Relinquished by DEERICK		NVL	1/2/19	
Received by S. Mitchell		NVL	1/2/19	1630
Analyzed by				
Results Called by				
Results Faxed by				

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

TAN

January 7, 2019



Derrick Gallard
NVL Field Services Division
4708 Aurora Ave. N.
Seattle, WA 98103

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1900165.00

Client Project: 2018-0913
Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Dear Mr. Gallard,

Enclosed please find test results for the 19 sample(s) submitted to our laboratory for analysis on 1/2/2019.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, 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,

A handwritten signature in black ink, appearing to read "Nick Ly".

Nick Ly, Technical Director

The logo for NVLAP (National Voluntary Laboratory Accreditation Program). It features the letters "NVLAP" in a stylized, outlined font. The "A" is unique, with a small circle at the top right and a small tail at the bottom right.

Lab Code: 102063-0

Enc.: Sample Results

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900165.00

Client Project #: 2018-0913

Date Received: 1/2/2019

Samples Received: 19

Samples Analyzed: 19

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Lab ID: 19000408 Client Sample #: 2018-0913-3-24

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: Brown flat hard compressed fibrous material with white surface

Non-Fibrous Materials:	Other Fibrous Materials:%
Laminate/binder	Cellulose 75%

Asbestos Type: %
None Detected ND

Layer 2 of 2 Description: Red soft mastic

Non-Fibrous Materials:	Other Fibrous Materials:%
Mastic/Binder, Fine particles	Cellulose <1%

Asbestos Type: %
None Detected ND

Lab ID: 19000409 Client Sample #: 2018-0913-3-25

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 1 Description: Black asphaltic material

Non-Fibrous Materials:	Other Fibrous Materials:%
Asphalt/Binder, Fine particles	Cellulose <1%

Asbestos Type: %
Chrysotile 6%

Lab ID: 19000410 Client Sample #: 2018-0913-3-26

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: Off-white vinyl

Non-Fibrous Materials:	Other Fibrous Materials:%
Vinyl/Binder, Fine particles	None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 2 Description: Gray fibrous material with tan brittle mastic

Non-Fibrous Materials:	Other Fibrous Materials:%
Mastic/Binder, Fine particles	Cellulose 20%

Asbestos Type: %
Chrysotile 55%

Lab ID: 19000411 Client Sample #: 2018-0913-3-27

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Tiffany Cummings

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019



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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900165.00

Client Project #: 2018-0913

Date Received: 1/2/2019

Samples Received: 19

Samples Analyzed: 19

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 5	Description: Off-white vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Vinyl/Binder, Calcareous particles, Fine particles	Cellulose 2%		None Detected ND
Layer 2 of 5	Description: Yellow crumbly mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder, Fine particles	Cellulose 2%		None Detected ND
		Synthetic fibers <1%		
Layer 3 of 5	Description: Beige vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Calcareous binder, Calcareous particles, Fine particles	Cellulose <1%		Chrysotile 5%
Layer 4 of 5	Description: Black asphaltic mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder, Calcareous particles, Fine particles	Cellulose 2%		None Detected ND
Layer 5 of 5	Description: Black asphaltic fibrous material with brown brittle mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder, Wood flakes, Fine particles	Cellulose 70%		None Detected ND

Lab ID: 19000412 **Client Sample #: 2018-0913-3-28**

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Brown rubbery material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Vinyl/Binder, Fine grains	None Detected ND		None Detected ND
Layer 2 of 2	Description: Brown brittle mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder, Fine particles	Cellulose 4%		None Detected ND

Sampled by: Client

Analyzed by: Tiffany Cummings

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Derrick Gallard
Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Batch #: 1900165.00
Client Project #: 2018-0913
Date Received: 1/2/2019
Samples Received: 19
Samples Analyzed: 19
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 19000413 Client Sample #: 2018-0913-3-29

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: Brown flat hard compressed fibrous material with white surface

Non-Fibrous Materials:	Other Fibrous Materials: %
Laminate/binder, Fine particles	Cellulose 60%

Asbestos Type: %
None Detected ND

Layer 2 of 2 Description: Yellow soft mastic with wood flakes

Non-Fibrous Materials:	Other Fibrous Materials: %
Mastic/Binder, Calcareous particles, Wood flakes	Cellulose 8%

Asbestos Type: %
None Detected ND

Lab ID: 19000414 Client Sample #: 2018-0913-3-30

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 3 Description: Yellow vinyl

Non-Fibrous Materials:	Other Fibrous Materials: %
Vinyl/Binder, Fine particles	None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 3 Description: Off-white fibrous material with yellow soft mastic

Non-Fibrous Materials:	Other Fibrous Materials: %
Mastic/Binder, Fine particles	Cellulose 40%
	Glass fibers 15%

Asbestos Type: %
None Detected ND

Layer 3 of 3 Description: Brown crumbly material

Non-Fibrous Materials:	Other Fibrous Materials: %
Binder/Filler, Fine particles	Cellulose 20%

Asbestos Type: %
None Detected ND

Lab ID: 19000415 Client Sample #: 2018-0913-3-31

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 3 Description: Brown flat hard compressed fibrous material with off white surface

Non-Fibrous Materials:	Other Fibrous Materials: %
Laminate/binder, Fine particles	Cellulose 80%

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Tiffany Cummings

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900165.00

Client Project #: 2018-0913

Date Received: 1/2/2019

Samples Received: 19

Samples Analyzed: 19

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 2 of 3	Description: White soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Fine particles	Cellulose 10%		None Detected ND
Layer 3 of 3	Description: Tan fibrous material with yellow soft mastic and white foamy material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Synthetic foam, Fine particles	Cellulose 60%		None Detected ND
	Calcareous particles			
<hr/>				
Lab ID: 19000416	Client Sample #: 2018-0913-3-32			
	Location: "Building 18" 121 8th Ave. Seattle, WA 98104			
Layer 1 of 5	Description: Off-white vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Vinyl/Binder, Calcareous particles	None Detected ND		None Detected ND
Layer 2 of 5	Description: Yellow crumbly mastic with white compacted powdery material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Calcareous particles, Mastic/Binder	Cellulose 5%		None Detected ND
Layer 3 of 5	Description: Beige vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Calcareous particles, Vinyl/Binder, Fine particles	Cellulose 2%		Chrysotile 4%
Layer 4 of 5	Description: Black asphaltic mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Calcareous particles, Fine particles	Cellulose 5%		None Detected ND
Layer 5 of 5	Description: Black asphaltic fibrous material with brown brittle mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Fine particles, Wood flakes	Cellulose 65%		None Detected ND

Sampled by: Client

Analyzed by: Tiffany Cummings

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900165.00

Client Project #: 2018-0913

Date Received: 1/2/2019

Samples Received: 19

Samples Analyzed: 19

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Lab ID: 19000417 Client Sample #: 2018-0913-3-33

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 3 Description: Off-white vinyl tile

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Calcareous particles, Vinyl/Binder

None Detected ND

None Detected ND

Layer 2 of 3 Description: Yellow crumbly mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Mastic/Binder, Fine particles

Cellulose <1%

None Detected ND

Layer 3 of 3 Description: Black asphaltic fibrous material with brown brittle mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Mastic/Binder, Fine particles, Wood flakes

Cellulose 75%

None Detected ND

Lab ID: 19000418 Client Sample #: 2018-0913-3-34

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: Yellow vinyl

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Vinyl/Binder, Fine particles

None Detected ND

None Detected ND

Layer 2 of 2 Description: Off-white fibrous material with yellow soft mastic and wood flakes

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Mastic/Binder, Mineral grains, Wood flakes

Cellulose 55%

None Detected ND

Glass fibers 12%

Lab ID: 19000419 Client Sample #: 2018-0913-3-35

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 4 Description: Off-white vinyl tile

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Calcareous particles, Vinyl/Binder, Fine particles

None Detected ND

None Detected ND

Sampled by: Client

Analyzed by: Tiffany Cummings

Date: 01/04/2019

Reviewed by: Nick Ly

Date: 01/07/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900165.00

Client Project #: 2018-0913

Date Received: 1/2/2019

Samples Received: 19

Samples Analyzed: 19

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 2 of 4	Description: Yellow brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder, Fine particles	None Detected ND	None Detected ND
Layer 3 of 4	Description: Beige vinyl tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Calcareous particles, Vinyl/Binder	Cellulose <1%	Chrysotile 4%
Layer 4 of 4	Description: Black asphaltic fibrous material with brown brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder, Wood flakes, Fine particles	Cellulose 85%	None Detected ND

Lab ID: 19000420 Client Sample #: 2018-0913-3-36

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Off-white vinyl tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Vinyl/Binder, Calcareous particles, Fine particles	Cellulose <1%	None Detected ND
Layer 2 of 3	Description: Black asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder, Fine particles	Cellulose 4%	None Detected ND
Layer 3 of 3	Description: Black asphaltic fibrous material with brown brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder, Fine particles, Wood flakes	Cellulose 77%	None Detected ND

Lab ID: 19000421 Client Sample #: 2018-0913-3-37

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Yellow vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Vinyl/Binder, Fine particles	None Detected ND	None Detected ND

Sampled by: Client

Analyzed by: Tiffany Cummings

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019



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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900165.00

Client Project #: 2018-0913

Date Received: 1/2/2019

Samples Received: 19

Samples Analyzed: 19

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 2 of 3	Description: Tan fibrous material with tan brittle mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder	Cellulose 20%		Chrysotile 55%
Layer 3 of 3	Description: White powdery material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Calcareous particles, Binder/Filler, Wood flakes	Cellulose 10%		None Detected ND

Lab ID: 19000422 Client Sample #: 2018-0913-3-38

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Off-white vinyl			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Calcareous particles, Vinyl/Binder	None Detected ND		None Detected ND
Layer 2 of 3	Description: Yellow soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Fine particles	Cellulose 8%		None Detected ND
Layer 3 of 3	Description: Black asphaltic fibrous material with brown brittle mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Wood flakes	Cellulose 80%		None Detected ND

Lab ID: 19000423 Client Sample #: 2018-0913-3-39

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 1	Description: Tan chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine grains	Cellulose 30%		None Detected ND

Lab ID: 19000424 Client Sample #: 2018-0913-3-40

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Tiffany Cummings

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900165.00

Client Project #: 2018-0913

Date Received: 1/2/2019

Samples Received: 19

Samples Analyzed: 19

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard
Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 1	Description: White soft elastic material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Fine particles, Fine grains	Cellulose <1%		None Detected ND

Lab ID: 19000425 **Client Sample #: 2018-0913-3-41**

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Black asphaltic material with granules			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Granules, Fine grains	Glass fibers 30%		None Detected ND

Layer 2 of 3	Description: Black asphaltic mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Fine particles	Cellulose 2%		None Detected ND

Layer 3 of 3	Description: Black asphaltic fibrous felt			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Fine particles	Cellulose 70%		None Detected ND

Lab ID: 19000426 **Client Sample #: 2018-0913-3-42**

Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Comments: Sample was dried prior to analysis.

Layer 1 of 2	Description: Black asphaltic material with granules			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Granules, Fine grains	Glass fibers 27%		None Detected ND

Layer 2 of 2	Description: Black asphaltic mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Fine particles, Fine grains	Cellulose <1%		None Detected ND

Sampled by: Client

Analyzed by: Tiffany Cummings

Reviewed by: Nick Ly

Date: 01/04/2019

Date: 01/07/2019



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

ASBESTOS LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Derrick Gallard
Phone (206) 547-0100
Cell (206) 707-3236
NVL Batch Number 1900165.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/4/2019 **Time** 4:30 PM
Email derrick.g@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0913 **Project Location:** "Building 18" 121 8th Ave. Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 19

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19000408	2018-0913-3-24		A
2	19000409	2018-0913-3-25		A
3	19000410	2018-0913-3-26		A
4	19000411	2018-0913-3-27		A
5	19000412	2018-0913-3-28		A
6	19000413	2018-0913-3-29		A
7	19000414	2018-0913-3-30		A
8	19000415	2018-0913-3-31		A
9	19000416	2018-0913-3-32		A
10	19000417	2018-0913-3-33		A
11	19000418	2018-0913-3-34		A
12	19000419	2018-0913-3-35		A
13	19000420	2018-0913-3-36		A
14	19000421	2018-0913-3-37		A
15	19000422	2018-0913-3-38		A
16	19000423	2018-0913-3-39		A
17	19000424	2018-0913-3-40		A
18	19000425	2018-0913-3-41		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/2/19	1630
Analyzed by	Tiffany Cummings		NVL	1/4/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/2/2019
 Time: 4:56 PM
 Entered By: Shaina Mitchell

ASBESTOS LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Derrick Gallard
Phone (206) 547-0100
Cell (206) 707-3236
NVL Batch Number 1900165.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/4/2019 **Time** 4:30 PM
Email derrick.g@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0913 **Project Location:** "Building 18" 121 8th Ave. Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 19

Rush Samples

Lab ID	Sample ID	Description	A/R
19	19000426	2018-0913-3-42	A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/2/19	1630
Analyzed by	Tiffany Cummings		NVL	1/4/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special
Instructions:

Date: 1/2/2019
 Time: 4:56 PM
 Entered By: Shaina Mitchell

NVL Laboratories, Inc.

4708 Aurora Ave N. Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900165

Client NVL Laboratories Inc

Street 4708 Aurora Ave N

Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 18" 121 8th Ave.

Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0913

Total Samples 19

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days

☐ 2 Hrs ☐ 1 Day ☐ 4 Days

☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

☐ Asbestos Air ☐ PCM (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II) ☐ Other

☒ Asbestos Bulk ☒ PLM (EPA/600/R-93/116) ☐ PLM (EPA Point Count) ☐ PLM (EPA Gravimetry) ☐ TEM BULK

☐ Mold/Fungus ☐ Mold Air ☐ Mold Bulk ☐ Rotometer Calibration

METALS

☐ Total Metals

☐ TCLP

☐ Cr 6

Det. Limit

☐ FAA (ppm)

☐ ICP (ppm)

☐ GFAA (ppb)

Matrix

☐ Air Filter

☐ Drinking water

☐ Dust/wipe (Area)

☐ Soil

☐ Paint Chips in %

☐ Paint Chips in cr

RCRA Metals

☐ Arsenic (As)

☐ Barium (Ba)

☐ Cadmium (Cd)

☐ All 8

☐ Chromium (Cr)

☐ Lead (Pb)

☐ Mercury (Hg)

Other Metals

☐ All 3

☐ Copper (Cu)

☐ Nickel (Ni)

☐ Zinc (Zn)

☐ Other Types of Analysis

☐ Fiberglass

☐ Silica

☐ Nuisance Dust

☐ Respirable Dust

☐ Other (Specify) _____

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0913-3-24	2018-0913-3-34	
2		-3-25	-3-40	
3		-3-26	-3-41	
4		-3-27	-3-42	
5		-3-28		
6		-3-29		
7		-3-30		
8		-3-31		
9		-3-32		
10		-3-33		
11		-3-34		
12		-3-35		
13		-3-36		
14		-3-37		
15		-3-38		

	Print Below	Sign Below	Company	Date	Time
Sampled by	DERRIUC	7C	NVL	1/2/19	7:30
Relinquished by	DERRIUC	7C	NVL	1/2/19	4:30
Received by	S. Mitchell	[Signature]	NVL	1/2/19	1630
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

January 4, 2019

Derrick Gallard

NVL Field Services Division

4708 Aurora Ave. N.

Seattle, WA 98103



RE: Metals Analysis; NVL Batch # 1900163.00

Dear Mr. Gallard,

Enclosed please find the test results for samples submitted to our laboratory for analysis. Preparation of these samples was conducted following protocol outlined in EPA Method SW 846 -3051 unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with U.S. EPA, NIOSH, OSHA and other ASTM methods.

For matrix materials submitted as paint, dust wipe, soil or TCLP samples, analysis for the presence of total metals is conducted using published U.S. EPA Methods. Paint and soil results are usually expressed in mg/Kg which is equivalent to parts per million (ppm). Lead (Pb) in paint is usually expressed in mg/Kg (ppm), Percent (%) or mg/cm² by area. Dust wipe sample results are usually expressed in ug/wipe and ug/ft². TCLP samples are reported in mg/L (ppm). For air filter samples, analyses are conducted using NIOSH and OSHA Methods. Results are expressed in ug/filter and ug/m³. Other matrix materials are analyzed accordingly using published methods or specified by client. The reported test results pertain only to items tested and 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 details.

This report is considered highly confidential and will not be released without your approval. 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. if you need further assistance please feel free to call us at 206-547-0100 or 1-888-NVLLABS.

Sincerely,

A handwritten signature in black ink, appearing to read "Shalini Patel".

Shalini Patel, Lab Supervisor

Enc.: Sample results



LAB # 101861

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516

Analysis Report

Total Lead (Pb)

NVL

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900163.00

Matrix: Paint
Method: EPA 3051/7000B
Client Project #: 2018-0913
Date Received: 1/2/2019
Samples Received: 6
Samples Analyzed: 6

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Lab ID	Client Sample #	Sample Weight (g)	RL in mg/Kg	Results in mg/Kg	Results in percent
19000401	2018-0913-Pb-1	0.1962	51	< 51	<0.0051
19000402	2018-0913-Pb-2	0.1913	52	< 52	<0.0052
19000403	2018-0913-Pb-3	0.1929	52	1300	0.13
19000404	2018-0913-Pb-4	0.1951	51	3100	0.31
19000405	2018-0913-Pb-5	0.1742	57	7100	0.71
19000406	2018-0913-Pb-6	0.1055	95	< 95	<0.0095

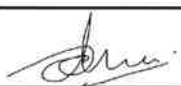
Sampled by: Client

Analyzed by: Yasuyuki Hida

Reviewed by: Shalini Patel

Date Analyzed: 01/04/2019

Date Issued: 01/04/2019


Shalini Patel, Lab Supervisor

mg/ Kg =Milligrams per kilogram

Percent = Milligrams per kilogram / 10000

Note : Method QC results are acceptable unless stated otherwise.

Unless otherwise indicated, the condition of all samples was acceptable at time of receipt.

RL = Reporting Limit

'<' = Below the reporting Limit

Bench Run No: 2019-0104-1

FAA-02

LEAD LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Derrick Gallard
Phone (206) 547-0100
Cell (206) 707-3236
NVL Batch Number 1900163.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/4/2019 **Time** 4:30 PM
Email derrick.g@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0913 **Project Location:** "Building 18" 121 8th Ave. Seattle, WA 98104

Subcategory Flame AA (FAA)

Item Code FAA-02 EPA 7000B Lead by FAA <paint>

Total Number of Samples 6

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19000401	2018-0913-Pb-1		A
2	19000402	2018-0913-Pb-2		A
3	19000403	2018-0913-Pb-3		A
4	19000404	2018-0913-Pb-4		A
5	19000405	2018-0913-Pb-5		A
6	19000406	2018-0913-Pb-6		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/2/19	1630
Analyzed by	Yasuyuki Hida		NVL	1/4/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/2/2019

Time: 4:49 PM

Entered By: Shaina Mitchell

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvillabs.com

CHAIN of CUSTODY SAMPLE LOG

1900163

Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 18" 121 8th Ave.
Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0913

Total Samples 6

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days

☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

☐ Asbestos Air ☐ PCM (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II) ☐ Other

☐ Asbestos Bulk ☐ PLM (EPA/600/R-93/116) ☐ PLM (EPA Point Count) ☐ PLM (EPA Gravimetry) ☐ TEM BULK

☐ Mold/Fungus ☐ Mold Air ☐ Mold Bulk ☐ Rotometer Calibration

METALS

☒ Total Metals

☐ TCLP

☐ Cr 6

Det. Limit

☒ FAA (ppm)

☐ ICP (ppm)

☐ GFAA (ppb)

Matrix

☐ Air Filter

☐ Drinking water

☐ Dust/wipe (Area)

☐ Soil

☒ Paint Chips in %

☐ Paint Chips in cr

RCRA Metals

☐ Arsenic (As)

☐ Barium (Ba)

☐ Cadmium (Cd)

All 8

☐ Chromium (Cr)

☒ Lead (Pb)

☐ Mercury (Hg)

Other Metals All 3

☐ Copper (Cu)

☐ Nickel (Ni)

☐ Zinc (Zn)

☐ Other Types of Analysis

☐ Fiberglass

☐ Silica

☐ Nuisance Dust

☐ Respirable Dust

☐ Other (Specify) _____

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0913 Pb 1		
2		-Pb-2		
3		-Pb-3		
4		-Pb-4		
5		-Pb-5		
6		-Pb-6		
7				
8				
9				
10				
11				
12				
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	DERRIK		NVL	1/2/19	7:30
Relinquished by	DERRIK		NVL	1/2/19	4:30
Received by	S. Mitchell		NVL	1/2/19	16:30
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

January 4, 2019

Derrick Gallard

NVL Field Services Division

4708 Aurora Ave. N.

Seattle, WA 98103



RE: Metals Analysis; NVL Batch # 1900164.00

Dear Mr. Gallard,

Enclosed please find the test results for samples submitted to our laboratory for analysis. Preparation of these samples was conducted following protocol outlined in EPA Method SW 846 -3051 unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with U.S. EPA, NIOSH, OSHA and other ASTM methods.

For matrix materials submitted as paint, dust wipe, soil or TCLP samples, analysis for the presence of total metals is conducted using published U.S. EPA Methods. Paint and soil results are usually expressed in mg/Kg which is equivalent to parts per million (ppm). Lead (Pb) in paint is usually expressed in mg/Kg (ppm), Percent (%) or mg/cm² by area. Dust wipe sample results are usually expressed in ug/wipe and ug/ft². TCLP samples are reported in mg/L (ppm). For air filter samples, analyses are conducted using NIOSH and OSHA Methods. Results are expressed in ug/filter and ug/m³. Other matrix materials are analyzed accordingly using published methods or specified by client. The reported test results pertain only to items tested and 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 details.

This report is considered highly confidential and will not be released without your approval. 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. If you need further assistance please feel free to call us at 206-547-0100 or 1-888-NVLLABS.

Sincerely,

A handwritten signature in black ink, appearing to read "Shalini Patel".

Shalini Patel, Lab Supervisor

Enc.: Sample results



Analysis Report

Toxicity Characteristic Leaching Procedure - Lead (Pb)

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900164.00

Matrix: Bulk
Method: EPA 1311/7000B
Client Project #: 2018-0913
Date Received: 1/2/2019
Samples Received: 1
Samples Analyzed: 1

Attention: Mr. Derrick Gallard

Project Location: "Building 18" 121 8th Ave. Seattle, WA 98104

Lab ID	Client Sample #	RL mg/ L	Results in mg/L	Results in ppm
19000407	2018-0913-TCLP	0.5	< 0.5	< 0.5


Sampled by: Client

Analyzed by: Yasuyuki Hida

Reviewed by: Shalini Patel

Date Analyzed: 01/04/2019

Date Issued: 01/04/2019


Shalini Patel, Lab Supervisor

mg/ L =Milligrams per liter

ppm = parts per million

Note : Method QC results are acceptable unless stated otherwise.

Unless otherwise indicated, the condition of all samples was acceptable at time of receipt.

RL = Reporting Limit

'<' = Below the reporting Limit

Bench Run No: 2019-0103-1

TCLP-1

LEAD LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Derrick Gallard
Phone (206) 547-0100
Cell (206) 707-3236
NVL Batch Number 1900164.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/4/2019 **Time** 4:30 PM
Email derrick.g@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0913 **Project Location:** "Building 18" 121 8th Ave. Seattle, WA 98104

Subcategory Flame AA (FAA)

Item Code TCLP-1 **EPA 1311/7000B Lead by FAA <TCLP>**

Total Number of Samples 1

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19000407	2018-0913-TCLP		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/2/19	1630
Analyzed by	Yasuyuki Hida		NVL	1/4/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					
Special Instructions:					

Date: 1/2/2019
 Time: 4:53 PM
 Entered By: Shaina Mitchell

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**CHAIN of CUSTODY
SAMPLE LOG****1900164**L
SClient **NVL Laboratories Inc**Street **4708 Aurora Ave N
Seattle, WA 98103**Project Manager **Syed Hasan**Project Location **"Building 18" 121 8th Ave.
Seattle, WA 98104**

NVL Batch Number _____

Client Job Number **2018-0913**Total Samples **1**Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address **George.Barlet@seattlehousing.org**

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input type="checkbox"/> Asbestos Bulk	<input type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	<input type="checkbox"/> All 8	Other Metals
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)	<input type="checkbox"/> All 3
<input checked="" type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input checked="" type="checkbox"/> Lead (Pb)	<input type="checkbox"/> Copper (Cu)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Nickel (Ni)
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify) _____		
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0913-TCLP		
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	DEERICK		NVL	1/2/19	7:30
Relinquished by	DEERICK		NVL	1/2/19	
Received by	S. Mitchell		NVL	1/2/19	1630
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to



Appendix C

AHERA Certifications & Laboratory Qualification



AIHA

Laboratory Accreditation
Programs, LLC

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 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

LABORATORY ACCREDITATION PROGRAMS

- | | |
|--|--------------------------------------|
| <input checked="" type="checkbox"/> INDUSTRIAL HYGIENE | Accreditation Expires: June 01, 2019 |
| <input checked="" type="checkbox"/> ENVIRONMENTAL LEAD | Accreditation Expires: June 01, 2019 |
| <input checked="" type="checkbox"/> ENVIRONMENTAL MICROBIOLOGY | Accreditation Expires: June 01, 2019 |
| <input type="checkbox"/> FOOD | Accreditation Expires: |
| <input checked="" type="checkbox"/> UNIQUE SCOPES | Accreditation Expires: June 01, 2019 |

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 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

William Walsh

William Walsh, CIH

Chairperson, Analytical Accreditation Board

Revision 15: 03/30/2016

Cheryl O. Morton

Cheryl O. Morton

Managing Director, AIHA Laboratory Accreditation Programs, LLC

Date Issued: 05/31/2017

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

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 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).*

2018-10-01 through 2019-09-30

Effective Dates



A handwritten signature in cursive script, appearing to read "Tina S. Samson".

For the National Voluntary Laboratory Accreditation Program



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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

Code

Description

18/A01

EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples

18/A03

EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

A handwritten signature in black ink, appearing to read "John S. Gorman".

For the National Voluntary Laboratory Accreditation Program

Certificate of Completion

This is to certify that

Derrick S. Gallard

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

169720

Certificate Number



Oct 10, 2018 Expires in 1 year.

Date(s) of Training

Exam Score: N/A
if appropriate.

A handwritten signature in black ink, appearing to be "S. Gallard", written over a horizontal line.

Instructor

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

STATE OF WASHINGTON

Department of Commerce

Lead-Based Paint Abatement Program

Derrick Gallard

*Has fulfilled the certification requirements of
WAC 365-230
and has been certified to conduct lead-based
paint activities as a
Inspector*

<u>Certification #</u>	<u>Issuance Date</u>	<u>Expiration Date</u>
7090	02/13/2018	02/13/2021

Certificate of Completion

This is to certify that

Jason Lindahl

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

167717

Certificate Number



May 23, 2018 Expires in 1 year.

Date(s) of Training

Exam Score: N/A
if appropriate:

A handwritten signature in black ink, appearing to be "R. B.", written over a horizontal line.

Instructor

ARGUS PACIFIC, INC / 1900 WEST NICKERSON ST, SUITE 315 / SEATTLE, WASHINGTON 98119 / 206.285.3373 / ARGUSPACIFIC.COM

STATE OF WASHINGTON

Department of Commerce

Lead-Based Paint Abatement Program

Jason Lindahl

*Has fulfilled the certification requirements of
WAC 365-230
and has been certified to conduct lead-based
paint activities as a
Inspector*

<u>Certification #</u>	<u>Issuance Date</u>	<u>Expiration Date</u>
7145	03/20/2018	03/20/2021



Hazardous Materials Survey

"Building #19"
115 8th Avenue
Seattle, WA 98104



Prepared For
Mr. George Barlet
Seattle Housing Authority
190 Queen Anne Avenue N
Seattle, WA 98109

Project Number:	2018-0914
Inspection Date:	January 3, 2019
Report Date:	January 9, 2019
Inspected By	Derrick Gallard / Jason Lindahl
AHERA Certification	# 169720 / 167717
Certification Expiration Date	October 10, 2019 / May 23, 2019

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APPENDICIES

- A** Sample Locations (Floor Plan)
- B** Laboratory Analysis Results
- C** AHERA Certifications & Laboratory Qualifications

1.0 SCOPE OF WORK

A Hazardous Materials Survey was conducted on apartment building #19 located at 115 8th Avenue Seattle, WA 98104 on January 3, 2019.

Derrick Gallard and Jason Lindahl (AHERA Building Inspectors and WA – Commerce Certified Lead Inspectors), conducted this survey at the request of Mr. George Barlet of Seattle Housing Authority.

The purpose of this survey was to identify suspect asbestos containing building materials, lead paint coatings, and Mercury (Hg) / PCB containing devices which would be impacted by the planned demolition of the structure. Destructive sampling methods were utilized to collect samples of suspect building materials. No soft/limited demolition was performed during this inspection. Hidden materials may exist within the structure, and all suspect materials must be treated as hazardous until testing proves otherwise.

This survey constitutes a survey of accessible suspect ACM in the project area and was conducted in accordance with:

The National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 Code of Federal Regulations (CFR) Part 61, Subpart M requires a survey by an accredited asbestos inspector prior to demolition of a structure.

This asbestos survey also satisfies the requirements for "Good Faith" inspection outlined in Washington Administrative Code (WAC) 296-62-07721 (2) Communication of hazards, which requires the owner of a structure to provide contractors with a written report identifying the asbestos-containing materials expected to be disturbed during renovation or demolition.

The asbestos survey section is written to comply with the AHERA asbestos sampling procedure as stated in 40 CFR 763.86. This protocol is required under the Puget Sound Clean Air Agency (PSCAA) Regulation III, Article IV, rev. March 26, 2009) for all asbestos surveys prior to a building demolition.

Recommendations have been included for compliance with WAC 296-155-176 "Lead in Construction" and WAC 173-090 "Waste Disposal Regulations". The Lead in Construction regulations are designed to protect workers from lead hazards during construction and demolition activities.

Fluorescent light tubes, HID lamps, and thermostats contain Mercury (Hg) are classified as universal waste by the EPA and Washington Department of Ecology. Recommendations have been included for compliance with WAC 173-303-573, "The Universal Waste Rule for Dangerous Waste".

A floor plan indicating locations of samples collected by NVL personnel has been included in **Appendix A**.

2.0 SURVEY METHOD

Asbestos Survey Method

The NVL Labs field inspector is an Asbestos Building Inspector, certified under the requirements of the United States Environmental Protection Agency (EPA) Asbestos Hazard Emergency Response Act (AHERA) regulation 40 CFR 763, Subpart E. A copy of his certificate is provided in Appendix C.

The AHERA Guidelines dictate the following:

The inspector must determine *homogenous areas*, which are defined as an area of Thermal System Insulation, Surfacing Material, or Miscellaneous Material that is uniform in texture and color.

Once homogenous areas have been determined, the inspector must determine whether or not material is friable or non-friable. **Friable** is defined as a material, that when dry, can be crushed, pulverized, or reduced to dust using hand pressure, and **non-friable** material is defined as a material, that when dry, *cannot* be crushed pulverized or reduced to dust using hand pressure. Materials normally defined as non-friable can become friable by definition if sufficiently damaged.

Once friability has been determined, the materials suspected of containing asbestos are divided into one of three categories: Thermal System Insulation (TSI), Surfacing Material (SM), or Miscellaneous Material (MM). Generally speaking, TSI and SM are considered to be friable, with the exception of TSI where the structural integrity of the insulation is intact and the protective out wrap is undamaged.

Once materials are divided into one of the categories, samples are collected in the following manner:

Friable Thermal System Insulation:

1. Inspector shall collect three (3) randomly distributed samples;
2. Inspector shall collect a minimum of one sample of each TSI materials that appears to have been used as a patch, as long as the patch is less than 6 linear feet or 6 square feet;
3. Inspector shall collect in a manner sufficient, samples from areas of TSI applied to fittings, tees, and joints.

Friable Surfacing Material:

1. Inspector shall collect samples in random manner of surfacing materials as follows:
 - a. Collect three bulk samples from an area believed to be homogeneous (defined as a material that appears to be the same or similar and was installed at the same time) that is 1,000 square feet or less in size;
 - b. Collect five bulk samples from an area believed to be homogeneous that is greater than 1,000 square feet in size, but less than 5,000 square feet in size;
 - c. Collect seven bulk samples from an area believed to be homogeneous that is greater than 5,000 square feet.

2.0 SURVEY METHOD (continued)

Miscellaneous Materials:

1. Inspector shall collect samples in a manner and number sufficient to determine if the material is asbestos-containing or not.

All Materials Determined to Be Non-Friable:

1. Inspector shall collect samples in a manner and number sufficient to determine if the material is asbestos containing or not.

In addition to these sampling requirements, the AHERA Building Inspector is required to assess the following of each material that is found to be positive for asbestos:

1. The condition of each material;
2. Accessibility;
3. Possibility for air erosion.

Once the samples have been collected, they must be analyzed by an accredited laboratory, and they must be analyzed using polarized light microscopy methods, commonly referred to as EPA Method 600/R-93/116.

NVL Labs collected samples and obtained analytical data for suspect asbestos-containing materials identified in the building. Once collected, each bulk sample was sealed in an unadulterated plastic bag to eliminate the possibility of cross-contamination. "Chain-of-Custody" tracking was followed to maintain sample integrity during handling and data reporting at NVL Labs.

A walk-through inspection of all accessible areas of the structures was performed to identify potential asbestos-containing materials. The walk-through inspection included a review of the internal and external aspects of the structures. The locations and types of potential asbestos-containing materials were noted.

Homogeneous Materials

Homogeneous materials are defined as an area of asbestos-containing material or presumed asbestos-containing material which appears similar throughout in terms of color, texture, and date of material application. The report listing for homogenous materials will appear as follows:

Sample Number	Material Description by Layer	Location	Asbestos	Quantity	Friable
#	Layer 1 is not asbestos-containing Layer 2 is asbestos-containing	Location description	1. % 2. %	"X" LF/ft ²	Yes/No

Lead Survey Method

NVL Labs collected representative samples of paint from the interior and exterior of the building within the project scope. Once collected, each bulk sample was sealed in an unadulterated plastic bag to eliminate the possibility of cross-contamination. "Chain-of-Custody" tracking was followed to maintain sample integrity during handling and data reporting at NVL Labs. Sampling was representative of all layers of paint. Copies of laboratory reports and field data forms for lead paint are in Appendix B.

2.0 SURVEY METHOD (continued)

TCLP Sampling Method

A representative composite sample of the proportionate components which make up the areas to be demolished was collected and analyzed according to ASTM Standard. E 1908-97, as suggested by the Washington State Department of Ecology. Waste Characterization Plan number three of this standard, "Composite Sample and Demolish", was used to access the lead (Pb) content of the total debris.

3.0 LABORATORY INFORMATION

Laboratory Analysis: Asbestos

In accordance with 40 CFR Chapter 1 (7-01-07 Edition) Part 763, Subpart E, Appendix E, asbestos samples are analyzed at NVL Labs using polarized light microscopy (PLM) with dispersion staining. If samples are not homogeneous, then sub-samples of the components are analyzed separately. All bulk samples are analyzed using EPA Method 600/R-93/116 with the following measurement uncertainties for reported % asbestos: 1%=0-3%, 5%≥1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%. Only materials containing more than 1% total asbestos were classified as "asbestos-containing" based on EPA, state, and local regulations.

Findings for samples containing more than one separable layer of materials are reported for each layer. The asbestos concentration in the sample is determined by visual estimation.

NVL Labs is accredited by the National Institute of Standards and Technology (NIST) under the National Volunteer Laboratory Accreditation Program (NVLAP) program for bulk asbestos fiber analysis; *NVLAP Lab Code 102063-0*

Laboratory Analysis: Lead (Pb)

Samples are analyzed for the presence of inorganic lead using atomic absorption spectroscopy (AAS) in accordance with method EPA 3051/7000B. This method reports results in milligrams per kilogram (mg/kg) or its equivalent, parts per million (ppm).

Laboratory Accreditation

Professional accreditations for NVL Laboratories, Inc. include the following:

NVL Laboratories, Inc. is currently accredited by the National Institute of Standards and Technology (NIST) under the National Volunteer Laboratory Accreditation Program (NVLAP) program for bulk asbestos fiber analysis.

NVLAP Lab Code 102063-0

NVL Laboratories, Inc. is approved by the American Industrial Hygiene Association (AIHA) Asbestos Analysts Registry (AAR) program for airborne asbestos fiber analysis.

AAR Counter ID 7412

NVL Laboratories, Inc. is currently accredited by the American Industrial Hygiene Association (AIHA) under the Industrial Hygiene Laboratory Accreditation Program (IHLAP). The IHLAP program is designed specifically for laboratories involved in analyzing samples to evaluate workplace exposure. *IHLAP Certification Number 563*

4.0 BUILDING DESCRIPTION

General Building Type	This is a two-story 4-unit apartment building of traditional wood framed construction.
Primary External Components	The exterior of the building has vinyl and wood siding.
Foundation Type	The building has an on-grade concrete foundation.
Roofing Material(s)	The building has tri-tab shingle and rolled asphalt roofing.
Window Type(s)	The building has vinyl framed windows with exterior caulking.
Flooring	The building has vinyl tiles and sheet vinyl flooring.
Thermal Systems with Insulation	The building has baseboard heating system, with no visible suspect thermal insulation.
Finishing	The building is finished with drywall and plaster.

5.0 FINDINGS

Inventory of Suspect Asbestos-Containing Materials

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0914-1-1	1: Skim coating with paint 2: Plaster 3: Drywall	Main floor, room 1, wall	1: ND 2: ND 3: ND		
2018-0914-1-2	1: Skim coating with paint 2: Plaster 3: Drywall	Upper level, room 5, ceiling	1: ND 2: ND 3: ND		
2018-0914-1-3	1: Skim coating with paint 2: Plaster 3: Drywall	Upper level, room 13, wall	1: ND 2: ND 3: ND		
2018-0914-1-4	1: Skim coating with paint 2: Plaster 3: Drywall	Main floor, room 18, wall	1: ND 2: ND 3: ND		
2018-0914-1-5	1: Skim coating with paint 2: Plaster 3: Drywall	Upper level, room 22, wall	1: ND 2: ND 3: ND		
2018-0914-1-6	1: Skim coating with paint 2: Plaster 3: Drywall	Main floor, room 26, ceiling	1: ND 2: ND 3: ND		
2018-0914-1-7	1: Skim coating with paint 2: Plaster 3: Drywall	Upper level, room 29, wall	1: ND 2: ND 3: ND		
2018-0914-3-1	1: Joint compound with paint 2: Joint compound 3: Paper 4: Drywall	Main floor, room 12, wall joint	1: ND 2: ND 3: ND		
2018-0914-3-2	Drywall with paint	Main floor, room 19, mid-wall	ND		
2018-0914-3-3	1: Brown sheet vinyl 2: Off-white backing with tan mastic 3: Black mastic	Main floor, rooms 1 & 9, stair steps	1: ND 2: 28% 3: ND	75 ft ²	Yes

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0914-3-4	1: 6" Brown vinyl cove base 2: Light brown mastic	Main floor, rooms 1 & 9, stair risers	1: ND 2: ND		
2018-0914-3-5	1: 12x12 Cream vinyl floor tile 2: Tan mastic 3: Beige with streaks vinyl floor tile 4: Tan mastic 5: Residual black backing with brown mastic	Main floor, rooms 1-3, floor	1: ND 2: ND 3: ND 4: ND 5: ND		
2018-0914-3-6	1: Beige sheet vinyl 2: Off-white backing with tan mastic 3: Gray leveler 4: Compressed board	Main floor, room 4, floor	1: ND 2: ND 3: ND 4: ND		
2018-0914-3-7	1: Cream laminate 2: Tan mastic	Main floor, rooms 4 & 12, counter	1: ND 2: ND		
2018-0914-3-8	Black sink under coating	Main floor, rooms 4 & 12, sinks	2%	2 sinks	No
2018-0914-3-9	1: 12x12 Cream vinyl floor tile 2: Tan mastic 3: Beige vinyl floor tile 4: Black mastic 5: Residual black backing with brown mastic	Upper level, rooms 5-7, floor	1: ND 2: ND 3: 6% 4: ND 5: ND	300 ft ²	No
2018-0914-3-10	1: Tan sheet vinyl 2: Off-white backing with tan mastic 3: Light brown mastic	Upper level, rooms 5 & 13, shelf floor	1: ND 2: 29% 3: ND	50 ft ²	Yes
2018-0914-3-11	1: Tan laminate 2: Tan mastic	Upper level, room 6, window-sill	1: ND 2: ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0914-3-12	1: Gray debris 2: Beige sheet vinyl 3: Clear mastic 4: Tan sheet vinyl 5: Off-white backing with mastic 6: Residual black backing with brown mastic	Upper level, rooms 8, floor	1: ND 2: ND 3: ND 4: ND 5: 27% 6: ND	45 ft ²	Yes
2018-0914-3-13	1: Off-white laminate 2: Yellow mastic 3: Paper 4: White foam 5: Paper with adhesive 6: Drywall paper 7: Drywall	Upper level, rooms 8 & 16, tub surround	1: ND 2: ND 3: ND 4: ND 5: ND 6: ND 7: ND		
2018-0914-3-14	1: 12x12 Cream vinyl floor tiles 2: Brown mastic 3: Black mastic 4: Residual black backing with brown mastic	Main floor, rooms 9 & 11, floor	1: ND 2: ND 3: ND 4: ND		
2018-0914-3-15	1: 12x12 Cream vinyl floor tile 2: Tan mastic	Main floor, rooms 10 & 12, floor	1: ND 2: ND		
2018-0914-3-16	1: 12x12 Cream vinyl floor tile 2: Tan mastic 3: Residual black backing with mastic	Upper level, rooms 13-15, floor	1: ND 2: ND 3: ND		
2018-0914-3-17	1: Beige sheet vinyl 2: Off-white backing with mastic	Upper level, room 16, floor	1: ND 2: ND		
2018-0914-3-18	1: Beige sheet vinyl 2: Off-white backing with mastic	Main floor, room 17, floor	1: ND 2: ND		
2018-0914-3-19	1: Brown vinyl flooring 2: Yellow / white mastic	Main floor, room 17, stair steps	1: ND 2: ND		
2018-0914-3-20	1: 6" Brown vinyl cove base 2: White / brown mastic	Main floor, room 17, stair risers	1: ND 2: ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0914-3-21	1: 12x12 Cream vinyl floor tile 2: Black mastic 3: Brown mastic	Main floor, rooms 18 & 19, floor	1: ND 2: ND 3: ND		
2018-0914-3-22	1: Beige sheet vinyl 2: Off-white backing 3: Yellow mastic	Main floor, room 20, floor	1: ND 2: ND 3: ND		
2018-0914-3-23	1: Tan laminate 2: Red mastic	Main floor, rooms 20 & 27, counter	1: ND 2: ND		
2018-0914-3-24	Black sink undercoating	Main floor, rooms 20 & 27, sinks	3%	2 sinks	No
2018-0914-3-25	1: 12x12 Cream vinyl floor tile 2: Black mastic	Upper level, rooms 21-23, floor	1: ND 2: ND		
2018-0914-3-26	1: 12x12 Cream vinyl floor tile 2: Black mastic	Upper level, room 21, shelf, floor	1: ND 2: ND		
2018-0914-3-27	1: Tan laminate 2: Beige mastic 3: White mastic	Upper level, room 21, window-sill	1: ND 2: ND 3: ND		
2018-0914-3-28	1: Beige sheet vinyl 2: Off-white backing with yellow mastic	Upper level, room 24, floor	1: ND 2: ND		
2018-0914-3-29	1: Cream laminate 2: White foam 3: Beige mastic 4: Drywall	Upper level, rooms 24 & 32, tub surround	1: ND 2: ND 3: ND 4: ND		
2018-0914-3-30	1: 3" Brown vinyl cove base 2: White / beige mastic	Main floor, room 17, wall base	1: ND 2: ND		
2018-0914-3-31	1: Beige sheet vinyl 2: White backing with yellow mastic	Main floor, room 26, landing floor	1: ND 2: ND		
2018-0914-3-32	1: Brown vinyl flooring 2: White mastic 3: Brown mastic	Main floor room 25, stair steps	1: ND 2: ND 3: ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0914-3-33	1: Black asphaltic paper with foil 2: Fiberglass insulation	Main floor, room 27, wall cavity	1: ND 2: ND		
2018-0914-3-34	1: 12x12 White tile 2: Yellow adhesive 3: Leveler	Main floor, room 26, floor	1: ND 2: ND 3: ND		
2018-0914-3-35	1: Tan sheet vinyl 2: White backing with mastic & leveler 3: Brown mastic	Main floor, room 27, floor	1: ND 2: ND 3: ND		
2018-0914-3-36	1: 12x12 White tile 2: Yellow mastic 3: Brown mastic	Upper level, room 28-31, floor	1: ND 2: ND 3: ND		
2018-0914-3-37	1: 3" Brown vinyl cove base 2: Yellow & white mastic	Upper level, room 31, wall base	1: ND 2: ND		
2018-0914-3-38	1: Beige sheet vinyl 2: White backing with mastic & leveler	Upper level, room 32 & 29, floor	1: ND 2: ND		
2018-0914-3-39	White caulking	Exterior, perimeter vinyl windows	ND		
2018-0914-3-40	Black asphaltic material	Exterior, behind siding	ND		
2018-0914-3-41	1: Tri-tab asphaltic sheeting 2: Black asphaltic material with silver paint	Pitched roof	1: ND 2: ND		
2018-0914-3-42	Rolled black asphaltic sheeting	Flat roof	ND		

ND None Detected

Any suspect material(s) not identified above should not be disturbed and should be tested immediately. The suspect material must be treated as asbestos-containing until testing proves otherwise.

Inventory of Suspect Lead-Containing Paint Coatings

Sample Number	Material Description	Location	Lead in mg/kg	Lead in %
2018-0914-Pb-1	White paint on GWB	Interior walls / ceilings	< 52	< 0.0052
2018-0914-Pb-2	White paint on plaster	Interior walls / ceilings	< 49	< 0.0049

< Lead content of material analyzed is below the Lower Detection Limit.

5.0 FINDINGS (continued)

Inventory of Suspect Lead-Containing Paint Coatings

Sample Number	Material Description	Location	Lead in mg/kg	Lead in %
2018-0914-Pb-3	Brown paint on wood	Interior railings / stair stringers / door & closet components	670	0.067
2018-0914-Pb-4	Beige paint on wood	Exterior siding (behind vinyl siding)	8800	0.88
2018-0914-Pb-5	White paint on wood	Exterior siding walls / soffit / columns & fascia	< 53	< 0.0053
2018-0914-Pb-6	Red paint on metal	Exterior door components	< 140	< 0.014

< Lead content of material analyzed is below the Lower Detection Limit.

Samples in bold contain lead in excess of detectable levels

Mercury

A visual inspection was conducted to identify Mercury and Poly Chlorinated Biphenyls (PCB) containing devices. This includes Mercury thermostats, HID lamps, florescent light tubes (including the newer "green tubes" which still contain low levels of Mercury) and PCB containing light ballasts. Following devices were identified and assumed to contain Mercury and Poly Chlorinated Biphenyls (PCB).

Material	Location	Quantity
HID lamp	Exterior North Elevation	2 lamps
HID lamp	Exterior East Elevation	2 lamps
HID lamp	Exterior West Elevation	1 lamp

Poly Chlorinated Biphenyls (PCB) Light Ballasts

Material	Location	Quantity
HID light ballast	Exterior North Elevation	2 ballasts
HID light ballast	Exterior East Elevation	2 ballasts
HID light ballast	Exterior West Elevation	1 ballast

Location of Mercury and Poly Chlorinated Biphenyls (PCB) containing HID lamps are highlighted with green in the attached floor plan.

TCLP Sampling

Sample Number	Sample Location	Results in ppm
2018-0914-TCLP	"Building #19" 115 8th Avenue, Seattle, WA 98104	0.9

6.0 CONCLUSIONS AND RECOMMENDATIONS

The following is an inventory of asbestos-containing building materials identified during the Hazardous Materials Survey of building #19 located at 115 8th Avenue, Seattle, WA 98104.

1. Brown sheet vinyl backing / mastic (Friable)

Sample number: 2018-0914-3-3



There is approximately 75 square feet of asbestos-containing off-white backing with tan mastic associated with brown sheet vinyl flooring / steps located in room 1 & 9 of building #19. The substrate is wood.

2. Black sink undercoating (Non-friable)

Sample numbers: 2018-0914-3-8 & 3-24



There is a total of four (4) aluminum sinks with asbestos containing black undercoating located in room 4, 12, 20, and 27 of building #19.

3. Beige vinyl floor tiles (Non-friable)

Sample number: 2018-0914-3-9



There is approximately 300 square feet of asbestos-containing beige vinyl floor tiles located in room 5 thru 7 of building #19. The associated black mastic is not asbestos containing. The substrate is wood.

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

4. Tan sheet vinyl backing / mastic (Friable)

Sample numbers: 2018-0914-3-10, 3-12



There is approximately 95 square feet of asbestos-containing off-white backing with mastic associated with tan sheet vinyl flooring located on the shelf in room 5 & 13 and in room 8 (under beige sheet vinyl) of building #19. The substrate is wood.

Contractors should be aware that concealed suspect asbestos-containing building materials may be uncovered during the course of demolition or renovation work. Contractors should have contingency plans that include stopping work, evacuation of the immediate area and sampling by a certified AHERA Building Inspector whenever these materials are found. Concealed suspect materials may include but are not limited to: non-fiberglass pipe or roof drain insulation; spray-applied coatings; cement board; asphalt or paper vapor barriers; floorings and adhesives.

If discovered, all asbestos-containing materials that will be disturbed as a natural part of renovation and/or demolition are required to be removed and disposed of in accordance with Washington State regulations. Washington State Department of Labor and Industries and PSCAA requires that the Abatement be performed using Certified Asbestos Workers under the direct on-site supervision by a Certified Asbestos Supervisor. Further, NVL suggests that an AHERA inspector review this property after abatement to ensure all asbestos-containing materials have been removed by the contractor.

NVL recommends that an AHERA inspector/project manager be on site at the time of demolition to ensure that any potentially asbestos-containing materials uncovered during the process of renovation/demolition be dealt with properly.

NVL Labs, Inc. is making the following recommendations regarding asbestos:

1. A copy of this inspection report should be maintained at the project site during the duration of renovation / demolition.
2. A copy of this inspection report should be provided to the General Contractor and any Sub Contractors working on the renovation / demolition project.
3. The inspection report is not intended to serve as a design / bidding document, or scope of work prior to renovation / demolition.
4. Abatement specifications should be prepared by a Hazardous Materials Consulting firm covering the regulated building materials that will be impacted by the renovations / demolition, and these specifications should be part of any contract documents prepared for this project.
5. A licensed asbestos abatement contractor must be utilized to remove any asbestos-containing materials that will be impacted by the planned renovation / demolition.
6. A Hazardous Materials Consulting Firm should provide project oversight and air monitoring during the removal of the asbestos-containing materials.

NVL Laboratories, Inc.
4708 Aurora Ave N
Seattle, WA 98103

Phone (206) 547-0100 • Fax (206) 634-1936

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

Lead

Lead-containing paint was identified in the following paint samples. Worker protection protocols are applicable for this project.

1. Brown paint: interior railings / stair stringers / door & closet components. (approx. 525 ft²)
2. Beige paint: exterior wood siding, behind vinyl siding. (approx. 4100 ft²)

The Federal Occupational Safety & Health Administration's (OSHA) interim lead safety standard (29 CFR 1926.59) for the construction industry became effective on June 3, 1993. Lead exposure in construction is regulated in Washington State by WAC 296-155-176. These regulations protect workers disturbing building surfaces with lead containing paints. Paint with "any detectable level" of lead is classified as a lead containing paint by federal and state regulations and the applicable worker safety provisions must be implemented.

WORKER EXPOSURE

WAC 296-155-176, Lead (Pb), applies to all construction work where an employee may be occupationally exposed to Lead (Pb). Construction work includes activities such as demolition or salvage, removal or encapsulation, and renovation of materials that contain Lead (Pb). When an employee may be occupationally exposed to Lead (Pb), the employer must perform an exposure assessment according to WAC 296-155-176.

The exposure assessment consists of personal air monitoring to determine representative Lead (Pb) exposure levels for the work being performed. During the exposure assessment, the employer must provide the following:

- As a minimum, a half mask air purifying respirators equipped with high efficiency particulate air (HEPA) filters in accordance with WAC 296-155-17613.
- Appropriate personal protective clothing / equipment in accordance with WAC 296-155-17615.
- A designated change area which allows for separate storage areas for work and street clothing to prevent cross contamination in accordance with WAC 296-155-17619(2).
- Hand washing facilities to wash their hands and faces WAC 296-155-17619(5).
- Biological monitoring in the form of blood survey and analysis for Lead (Pb) and zinc protoporphyrin levels in accordance with WAC 296-155-17621 (1) (a).
- Training to include hazard communication, safety, and the limitations, proper use, and maintenance of respirators in accordance with WAC 296-155-100.

In addition to the protective equipment and hygiene requirements, the employer must attempt to reduce the levels of airborne Lead (Pb) through engineering controls such as ventilation and wet methods.

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

Mercury

Five (5) HID lamps were identified and assumed to contain Mercury (Hg) at building #19.

Fluorescent light tubes, HID lamps, and thermostats contain mercury (Hg) are classified as universal waste by the EPA and Ecology. The Universal Waste Rule for Dangerous Waste Lamps (WAC 173-303-573) included the following requirements:

- Immediately place lamps showing evidence of leakage, damage, etc. in a container following removal;
- Containerize in closed, structurally sound, compatible containers;
- Cardboard containers may be used for inside storage only;
- Labeling container required: "Waste Lamps," or "Universal Waste Lamps;"
- Track the length of time since waste lamp generation. Acceptable methods of proof include: date on label, inventory system, etc.
- Respond immediately to potential releases. If determined to be a release, contain and determine if it designates as a dangerous waste. If so, manage the release as specified in WAC 173-303;
- Disposal of universal waste as general or construction debris is not permitted;
- The crushing of fluorescent light tubes on-site is not allowed. In addition, measures should be taken to prevent breakage of fluorescent light tubes while the light tubes are in transit to their destination.
- Provide training to employees on the proper handling and emergency procedures of universal waste lamps;
- Track shipments of universal waste lamps with records (invoice, manifest, etc.) kept for a minimum of 3 years.

Poly Chlorinated Biphenyls (PCB) Light Ballasts

Five (5) HID light ballasts were identified and assumed to contain Poly Chlorinated Biphenyls (PCB).

The Washington statutes definition of a PCB-containing material require that any material with more than 2 parts per million (ppm) to be treated as PCB-containing material. Federal regulations dictated that any material with less than 50 ppm PCBs could be labeled as a non-PCB containing material. Because of this regulatory change, NVL recommends that all light ballasts be observed, removed, handled, and disposed of in an appropriate manner. The ballasts labeled with "PCB Free" and "Non-PCB" shall be packaged for recycle by an approved recycling facility.

TCLP

The TCLP sample result is below the threshold of 5.0 ppm. Thus, the solid waste stream of the demolition debris from the structure is considered as regular demolition debris.

A solid waste exhibits the characteristic of toxicity if, using the *Toxicity Characteristic Leaching Procedure* (TCLP) testing method, as incorporated in WAC 173-303-090, the extract from a representative sample of the waste contains lead (Pb) contaminants equal to or greater than 5.0 ppm. A material "fails" the TCLP when there is 5.0 parts per million or greater of lead (Pb) in the leachate.

7.0 LIMITATIONS OF SURVEY

The purpose of this hazardous materials survey report is to document asbestos containing building materials, lead paint coatings and Mercury / PCB containing devices discovered at "Building #19" 115 8th Avenue, Seattle, WA 98104.

The purpose of this survey was to identify suspect asbestos containing building materials, lead paint coatings, and Mercury (Hg) / PCB containing devices which would be impacted by the planned demolition of the structure. Destructive sampling methods were utilized to collect samples of suspect building materials. No soft/limited demolition was performed during this inspection. Hidden materials may exist within the structure, and all suspect materials must be treated as hazardous until testing proves otherwise.

As hazardous material surveys are non-comprehensive by nature, NVL Laboratories, Inc. cannot be held liable for materials which require destructive means to access, materials which are hidden from sight (e.g. materials hidden behind walls), materials which cannot be found due to their obscure nature, or which otherwise cannot be discovered with reasonable diligence.

This document is the sole property of NVL Laboratories and the property owner, or his agent, authorizing this survey.

Inspected By



Derrick Gallard
AHERA Building Inspector
AHERA Certification: 169720
Expiration Date : October 10, 2019

Prepared By



Tanveer Khan
Project Manager
AHERA Certification: 167087
Expiration Date: April 25, 2019

Inspected By



Jason Lindahl
AHERA Building Inspector
AHERA Certification: 167717
Expiration Date : May 23, 2019

Reviewed By



Syed Hasan
Manager Field Services
AHERA Certification: # 168599
Expiration Date: July 18, 2019



Appendix A

Sample Locations (Floor Plan)



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NVL Project # 2018-0914

Client Seattle Housing Authority - George Barlet

Location "Building 19" 115 8th Ave.

City Seattle

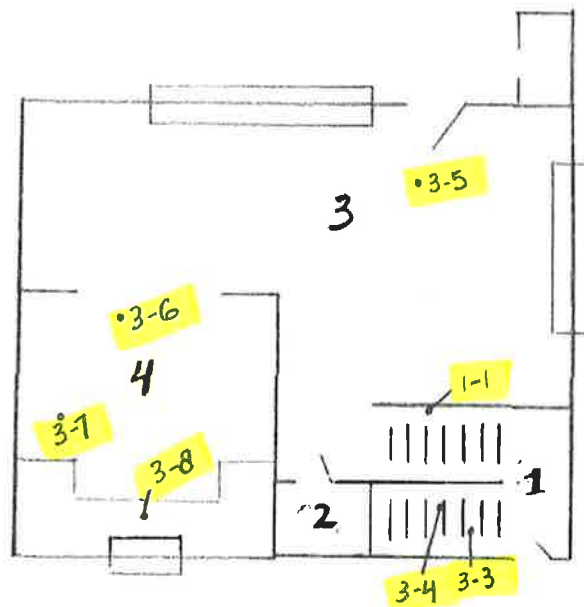
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Date 1/3/2019

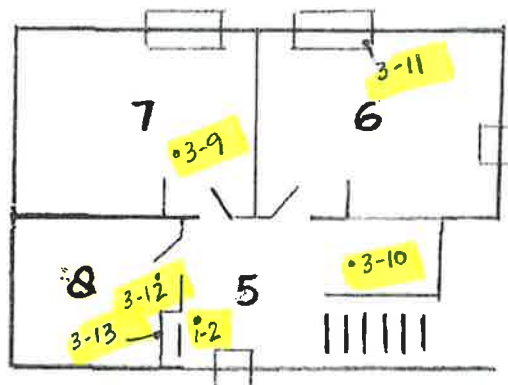
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UNIT 179

MAIN FLOOR



UPPER LEVEL



SUSPECT ASBESTOS SAMPLES

(NOT TO SCALE)



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Location "Building 19" 115 8th Ave.

City Seattle

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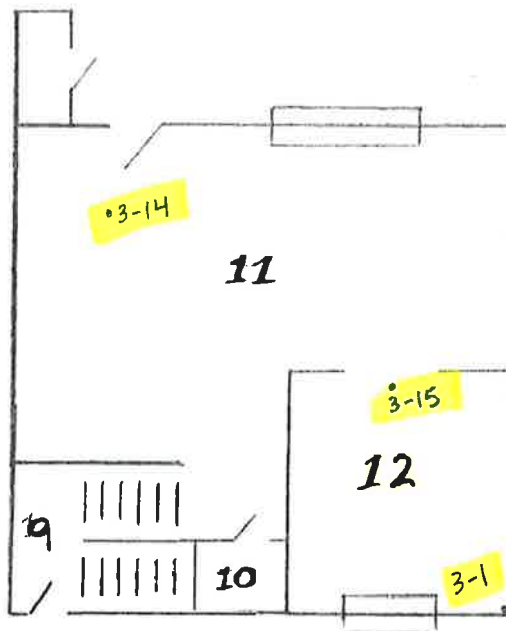
Date 1/3/2019

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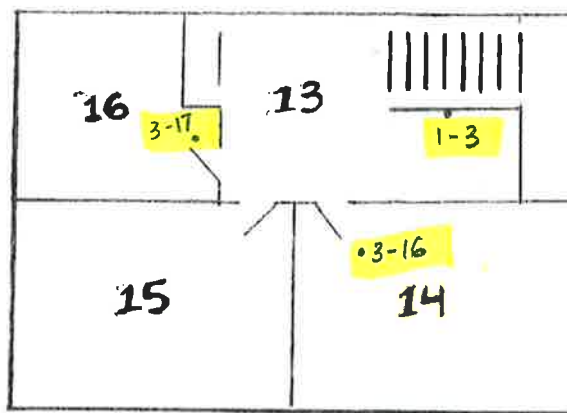
UNIT 180

↓
N

MAIN FLOOR



UPPER LEVEL

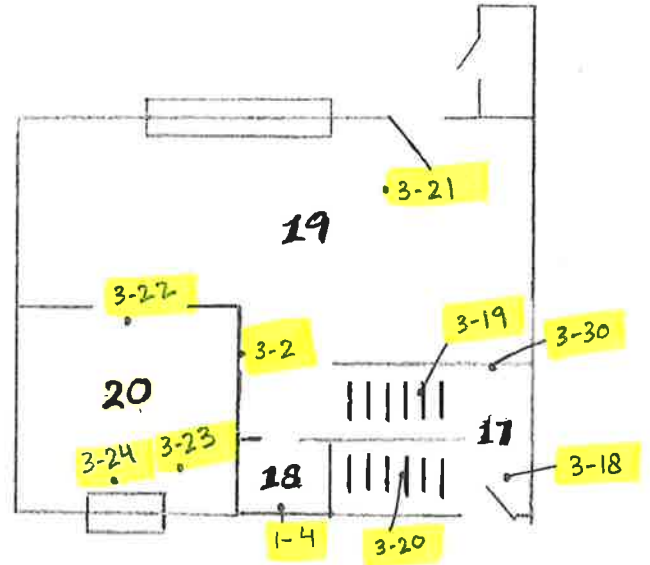


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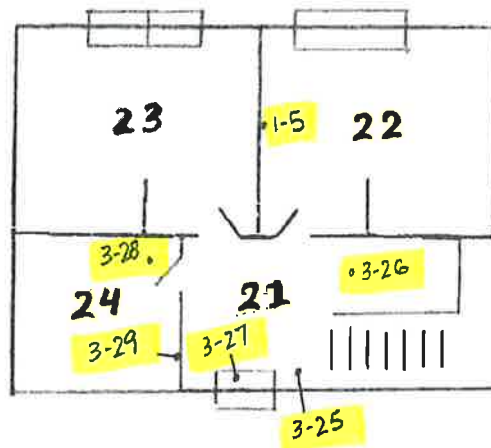
SUSPECT ASBESTOS SAMPLES

UNIT 181

MAIN FLOOR



UPPER LEVEL



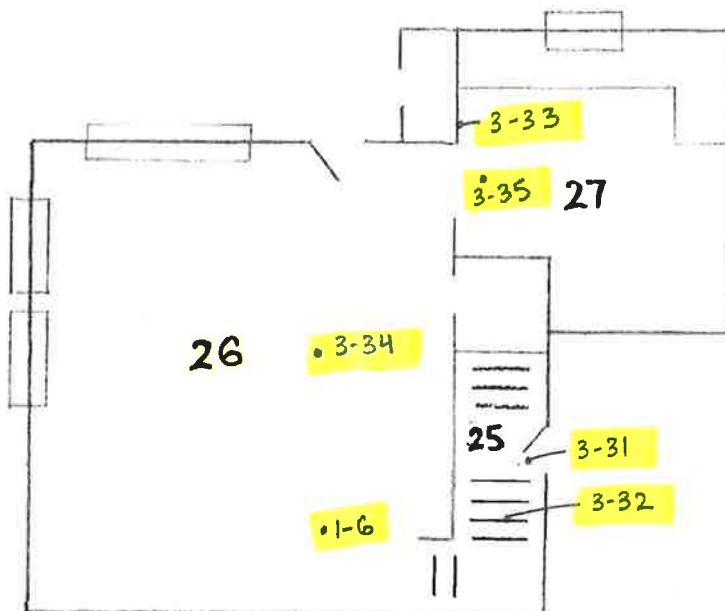
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SUSPECT ASBESTOS SAMPLES

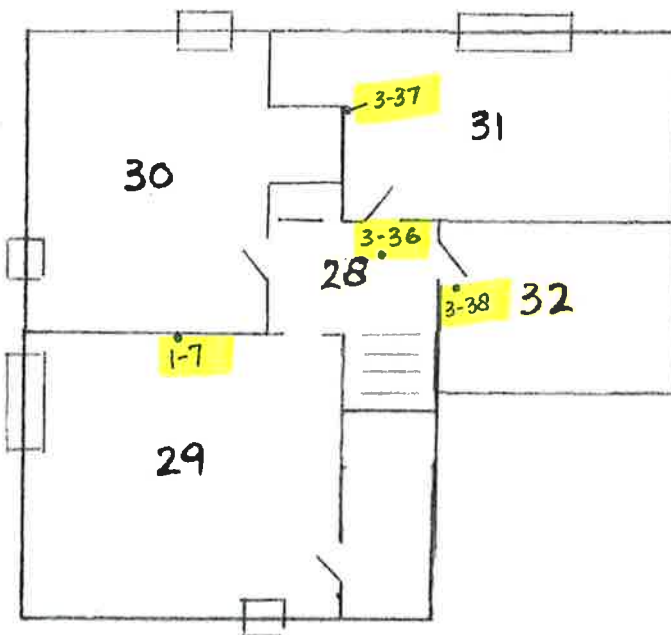
UNIT 182



MAIN FLOOR



UPPER LEVEL



(NOT TO SCALE)

SUSPECT ASBESTOS SAMPLES



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Client Seattle Housing Authority -George Barlet

Location "Building 19" 115 8th Ave.

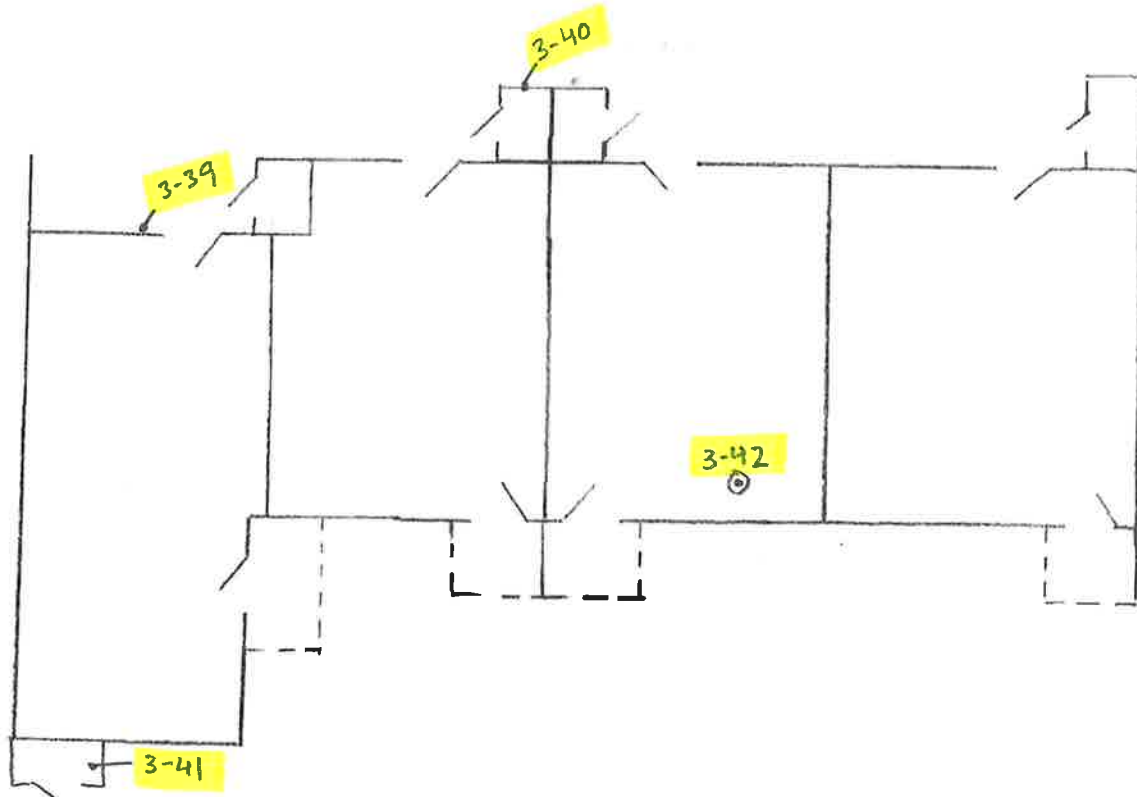
City Seattle

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Date 1/3/2019

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EXTERIOR

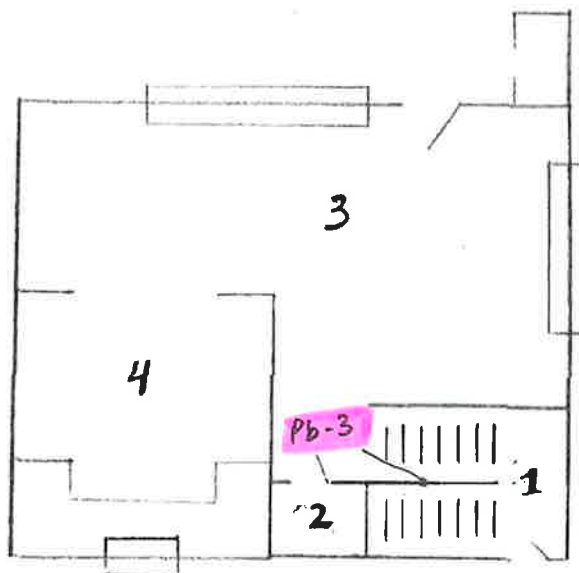


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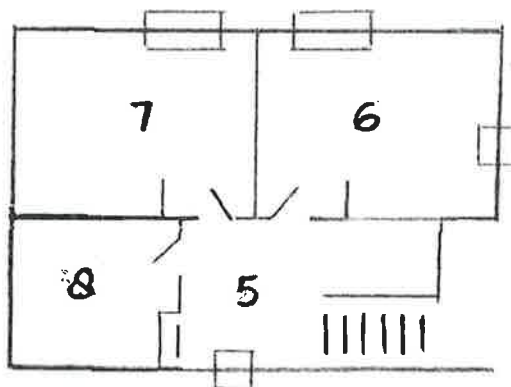
(NOT TO SCALE)

UNIT 179

MAIN FLOOR



UPPER LEVEL



LEAD PAINT SAMPLES

(NOT TO SCALE)



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City Seattle

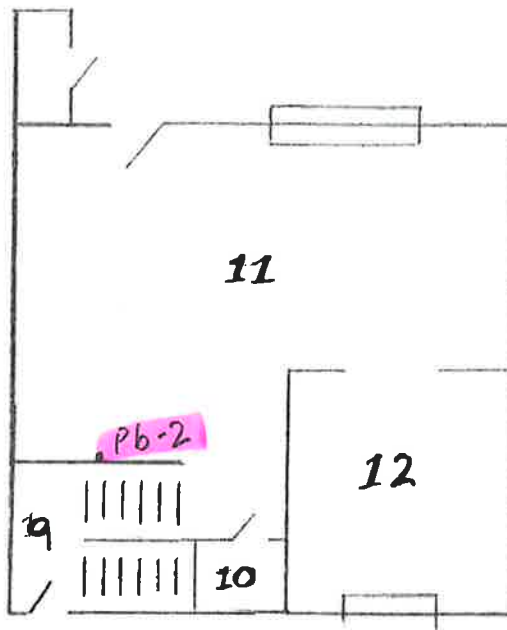
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Date 1/3/2019

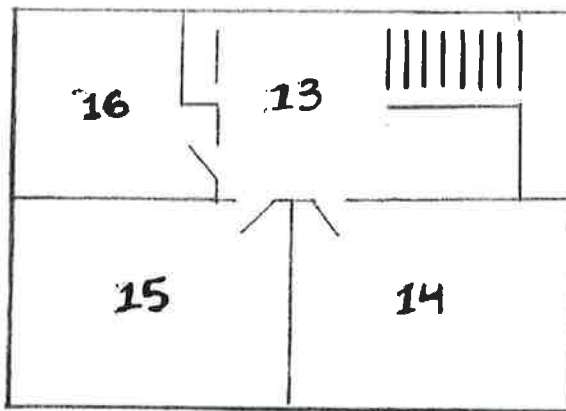
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UNIT 180

MAIN FLOOR



UPPER LEVEL

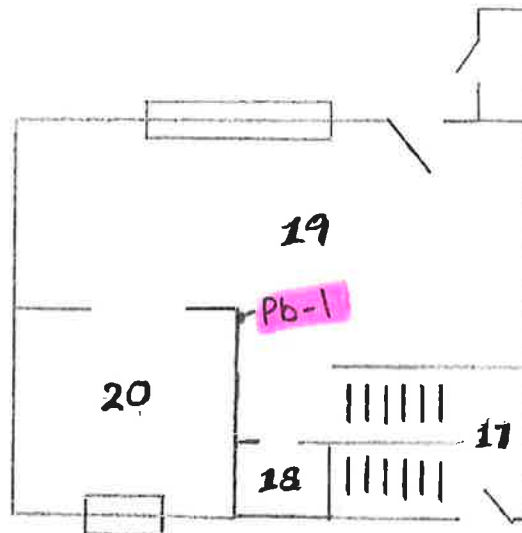


LEAD PAINT SAMPLES

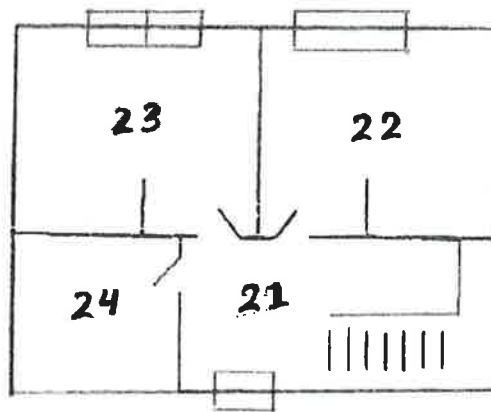
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UNIT 181

MAIN FLOOR



UPPER LEVEL



LEAD PAINT SAMPLES

(NOT TO SCALE)



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City Seattle

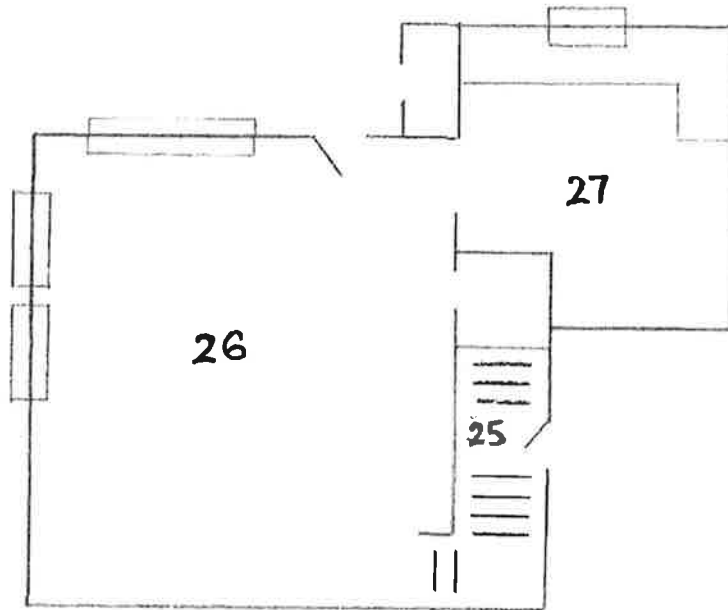
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Date 1/3/2019

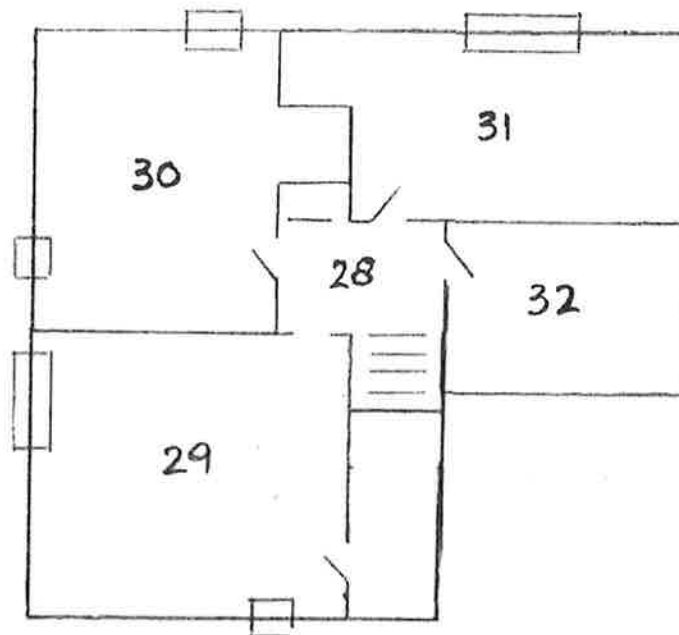
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UNIT 182

MAIN FLOOR



UPPER LEVEL



LEAD PAINT SAMPLES

(NOT TO SCALE)



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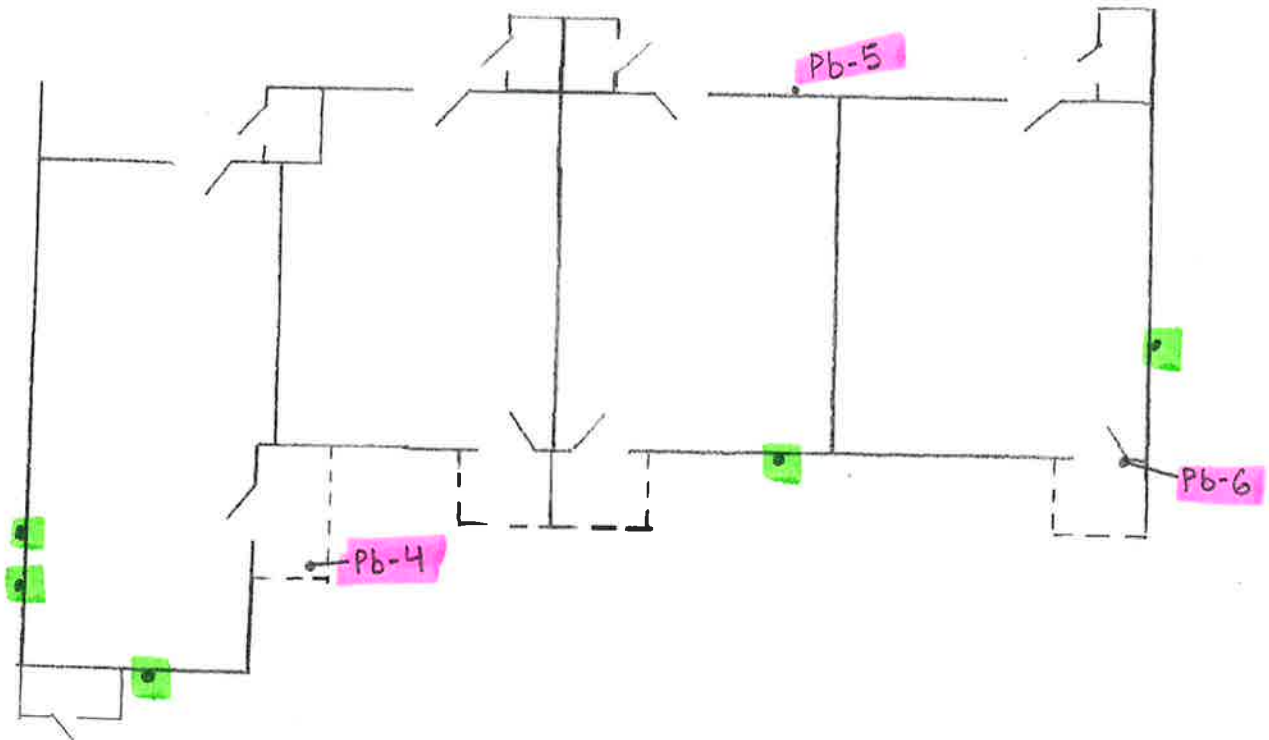
City Seattle

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Date 1/3/2019

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EXTERIOR



LEAD PAINT SAMPLES

MERCURY & PCB DEVICES ARE HIGHLIGHTED IN GREEN

(NOT TO SCALE)



Appendix B

Laboratory Analysis Results

January 4, 2019



Derrick Gallard
NVL Field Services Division
4708 Aurora Ave. N.
Seattle, WA 98103

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1900238.00

Client Project: 2018-0914

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Dear Mr. Gallard,

Enclosed please find test results for the 25 sample(s) submitted to our laboratory for analysis on 1/3/2019.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, 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,

A handwritten signature in black ink, appearing to read "Matt Macfarlane".

Matt Macfarlane, Asbestos Lab Supervisor

The logo for NVLAP (National Voluntary Laboratory Accreditation Program). It features the letters "NVLAP" in a stylized, outlined font. The "V" and "A" are particularly large and stylized.

Lab Code: 102063-0

Enc.: Sample Results

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: **Mr. Derrick Gallard**
Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Batch #: 1900238.00
Client Project #: 2018-0914
Date Received: 1/3/2019
Samples Received: 25
Samples Analyzed: 25
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 19000747 **Client Sample #: 2018-0914-1-1**

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: White brittle textured material with layered paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Fine particles, Mineral grains	None Detected ND	
		Paint		
Layer 2 of 3	Description: Off-white sandy material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Granules, Mineral grains	Wood fibers 3%	
		Sand		
Layer 3 of 3	Description: Off-white chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Calcareous particles, Gypsum/Binder, Grains	Cellulose 25%	

Lab ID: 19000748 **Client Sample #: 2018-0914-1-2**

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: White brittle textured material with layered paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Fine particles, Mineral grains	None Detected ND	
		Paint		
Layer 2 of 3	Description: Off-white sandy material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Granules, Mineral grains	Wood fibers 2%	
		Sand		

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/04/2019

Date: 01/04/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Derrick Gallard

Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Batch #: 1900238.00

Client Project #: 2018-0914

Date Received: 1/3/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 3 of 3	Description: Off-white chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Calcareous particles, Gypsum/Binder, Grains		Cellulose 23%	None Detected ND

Lab ID: 19000749 Client Sample #: 2018-0914-1-3

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: White brittle textured material with layered paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Fine particles, Mineral grains		None Detected ND	None Detected ND
	Paint			

Layer 2 of 3	Description: Off-white sandy material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Granules, Mineral grains		Wood fibers 2%	None Detected ND
	Sand			

Layer 3 of 3	Description: Off-white chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Calcareous particles, Gypsum/Binder, Grains		Cellulose 20%	None Detected ND

Lab ID: 19000750 Client Sample #: 2018-0914-1-4

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: White brittle textured material with layered paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Fine particles, Mineral grains		None Detected ND	None Detected ND
	Paint			

Sampled by: Client

Analyzed by: Alla Prysazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/04/2019

Date: 01/04/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Batch #: 1900238.00

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Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 2 of 3	Description: Off-white sandy material				Asbestos Type: % None Detected ND
	Non-Fibrous Materials:	Other Fibrous Materials:%			
	Binder/Filler, Granules, Mineral grains	Wood fibers	3%		
	Sand				
Layer 3 of 3	Description: Off-white chalky material with paper				Asbestos Type: % None Detected ND
	Non-Fibrous Materials:	Other Fibrous Materials:%			
	Calcareous particles, Gypsum/Binder, Grains	Cellulose	27%		
<hr/>					
Lab ID: 19000751		Client Sample #: 2018-0914-1-5			
Location: "Building 19" 115 8th Ave. Seattle, WA 98104					
Layer 1 of 3	Description: White brittle textured material with layered paint				Asbestos Type: % None Detected ND
	Non-Fibrous Materials:	Other Fibrous Materials:%			
	Binder/Filler, Fine particles, Mineral grains	None Detected	ND		
	Paint				
Layer 2 of 3	Description: Off-white sandy material				Asbestos Type: % None Detected ND
	Non-Fibrous Materials:	Other Fibrous Materials:%			
	Binder/Filler, Granules, Mineral grains	Wood fibers	2%		
	Sand				
Layer 3 of 3	Description: Off-white chalky material with paper				Asbestos Type: % None Detected ND
	Non-Fibrous Materials:	Other Fibrous Materials:%			
	Calcareous particles, Gypsum/Binder, Grains	Cellulose	20%		

Lab ID: 19000752 **Client Sample #: 2018-0914-1-6**

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Alla Prysazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/04/2019

Date: 01/04/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Batch #: 1900238.00

Client Project #: 2018-0914

Date Received: 1/3/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 1 of 3	Description: White brittle textured material with layered paint	Non-Fibrous Materials: Binder/Filler, Fine particles, Mineral grains Paint	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND
Layer 2 of 3	Description: Off-white sandy material	Non-Fibrous Materials: Binder/Filler, Granules, Mineral grains Sand	Other Fibrous Materials:% Wood fibers 2%	Asbestos Type: % None Detected ND
Layer 3 of 3	Description: Off-white chalky material with paper	Non-Fibrous Materials: Calcareous particles, Gypsum/Binder, Grains	Other Fibrous Materials:% Cellulose 21%	Asbestos Type: % None Detected ND

Lab ID: 19000753 Client Sample #: 2018-0914-1-7

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: White brittle textured material with layered paint	Non-Fibrous Materials: Binder/Filler, Fine particles, Mineral grains Paint	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND
Layer 2 of 3	Description: Off-white sandy material	Non-Fibrous Materials: Binder/Filler, Granules, Mineral grains Sand	Other Fibrous Materials:% Wood fibers 3%	Asbestos Type: % None Detected ND
Layer 3 of 3	Description: Off-white chalky material with paper	Non-Fibrous Materials: Calcareous particles, Gypsum/Binder, Grains	Other Fibrous Materials:% Cellulose 20%	Asbestos Type: % None Detected ND

Sampled by: Client

Analyzed by: Alla Prysazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/04/2019

Date: 01/04/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Batch #: 1900238.00
Client Project #: 2018-0914
Date Received: 1/3/2019
Samples Received: 25
Samples Analyzed: 25
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 19000754 Client Sample #: 2018-0914-3-1

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: White compacted powdery material with layered paint	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
		Binder/Filler, Calcareous particles, Paint	None Detected ND	
Layer 2 of 4	Description: White compacted powdery material with white paper	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
		Binder/Filler, Calcareous particles	Cellulose 25%	
Layer 3 of 4	Description: Off-white thin fibrous material	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
		Binder/Filler	Cellulose 30%	
Layer 4 of 4	Description: Off-white chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
		Gypsum/Binder, Fine particles	Cellulose 20%	
			Glass fibers 2%	

Lab ID: 19000755 Client Sample #: 2018-0914-3-2

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 1	Description: White chalky material with paper and paint	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
		Gypsum/Binder, Fine particles, Paint	Cellulose 30%	
			Glass fibers 4%	

Lab ID: 19000756 Client Sample #: 2018-0914-3-3

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

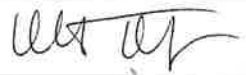
Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/04/2019

Date: 01/04/2019


Matt Macfarlane, Asbestos Lab Supervisor

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By Polarized Light Microscopy

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Seattle, WA 98103

Batch #: 1900238.00

Client Project #: 2018-0914

Date Received: 1/3/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Brown sheet vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Calcareous particles, Vinyl/Binder	None Detected ND	None Detected ND
Layer 2 of 3	Description: Off-white fibrous backing with tan mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Binder/Filler, Mastic/Binder	None Detected ND	Chrysotile 28%
Layer 3 of 3	Description: Trace thin black asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Asphalt/Binder	None Detected ND	None Detected ND

Lab ID: 19000757 **Client Sample #: 2018-0914-3-4**

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Brown rubbery material with trace thin adhesive surface	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Adhesive/Binder, Calcareous particles, Rubber/Binder	None Detected ND	None Detected ND
Layer 2 of 2	Description: Light brown soft/brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder	None Detected ND	None Detected ND

Lab ID: 19000758 **Client Sample #: 2018-0914-3-5**

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 5	Description: Beige tile with streaks	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	None Detected ND
Layer 2 of 5	Description: Tan soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Fine particles, Mastic/Binder, Starch grains	Cellulose <1%	None Detected ND

Sampled by: Client

Analyzed by: Alla Prysazhnyuk

Date: 01/04/2019

Reviewed by: Matt Macfarlane

Date: 01/04/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Batch #: 1900238.00
Client Project #: 2018-0914
Date Received: 1/3/2019
Samples Received: 25
Samples Analyzed: 25
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 3 of 5	Description: Cream tile			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains	None Detected ND		None Detected ND
Layer 4 of 5	Description: Tan soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder	Synthetic fibers <1%		None Detected ND
Layer 5 of 5	Description: Black asphaltic fibrous backing with brown mastic and trace thin wood flakes			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Mastic/Binder, Wood flakes	Cellulose 36%		None Detected ND

Lab ID: 19000759 **Client Sample #: 2018-0914-3-6**

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: Beige sheet vinyl			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Vinyl/Binder	None Detected ND		None Detected ND
Layer 2 of 4	Description: Off-white fibrous backing with tan soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Fine particles, Mastic/Binder	Cellulose 33%		None Detected ND
	Perlite	Glass fibers 5%		
		Synthetic fibers 12%		
Layer 3 of 4	Description: Gray thin crumbly material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Calcareous particles	Cellulose 3%		None Detected ND
Layer 4 of 4	Description: Off-white compressed chalky material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine particles	Cellulose 2%		None Detected ND

Sampled by: Client

Analyzed by: Alla Pryszazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/04/2019

Date: 01/04/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Lab ID: 19000760		Client Sample #: 2018-0914-3-7	
Location: "Building 19" 115 8th Ave. Seattle, WA 98104			
Layer 1 of 2	Description: Brown flat hard compressed fibrous material with cream surface		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Adhesive/Binder, Binder/Filler	Cellulose 94%	None Detected ND
Layer 2 of 2	Description: Tan soft mastic		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Mastic/Binder, Starch grains	Cellulose 2%	None Detected ND
Lab ID: 19000761		Client Sample #: 2018-0914-3-8	
Location: "Building 19" 115 8th Ave. Seattle, WA 98104			
Layer 1 of 1	Description: Black asphaltic flaky material		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Asphalt/Binder, Calcareous particles	Cellulose 3%	Chrysotile 2%
Lab ID: 19000762		Client Sample #: 2018-0914-3-9	
Location: "Building 19" 115 8th Ave. Seattle, WA 98104			
Layer 1 of 5	Description: Off-white tile		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	None Detected ND
Layer 2 of 5	Description: Tan brittle mastic		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Mastic/Binder	None Detected ND	None Detected ND
Layer 3 of 5	Description: Beige tile		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	Chrysotile 6%

Sampled by: Client

Analyzed by: Alla Prysyzhnyuk

Reviewed by: Matt Macfarlane

Date: 01/04/2019

Date: 01/04/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Samples Analyzed: 25

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Layer 4 of 5	Description: Black thin soft asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Asphalt/Binder	None Detected ND	None Detected ND
Layer 5 of 5	Description: Black asphaltic fibrous backing with brown mastic and trace wood flakes	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Asphalt/Binder, Wood flakes	Cellulose 37%	None Detected ND

Lab ID: 19000763 Client Sample #: 2018-0914-3-10

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Yellow sheet vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Calcareous particles, Vinyl/Binder	None Detected ND	None Detected ND
Layer 2 of 3	Description: Off-white fibrous backing with tan mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Binder/Filler, Mastic/Binder	Cellulose 2%	Chrysotile 29%
Layer 3 of 3	Description: Light brown tin brittle mastic with trace wood flakes	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder, Wood flakes	None Detected ND	None Detected ND

Lab ID: 19000764 Client Sample #: 2018-0914-3-11

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Brown flat hard compressed fibrous material with surface	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Adhesive/Binder, Binder/Filler	Cellulose 93%	None Detected ND
Layer 2 of 2	Description: Tan soft mastic with wood flakes	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder, Wood flakes	None Detected ND	None Detected ND

Sampled by: Client

Analyzed by: Alla Prysazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/04/2019

Date: 01/04/2019

Matt Macfarlane, Asbestos Lab Supervisor

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Date Received: 1/3/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 19000765 Client Sample #: 2018-0914-3-12

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Comments: Qualitative analysis was conducted for the presence of asbestos fibers in this layer 1.

Layer 1 of 6	Description: Gray debris	Non-Fibrous Materials: Binder/Filler, Fine particles, Mastic/Binder	Other Fibrous Materials:% Cellulose Synthetic fibers	Asbestos Type: % None Detected ND
Layer 2 of 6	Description: Tan soft vinyl	Non-Fibrous Materials: Synthetic foam, Vinyl/Binder	Other Fibrous Materials:% Glass fibers 5%	Asbestos Type: % None Detected ND
Layer 3 of 6	Description: Clear soft adhesive	Non-Fibrous Materials: Adhesive/Binder	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND
Layer 4 of 6	Description: Yellow sheet vinyl	Non-Fibrous Materials: Calcareous particles, Vinyl/Binder	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND
Layer 5 of 6	Description: Off-white fibrous backing with mastic	Non-Fibrous Materials: Binder/Filler, Mastic/Binder	Other Fibrous Materials:% None Detected ND	Asbestos Type: % Chrysotile 27%
Layer 6 of 6	Description: Black asphaltic fibrous backing with brown mastic and trace wood flakes	Non-Fibrous Materials: Asphalt/Binder, Mastic/Binder, Wood flakes	Other Fibrous Materials:% Cellulose 30%	Asbestos Type: % None Detected ND

Lab ID: 19000766 Client Sample #: 2018-0914-3-13

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/04/2019

Date: 01/04/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 7	Description: Brown flat hard compressed fibrous material with off-white surface	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Adhesive/Binder, Binder/Filler	Cellulose 89%	None Detected ND
Layer 2 of 7	Description: Yellow soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder	None Detected ND	None Detected ND
Layer 3 of 7	Description: Tan thin fibrous material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Binder/Filler	Cellulose 45%	None Detected ND
Layer 4 of 7	Description: White foamy material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Synthetic foam	None Detected ND	None Detected ND
Layer 5 of 7	Description: Tan fibrous material with clear adhesive	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Adhesive/Binder, Binder/Filler	Cellulose 38%	None Detected ND
Layer 6 of 7	Description: Light green fibrous material with trace thin white compacted powdery material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Binder/Filler, Calcareous particles	Cellulose 17%	None Detected ND
Layer 7 of 7	Description: Tan chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Gypsum/Binder, Fine particles, Mica	Cellulose 20%	None Detected ND
			Glass fibers 2%	

Lab ID: 19000767 **Client Sample #: 2018-0914-3-14**

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/04/2019

Date: 01/04/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Derrick Gallard

Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Batch #: 1900238.00

Client Project #: 2018-0914

Date Received: 1/3/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 1 of 4	Description: Off-white tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains	None Detected	ND	None Detected ND
Layer 2 of 4	Description: Brown soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Mastic/Binder	None Detected	ND	None Detected ND
Layer 3 of 4	Description: Black thin soft asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Asphalt/Binder	Cellulose	2%	None Detected ND
Layer 4 of 4	Description: Black asphaltic fibrous backing with brown mastic on wood	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Asphalt/Binder, Mastic/Binder, Wood	Cellulose	30%	None Detected ND

Lab ID: 19000768 Client Sample #: 2018-0914-3-15

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Off-white tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains	None Detected	ND	None Detected ND
Layer 2 of 2	Description: Tan brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Mastic/Binder	None Detected	ND	None Detected ND

Lab ID: 19000769 Client Sample #: 2018-0914-3-16

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Beige tile with adhesive thin clear surface	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Adhesive/Binder, Binder/Filler, Calcareous particles	None Detected	ND	None Detected ND

Sampled by: Client

Analyzed by: Alla Prysazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/04/2019

Date: 01/04/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Derrick Gallard

Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Batch #: 1900238.00

Client Project #: 2018-0914

Date Received: 1/3/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

		Mineral grains			
Layer 2 of 3	Description: Tan soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
		Mastic/Binder	None Detected ND	None Detected ND	
Layer 3 of 3	Description: Black asphaltic fibrous backing with mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
		Asphalt/Binder, Mastic/Binder	Cellulose 28%	None Detected ND	
Lab ID: 19000770		Client Sample #: 2018-0914-3-17			
Location: "Building 19" 115 8th Ave. Seattle, WA 98104					
Layer 1 of 2	Description: Cream sheet vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
		Synthetic foam, Vinyl/Binder	None Detected ND	None Detected ND	
Layer 2 of 2	Description: Off-white fibrous backing with soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
		Binder/Filler, Calcareous particles, Mastic/Binder	Cellulose 40%	None Detected ND	
			Glass fibers 5%		
Lab ID: 19000771		Client Sample #: 2018-0914-3-18			
Location: "Building 19" 115 8th Ave. Seattle, WA 98104					
Layer 1 of 2	Description: Cream sheet vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
		Synthetic foam, Vinyl/Binder	None Detected ND	None Detected ND	
Layer 2 of 2	Description: Off-white fibrous backing with soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
		Binder/Filler, Calcareous particles, Mastic/Binder	Cellulose 38%	None Detected ND	

Sampled by: Client

Analyzed by: Alla Prysazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/04/2019

Date: 01/04/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Derrick Gallard
Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Batch #: 1900238.00
Client Project #: 2018-0914
Date Received: 1/3/2019
Samples Received: 25
Samples Analyzed: 25
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Glass fibers	4%
Synthetic fibers	2%

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/04/2019

Date: 01/04/2019


Matt Macfarlane, Asbestos Lab Supervisor

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

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Derrick Gallard
Phone (206) 547-0100
Cell (206) 707-3236
NVL Batch Number 1900238.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/7/2019 **Time** 4:05 PM
Email derrick.g@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0914 **Project Location:** "Building 19" 115 8th Ave. Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 25

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19000747	2018-0914-1-1		A
2	19000748	2018-0914-1-2		A
3	19000749	2018-0914-1-3		A
4	19000750	2018-0914-1-4		A
5	19000751	2018-0914-1-5		A
6	19000752	2018-0914-1-6		A
7	19000753	2018-0914-1-7		A
8	19000754	2018-0914-3-1	Composite	A
9	19000755	2018-0914-3-2		A
10	19000756	2018-0914-3-3		A
11	19000757	2018-0914-3-4		A
12	19000758	2018-0914-3-5		A
13	19000759	2018-0914-3-6		A
14	19000760	2018-0914-3-7		A
15	19000761	2018-0914-3-8		A
16	19000762	2018-0914-3-9		A
17	19000763	2018-0914-3-10		A
18	19000764	2018-0914-3-11		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Emily Schubert		NVL	1/3/19	1605
Analyzed by	Alla Prysyazhnyuk		NVL	1/4/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					
Special Instructions:					

Date: 1/3/2019
 Time: 4:11 PM
 Entered By: Shaina Mitchell

ASBESTOS LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Derrick Gallard
Phone (206) 547-0100
Cell (206) 707-3236
NVL Batch Number 1900238.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/7/2019 **Time** 4:05 PM
Email derrick.g@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0914 **Project Location:** "Building 19" 115.8th Ave. Seattle, WA 98104

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

Total Number of Samples 25 **Rush Samples**

Lab ID	Sample ID	Description	A/R
19	19000765	2018-0914-3-12	A
20	19000766	2018-0914-3-13	A
21	19000767	2018-0914-3-14	A
22	19000768	2018-0914-3-15	A
23	19000769	2018-0914-3-16	A
24	19000770	2018-0914-3-17	A
25	19000771	2018-0914-3-18	A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Emily Schubert		NVL	1/3/19	1605
Analyzed by	Alla Prysyzhnyuk		NVL	1/4/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					
Special Instructions:					

Date: 1/3/2019
 Time: 4:11 PM
 Entered By: Shaina Mitchell

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900238

Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 19" 115 8th Ave.
Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0914

Total Samples 30 25

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Asbestos Bulk	<input checked="" type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS		Det. Limit	Matrix	RCRA Metals	Other Metals
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Soil	<input type="checkbox"/> All 8	<input type="checkbox"/> All 3
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Paint Chips in %	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Paint Chips in cr	<input type="checkbox"/> Barium (Ba)	<input type="checkbox"/> Lead (Pb)
				<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify)	<input type="checkbox"/> Copper (Cu)	<input type="checkbox"/> Nickel (Ni)
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust		<input type="checkbox"/> Zinc (Zn)	

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0914-1-1		
2		-1-2		
3		-1-3		
4		-1-4		
5		-1-5		
6		-1-6		
7		-1-7		
8		-3-1	COMPOSITE	
9		-3-2		
10		-3-3		
11		-3-4		
12		-3-5		
13		-3-6		
14		-3-7		
15		-3-8		

	Print Below	Sign Below	Company	Date	Time
Sampled by	DERRICK		NVL	1/3/18	730
Relinquished by	DERRICK		NVL	1/3/18	
Received by	Emily		NVL	1/3/19	1605
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206 547 0100 | f 206 634 1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900238

Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 19" 115 8th Ave.
Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0914

Total Samples 25

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Asbestos Bulk	<input checked="" type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	<input type="checkbox"/> All 8	Other Metals
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)	<input type="checkbox"/> All 3
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input type="checkbox"/> Lead (Pb)	<input type="checkbox"/> Copper (Cu)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Nickel (Ni)
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify) _____		
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0114-3-9		
2		-3-10		
3		-3-11		
4		-3-12		
5		-3-13		
6		-3-14		
7		-3-15		
8		-3-16		
9		-3-17		
10		-3-18		
11				
12				
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	DERRICK		NVL	1/31/18	7:30
Relinquished by	DERRICK		NVL	1/31/18	
Received by	Emelys		NVL	1/8/19	1605
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

January 7, 2019



Derrick Gallard
NVL Field Services Division
4708 Aurora Ave. N.
Seattle, WA 98103

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1900242.00

Client Project: 2018-0914

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Dear Mr. Gallard,

Enclosed please find test results for the 24 sample(s) submitted to our laboratory for analysis on 1/3/2019.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, 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,

A handwritten signature in black ink, appearing to read "Matt Macfarlane".

Matt Macfarlane, Asbestos Lab Supervisor

The logo for NVLAP (National Voluntary Laboratory Accreditation Program). It features the letters "NVLAP" in a stylized, outlined font. Below the letters is a small graphic of a checkmark or a similar symbol.

Lab Code: 102063-0

Enc.: Sample Results

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900242.00
Client Project #: 2018-0914
Date Received: 1/3/2019
Samples Received: 24
Samples Analyzed: 24
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard
Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Lab ID: 19000780 Client Sample #: 2018-0914-3-19

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Comments: Unable to separate mastics for analysis (Layer 2).

Layer 1 of 2 Description: Brown rubbery material

Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
Rubber/Binder, Fine grains, Fine particles	Cellulose 2%	

Layer 2 of 2 Description: Yellow and white mastic

Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
Mastic/Binder, Fine grains, Fine particles	Cellulose 3%	
Wood flakes		

Lab ID: 19000781 Client Sample #: 2018-0914-3-20

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Comments: Unable to separate mastics for analysis (Layer 2)

Layer 1 of 2 Description: Brown rubbery material

Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
Rubber/Binder, Fine grains, Fine particles	Cellulose 2%	

Layer 2 of 2 Description: White and brown mastic

Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
Mastic/Binder, Fine grains, Fine particles	Cellulose 4%	
Adhesive/Binder, Wood flakes		

Lab ID: 19000782 Client Sample #: 2018-0914-3-21

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 3 Description: White vinyl tile

Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
Vinyl/Binder, Fine grains, Fine particles	None Detected ND	

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/07/2019

Date: 01/07/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Derrick Gallard

Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Batch #: 1900242.00

Client Project #: 2018-0914

Date Received: 1/3/2019

Samples Received: 24

Samples Analyzed: 24

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 2 of 3	Description: Black asphaltic mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
	Asphalt/Binder, Fine grains, Fine particles	Cellulose 7%	None Detected ND	
Layer 3 of 3	Description: Brown brittle mastic (on wood)			
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
	Mastic/Binder, Fine particles, Wood flakes	Cellulose 12%	None Detected ND	

Lab ID: 19000783 Client Sample #: 2018-0914-3-22

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Beige vinyl			
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
	Vinyl/Binder, Fine particles	None Detected ND	None Detected ND	
Layer 2 of 3	Description: Off-white fibrous material			
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
	Binder/Filler, Fine grains, Fine particles	Cellulose 26%	None Detected ND	
		Glass fibers 2%		
Layer 3 of 3	Description: Yellow soft mastic (on wood)			
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
	Mastic/Binder, Fine grains, Fine particles	Cellulose 7%	None Detected ND	
	Wood flakes			

Lab ID: 19000784 Client Sample #: 2018-0914-3-23

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Tan compressed fibrous material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
	Binder/Filler, Fine particles, Paint	Cellulose 28%	None Detected ND	

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/07/2019

Date: 01/07/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Derrick Gallard

Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Batch #: 1900242.00

Client Project #: 2018-0914

Date Received: 1/3/2019

Samples Received: 24

Samples Analyzed: 24

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 2 of 2	Description: Brown-red soft adhesive			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Adhesive/Binder, Fine particles	Cellulose 5%		None Detected ND

Lab ID: 19000785 **Client Sample #: 2018-0914-3-24**

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 1	Description: Black asphaltic flaky material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Fine grains, Fine particles	None Detected ND		Chrysotile 3%

Lab ID: 19000786 **Client Sample #: 2018-0914-3-25**

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: White vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Vinyl/Binder, Fine grains, Fine particles	None Detected ND		None Detected ND

Layer 2 of 2	Description: Black asphaltic mastic (on wood)			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Fine grains, Fine particles	Cellulose 6%		None Detected ND
	Wood flakes			

Lab ID: 19000787 **Client Sample #: 2018-0914-3-26**

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: White vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Vinyl/Binder, Fine grains, Fine particles	None Detected ND		None Detected ND

Layer 2 of 2	Description: Black asphaltic mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Fine grains, Fine particles	Cellulose 3%		None Detected ND

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/07/2019

Date: 01/07/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Derrick Gallard

Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Batch #: 1900242.00

Client Project #: 2018-0914

Date Received: 1/3/2019

Samples Received: 24

Samples Analyzed: 24

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 19000788 **Client Sample #: 2018-0914-3-27**

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 3 **Description:** Tan compressed fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials: %
Binder/Filler, Fine particles, Paint	Cellulose 27%

Asbestos Type: %
None Detected ND

Layer 2 of 3 **Description:** Beige soft mastic (on wood)

Non-Fibrous Materials:	Other Fibrous Materials: %
Mastic/Binder, Fine particles, Wood flakes	Cellulose 7%

Asbestos Type: %
None Detected ND

Layer 3 of 3 **Description:** White crumbly material

Non-Fibrous Materials:	Other Fibrous Materials: %
Binder/Filler, Fine particles	None Detected ND

Asbestos Type: %
None Detected ND

Lab ID: 19000789 **Client Sample #: 2018-0914-3-28**

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 2 **Description:** Beige vinyl

Non-Fibrous Materials:	Other Fibrous Materials: %
Vinyl/Binder, Fine particles	None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 2 **Description:** Off-white fibrous material with trace of yellow soft mastic

Non-Fibrous Materials:	Other Fibrous Materials: %
Binder/Filler, Fine grains, Fine particles	Cellulose 29%
Mastic/Binder, Wood flakes	Glass fibers 3%

Asbestos Type: %
None Detected ND
None Detected ND

Lab ID: 19000790 **Client Sample #: 2018-0914-3-29**

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 4 **Description:** Tan compressed fibrous material with paint and paper

Non-Fibrous Materials:	Other Fibrous Materials: %
Binder/Filler, Fine particles, Paint	Cellulose 30%

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/07/2019

Date: 01/07/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Derrick Gallard

Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Batch #: 1900242.00

Client Project #: 2018-0914

Date Received: 1/3/2019

Samples Received: 24

Samples Analyzed: 24

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 2 of 4	Description: White foamy material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Synthetic foam	Cellulose 15%		None Detected ND
Layer 3 of 4	Description: Beige soft adhesive			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Adhesive/Binder, Fine particles	Cellulose 3%		None Detected ND
Layer 4 of 4	Description: Beige chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 28%		None Detected ND
		Glass fibers 2%		

Lab ID: 19000791 **Client Sample #: 2018-0914-3-30**

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Comments: Unable to separate mastics for analysis (Layer 2).

Layer 1 of 2	Description: Brown rubbery material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Rubber/Binder, Fine particles	None Detected ND		None Detected ND
Layer 2 of 2	Description: White and beige mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Fine grains, Fine particles	Cellulose 2%		None Detected ND

Lab ID: 19000792 **Client Sample #: 2018-0914-3-31**

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Beige patterned vinyl			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Vinyl/Binder, Fine particles	None Detected ND		None Detected ND

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/07/2019

Date: 01/07/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Derrick Gallard

Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Batch #: 1900242.00

Client Project #: 2018-0914

Date Received: 1/3/2019

Samples Received: 24

Samples Analyzed: 24

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 2 of 2	Description: White fibrous material with yellow soft mastic (on wood)		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Fine grains, Fine particles	Cellulose 29%	None Detected ND
	Mastic/Binder, Wood flakes	Glass fibers 3%	

Lab ID: 19000793 Client Sample #: 2018-0914-3-32

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Brown rubbery material		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Rubber/Binder, Fine particles	None Detected ND	None Detected ND
Layer 2 of 3	Description: White soft mastic (on wood)		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Mastic/Binder, Fine particles, Wood flakes	Cellulose 6%	None Detected ND
Layer 3 of 3	Description: Brown mastic		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Mastic/Binder, Wood flakes	Cellulose 5%	None Detected ND

Lab ID: 19000794 Client Sample #: 2018-0914-3-33

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Black asphaltic material with silver foil and paper		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Asphalt/Binder, Fine particles, Metal foil	Cellulose 12%	None Detected ND
		Glass fibers 4%	
Layer 2 of 2	Description: Yellow fibrous material		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Glass beads	Glass fibers 95%	None Detected ND

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/07/2019

Date: 01/07/2019

Matt Macfarlane, Asbestos Lab Supervisor

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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900242.00

Client Project #: 2018-0914

Date Received: 1/3/2019

Samples Received: 24

Samples Analyzed: 24

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard

Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Lab ID: 19000795 Client Sample #: 2018-0914-3-34

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 3 Description: White vinyl tile

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Vinyl/Binder, Fine grains, Fine particles

None Detected ND

None Detected ND

Layer 2 of 3 Description: Yellow soft adhesive

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Adhesive/Binder, Fine grains, Fine particles

Cellulose 3%

None Detected ND

Layer 3 of 3 Description: Gray crumbly material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Fine grains, Fine particles

Cellulose 4%

None Detected ND

Lab ID: 19000796 Client Sample #: 2018-0914-3-35

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 3 Description: Beige vinyl

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Vinyl/Binder, Fine particles

None Detected ND

None Detected ND

Layer 2 of 3 Description: White fibrous material with white soft mastic and trace of gray crumbly material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Fine grains, Fine particles

Cellulose 27%

None Detected ND

Mastic/Binder

Glass fibers 2%

Layer 3 of 3 Description: Brown-red brittle mastic (on wood)

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Mastic/Binder, Fine grains, Fine particles

Cellulose 8%

None Detected ND

Wood flakes

Sampled by: Client

Analyzed by: Akane Yoshikawa

Date: 01/07/2019

Reviewed by: Matt Macfarlane

Date: 01/07/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900242.00
Client Project #: 2018-0914
Date Received: 1/3/2019
Samples Received: 24
Samples Analyzed: 24
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard
Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Lab ID: 19000797 Client Sample #: 2018-0914-3-36

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 3 Description: Off-white vinyl tile

Non-Fibrous Materials:
Vinyl/Binder, Fine grains, Fine particles

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 3 Description: Yellow brittle mastic (on wood)

Non-Fibrous Materials:
Mastic/Binder, Fine particles, Wood flakes

Other Fibrous Materials:%
Cellulose 7%

Asbestos Type: %
None Detected ND

Layer 3 of 3 Description: Brown brittle mastic

Non-Fibrous Materials:
Mastic/Binder, Fine particles

Other Fibrous Materials:%
Cellulose 6%

Asbestos Type: %
None Detected ND

Lab ID: 19000798 Client Sample #: 2018-0914-3-37

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Comments: Unable to separate mastics for analysis (Layer 2).

Layer 1 of 2 Description: Brown rubbery material

Non-Fibrous Materials:
Rubber/Binder, Fine particles

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 2 Description: Yellow and white mastic

Non-Fibrous Materials:
Mastic/Binder, Fine grains, Fine particles

Other Fibrous Materials:%
Cellulose 3%

Asbestos Type: %
None Detected ND

Lab ID: 19000799 Client Sample #: 2018-0914-3-38

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: Beige vinyl

Non-Fibrous Materials:
Vinyl/Binder, Fine particles

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/07/2019

Date: 01/07/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900242.00
Client Project #: 2018-0914
Date Received: 1/3/2019
Samples Received: 24
Samples Analyzed: 24
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Derrick Gallard
Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 2 of 2	Description: White fibrous material with white mastic and trace of gray crumbly material		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Binder/Filler, Fine grains, Fine particles	Cellulose 29%	None Detected ND
	Mastic/Binder, Wood flakes	Glass fibers 2%	

Lab ID: 19000800 **Client Sample #: 2018-0914-3-39**
Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 1	Description: White soft rubbery material		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Rubber/Binder, Fine particles	Cellulose 2%	None Detected ND

Lab ID: 19000801 **Client Sample #: 2018-0914-3-40**
Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 1	Description: Black asphaltic fibrous material		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Asphalt/Binder, Fine particles	Cellulose 28%	None Detected ND

Lab ID: 19000802 **Client Sample #: 2018-0914-3-41**
Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Comments: Unable to analyze silver paint as a separate layer (Layer 2).

Layer 1 of 2	Description: Black asphaltic fibrous material with granules		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Asphalt/Binder, Granules, Fine grains	Glass fibers 28%	None Detected ND
	Fine particles		

Layer 2 of 2	Description: Black asphaltic fibrous material with trace of silver paint		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Asphalt/Binder, Fine particles, Paint	Cellulose 27%	None Detected ND

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/07/2019

Date: 01/07/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Derrick Gallard

Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Batch #: 1900242.00

Client Project #: 2018-0914

Date Received: 1/3/2019

Samples Received: 24

Samples Analyzed: 24

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 19000803 **Client Sample #: 2018-0914-3-42**

Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Layer 1 of 1 **Description:** Black asphaltic built-up fibrous material with granules

Non-Fibrous Materials:	Other Fibrous Materials: %
Asphalt/Binder, Granules, Fine grains	Glass fibers 27%
Fine particles	

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/07/2019

Date: 01/07/2019


Matt Macfarlane, Asbestos Lab Supervisor

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ASBESTOS LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Derrick Gallard
Phone (206) 547-0100
Cell (206) 707-3236
NVL Batch Number 1900242.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/7/2019 **Time** 4:05 PM
Email derrick.g@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0914 **Project Location:** "Building 19" 115 8th Ave. Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 24

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19000780	2018-0914-3-19		A
2	19000781	2018-0914-3-20		A
3	19000782	2018-0914-3-21		A
4	19000783	2018-0914-3-22		A
5	19000784	2018-0914-3-23		A
6	19000785	2018-0914-3-24		A
7	19000786	2018-0914-3-25		A
8	19000787	2018-0914-3-26		A
9	19000788	2018-0914-3-27		A
10	19000789	2018-0914-3-28		A
11	19000790	2018-0914-3-29		A
12	19000791	2018-0914-3-30		A
13	19000792	2018-0914-3-31		A
14	19000793	2018-0914-3-32		A
15	19000794	2018-0914-3-33		A
16	19000795	2018-0914-3-34		A
17	19000796	2018-0914-3-35		A
18	19000797	2018-0914-3-36		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

	Print Name	Signature	Company	Date	Time
Office Use Only					
Received by	Emily Schubert		NVL	1/3/19	1605
Analyzed by	Akane Yoshikawa		NVL	1/7/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/3/2019
 Time: 4:35 PM
 Entered By: Shaina Mitchell

ASBESTOS LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Derrick Gallard
Phone (206) 547-0100
Cell (206) 707-3236
NVL Batch Number 1900242.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/7/2019 **Time** 4:05 PM
Email derrick.g@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0914 **Project Location:** "Building 19" 115 8th Ave. Seattle, WA 98104

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

Total Number of Samples 24

Rush Samples

Lab ID	Sample ID	Description	A/R
19	19000798	2018-0914-3-37	A
20	19000799	2018-0914-3-38	A
21	19000800	2018-0914-3-39	A
22	19000801	2018-0914-3-40	A
23	19000802	2018-0914-3-41	A
24	19000803	2018-0914-3-42	A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Emily Schubert		NVL	1/3/19	1605
Analyzed by	Akane Yoshikawa		NVL	1/7/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					
Special Instructions:					

Date: 1/3/2019
 Time: 4:35 PM
 Entered By: Shaina Mitchell

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900242

L
S

Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 19" 115 8th Ave.
Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0914

Total Samples 24

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Asbestos Bulk	<input checked="" type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS		Det. Limit		Matrix	
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Soil	RCRA Metals	
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Paint Chips in %	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Paint Chips in cr	<input type="checkbox"/> Barium (Ba)	<input type="checkbox"/> Lead (Pb)
				<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify) _____		
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0914-3-19		
2		-3-20		
3		-3-21		
4		-3-22		
5		-3-23		
6		-3-24		
7		-3-25		
8		-3-26		
9		-3-27		
10		-3-28		
11		-3-29		
12		-3-30		
13		-3-31		
14		-3-32		
15		-3-33		

Print Below	Sign Below	Company	Date	Time
Sampled by DERRICK	✓	NVL	1/3/18	7:30
Relinquished by DERRICK	✓	NVL	1/3/18	
Received by EMILY	✓	NVL	1/3/19	1605
Analyzed by				
Results Called by				
Results Faxed by				

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**CHAIN of CUSTODY
SAMPLE LOG****1900242**

Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 19" 115 8th Ave.
Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0914

Total Samples 24

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Asbestos Bulk	<input checked="" type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS		Det. Limit	Matrix	RCRA Metals	Other Metals
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Soil	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> All 8
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Paint Chips in %	<input type="checkbox"/> Barium (Ba)	<input type="checkbox"/> Chromium (Cr)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Paint Chips in cr	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Lead (Pb)
				<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Copper (Cu)
					<input type="checkbox"/> Nickel (Ni)
					<input type="checkbox"/> Zinc (Zn)
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify) _____		
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0914-3-34		
2		-3-35		
3		-3-36		
4		-3-37		
5		-3-38		
6		-3-39		
7		-3-40		
8		-3-41		
9		-3-42		
10				
11				
12				
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	DEIRILL	7-	NVL	1/31/19	7:30
Relinquished by	DEIRILL	7-	NVL	1/31/19	
Received by	Emily S	ac	NVL	1/3/19	10:05
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

January 7, 2019

Derrick Gallard

NVL Field Services Division

4708 Aurora Ave. N.

Seattle, WA 98103



RE: Metals Analysis; NVL Batch # 1900241.00

Dear Mr. Gallard,

Enclosed please find the test results for samples submitted to our laboratory for analysis. Preparation of these samples was conducted following protocol outlined in EPA Method SW 846 -3051 unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with U.S. EPA, NIOSH, OSHA and other ASTM methods.

For matrix materials submitted as paint, dust wipe, soil or TCLP samples, analysis for the presence of total metals is conducted using published U.S. EPA Methods. Paint and soil results are usually expressed in mg/Kg which is equivalent to parts per million (ppm). Lead (Pb) in paint is usually expressed in mg/Kg (ppm), Percent (%) or mg/cm² by area. Dust wipe sample results are usually expressed in ug/wipe and ug/ft². TCLP samples are reported in mg/L (ppm). For air filter samples, analyses are conducted using NIOSH and OSHA Methods. Results are expressed in ug/filter and ug/m³. Other matrix materials are analyzed accordingly using published methods or specified by client. The reported test results pertain only to items tested and 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 details.

This report is considered highly confidential and will not be released without your approval. 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. If you need further assistance please feel free to call us at 206-547-0100 or 1-888-NVLLABS.

Sincerely,

A handwritten signature in black ink, appearing to read "Shalini Patel".

Shalini Patel, Lab Supervisor

Enc.: Sample results



Analysis Report

Total Lead (Pb)

NVL

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900241.00

Matrix: Paint
Method: EPA 3051/7000B
Client Project #: 2018-0914
Date Received: 1/3/2019
Samples Received: 6
Samples Analyzed: 6

Attention: Mr. Derrick Gallard

Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Lab ID	Client Sample #	Sample Weight (g)	RL in mg/Kg	Results in mg/Kg	Results in percent
19000774	2018-0914-Pb-1	0.1940	52	< 52	<0.0052
19000775	2018-0914-Pb-2	0.2042	49	< 49	<0.0049
19000776	2018-0914-Pb-3	0.1843	54	670	0.067
19000777	2018-0914-Pb-4	0.1924	52	8800	0.88
19000778	2018-0914-Pb-5	0.1883	53	< 53	<0.0053
19000779	2018-0914-Pb-6	0.0697	140	< 140	<0.014


Sampled by: Client

Analyzed by: Yasuyuki Hida

Date Analyzed: 01/07/2019

Reviewed by: Shalini Patel

Date Issued: 01/07/2019


Shalini Patel, Lab Supervisor

mg/ Kg =Milligrams per kilogram

Percent = Milligrams per kilogram / 10000

Note : Method QC results are acceptable unless stated otherwise.

Unless otherwise indicated, the condition of all samples was acceptable at time of receipt.

RL = Reporting Limit

'<' = Below the reporting Limit

Bench Run No: 2019-0107-1

FAA-02

LEAD LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Derrick Gallard
Phone (206) 547-0100
Cell (206) 707-3236
NVL Batch Number 1900241.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/7/2019 **Time** 4:05 PM
Email derrick.g@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0914 **Project Location:** "Building 19" 115 8th Ave. Seattle, WA 98104

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

Total Number of Samples 6

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19000774	2018-0914-Pb-1		A
2	19000775	2018-0914-Pb-2		A
3	19000776	2018-0914-Pb-3		A
4	19000777	2018-0914-Pb-4		A
5	19000778	2018-0914-Pb-5		A
6	19000779	2018-0914-Pb-6		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Emily Schubert		NVL	1/3/19	1605
Analyzed by	Yasuyuki Hida		NVL	1/7/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special
Instructions:

Date: 1/3/2019
 Time: 4:32 PM
 Entered By: Shaina Mitchell

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**CHAIN of CUSTODY
SAMPLE LOG**
1900241

 Client NVL Laboratories Inc

 Street 4708 Aurora Ave N
Seattle, WA 98103

 Project Manager Syed Hasan

 Project Location "Building 19" 115 8th Ave.
Seattle, WA 98104

NVL Batch Number _____

 Client Job Number 2018-0914

 Total Samples 6

 Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

 Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input type="checkbox"/> Asbestos Bulk	<input type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	<input type="checkbox"/> All 8	Other Metals
<input checked="" type="checkbox"/> Total Metals	<input checked="" type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)	<input type="checkbox"/> All 3
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input checked="" type="checkbox"/> Lead (Pb)	<input type="checkbox"/> Copper (Cu)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Nickel (Ni)
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify) _____		
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

 Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0914-Pb1		
2		-Pb 2		
3		-Pb 3		
4		-Pb 4		
5		-Pb 5		
6		-Pb 6		
7				
8				
9				
10				
11				
12				
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	DERRIK		NVL	1/3/19	7:36
Relinquished by	DERRIK		NVL	1/3/19	
Received by	Emley S		NVL	1/3/19	1005
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

TAN

January 4, 2019

Derrick Gallard

NVL Field Services Division

4708 Aurora Ave. N.

Seattle, WA 98103



RE: Metals Analysis; NVL Batch # 1900240.00

Dear Mr. Gallard,

Enclosed please find the test results for samples submitted to our laboratory for analysis. Preparation of these samples was conducted following protocol outlined in EPA Method SW 846 -3051 unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with U.S. EPA, NIOSH, OSHA and other ASTM methods.

For matrix materials submitted as paint, dust wipe, soil or TCLP samples, analysis for the presence of total metals is conducted using published U.S. EPA Methods. Paint and soil results are usually expressed in mg/Kg which is equivalent to parts per million (ppm). Lead (Pb) in paint is usually expressed in mg/Kg (ppm), Percent (%) or mg/cm² by area. Dust wipe sample results are usually expressed in ug/wipe and ug/ft². TCLP samples are reported in mg/L (ppm). For air filter samples, analyses are conducted using NIOSH and OSHA Methods. Results are expressed in ug/filter and ug/m³. Other matrix materials are analyzed accordingly using published methods or specified by client. The reported test results pertain only to items tested and 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 details.

This report is considered highly confidential and will not be released without your approval. 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. If you need further assistance please feel free to call us at 206-547-0100 or 1-888-NVLLABS.

Sincerely,

A handwritten signature in black ink, appearing to read "Shalini Patel".

Shalini Patel, Lab Supervisor

Enc.: Sample results



Analysis Report

Toxicity Characteristic Leaching Procedure - Lead (Pb)

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900240.00

Matrix: Bulk

Method: EPA 1311/7000B

Client Project #: 2018-0914

Date Received: 1/3/2019

Samples Received: 1

Samples Analyzed: 1

Attention: Mr. Derrick Gallard
Project Location: "Building 19" 115 8th Ave. Seattle, WA 98104

Lab ID	Client Sample #	RL mg/ L	Results in mg/L	Results in ppm
19000773	2018-0914-TCLP	0.5	0.9	0.9

Sampled by: Client

Analyzed by: Yasuyuki Hida

Reviewed by: Shalini Patel

Date Analyzed: 01/04/2019

Date Issued: 01/04/2019


Shalini Patel, Lab Supervisor

mg/ L =Milligrams per liter

ppm = parts per million

Note : Method QC results are acceptable unless stated otherwise.

Unless otherwise indicated, the condition of all samples was acceptable at time of receipt.

RL = Reporting Limit

'<' = Below the reporting Limit

LEAD LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Derrick Gallard
Phone (206) 547-0100
 Cell (206) 707-3236
NVL Batch Number 1900240.00
TAT 2 Days **AH No.**
Rush TAT
Due Date 1/7/2019 **Time** 4:05 PM
Email derrick.g@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0914 **Project Location:** "Building 19" 115 8th Ave. Seattle, WA 98104

Subcategory Flame AA (FAA)

Item Code TCLP-1 EPA 1311/7000B Lead by FAA <TCLP>

Total Number of Samples 1

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19000773	2018-0914-TCLP		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Emily Schubert		NVL	1/3/19	1605
Analyzed by	Yasuyuki Hida		NVL	1/4/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special
Instructions:

Date: 1/3/2019
 Time: 4:25 PM
 Entered By: Shaina Mitchell

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**CHAIN of CUSTODY
SAMPLE LOG**
1900240

5

Client NVL Laboratories Inc

Street 4708 Aurora Ave N

Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 19" 115 8th Ave.

Seattle, WA 98104

NVL Batch Number
Client Job Number 2018-0914

Total Samples 1

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input type="checkbox"/> Asbestos Bulk	<input type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	<input type="checkbox"/> All 8	Other Metals
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)	<input type="checkbox"/> All 3
<input checked="" type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input checked="" type="checkbox"/> Lead (Pb)	<input type="checkbox"/> Copper (Cu)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Nickel (Ni)
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify) _____		<input type="checkbox"/> Zinc (Zn)
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0914-TCLP		
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	DERRICK	74	NVL	1/31/18	730
Relinquished by	DERRICK	74	NVL	1/31/18	
Received by	Emilus	AO	NVL	1/31/19	1605
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to TAN



Appendix C

AHERA Certifications & Laboratory Qualification



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 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

LABORATORY ACCREDITATION PROGRAMS

- | | |
|-------------------------------|--------------------------------------|
| ✓ INDUSTRIAL HYGIENE | Accreditation Expires: June 01, 2019 |
| ✓ ENVIRONMENTAL LEAD | Accreditation Expires: June 01, 2019 |
| ✓ ENVIRONMENTAL MICROBIOLOGY | Accreditation Expires: June 01, 2019 |
| <input type="checkbox"/> FOOD | Accreditation Expires: |
| ✓ UNIQUE SCOPES | Accreditation Expires: June 01, 2019 |

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 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

William Walsh

William Walsh, CIH
Chairperson, Analytical Accreditation Board

Revision 15: 03/30/2016

Cheryl O. Morton

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

Date Issued: 05/31/2017

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

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 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).*

2018-10-01 through 2019-09-30

Effective Dates



A handwritten signature in cursive script, appearing to read "T. L. S. Sander", is written over a horizontal line.

For the National Voluntary Laboratory Accreditation Program



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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

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

A handwritten signature in black ink, appearing to read "Tara S. Laman".

For the National Voluntary Laboratory Accreditation Program

Certificate of Completion

This is to certify that
Derrick S. Gallard
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

169720
Certificate Number



Oct 10, 2018 Expires in 1 year.

Date(s) of Training

Exam Score: N/A
if appropriate:

A handwritten signature in black ink, appearing to be "D. S. Gallard", written over a horizontal line.

Instructor

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

STATE OF WASHINGTON

Department of Commerce

Lead-Based Paint Abatement Program

Derrick Gallard

*Has fulfilled the certification requirements of
WAC 365-230
and has been certified to conduct lead-based
paint activities as a
Inspector*

<u>Certification #</u>	<u>Issuance Date</u>	<u>Expiration Date</u>
7090	02/13/2018	02/13/2021

Certificate of Completion

This is to certify that

Jason Lindahl

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

167717

Certificate Number



May 23, 2018 Expires in 1 year.

Date(s) of Training

Exam Score: N/A
if appropriate:

A handwritten signature in black ink, appearing to be "R. D.", written over a horizontal line.

Instructor

ARGUS PACIFIC, INC. / 1900 WEST NICKERSON ST. SUITE 315 / SEATTLE, WASHINGTON 98119 / 206.285.3373 / ARGUSPACIFIC.COM

STATE OF WASHINGTON

Department of Commerce

Lead-Based Paint Abatement Program

Jason Lindahl

*Has fulfilled the certification requirements of
WAC 365-230
and has been certified to conduct lead-based
paint activities as a
Inspector*

<u>Certification #</u>	<u>Issuance Date</u>	<u>Expiration Date</u>
7145	03/20/2018	03/20/2021



Hazardous Materials Survey

"Building #20"
111 8th Avenue
Seattle, WA 98104



Prepared For
Mr. George Barlet
Seattle Housing Authority
190 Queen Anne Avenue N
Seattle, WA 98109

Project Number:	2018-0915
Inspection Date:	January 4 & 7, 2019
Report Date:	January 11, 2019
Inspected By	Derrick Gallard / Jason Lindahl
AHERA Certification	# 169720 / 167717
Certification Expiration Date	October 10, 2019 / May 23, 2019

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APPENDICIES

- A** Sample Locations (Floor Plan)
- B** Laboratory Analysis Results
- C** AHERA Certifications & Laboratory Qualifications

1.0 SCOPE OF WORK

A Hazardous Materials Survey was conducted on apartment building #20 located at 111 8th Avenue Seattle, WA 98104 on January 4 & 7, 2019.

Derrick Gallard and Jason Lindahl (AHERA Building Inspectors and WA – Commerce Certified Lead Inspectors), conducted this survey at the request of Mr. George Barlet of Seattle Housing Authority.

The purpose of this survey was to identify suspect asbestos containing building materials, lead paint coatings, and Mercury (Hg) / PCB containing devices which would be impacted by the planned demolition of the structure. Destructive sampling methods were utilized to collect samples of suspect building materials. No soft/limited demolition was performed during this inspection. Hidden materials may exist within the structure, and all suspect materials must be treated as hazardous until testing proves otherwise.

This survey constitutes a survey of accessible suspect ACM in the project area and was conducted in accordance with:

The National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 Code of Federal Regulations (CFR) Part 61, Subpart M requires a survey by an accredited asbestos inspector prior to demolition of a structure.

This asbestos survey also satisfies the requirements for "Good Faith" inspection outlined in Washington Administrative Code (WAC) 296-62-07721 (2) Communication of hazards, which requires the owner of a structure to provide contractors with a written report identifying the asbestos-containing materials expected to be disturbed during renovation or demolition.

The asbestos survey section is written to comply with the AHERA asbestos sampling procedure as stated in 40 CFR 763.86. This protocol is required under the Puget Sound Clean Air Agency (PSCAA) Regulation III, Article IV, rev. March 26, 2009) for all asbestos surveys prior to a building demolition.

Recommendations have been included for compliance with WAC 296-155-176 "Lead in Construction" and WAC 173-090 "Waste Disposal Regulations". The Lead in Construction regulations are designed to protect workers from lead hazards during construction and demolition activities.

Fluorescent light tubes, HID lamps, and thermostats contain Mercury (Hg) are classified as universal waste by the EPA and Washington Department of Ecology. Recommendations have been included for compliance with WAC 173-303-573, "The Universal Waste Rule for Dangerous Waste".

A floor plan indicating locations of samples collected by NVL personnel has been included in **Appendix A**.

2.0 SURVEY METHOD

Asbestos Survey Method

The NVL Labs field inspector is an Asbestos Building Inspector, certified under the requirements of the United States Environmental Protection Agency (EPA) Asbestos Hazard Emergency Response Act (AHERA) regulation 40 CFR 763, Subpart E. A copy of his certificate is provided in Appendix C.

The AHERA Guidelines dictate the following:

The inspector must determine *homogenous areas*, which are defined as an area of Thermal System Insulation, Surfacing Material, or Miscellaneous Material that is uniform in texture and color.

Once homogenous areas have been determined, the inspector must determine whether or not material is friable or non-friable. **Friable** is defined as a material, that when dry, can be crushed, pulverized, or reduced to dust using hand pressure, and **non-friable** material is defined as a material, that when dry, *cannot* be crushed pulverized or reduced to dust using hand pressure. Materials normally defined as non-friable can become friable by definition if sufficiently damaged.

Once friability has been determined, the materials suspected of containing asbestos are divided into one of three categories: Thermal System Insulation (TSI), Surfacing Material (SM), or Miscellaneous Material (MM). Generally speaking, TSI and SM are considered to be friable, with the exception of TSI where the structural integrity of the insulation is intact and the protective out wrap is undamaged.

Once materials are divided into one of the categories, samples are collected in the following manner:

Friable Thermal System Insulation:

1. Inspector shall collect three (3) randomly distributed samples;
2. Inspector shall collect a minimum of one sample of each TSI materials that appears to have been used as a patch, as long as the patch is less than 6 linear feet or 6 square feet;
3. Inspector shall collect in a manner sufficient, samples from areas of TSI applied to fittings, tees, and joints.

Friable Surfacing Material:

1. Inspector shall collect samples in random manner of surfacing materials as follows:
 - a. Collect three bulk samples from an area believed to be homogeneous (defined as a material that appears to be the same or similar and was installed at the same time) that is 1,000 square feet or less in size;
 - b. Collect five bulk samples from an area believed to be homogeneous that is greater than 1,000 square feet in size, but less than 5,000 square feet in size;
 - c. Collect seven bulk samples from an area believed to be homogeneous that is greater than 5,000 square feet.

2.0 SURVEY METHOD (continued)

Miscellaneous Materials:

1. Inspector shall collect samples in a manner and number sufficient to determine if the material is asbestos-containing or not.

All Materials Determined to Be Non-Friable:

1. Inspector shall collect samples in a manner and number sufficient to determine if the material is asbestos containing or not.

In addition to these sampling requirements, the AHERA Building Inspector is required to assess the following of each material that is found to be positive for asbestos:

1. The condition of each material;
2. Accessibility;
3. Possibility for air erosion.

Once the samples have been collected, they must be analyzed by an accredited laboratory, and they must be analyzed using polarized light microscopy methods, commonly referred to as EPA Method 600/R-93/116.

NVL Labs collected samples and obtained analytical data for suspect asbestos-containing materials identified in the building. Once collected, each bulk sample was sealed in an unadulterated plastic bag to eliminate the possibility of cross-contamination. "Chain-of-Custody" tracking was followed to maintain sample integrity during handling and data reporting at NVL Labs.

A walk-through inspection of all accessible areas of the structures was performed to identify potential asbestos-containing materials. The walk-through inspection included a review of the internal and external aspects of the structures. The locations and types of potential asbestos-containing materials were noted.

Homogeneous Materials

Homogeneous materials are defined as an area of asbestos-containing material or presumed asbestos-containing material which appears similar throughout in terms of color, texture, and date of material application. The report listing for homogenous materials will appear as follows:

Sample Number	Material Description by Layer	Location	Asbestos	Quantity	Friable
#	Layer 1 is not asbestos-containing Layer 2 is asbestos-containing	Location description	1. % 2. %	"X" LF/ft ²	Yes/No

Lead Survey Method

NVL Labs collected representative samples of paint from the interior and exterior of the building within the project scope. Once collected, each bulk sample was sealed in an unadulterated plastic bag to eliminate the possibility of cross-contamination. "Chain-of-Custody" tracking was followed to maintain sample integrity during handling and data reporting at NVL Labs. Sampling was representative of all layers of paint. Copies of laboratory reports and field data forms for lead paint are in Appendix B.

2.0 SURVEY METHOD (continued)

TCLP Sampling Method

A representative composite sample of the proportionate components which make up the areas to be demolished was collected and analyzed according to ASTM Standard. E 1908-97, as suggested by the Washington State Department of Ecology. Waste Characterization Plan number three of this standard, "Composite Sample and Demolish", was used to access the lead (Pb) content of the total debris.

3.0 LABORATORY INFORMATION

Laboratory Analysis: Asbestos

In accordance with 40 CFR Chapter 1 (7-01-07 Edition) Part 763, Subpart E, Appendix E, asbestos samples are analyzed at NVL Labs using polarized light microscopy (PLM) with dispersion staining. If samples are not homogeneous, then sub-samples of the components are analyzed separately. All bulk samples are analyzed using EPA Method 600/R-93/116 with the following measurement uncertainties for reported % asbestos: 1%=0-3%, 5%≥1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%. Only materials containing more than 1% total asbestos were classified as "asbestos-containing" based on EPA, state, and local regulations.

Findings for samples containing more than one separable layer of materials are reported for each layer. The asbestos concentration in the sample is determined by visual estimation.

NVL Labs is accredited by the National Institute of Standards and Technology (NIST) under the National Volunteer Laboratory Accreditation Program (NVLAP) program for bulk asbestos fiber analysis; *NVLAP Lab Code 102063-0*

Laboratory Analysis: Lead (Pb)

Samples are analyzed for the presence of inorganic lead using atomic absorption spectroscopy (AAS) in accordance with method EPA 3051/7000B. This method reports results in milligrams per kilogram (mg/kg) or its equivalent, parts per million (ppm).

Laboratory Accreditation

Professional accreditations for NVL Laboratories, Inc. include the following:

NVL Laboratories, Inc. is currently accredited by the National Institute of Standards and Technology (NIST) under the National Volunteer Laboratory Accreditation Program (NVLAP) program for bulk asbestos fiber analysis.

NVLAP Lab Code 102063-0

NVL Laboratories, Inc. is approved by the American Industrial Hygiene Association (AIHA) Asbestos Analysts Registry (AAR) program for airborne asbestos fiber analysis.

AAR Counter ID 7412

NVL Laboratories, Inc. is currently accredited by the American Industrial Hygiene Association (AIHA) under the Industrial Hygiene Laboratory Accreditation Program (IHLAP). The IHLAP program is designed specifically for laboratories involved in analyzing samples to evaluate workplace exposure. *IHLAP Certification Number 563*

4.0 BUILDING DESCRIPTION

General Building Type	This is a two-story 9-unit apartment building of traditional wood framed construction.
Primary External Components	The exterior of the building has vinyl and wood siding.
Foundation Type	The building has an on-grade concrete foundation.
Roofing Material(s)	The building has tri-tab shingle and rolled asphalt roofing.
Window Type(s)	The building has vinyl framed windows with exterior caulking.
Flooring	The building has vinyl tiles and sheet vinyl flooring.
Thermal Systems with Insulation	The building has baseboard heating system, with no visible suspect thermal insulation.
Finishing	The building is finished with drywall and plaster.

5.0 FINDINGS

Inventory of Suspect Asbestos-Containing Materials

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0915-1-1	1: Skim coat with paint 2: Plaster 3: Drywall	Main floor, room 2, ceiling	1: ND 2: ND 3: ND		
2018-0915-1-2	1: Skim coat with paint 2: Plaster 3: Drywall	Upper level, room 15, wall	1: ND 2: ND 3: ND		
2018-0915-1-3	1: Skim coat with paint 2: Plaster 3: Drywall	Upper level, room 22, wall	1: ND 2: ND 3: ND		
2018-0915-1-4	1: Skim coat with paint 2: Plaster 3: Drywall	Upper level, room 30, wall	1: ND 2: ND 3: ND		
2018-0915-1-5	1: Skim coat with paint 2: Skim coat with paint 3: Plaster 4: Drywall	Upper level, room 39, wall	1: ND 2: ND 3: ND 4: ND		
2018-0915-1-6	1: Skim coat with paint 2: Skim coat with paint 3: Plaster 4: Drywall	Main floor, room 41, wall	1: ND 2: ND 3: ND 4: ND		
2018-0915-1-7	1: Skim coat with paint 2: Plaster 3: Drywall	Main floor, room 51, ceiling	1: ND 2: ND 3: ND		
2018-0915-1-8	1: Skim coat with paint 2: Plaster 3: Drywall	Upper level, room 62, ceiling	1: ND 2: ND 3: ND		
2018-0915-1-9	1: Skim coat with paint 2: Skim coat with paint 3: Plaster 4: Drywall	Upper level, room 71, wall	1: ND 2: ND 3: ND 4: ND		

ND None Detected

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0915-3-1	1: Joint compound with paint 2: Off-white material 3: Drywall	Main floor, room 11, wall joint	1: ND 2 ND 3: ND		
2018-0915-3-2	1: White material with paint 2: Drywall	Main floor, room 28, mid-wall	1: ND 2 ND		
2018-0915-3-3	1: Beige tile 2: Light brown mastic 3: Black backing with brown mastic	Main floor, room 1, floor	1: ND 2 ND 3: ND		
2018-0915-3-4	1: Brown sheet vinyl 2: Off-white backing with mastic 3: Black mastic	Main floor, rooms 1, 9, & 17, stair steps	1: ND 2: 32% 3: ND	105 ft ²	Yes
2018-0915-3-5	1: 6" Brown vinyl cove base with adhesive 2: Brown mastic	Main floor, rooms 1, 9, & 17, stair risers	1: ND 2 ND		
2018-0915-3-6	1: Beige tile 2: Yellow mastic 3: Brown tile 4: Black mastic 5: Black backing with mastic	Main floor, room 2, floor	1: ND 2: ND 3: 6% 4: ND 5: ND	245 ft ²	No
2018-0915-3-7	1: Beige tile 2: Gold mastic 3: Tan mastic 4: Brown material 5: Yellow mastic 6: Gray backing with mastic	Main floor, room 3, floor	1: ND 2 ND 3: ND 4: ND 5: ND 6: ND		
2018-0915-3-8	1: Tan laminate 2: Pink mastic 3: Tan mastic	Main floor, rooms 3, 12, & 20, counter	1: ND 2 ND 3: ND		
2018-0915-3-9	Black sink undercoating	Main floor, rooms 3, 12, & 20, sink	2%	3 sinks	No
2018-0915-3-10	1: Beige sheet vinyl 2: Off-white backing with mastic & leveler	Upper level, rooms 4, 13, & 21, closet shelf floor	1: ND 2: 30%	90 ft ²	Yes

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0915-3-11	1: 3" Brown vinyl cove base with adhesive 2: Tan mastic	Upper level, room 4, wall base	1: ND 2 ND		
2018-0915-3-12	1: White laminate 2: Yellow mastic	Upper level, room 5, window-sill	1: ND 2 ND		
2018-0915-3-13	1: Beige tile 2: Brown mastic 3: Black backing with mastic	Upper level, rooms 4-7, floor	1: ND 2 ND 3: ND		
2018-0915-3-14	1: Beige sheet vinyl with adhesive 2: Off-white backing with mastic 3: Leveling compound	Upper level, rooms 8 & 24, floor	1: ND 2: 29% 3: ND	50 ft ²	Yes
2018-0915-3-15	1: Tan laminate 2: Yellow mastic 3: Tan material 4: Foamy board	Upper level, rooms 8 & 24, tub surround	1: ND 2 ND 3: ND 4: ND		
2018-0915-3-16	1: Beige vinyl tile 2: Yellow mastic 3: Tan tile 4: Black mastic 5: Black backing with mastic	Main floor, room 9, floor	1: ND 2: ND 3: 8% 4: ND 5: ND	20 ft ²	No
2018-0915-3-17	1: Off-white tile with adhesive 2: Yellow mastic 3: Brown tile 4: Black mastic 5: Black backing with mastic	Main floor, room 11, floor	1: ND 2: ND 3: 6% 4: ND 5: ND	230 ft ²	No
2018-0915-3-18	1: Beige sheet vinyl 2: Beige tile 3: Tan mastic 4: Black backing with paint	Main floor, rooms 10 & 12, floor	1: ND 2 ND 3: ND 4: ND		

ND None Detected

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5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0915-3-19	1: Beige tile with adhesive 2: Yellow mastic 3: Tan tile 4: Black mastic 5: Black backing with mastic	Upper level, rooms 13 & 14, floor	1: ND 2: ND 3: 6% 4: ND 5: ND	185 ft ²	No
2018-0915-3-20	1: Off-white tile with adhesive 2: Tan mastic 3: Beige tile 4: Black mastic 5: Black backing with mastic	Upper level, room 15, floor	1: ND 2: ND 3: 2% 4: ND 5: ND	120 ft ²	No
2018-0915-3-21	1: Tan sheet vinyl 2: Leveler 3: Gold mastic 4: Black backing	Upper level, room 16, floor	1: ND 2: ND 3: ND 4: ND		
2018-0915-3-22	1: Tan laminate 2: Yellow mastic 3: Tan material 4: White foamy board 5: Tan material with mastic 6: Light green material 7: Tan material	Upper level, room 16, tub surround	1: ND 2: ND 3: ND 4: ND 5: ND 6: ND 7: ND		
2018-0915-3-23	1: Beige tile 2: Tan mastic 3: Tan tile 4: Black mastic 5: Black backing with mastic	Main floor, room 17, stair landing floor	1: ND 2: ND 3: 2% 4: ND 5: ND	20 ft ²	No
2018-0915-3-24	1: Beige tile 2: Yellow mastic 3: Leveling compound 4: Gold mastic	Main floor, room 18, floor	1: ND 2: ND 3: ND 4: ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0915-3-25	1: Beige tile 2: Yellow mastic 3: Brown tile 4: Black mastic 5: Black backing with mastic	Main floor, room 19, floor	1: ND 2: ND 3: 5% 4: ND 5: ND	230 ft ²	No
2018-0915-3-26	1: Beige tile 2: Yellow mastic with leveler 3: Leveling compound	Main floor, room 20, floor	1: ND 2 ND 3: ND		
2018-0915-3-27	1: Beige tile 2: Yellow mastic 3: Tan tile 4: Black mastic 5: Black backing with mastic 6: Gold mastic	Main floor, rooms 21-23, floor	1: ND 2: ND 3: 5% 4: ND 5: ND 6: ND	300 ft ²	No
2018-0915-3-28	1: Tan sheet vinyl 2: Off-white backing with mastic 3: Leveler 4: Red adhesive	Main floor, room 25, stair landing floor	1: ND 2 ND 3: ND 4: ND		
2018-0915-3-29	1: Off-white tile 2: Yellow mastic	Main floor, room 25, stair steps	1: ND 2 ND		
2018-0915-3-30	1: 6" Brown vinyl cove base 2: Off-white mastic 3: Tan mastic	Main floor, rooms 25, 33, & 41, stair risers	1: ND 2 ND 3: ND		
2018-0915-3-31	1: Beige tile 2: Yellow mastic 3: Leveler 4: Red adhesive	Main floor, room 27, floor	1: ND 2 ND 3: ND 4: ND		
2018-0915-3-32	1: Tan sheet vinyl 2: Off-white backing with mastic 3: Leveler 4: Red adhesive	Main floor, rooms 26 & 28, floor	1: ND 2 ND 3: ND 4: ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0915-3-33	1: Gold mastic 2: Caulking 3: Tan laminate 4: Off-white mastic	Main floor rooms 28, 36, & 44, counter	1: ND 2 ND 3: ND 4: ND		
2018-0915-3-34	1: Tan sheet vinyl 2: Off-white backing with mastic	Upper level, rooms 29, 37, 45, shelf floor	1: ND 2 ND		
2018-0915-3-35	1: Beige tile 2: Yellow mastic 3: Red adhesive 4: Black backing with mastic	Upper level, rooms 29-31, floor	1: ND 2 ND 3: ND 4: ND		
2018-0915-3-36	1: 3" Brown vinyl cove base 2: Off-white mastic 3: Tan mastic	Upper level, room 31, wall base	1: ND 2 ND 3: ND		
2018-0915-3-37	1: Caulking 2: Tan laminate 3: Brown mastic	Upper level, room 31, window-sill	1: ND 2 ND 3: ND		
2018-0915-3-38	1: Tan sheet vinyl 2: White backing with mastic 3: Leveler 4: White mastic	Upper level, room 32, floor	1: ND 2 ND 3: ND 4: ND		
2018-0915-3-39	1: Tan laminate 2: Brown mastic with foamy board 3: Green mastic 4: Brown GWB	Upper level, rooms 32, 40, & 48, tub surround	1: ND 2 ND 3: ND 4: ND		
2018-0915-3-40	1: White vinyl tile 2: Yellow mastic 3: Beige vinyl tile 4: Black mastic 5: Black backing with mastic	Main floor, room 33, stair landing floor	1: ND 2: ND 3: 3% 4: 6% 5: ND	20 ft ²	No
2018-0915-3-41	1: White vinyl tile 2: Brown mastic 3: Black backing with mastic	Main floor, rooms 34 & 35, floor	1: ND 2 ND 3: ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0915-3-42	1: Black material with paper & foil 2: Fiberglass insulation	Main floor, room 34, wall cavity	1: ND 2: ND		
2018-0915-3-43	1: Tan sheet vinyl 2: Gray backing with mastic 3: Leveler 4: White mastic	Main floor, room 36, floor	1: ND 2: ND 3: ND 4: ND		
2018-0915-3-44	1: White tile 2: Yellow / brown mastic 3: Black backing with brown mastic 4: Black material	Upper level, rooms 37-39, floor	1: ND 2: ND 3: ND 4: ND		
2018-0915-3-45	1: Beige sheet vinyl 2: Off-white backing with mastic 3: Leveling compound	Upper level, room 40, floor	1: ND 2: 59% 3: ND	45 ft ²	Yes
2018-0915-3-46	1: Brown sheet vinyl 2: Off-white backing with mastic	Main floor, rooms 33 & 41, stair steps	1: ND 2: 51%	75 ft ²	Yes
2018-0915-3-47	Black sink undercoating	Main floor, rooms 36 & 44, sinks	5%	2 sinks	No
2018-0915-3-48	1: White vinyl tile 2: Brown mastic 3: Black backing with mastic 4: Black material	Main floor, room 41-43, floor	1: ND 2: ND 3: ND 4: ND		
2018-0915-3-49	1: White tile 2: Colorless mastic 3: Tan sheet vinyl 4: White backing with mastic	Main floor, room 44, floor	1: ND 2: ND 3: ND 4: ND		
2018-0915-3-50	1: White vinyl floor tile 2: Yellow mastic 3: Off-white vinyl floor tile 4: Brown mastic 5: Black backing with mastic	Upper level, room 46-47, floor	1: ND 2: ND 3: ND 4: ND 5: ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0915-3-51	1: Beige sheet vinyl 2: Off-white backing with mastic 3: Leveler	Upper level, room 48, floor	1: ND 2: 54% 3: ND	45 ft ²	Yes
2018-0915-3-52	1: White tile 2: Yellow mastic 3: Beige tile 4: Black mastic 5: Black backing with mastic	Main floor, room 49, floor	1: ND 2: ND 3: 4% 4: 5% 5: ND	20 ft ²	No
2018-0915-3-53	1: Brown sheet vinyl 2: Off-white backing with mastic 3: Black mastic	Main floor, room 49 & 57, stairs steps	1: ND 2: 58% 3: 5%	75 ft ²	Yes
2018-0915-3-54	1: 6" Brown vinyl cove base 2: Brown mastic	Main floor, room 49 / 57 / 65, stair risers	1: ND 2 ND		
2018-0915-3-55	1: White tile 2: Yellow mastic 3: Leveler	Main floor, room 50, floor	1: ND 2 ND 3: ND		
2018-0915-3-56	1: White tile 2: Yellow mastic 3: Brown tile 4: Black mastic 5: Black backing with mastic	Main floor, room 51, floor	1: ND 2: ND 3: 6% 4: 5% 5: ND	230 ft ²	No
2018-0915-3-57	1: White tile 2: Yellow mastic 3: Tan material 4: Leveler	Main floor, room 52, floor	1: ND 2 ND 3: ND 4: ND		
2018-0915-3-58	1: Tan laminate 2: Brown mastic	Main floor, room 52 / 60 / 6, counter	1: ND 2 ND		
2018-0915-3-59	Black sink undercoating	Main floor, room 52, sink	5%	1 sink	No
2018-0915-3-60	1: Beige sheet vinyl 2: Off-white backing with mastic	Upper level, room 53, 61, shelf floor	1: ND 2: 54%	50 ft ²	Yes

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0915-3-61	1: White tile 2: Yellow mastic 3: Beige tile 4: Black mastic 5: Tan tile 6: Black material 7: Black material on paper	Upper level, room 53-55, floor	1: ND 2: ND 3: 3% 4: 5% 5: 6% 6: ND 7: ND	300 ft ²	No
2018-0915-3-62	1: Tan laminate 2: Beige mastic	Upper level, room 54-56, window-sill	1: ND 2: ND		
2018-0915-3-63	1: 3" Brown vinyl cove base 2: Beige mastic	Upper level, room 55, wall base	1: ND 2: ND		
2018-0915-3-64	1: Beige sheet vinyl 2: Off-white backing with mastic 3: Black felt	Upper level, room 56 / 64, floor	1: ND 2: 29% 3: ND	85 ft ²	Yes
2018-0915-3-65	1: Tan laminate 2: Foamy board 3: Beige adhesive 4: GWB	Upper level, room 56 / 64, tub surround	1: ND 2: ND 3: ND 4: ND		
2018-0915-3-66	1: White vinyl tile 2: Yellow mastic 3: Black backing with mastic	Main floor, room 57, floor	1: ND 2: ND 3: ND		
2018-0915-3-67	1: White vinyl tile 2: Yellow mastic	Main floor, room 58, floor	1: ND 2: ND		
2018-0915-3-68	1: White vinyl tile 2: Yellow mastic 3: Brown tile 4: Black backing with mastic	Main floor, room 59, floor	1: ND 2: ND 3: 4% 4: ND	230 ft ²	No
2018-0915-3-69	1: Tan sheet vinyl 2: White backing with mastic 3: Leveler 4: Leveler 5: Leveler	Main floor, room 60, floor	1: ND 2: ND 3: ND 4: ND 5: ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0915-3-70	1: White vinyl tile 2: Black mastic 3: Black backing with mastic 4: Black felt	Upper level, room 61-63, floor	1: ND 2: ND 3: ND 4: ND		
2018-0915-3-71	1: Beige sheet vinyl 2: White backing with mastic 3: Brown-red adhesive	Main floor, room 65, floor	1: ND 2: ND 3: ND		
2018-0915-3-72	1: Brown material 2: Brown sheet vinyl 3: White mastic	Main floor, room 65, stair steps	1: ND 2: ND 3: ND		
2018-0915-3-73	1: White vinyl tile 2: Yellow mastic 3: Black material	Main floor, room 66, floor	1: ND 2: ND 3: ND		
2018-0915-3-74	1: Tan sheet vinyl 2: White backing with mastic 3: Tan adhesive 4: Black backing with leveler	Main floor, room 67 & 68, floor	1: ND 2: ND 3: ND 4: ND		
2018-0915-3-75	1: White tile 2: Clear adhesive 3: Brown adhesive	Upper level, room 69-72, floor	1: ND 2: ND 3: ND		
2018-0915-3-76	1: Tan sheet vinyl 2: White backing with mastic 3: Leveler with adhesive	Upper level, room 69 shelf floor & room 73 floor	1: ND 2: ND 3: ND		
2018-0915-3-77	White caulking	Exterior, perimeter vinyl windows	ND		
2018-0915-3-78	Black asphaltic felt	Exterior, behind siding	ND		
2018-0915-3-79	1: Tri-tab asphaltic shingle 2: Black asphaltic material	Pitched roof	1: ND 2: ND		
2018-0915-3-80	Rolled black asphaltic sheeting	Flat roof	ND		
2018-0915-3-81	Rolled black asphaltic sheeting	Flat roof	ND		
2018-0915-3-82	Rolled black asphaltic sheeting	Flat roof	ND		

ND None Detected

Any suspect material(s) not identified above should not be disturbed and should be tested immediately. The suspect material must be treated as asbestos-containing until testing proves otherwise.

5.0 FINDINGS (continued)

Inventory of Suspect Lead-Containing Paint Coatings

Sample Number	Material Description	Location	Lead in mg/kg	Lead in %
2018-0915-Pb-1	White paint on GWB	Interior walls / ceilings	< 56	< 0.0056
2018-0915-Pb-2	White paint on plaster	Interior walls / ceilings	2000	0.20
2018-0915-Pb-3	Brown paint on wood	Interior railings / stair stringers / door & closet components	4800	0.48
2018-0915-Pb-4	Beige paint on wood	Exterior siding (behind vinyl siding)	8200	0.82
2018-0915-Pb-5	White paint on wood	Exterior siding walls / soffit / columns & fascia	< 50	< 0.0050
2018-0915-Pb-6	Blue paint on metal	Exterior door components	< 170	< 0.017

< Lead content of material analyzed is below the Lower Detection Limit.

Samples in bold contain lead in excess of detectable levels

Mercury

A visual inspection was conducted to identify Mercury and Poly Chlorinated Biphenyls (PCB) containing devices. This includes Mercury thermostats, HID lamps, florescent light tubes (including the newer "green tubes" which still contain low levels of Mercury) and PCB containing light ballasts. Following devices were identified and assumed to contain Mercury and Poly Chlorinated Biphenyls (PCB).

Material	Location	Quantity
HID lamp	Exterior North Elevation	4 lamps
HID lamp	Exterior East Elevation	1 lamp
HID lamp	Exterior West Elevation	1 lamp

Poly Chlorinated Biphenyls (PCB) Light Ballasts

Material	Location	Quantity
HID light ballast	Exterior North Elevation	4 ballasts
HID light ballast	Exterior East Elevation	1 ballast
HID light ballast	Exterior West Elevation	1 ballast

Location of Mercury and Poly Chlorinated Biphenyls (PCB) containing HID lamps are highlighted with green in the attached floor plan.

TCLP Sampling

Sample Number	Sample Location	Results in ppm
2018-0915-TCLP	"Building #20" 111 8th Avenue, Seattle, WA 98104	0.6

6.0 CONCLUSIONS AND RECOMMENDATIONS

The following is an inventory of asbestos-containing building materials identified during the Hazardous Materials Survey of building #20 located at 111 8th Avenue, Seattle, WA 98104.

1. Brown sheet vinyl backing / mastic (Friable)

Sample numbers: 2018-0915-3-4, 3-46 & 3-53



There is approximately 255 square feet of asbestos-containing off-white backing with mastic associated with brown sheet vinyl flooring / steps located in rooms 1, 9, 17, 33, 41, 49 & 57 of building #20. The substrate is wood.

2. Brown / tan / beige vinyl floor tiles (Non-friable)

Sample numbers: 2018-0915-3-6, 3-16, 3-17, 3-19, 3-20, 3-23, 3-25, 3-27, & 3-68



There is approximately 1,580 square feet of asbestos-containing brown / tan / beige vinyl floor tiles located under vinyl floor tiles in rooms 2, 9, 11, 13, 14, 15, 17, 19, 21, 22, 23, & 59 of building #20. The associated black mastic is not asbestos containing. The substrate is wood.

3. Black sink undercoating (Non-friable)

Sample numbers: 2018-0915-3-9, 3-47, & 3-59



There is a total of six (6) aluminum sinks with asbestos containing black undercoating located in rooms 3, 12, 20, 36, 44, & 52 of building #20.

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

4. Beige sheet vinyl backing / mastic (Friable)

Sample numbers: 2018-0915-3-10, 3-14, 3-45, 3-51, 3-60, & 3-64



There is approximately 365 square feet of asbestos-containing off-white backing with mastic associated with beige sheet vinyl flooring located on the shelf in rooms 4, 13, 21, 53, 61 and on the floor in rooms 8, 24, 40, 48, 56, & 64 of building #20. The substrate is wood.

5. Beige / brown / tan vinyl floor tiles / black mastic (Non-friable)

Sample numbers: 2018-0915-3-40, 3-52, 3-56, & 3-61



There is approximately 570 square feet of asbestos-containing beige / brown / tan vinyl floor tiles with black mastic located under vinyl floor tiles in room 33, 49, 51, 53, 54, & 55 of building #20. The substrate is wood.

Contractors should be aware that concealed suspect asbestos-containing building materials may be uncovered during the course of demolition or renovation work. Contractors should have contingency plans that include stopping work, evacuation of the immediate area and sampling by a certified AHERA Building Inspector whenever these materials are found. Concealed suspect materials may include but are not limited to: non-fiberglass pipe or roof drain insulation; spray-applied coatings; cement board; asphalt or paper vapor barriers; floorings and adhesives.

If discovered, all asbestos-containing materials that will be disturbed as a natural part of renovation and/or demolition are required to be removed and disposed of in accordance with Washington State regulations. Washington State Department of Labor and Industries and PSCAA requires that the Abatement be performed using Certified Asbestos Workers under the direct on-site supervision by a Certified Asbestos Supervisor. Further, NVL suggests that an AHERA inspector review this property after abatement to ensure all asbestos-containing materials have been removed by the contractor.

NVL recommends that an AHERA inspector/project manager be on site at the time of demolition to ensure that any potentially asbestos-containing materials uncovered during the process of renovation/demolition be dealt with properly.

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

NVL Labs, Inc. is making the following recommendations regarding asbestos:

1. A copy of this inspection report should be maintained at the project site during the duration of renovation / demolition.
2. A copy of this inspection report should be provided to the General Contractor and any Sub Contractors working on the renovation / demolition project.
3. The inspection report is not intended to serve as a design / bidding document, or scope of work prior to renovation / demolition.
4. Abatement specifications should be prepared by a Hazardous Materials Consulting firm covering the regulated building materials that will be impacted by the renovations / demolition, and these specifications should be part of any contract documents prepared for this project.
5. A licensed asbestos abatement contractor must be utilized to remove any asbestos-containing materials that will be impacted by the planned renovation / demolition.
6. A Hazardous Materials Consulting Firm should provide project oversight and air monitoring during the removal of the asbestos-containing materials.

Lead

Lead-containing paint was identified in the following paint samples. Worker protection protocols are applicable for this project.

1. White paint: interior plaster walls / ceilings (approx. 17,995 ft²)
2. Brown paint: interior railings / stair stringers / door & closet components. (approx. 1,550 ft²)
3. Beige paint: exterior wood siding, behind vinyl siding. (approx. 8145 ft²)

The Federal Occupational Safety & Health Administration's (OSHA) interim lead safety standard (29 CFR 1926.59) for the construction industry became effective on June 3, 1993. Lead exposure in construction is regulated in Washington State by WAC 296-155-176. These regulations protect workers disturbing building surfaces with lead containing paints. Paint with "any detectable level" of lead is classified as a lead containing paint by federal and state regulations and the applicable worker safety provisions must be implemented.

WORKER EXPOSURE

WAC 296-155-176, Lead (Pb), applies to all construction work where an employee may be occupationally exposed to Lead (Pb). Construction work includes activities such as demolition or salvage, removal or encapsulation, and renovation of materials that contain Lead (Pb). When an employee may be occupationally exposed to Lead (Pb), the employer must perform an exposure assessment according to WAC 296-155-176.

The exposure assessment consists of personal air monitoring to determine representative Lead (Pb) exposure levels for the work being performed. During the exposure assessment, the employer must provide the following:

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

- As a minimum, a half mask air purifying respirators equipped with high efficiency particulate air (HEPA) filters in accordance with WAC 296-155-17613.
- Appropriate personal protective clothing / equipment in accordance with WAC 296-155-17615.
- A designated change area which allows for separate storage areas for work and street clothing to prevent cross contamination in accordance with WAC 296-155-17619(2).
- Hand washing facilities to wash their hands and faces WAC 296-155-17619(5).
- Biological monitoring in the form of blood survey and analysis for Lead (Pb) and zinc protoporphyrin levels in accordance with WAC 296-155-17621 (1) (a).
- Training to include hazard communication, safety, and the limitations, proper use, and maintenance of respirators in accordance with WAC 296-155-100.

In addition to the protective equipment and hygiene requirements, the employer must attempt to reduce the levels of airborne Lead (Pb) through engineering controls such as ventilation and wet methods.

Mercury

Six (6) HID lamps were identified and assumed to contain Mercury (Hg) at building #20.

Fluorescent light tubes, HID lamps, and thermostats contain mercury (Hg) are classified as universal waste by the EPA and Ecology. The Universal Waste Rule for Dangerous Waste Lamps (WAC 173-303-573) included the following requirements:

- Immediately place lamps showing evidence of leakage, damage, etc. in a container following removal;
- Containerize in closed, structurally sound, compatible containers;
- Cardboard containers may be used for inside storage only;
- Labeling container required: "Waste Lamps," or "Universal Waste Lamps;"
- Track the length of time since waste lamp generation. Acceptable methods of proof include: date on label, inventory system, etc.
- Respond immediately to potential releases. If determined to be a release, contain and determine if it designates as a dangerous waste. If so, manage the release as specified in WAC 173-303;
- Disposal of universal waste as general or construction debris is not permitted;
- The crushing of fluorescent light tubes on-site is not allowed. In addition, measures should be taken to prevent breakage of fluorescent light tubes while the light tubes are in transit to their destination.
- Provide training to employees on the proper handling and emergency procedures of universal waste lamps;
- Track shipments of universal waste lamps with records (invoice, manifest, etc.) kept for a minimum of 3 years.

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

Poly Chlorinated Biphenyls (PCB) Light Ballasts

Six (6) HID light ballasts were identified and assumed to contain Poly Chlorinated Biphenyls (PCB).

The Washington statutes definition of a PCB-containing material require that any material with more than 2 parts per million (ppm) to be treated as PCB-containing material. Federal regulations dictated that any material with less than 50 ppm PCBs could be labeled as a non-PCB containing material. Because of this regulatory change, NVL recommends that all light ballasts be observed, removed, handled, and disposed of in an appropriate manner. The ballasts labeled with "PCB Free" and "Non-PCB" shall be packaged for recycle by an approved recycling facility.

TCLP

The TCLP sample result is below the threshold of 5.0 ppm. Thus, the solid waste stream of the demolition debris from the structure is considered as regular demolition debris.

A solid waste exhibits the characteristic of toxicity if, using the *Toxicity Characteristic Leaching Procedure* (TCLP) testing method, as incorporated in WAC 173-303-090, the extract from a representative sample of the waste contains lead (Pb) contaminants equal to or greater than 5.0 ppm. A material "fails" the TCLP when there is 5.0 parts per million or greater of lead (Pb) in the leachate.

7.0 LIMITATIONS OF SURVEY

The purpose of this hazardous materials survey report is to document asbestos containing building materials, lead paint coatings and Mercury / PCB containing devices discovered at "Building #20" 111 8th Avenue, Seattle, WA 98104.

The purpose of this survey was to identify suspect asbestos containing building materials, lead paint coatings, and Mercury (Hg) / PCB containing devices which would be impacted by the planned demolition of the structure. Destructive sampling methods were utilized to collect samples of suspect building materials. No soft/limited demolition was performed during this inspection. Hidden materials may exist within the structure, and all suspect materials must be treated as hazardous until testing proves otherwise.

As hazardous material surveys are non-comprehensive by nature, NVL Laboratories, Inc. cannot be held liable for materials which require destructive means to access, materials which are hidden from sight (e.g. materials hidden behind walls), materials which cannot be found due to their obscure nature, or which otherwise cannot be discovered with reasonable diligence.

This document is the sole property of NVL Laboratories and the property owner, or his agent, authorizing this survey.

Inspected By



Derrick Gallard
AHERA Building Inspector
AHERA Certification: 169720
Expiration Date: October 10, 2019

Prepared By



Tanveer Khan
Project Manager
AHERA Certification: 167087
Expiration Date: April 25, 2019

Inspected By



Jason Lindahl
AHERA Building Inspector
AHERA Certification: 167717
Expiration Date: May 23, 2019

Reviewed By



Syed Hasan
Manager Field Services
AHERA Certification: # 168599
Expiration Date: July 18, 2019



Appendix A

Sample Locations (Floor Plan)



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NVL Project # 2018-0915

Client Seattle Housing Authority - George Barlet

Location "Building 20" 111 8th Ave.

City Seattle

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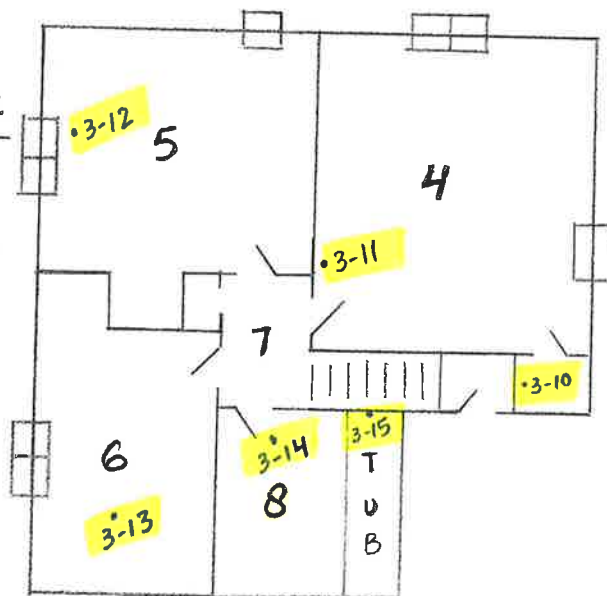
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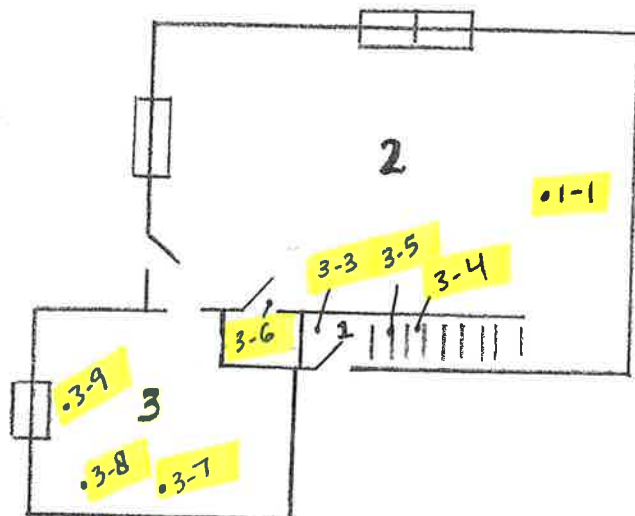
UNIT 183

N →

UPPER LEVEL



MAIN FLOOR



(NOT TO SCALE)

SUSPECT ASBESTOS SAMPLES

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516



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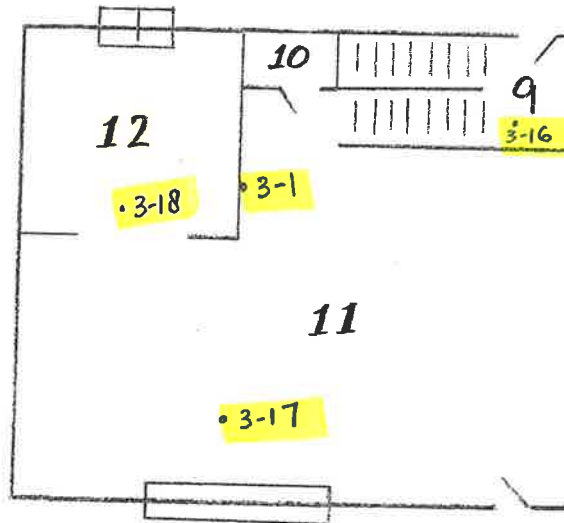
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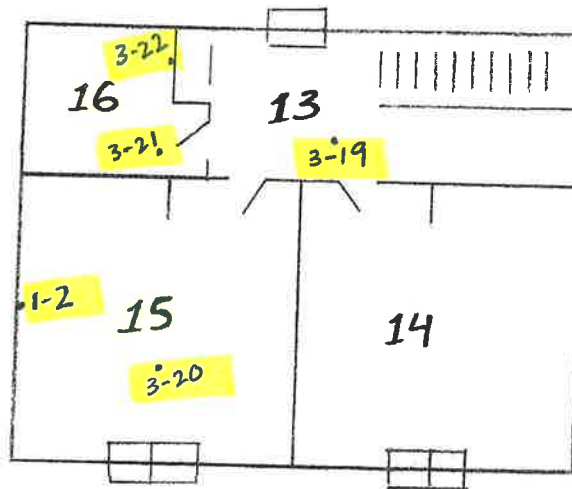
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MAIN FLOOR



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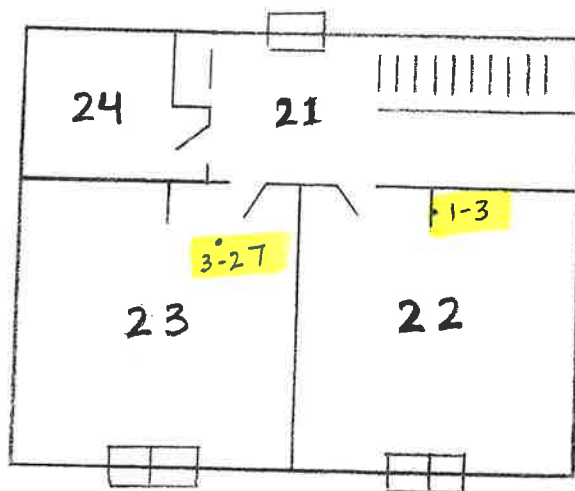
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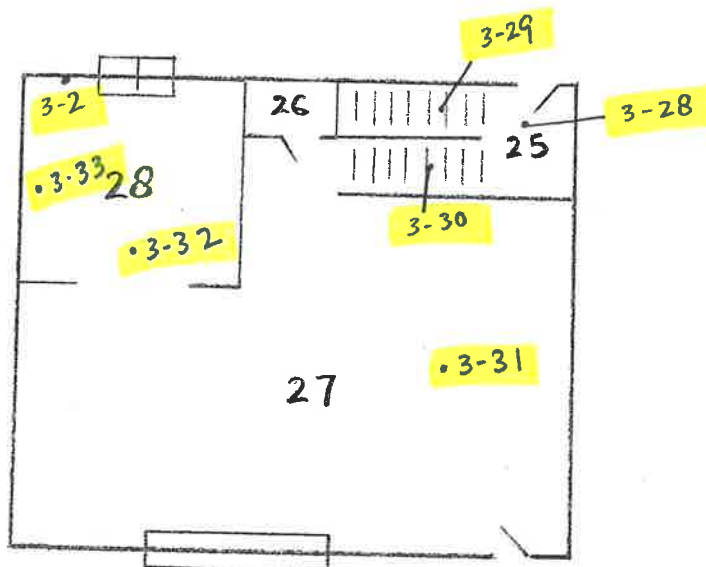
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UNIT 186

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MAIN FLOOR





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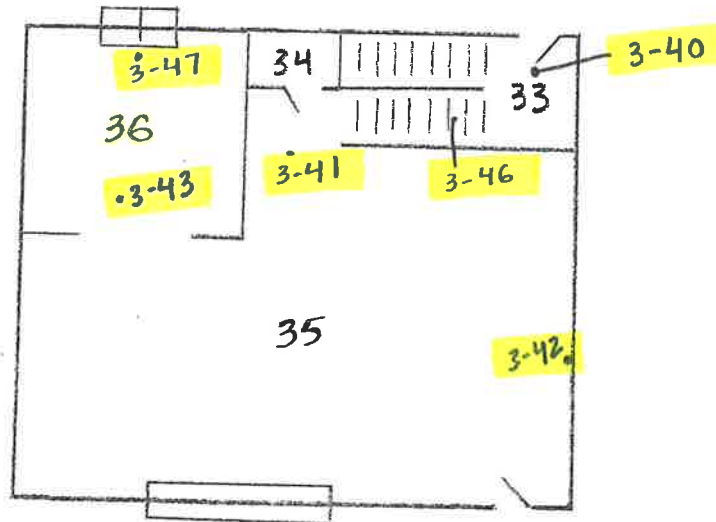
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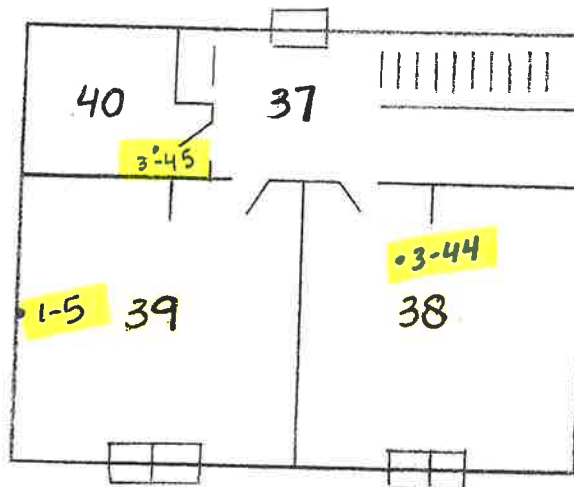
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MAIN FLOOR



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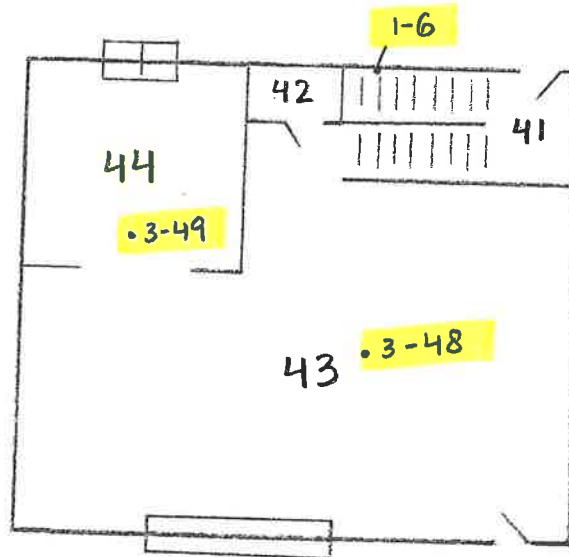
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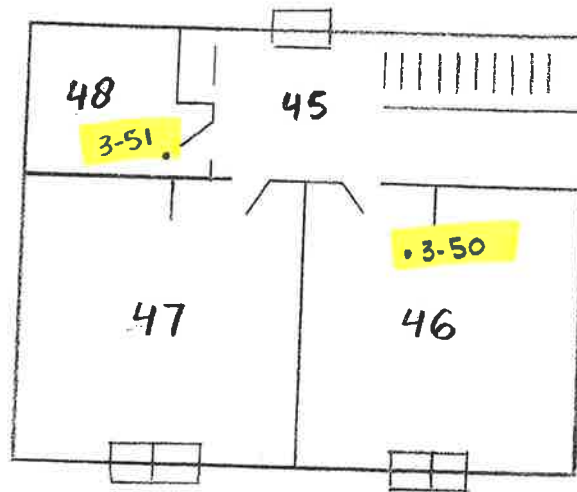
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MAIN FLOOR



UPPER LEVEL



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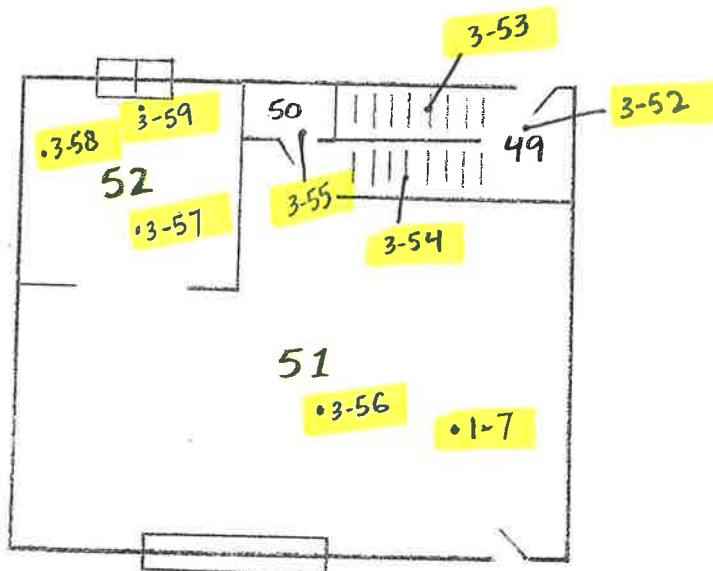
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4708 Aurora Avenue North | Seattle, WA 98103-6516

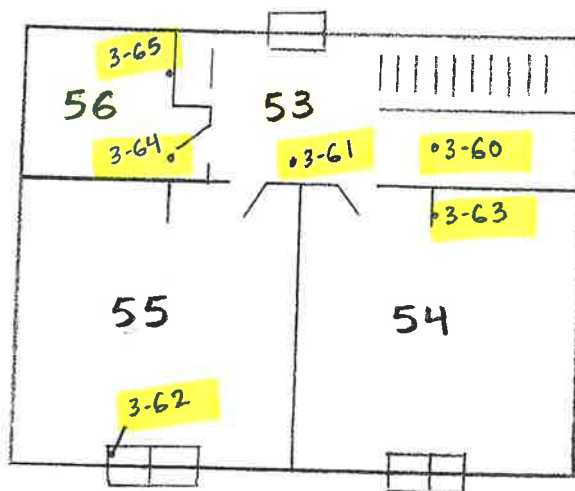
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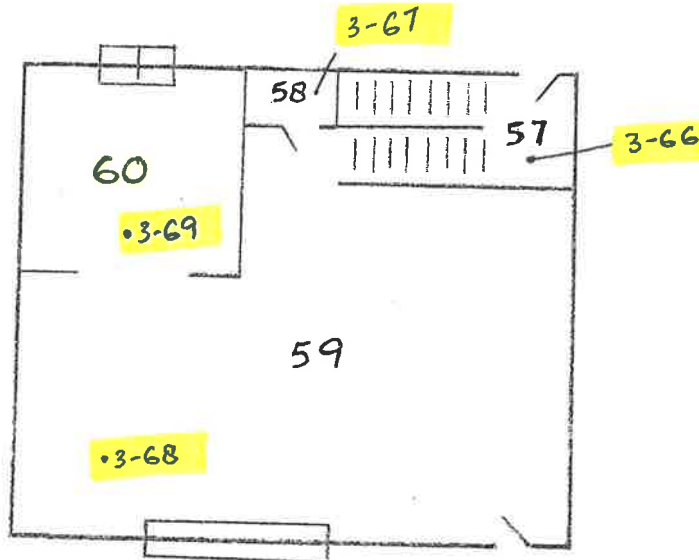
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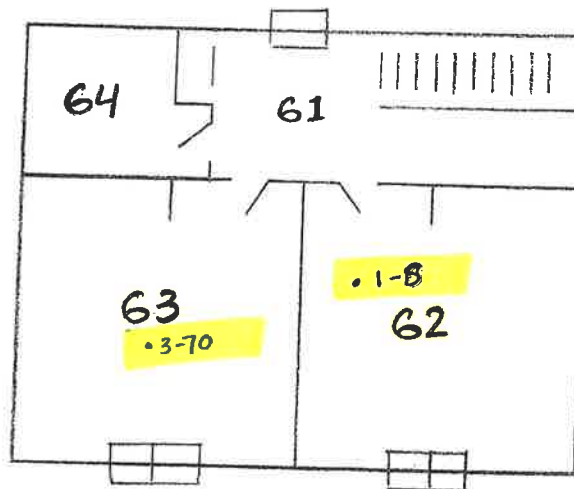
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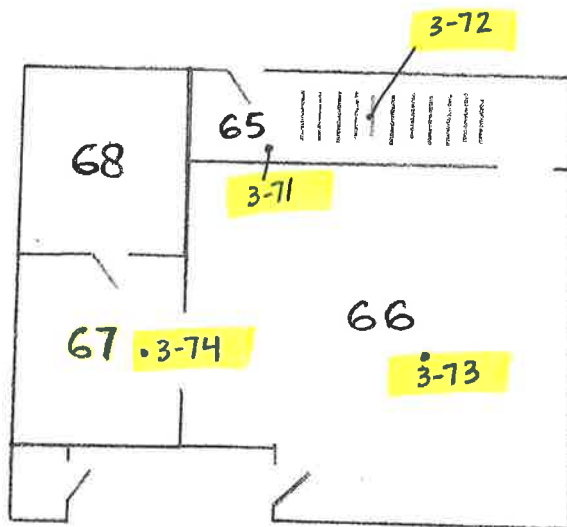
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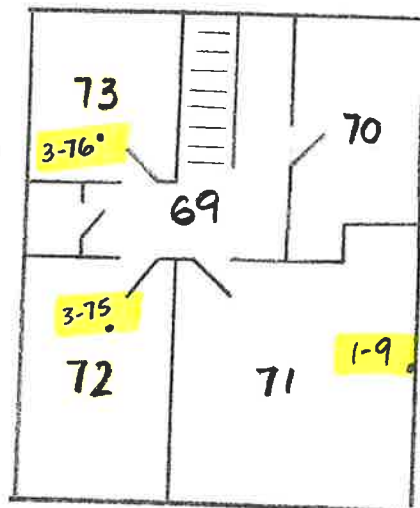
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Location "Building 20" 111 8th Ave.

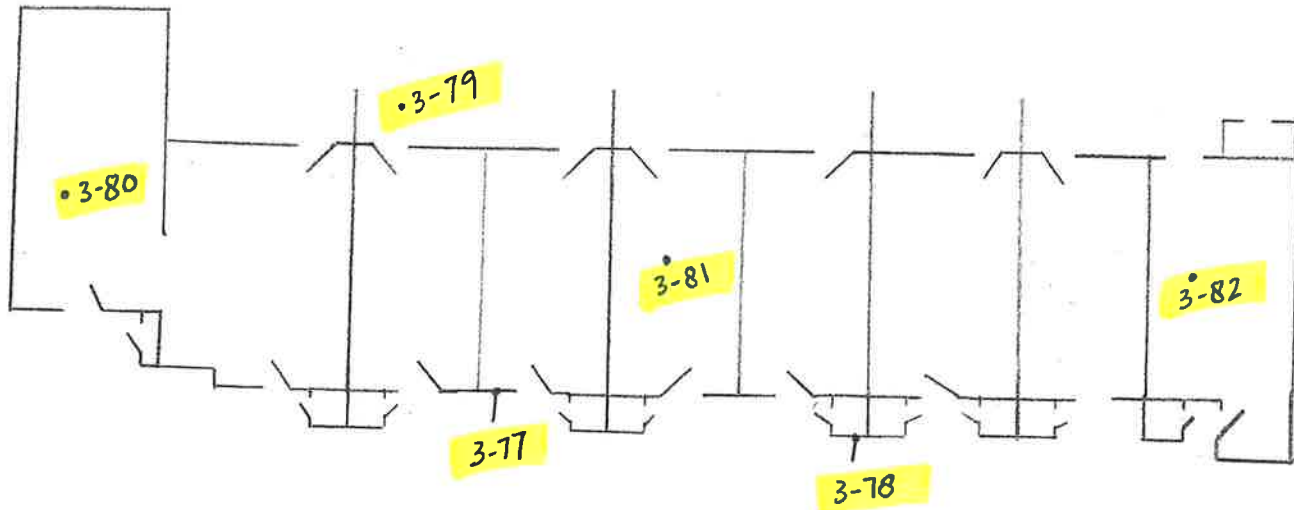
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EXTERIOR



SUSPECT ASBESTOS SAMPLES

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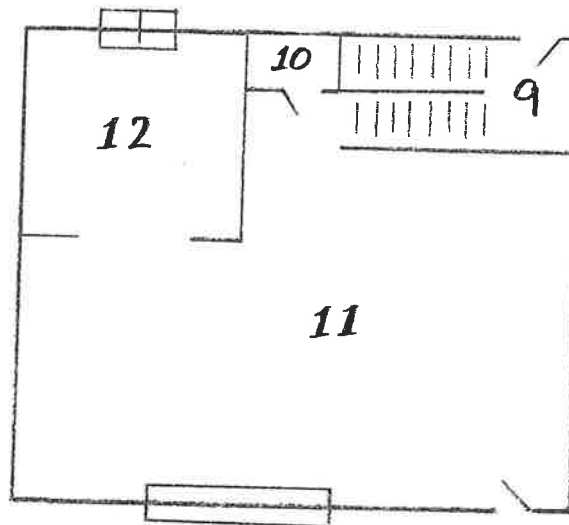
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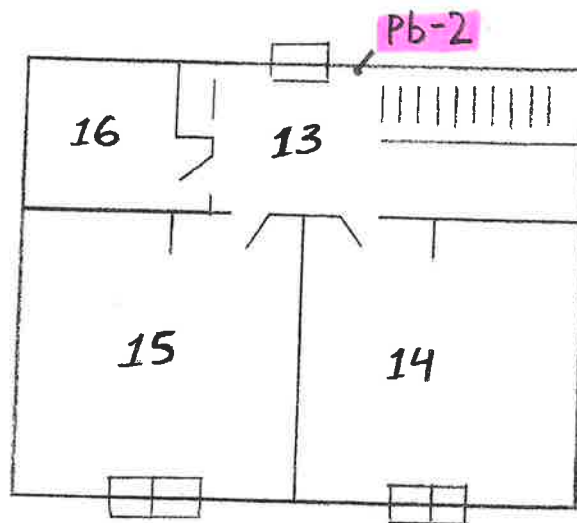
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MAIN FLOOR



UPPER LEVEL



(NOT TO SCALE)

LEAD PAINT SAMPLES

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Location "Building 20" 111 8th Ave.

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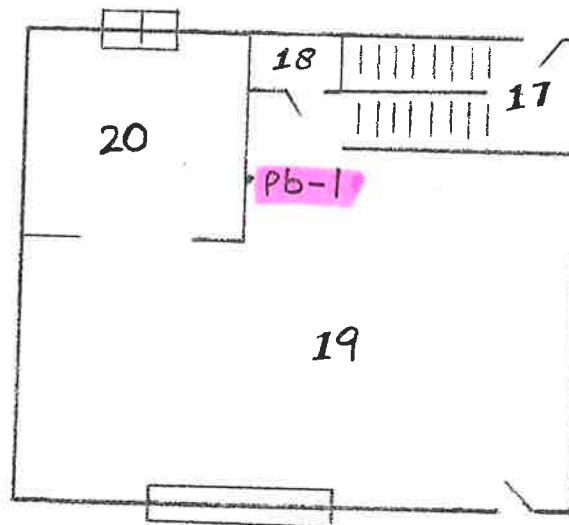
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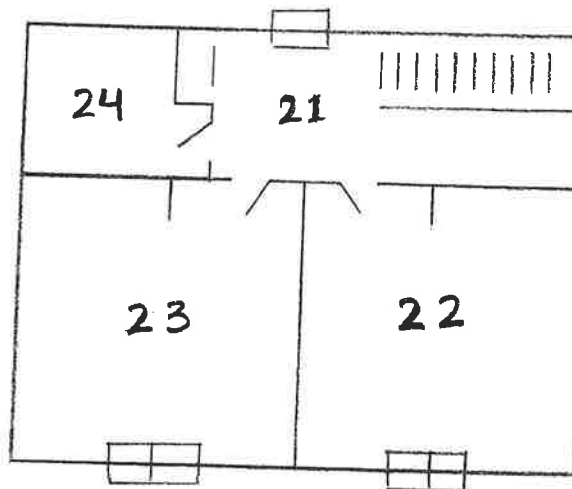
UNIT 185



MAIN FLOOR



UPPER LEVEL



LEAD PAINT SAMPLES

(NOT TO SCALE)



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Location "Building 20" 111 8th Ave.

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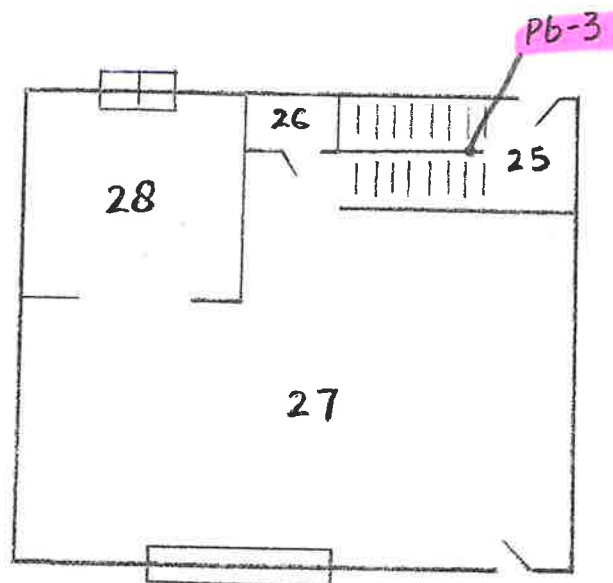
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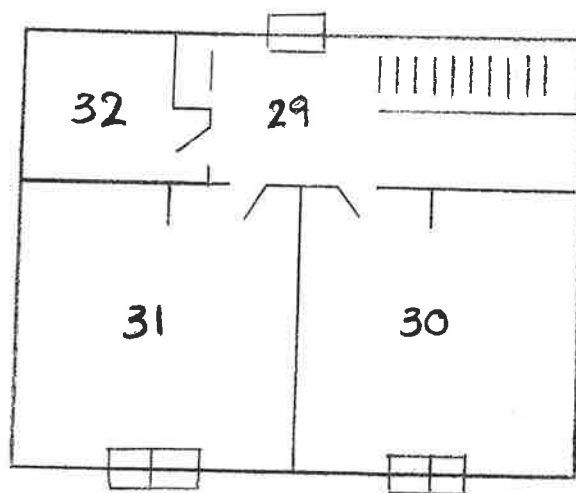
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UPPER LEVEL

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LEAD PAINT SAMPLES

(NOT TO SCALE)



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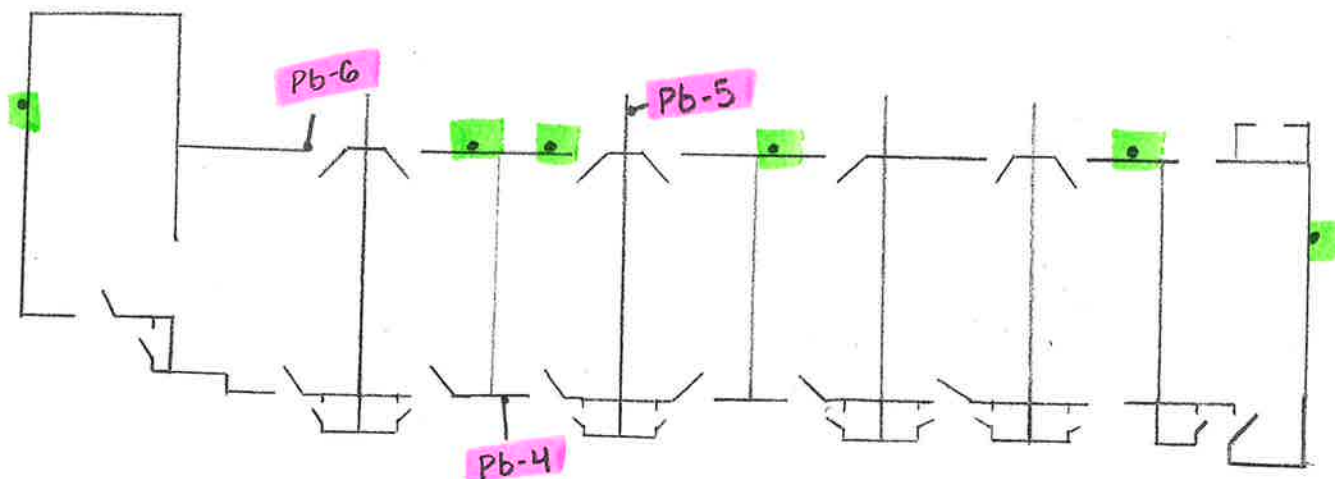
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EXTERIOR



LEAD PAINT SAMPLES

MERCURY & PCB DEVICES ARE HIGHLIGHTED IN GREEN

(NOT TO SCALE)



Appendix B

Laboratory Analysis Results

January 8, 2019



Jason Lindahl
NVL Field Services Division
4708 Aurora Ave. N.
Seattle, WA 98103

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1900413.00

Client Project: 2018-0915
Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Dear Mr. Lindahl,

Enclosed please find test results for the 45 sample(s) submitted to our laboratory for analysis on 1/7/2019.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, 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,

A handwritten signature in black ink, appearing to read "Matt Macfarlane".

Matt Macfarlane, Asbestos Lab Supervisor

The logo for NVLAP (National Voluntary Laboratory Accreditation Program). It features the letters "NVLAP" in a stylized, outlined font. The "P" is slightly larger and more prominent than the other letters.

Enc.: Sample Results

Lab Code: 102063-0

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Lab ID: 19001538 Client Sample #: 2018-0915-1-1

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3 Description: White brittle textured material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Fine particles, Mica	None Detected ND
Mineral grains, Paint	

Asbestos Type: %
None Detected ND

Layer 2 of 3 Description: Off-white sandy/brittle material

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Granules, Sand	Wood fibers 2%

Asbestos Type: %
None Detected ND

Layer 3 of 3 Description: Off-white chalky material with paper

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Gypsum/Binder, Fine particles	Cellulose 23%

Asbestos Type: %
None Detected ND

Lab ID: 19001539 Client Sample #: 2018-0915-1-2

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3 Description: White brittle textured material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Fine particles, Mica	None Detected ND
Mineral grains, Paint	

Asbestos Type: %
None Detected ND

Layer 2 of 3 Description: Off-white sandy/brittle material

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Granules, Sand	Wood fibers 2%

Asbestos Type: %
None Detected ND

Layer 3 of 3 Description: Off-white chalky material with paper

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Gypsum/Binder, Fine particles	Cellulose 24%

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/08/2019

Reviewed by: Matt Macfarlane

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Lab ID: 19001540 Client Sample #: 2018-0915-1-3

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3 Description: White brittle textured material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Fine particles, Mica	None Detected ND
Mineral grains, Paint	

Asbestos Type: %
None Detected ND

Layer 2 of 3 Description: Off-white sandy/brittle material

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Granules, Sand	Wood fibers 2%

Asbestos Type: %
None Detected ND

Layer 3 of 3 Description: Off-white chalky material with paper

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Gypsum/Binder, Fine particles	Cellulose 22%

Asbestos Type: %
None Detected ND

Lab ID: 19001541 Client Sample #: 2018-0915-1-4

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3 Description: White brittle textured material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Fine particles, Mica	None Detected ND
Mineral grains, Paint	

Asbestos Type: %
None Detected ND

Layer 2 of 3 Description: Off-white sandy/brittle material

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Granules, Sand	Wood fibers 3%

Asbestos Type: %
None Detected ND

Layer 3 of 3 Description: Off-white chalky material with paper

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Gypsum/Binder, Fine particles	Cellulose 20%

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Lab ID: 19001542 Client Sample #: 2018-0915-1-5

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: Off-white thin compacted powdery material with paint	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Binder/Filler, Calcareous particles, Paint	None Detected ND	None Detected ND
Layer 2 of 4	Description: White brittle textured material with light green/tan paint	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Binder/Filler, Fine particles, Mica	None Detected ND	None Detected ND
		Mineral grains, Paint		
Layer 3 of 4	Description: Off-white sandy/brittle material	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Binder/Filler, Granules, Sand	Wood fibers 3%	None Detected ND
Layer 4 of 4	Description: Off-white chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Binder/Filler, Gypsum/Binder, Fine particles	Cellulose 25%	None Detected ND

Lab ID: 19001543 Client Sample #: 2018-0915-1-6

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: White thin compacted powdery material with off-white paint	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Binder/Filler, Calcareous particles, Paint	None Detected ND	None Detected ND
Layer 2 of 4	Description: White brittle textured material with cream paint	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Binder/Filler, Fine particles, Mica	None Detected ND	None Detected ND
		Mineral grains, Paint		

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/08/2019

Reviewed by: Matt Macfarlane

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 3 of 4	Description: Off-white sandy/brittle material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Granules, Sand	Wood fibers 2%	
Layer 4 of 4	Description: Off-white chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Gypsum/Binder, Fine particles	Cellulose 25%	
<hr/>				
Lab ID: 19001544		Client Sample #: 2018-0915-1-7		
Location: "Building 20" 111 8th Ave. Seattle, WA 98104				
Layer 1 of 3	Description: White brittle textured material with layered paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Fine particles, Mica	None Detected ND	
		Mineral grains, Paint		
Layer 2 of 3	Description: Off-white sandy/brittle material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Granules, Sand	Wood fibers 3%	
Layer 3 of 3	Description: Off-white chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Gypsum/Binder, Fine particles	Cellulose 23%	

Lab ID: 19001545 **Client Sample #: 2018-0915-1-8**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: White brittle textured material with layered paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Fine particles, Mica	None Detected ND	
		Mineral grains, Paint		


Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/08/2019

Reviewed by: Matt Macfarlane

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 2 of 3	Description: Off-white sandy/brittle material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Granules, Sand	Wood fibers 2%	
Layer 3 of 3	Description: Off-white chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Gypsum/Binder, Fine particles	Cellulose 20%	
			Glass fibers 5%	

Lab ID: 19001546 **Client Sample #: 2018-0915-1-9**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: Trace thin off-white compacted powdery material with paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Calcareous particles, Paint	None Detected ND	
Layer 2 of 4	Description: White brittle textured material with paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Fine particles, Mica	None Detected ND	
		Mineral grains, Paint		
Layer 3 of 4	Description: Off-white sandy material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Granules, Sand	Wood fibers 2%	
Layer 4 of 4	Description: Off-white chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Gypsum/Binder, Fine particles	Cellulose 25%	

Lab ID: 19001547 **Client Sample #: 2018-0915-3-1**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Jason Lindahl
Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Batch #: 1900413.00
Client Project #: 2018-0915
Date Received: 1/7/2019
Samples Received: 45
Samples Analyzed: 45
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 1 of 3	Description: Off-white compacted powdery material with paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Calcareous particles, Paint	None Detected ND	
Layer 2 of 3	Description: Off-white thin fibrous material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler	Cellulose 27%	
Layer 3 of 3	Description: Off-white chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Gypsum/Binder, Fine particles	Cellulose 19%	
			Glass fibers 4%	

Lab ID: 19001548 Client Sample #: 2018-0915-3-2

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: White thin fibrous material with layered paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Paint	Cellulose 18%	
Layer 2 of 2	Description: Off-white chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Gypsum/Binder, Fine particles	Cellulose 20%	
			Glass fibers 4%	

Lab ID: 19001549 Client Sample #: 2018-0915-3-3

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Beige tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Jason Lindahl
Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Batch #: 1900413.00
Client Project #: 2018-0915
Date Received: 1/7/2019
Samples Received: 45
Samples Analyzed: 45
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 2 of 3	Description: Light brown soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Asphalt/Binder, Mastic/Binder	None Detected ND	
Layer 3 of 3	Description: Black asphaltic fibrous backing with brown mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Asphalt/Binder, Mastic/Binder	Cellulose 35%	
Lab ID: 19001550		Client Sample #: 2018-0915-3-4		
Location: "Building 20" 111 8th Ave. Seattle, WA 98104				
Layer 1 of 3	Description: Brown sheet vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Calcareous particles, Vinyl/Binder	None Detected ND	
Layer 2 of 3	Description: Off-white fibrous backing with cream brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Binder/Filler, Mastic/Binder	None Detected ND	
Layer 3 of 3	Description: Black thin asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Asphalt/Binder	None Detected ND	

Lab ID: 19001551 Client Sample #: 2018-0915-3-5
Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Dark brown rubbery material with trace clear thin adhesive	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Adhesive/Binder, Calcareous particles, Rubber/Binder	None Detected ND	
Layer 2 of 2	Description: Brown brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Fine particles, Mastic/Binder	Cellulose <1%	

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Lab ID: 19001552 Client Sample #: 2018-0915-3-6

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 5 Description: Beige tile

Non-Fibrous Materials:
Binder/Filler, Calcareous particles, Mineral grains

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 5 Description: Yellow brittle mastic

Non-Fibrous Materials:
Mastic/Binder

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Layer 3 of 5 Description: Dark brown tile

Non-Fibrous Materials:
Binder/Filler, Calcareous particles, Mineral grains

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
Chrysotile 6%

Layer 4 of 5 Description: Black thin soft asphaltic mastic

Non-Fibrous Materials:
Asphalt/Binder

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Layer 5 of 5 Description: Black asphaltic fibrous backing with brown mastic and wood flakes

Non-Fibrous Materials:
Asphalt/Binder, Mastic/Binder, Wood flakes

Other Fibrous Materials:%
Cellulose 37%

Asbestos Type: %
None Detected ND

Lab ID: 19001553 Client Sample #: 2018-0915-3-7

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 6 Description: Beige tile with tan streaks

Non-Fibrous Materials:
Binder/Filler, Calcareous particles, Mineral grains

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 6 Description: Gold soft mastic

Non-Fibrous Materials:
Mastic/Binder

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Address: 4708 Aurora Ave. N.
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Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 3 of 6	Description: Tan brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder	None Detected ND	
Layer 4 of 6	Description: Brown compressed fibrous material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler	Cellulose 95%	
Layer 5 of 6	Description: Yellow soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder	None Detected ND	
Layer 6 of 6	Description: Gray fibrous backing with brown mastic and trace wood flakes	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Mastic/Binder, Wood flakes	Cellulose 30%	
			Synthetic fibers 15%	

Lab ID: 19001554 **Client Sample #: 2018-0915-3-8**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Brown flat hard compressed fibrous material with white surface	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Adhesive/Binder, Binder/Filler	Cellulose 85%	
Layer 2 of 3	Description: Pink soft mastic with trace wood flakes	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder, Wood flakes	None Detected ND	
Layer 3 of 3	Description: Tan soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Fine particles, Mastic/Binder	Cellulose 2%	

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/08/2019

Reviewed by: Matt Macfarlane

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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

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Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Lab ID: 19001555 Client Sample #: 2018-0915-3-9

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 1 Description: Black asphaltic flaky material

Non-Fibrous Materials:
Asphalt/Binder, Calcareous particles

Other Fibrous Materials:%
Wollastonite <1%

Asbestos Type: %
Chrysotile 2%

Lab ID: 19001556 Client Sample #: 2018-0915-3-10

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: Yellow sheet vinyl

Non-Fibrous Materials:
Calcareous particles, Vinyl/Binder

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 2 Description: Off-white fibrous backing with yellow mastic and trace compacted powdery material

Non-Fibrous Materials:
Binder/Filler, Calcareous particles, Mastic/Binder

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
Chrysotile 30%

Lab ID: 19001557 Client Sample #: 2018-0915-3-11

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Comments: Qualitative analysis was conducted for the presence of asbestos fibers in this layer 2.

Layer 1 of 2 Description: Brown rubbery material with thin clear adhesive surface

Non-Fibrous Materials:
Adhesive/Binder, Calcareous particles, Rubber/Binder

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 2 Description: Tan soft mastic with debris

Non-Fibrous Materials:
Calcareous particles, Mastic/Binder, Fine particles

Other Fibrous Materials:%
Cellulose
Synthetic fibers

Asbestos Type: %
None Detected ND

Lab ID: 19001558 Client Sample #: 2018-0915-3-12

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Brown flat hard compressed fibrous material with off-white surface and paint			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Adhesive/Binder, Binder/Filler, Paint	Cellulose 95%		None Detected ND
Layer 2 of 2	Description: Yellow soft mastic with trace wood flakes			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder, Wood flakes	None Detected ND		None Detected ND
Lab ID: 19001559 Client Sample #: 2018-0915-3-13				
Location: "Building 20" 111 8th Ave. Seattle, WA 98104				
Layer 1 of 3	Description: Beige tile			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains	None Detected ND		None Detected ND
Layer 2 of 3	Description: Brown soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Asphalt/Binder, Mastic/Binder	None Detected ND		None Detected ND
Layer 3 of 3	Description: Black asphaltic fibrous backing with brown mastic and wood flakes			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Asphalt/Binder, Mastic/Binder, Wood flakes	Cellulose 35%		None Detected ND

Lab ID: 19001560 Client Sample #: 2018-0915-3-14

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Yellow sheet vinyl with clear thin adhesive surface	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Adhesive/Binder, Calcareous particles, Vinyl/Binder	None Detected ND	None Detected ND
Layer 2 of 3	Description: Off-white fibrous backing with mastic	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Binder/Filler, Mastic/Binder	None Detected ND	Chrysotile 29%

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/08/2019

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 3 of 3	Description: Off-white chalky material with trace wood flakes			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Gypsum/Binder, Wood flakes	Cellulose 2%		None Detected ND

Lab ID: 19001561 **Client Sample #: 2018-0915-3-15**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: Brown flat hard compressed fibrous material with off-white surface			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Adhesive/Binder, Binder/Filler	Cellulose 89%		None Detected ND

Layer 2 of 4	Description: Yellow soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder	None Detected ND		None Detected ND

Layer 3 of 4	Description: Tan fibrous material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler	Cellulose 42%		None Detected ND

Layer 4 of 4	Description: White foamy material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Synthetic foam	None Detected ND		None Detected ND

Lab ID: 19001562 **Client Sample #: 2018-0915-3-16**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 5	Description: Beige tile with brown streaks			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains	None Detected ND		None Detected ND

Layer 2 of 5	Description: Yellow soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder	None Detected ND		None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/08/2019

Reviewed by: Matt Macfarlane

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 3 of 5	Description: Tan tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % Chrysotile 8%
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	
Layer 4 of 5	Description: Black thin soft asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder	None Detected ND	
Layer 5 of 5	Description: Black asphaltic fibrous backing with brown mastic and wood flakes	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder, Mastic/Binder, Wood flakes	Cellulose 38%	
			Synthetic fibers 2%	

Lab ID: 19001563 **Client Sample #: 2018-0915-3-17**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 5	Description: Off-white tile with clear thin adhesive surface	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Adhesive/Binder, Binder/Filler, Calcareous particles	None Detected ND	
		Mineral grains		
Layer 2 of 5	Description: Yellow brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder	None Detected ND	
Layer 3 of 5	Description: Brown tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % Chrysotile 6%
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	
Layer 4 of 5	Description: Black soft asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder	None Detected ND	

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 5 of 5	Description: Black asphaltic fibrous backing with brown mastic and trace wood flakes		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Asphalt/Binder, Mastic/Binder, Wood flakes	Cellulose 38%	None Detected ND
		Synthetic fibers 3%	

Lab ID: 19001564 **Client Sample #: 2018-0915-3-18**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: Beige vinyl		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Synthetic foam, Vinyl/Binder	Glass fibers 4%	None Detected ND

Layer 2 of 4	Description: Beige tile		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	None Detected ND

Layer 3 of 4	Description: Tan brittle mastic		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Fine particles, Mastic/Binder	None Detected ND	None Detected ND

Layer 4 of 4	Description: Black asphaltic fibrous backing with trace thin silver paint and wood flakes		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Asphalt/Binder, Metallic paint, Wood flakes	Cellulose 32%	None Detected ND

Lab ID: 19001565 **Client Sample #: 2018-0915-3-19**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 5	Description: Beige tile with thin clear adhesive surface		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Adhesive/Binder, Binder/Filler, Calcareous particles	None Detected ND	None Detected ND
	Mineral grains		

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 2 of 5	Description: Yellow brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Fine particles, Mastic/Binder	None Detected ND	
Layer 3 of 5	Description: Tan tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % Chrysotile 6%
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	
Layer 4 of 5	Description: Black soft asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder	None Detected ND	
Layer 5 of 5	Description: Black asphaltic fibrous backing with brown mastic and trace wood flakes	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder, Mastic/Binder, Wood flakes	Cellulose 34%	
			Synthetic fibers 2%	

Lab ID: 19001566 **Client Sample #: 2018-0915-3-20**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 5	Description: Off-white tile with clear thin adhesive surface	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Adhesive/Binder, Binder/Filler, Calcareous particles	None Detected ND	
		Mineral grains		
Layer 2 of 5	Description: Tan brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder	None Detected ND	
Layer 3 of 5	Description: Beige tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % Chrysotile 2%
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 4 of 5	Description: Black soft asphaltic mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder	None Detected ND		None Detected ND
Layer 5 of 5	Description: Black asphaltic fibrous backing with brown mastic and trace wood flakes			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Mastic/Binder, Wood flakes	Cellulose 38%		None Detected ND
		Synthetic fibers 2%		

Lab ID: 19001567 **Client Sample #: 2018-0915-3-21**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: Beige vinyl			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Synthetic foam, Vinyl/Binder	Glass fibers 4%		None Detected ND
Layer 2 of 4	Description: Gray crumbly material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Calcareous particles	Cellulose 3%		None Detected ND
Layer 3 of 4	Description: Trace gold brittle/soft mastic on wood flakes			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Wood flakes	None Detected ND		None Detected ND
Layer 4 of 4	Description: Black asphaltic fibrous backing with trace wood flakes			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Wood flakes	Cellulose 33%		None Detected ND
		Synthetic fibers 2%		

Lab ID: 19001568 **Client Sample #: 2018-0915-3-22**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00
Client Project #: 2018-0915
Date Received: 1/7/2019
Samples Received: 45
Samples Analyzed: 45
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl
Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 7	Description: Brown flat hard compressed fibrous material with cream surface	Non-Fibrous Materials: Adhesive/Binder, Binder/Filler	Other Fibrous Materials:% Cellulose 90%	Asbestos Type: % None Detected ND
Layer 2 of 7	Description: Yellow soft mastic	Non-Fibrous Materials: Mastic/Binder	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND
Layer 3 of 7	Description: Tan fibrous material	Non-Fibrous Materials: Binder/Filler	Other Fibrous Materials:% Cellulose 25%	Asbestos Type: % None Detected ND
Layer 4 of 7	Description: White foamy material	Non-Fibrous Materials: Synthetic foam	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND
Layer 5 of 7	Description: Tan fibrous material with yellow soft mastic	Non-Fibrous Materials: Binder/Filler, Mastic/Binder	Other Fibrous Materials:% Cellulose 27%	Asbestos Type: % None Detected ND
Layer 6 of 7	Description: Light green thin fibrous material	Non-Fibrous Materials: Binder/Filler	Other Fibrous Materials:% Cellulose 18%	Asbestos Type: % None Detected ND
Layer 7 of 7	Description: Tan fibrous material	Non-Fibrous Materials: Binder/Filler	Other Fibrous Materials:% Cellulose 30%	Asbestos Type: % None Detected ND

Lab ID: 19001569 **Client Sample #: 2018-0915-3-23**
Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 5	Description: Beige tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	
Layer 2 of 5	Description: Tan brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Fine particles, Mastic/Binder	None Detected ND	
Layer 3 of 5	Description: Tan tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % Chrysotile 2%
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	
Layer 4 of 5	Description: Black soft asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder	None Detected ND	
Layer 5 of 5	Description: Black asphaltic fibrous backing with brown mastic and trace wood flakes	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder, Mastic/Binder, Wood flakes	Cellulose 37%	

Lab ID: 19001570 **Client Sample #: 2018-0915-3-24**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: Beige tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	
Layer 2 of 4	Description: Yellow brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder	None Detected ND	

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 3 of 4	Description: Off-white chalky material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Gypsum/Binder	Cellulose 2%	None Detected ND

Layer 4 of 4	Description: Gold thin brittle mastic with wood flakes	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder, Wood flakes	None Detected ND	None Detected ND

Lab ID: 19001571 Client Sample #: 2018-0915-3-25

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 5	Description: Beige tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	None Detected ND

Layer 2 of 5	Description: Yellow brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder	None Detected ND	None Detected ND

Layer 3 of 5	Description: Dark brown tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	Chrysotile 5%

Layer 4 of 5	Description: Black soft asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Asphalt/Binder	None Detected ND	None Detected ND

Layer 5 of 5	Description: Black asphaltic fibrous backing with brown mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Asphalt/Binder, Mastic/Binder	Cellulose 29%	None Detected ND

Lab ID: 19001572 Client Sample #: 2018-0915-3-26

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/08/2019

Reviewed by: Matt Macfarlane

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Beige tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains	None Detected	ND	None Detected ND
Layer 2 of 3	Description: Yellow brittle mastic with trace compacted powdery material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Calcareous particles, Mastic/Binder	None Detected	ND	None Detected ND
Layer 3 of 3	Description: Off-white chalky material with trace wood flakes	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Gypsum/Binder, Wood flakes		Cellulose 2%	None Detected ND

Lab ID: 19001573 **Client Sample #: 2018-0915-3-27**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 6	Description: Beige tile with clear thin adhesive surface	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Adhesive/Binder, Binder/Filler, Calcareous particles	None Detected	ND	None Detected ND
	Mineral grains			
Layer 2 of 6	Description: Yellow brittle/soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Mastic/Binder	None Detected	ND	None Detected ND
Layer 3 of 6	Description: Tan tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains	None Detected	ND	Chrysotile 2%
Layer 4 of 6	Description: Black soft asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Asphalt/Binder	None Detected	ND	None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 5 of 6	Description: Black asphaltic fibrous backing with brown mastic	Non-Fibrous Materials: Asphalt/Binder, Mastic/Binder	Other Fibrous Materials:% Cellulose 28%	Asbestos Type: % None Detected ND
Layer 6 of 6	Description: Gold thin brittle mastic with trace wood flakes	Non-Fibrous Materials: Mastic/Binder, Wood flakes	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND
<hr/>				
Lab ID: 19001574	Client Sample #: 2018-0915-3-28			
Location: "Building 20" 111 8th Ave. Seattle, WA 98104				
Layer 1 of 4	Description: Tan sheet vinyl	Non-Fibrous Materials: Synthetic foam, Vinyl/Binder	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND
Layer 2 of 4	Description: Off-white fibrous backing with mastic	Non-Fibrous Materials: Binder/Filler, Calcareous particles, Mastic/Binder	Other Fibrous Materials:% Cellulose 42% Glass fibers 4%	Asbestos Type: % None Detected ND
Layer 3 of 4	Description: Gray thin crumbly material	Non-Fibrous Materials: Binder/Filler, Calcareous particles	Other Fibrous Materials:% Cellulose 2%	Asbestos Type: % None Detected ND
Layer 4 of 4	Description: Red thin brittle adhesive on wood	Non-Fibrous Materials: Adhesive/Binder, Wood	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND

Lab ID: 19001575 **Client Sample #: 2018-0915-3-29**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

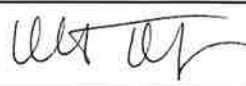
Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Off-white tile			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains	None Detected ND		None Detected ND
Layer 2 of 2	Description: Yellow soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder	None Detected ND		None Detected ND

Lab ID: 19001576 Client Sample #: 2018-0915-3-30

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Brown rubbery material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Calcareous particles, Rubber/Binder	None Detected ND		None Detected ND
Layer 2 of 3	Description: Off-white soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Calcareous particles, Mastic/Binder	None Detected ND		None Detected ND
Layer 3 of 3	Description: Tan brittle/soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Fine particles	None Detected ND		None Detected ND

Lab ID: 19001577 Client Sample #: 2018-0915-3-31

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: Beige tile with clear thin adhesive surface			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Adhesive/Binder, Binder/Filler, Calcareous particles	None Detected ND		None Detected ND
	Mineral grains			

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 2 of 4	Description: Yellow brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder	None Detected ND	
Layer 3 of 4	Description: Gray crumbly material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Calcareous particles	Cellulose 4%	
Layer 4 of 4	Description: Red brittle adhesive on wood	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Adhesive/Binder, Wood	None Detected ND	
<hr/>				
Lab ID: 19001578		Client Sample #: 2018-0915-3-32		
Location: "Building 20" 111 8th Ave. Seattle, WA 98104				
Layer 1 of 4	Description: Tan sheet vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Vinyl/Binder	None Detected ND	
Layer 2 of 4	Description: Off-white fibrous backing with mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Calcareous particles, Mastic/Binder	Cellulose 36%	
			Glass fibers 7%	
Layer 3 of 4	Description: Gray crumbly material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Calcareous particles	Cellulose 4%	
Layer 4 of 4	Description: Red thin brittle adhesive on wood	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Adhesive/Binder, Wood	None Detected ND	


Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 45

Samples Analyzed: 45

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Lab ID: 19001579 Client Sample #: 2018-0915-3-33

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: Gold thin brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder	Synthetic fibers <1%	
Layer 2 of 4	Description: White soft material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler	None Detected ND	
Layer 3 of 4	Description: Brown flat hard compressed fibrous material with cream surface	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Adhesive/Binder, Binder/Filler	Cellulose 93%	
Layer 4 of 4	Description: Off-white soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder	None Detected ND	

Lab ID: 19001580 Client Sample #: 2018-0915-3-34

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Tan sheet vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Vinyl/Binder	None Detected ND	
Layer 2 of 2	Description: Off-white fibrous backing with yellow mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Calcareous particles, Mastic/Binder	Cellulose 40% Glass fibers 3%	

Lab ID: 19001581 Client Sample #: 2018-0915-3-35

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900413.00
Client Project #: 2018-0915
Date Received: 1/7/2019
Samples Received: 45
Samples Analyzed: 45
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl
Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: Beige tile	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains		None Detected ND	None Detected ND
Layer 2 of 4	Description: Yellow soft mastic	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Mastic/Binder		None Detected ND	None Detected ND
Layer 3 of 4	Description: Red brittle adhesive on wood	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Adhesive/Binder, Wood		None Detected ND	None Detected ND
Layer 4 of 4	Description: Black asphaltic fibrous backing with mastic	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Asphalt/Binder, Mastic/Binder		Cellulose 27%	None Detected ND

Lab ID: 19001582 **Client Sample #: 2018-0915-3-36**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Brown rubbery material with thin clear adhesive surface	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Adhesive/Binder, Calcareous particles, Rubber/Binder		None Detected ND	None Detected ND
Layer 2 of 3	Description: Off-white soft mastic	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Calcareous particles, Mastic/Binder		None Detected ND	None Detected ND
Layer 3 of 3	Description: Tan thin brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Mastic/Binder		None Detected ND	None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019

Matt Macfarlane, Asbestos Lab Supervisor

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

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Jason Lindahl
Phone (206) 547-0100
 Cell (763) 286-3494
NVL Batch Number 1900413.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/9/2019 **Time** 3:00 PM
Email jason.l@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0915 **Project Location:** "Building 20" 111 8th Ave. Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 45

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19001538	2018-0915-1-1		A
2	19001539	2018-0915-1-2		A
3	19001540	2018-0915-1-3		A
4	19001541	2018-0915-1-4		A
5	19001542	2018-0915-1-5		A
6	19001543	2018-0915-1-6		A
7	19001544	2018-0915-1-7		A
8	19001545	2018-0915-1-8		A
9	19001546	2018-0915-1-9		A
10	19001547	2018-0915-3-1	Composite	A
11	19001548	2018-0915-3-2		A
12	19001549	2018-0915-3-3		A
13	19001550	2018-0915-3-4		A
14	19001551	2018-0915-3-5		A
15	19001552	2018-0915-3-6		A
16	19001553	2018-0915-3-7		A
17	19001554	2018-0915-3-8		A
18	19001555	2018-0915-3-9		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Emily Schubert		NVL	1/7/19	1500
Analyzed by	Alla Prysyazhnyuk		NVL	1/8/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/7/2019
 Time: 3:00 PM
 Entered By: Emily Schubert

ASBESTOS LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Jason Lindahl
Phone (206) 547-0100
Cell (763) 286-3494
NVL Batch Number 1900413.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/9/2019 **Time** 3:00 PM
Email jason.l@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0915 **Project Location:** "Building 20" 111 8th Ave. Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 45

Rush Samples

	Lab ID	Sample ID	Description	A/R
19	19001556	2018-0915-3-10		A
20	19001557	2018-0915-3-11		A
21	19001558	2018-0915-3-12		A
22	19001559	2018-0915-3-13		A
23	19001560	2018-0915-3-14		A
24	19001561	2018-0915-3-15		A
25	19001562	2018-0915-3-16		A
26	19001563	2018-0915-3-17		A
27	19001564	2018-0915-3-18		A
28	19001565	2018-0915-3-19		A
29	19001566	2018-0915-3-20		A
30	19001567	2018-0915-3-21		A
31	19001568	2018-0915-3-22		A
32	19001569	2018-0915-3-23		A
33	19001570	2018-0915-3-24		A
34	19001571	2018-0915-3-25		A
35	19001572	2018-0915-3-26		A
36	19001573	2018-0915-3-27		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Emily Schubert		NVL	1/7/19	1500
Analyzed by	Alla Prysyazhnyuk		NVL	1/8/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/7/2019
 Time: 3:00 PM
 Entered By: Emily Schubert

ASBESTOS LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Jason Lindahl
Phone (206) 547-0100
Cell (763) 286-3494
NVL Batch Number 1900413.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/9/2019 **Time** 3:00 PM
Email jason.l@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0915 **Project Location:** "Building 20" 111 8th Ave. Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 45

Rush Samples

	Lab ID	Sample ID	Description	A/R
37	19001574	2018-0915-3-28		A
38	19001575	2018-0915-3-29		A
39	19001576	2018-0915-3-30		A
40	19001577	2018-0915-3-31		A
41	19001578	2018-0915-3-32		A
42	19001579	2018-0915-3-33		A
43	19001580	2018-0915-3-34		A
44	19001581	2018-0915-3-35		A
45	19001582	2018-0915-3-36		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Emily Schubert		NVL	1/7/19	1500
Analyzed by	Alla Prysyazhnyuk		NVL	1/8/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/7/2019
 Time: 3:00 PM
 Entered By: Emily Schubert

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900413



Client NVL Laboratories Inc
Street 4708 Aurora Ave N
 Seattle, WA 98103
Project Manager Syed Hasan
Project Location "Building 20" 111 8th Ave.
 Seattle, WA 98104

NVL Batch Number
Client Job Number 2018-0915
Total Samples 45

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745 **Fax:** (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Asbestos Bulk	<input checked="" type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Funqus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	<input type="checkbox"/> All 8	Other Metals
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)	<input type="checkbox"/> All 3
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input type="checkbox"/> Lead (Pb)	<input type="checkbox"/> Copper (Cu)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Nickel (Ni)
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify) _____		
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0915-1-1		
2		1-2		
3		1-3		
4		1-4		
5		1-5		
6		1-6		
7		1-7		
8		1-8		
9		1-9		
10		3-1	Composite	
11		3-2		
12		3-3		
13		3-4		
14		3-5		
15		3-6		

Print Below	Sign Below	Company	Date	Time
Sampled by Jason Lindahl		NVL	1/7/19	7:30
Relinquished by Jason Lindahl		NVL	1/7/19	3:00
Received by Emrys		NVL	1/7/19	1500
Analyzed by				
Results Called by				
Results Faxed by				

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900413



Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 20" 111 8th Ave.
Seattle, WA 98104

NVL Batch Number _____

Client Job Number 2018-0915

Total Samples 45

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Asbestos Bulk	<input checked="" type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	<input type="checkbox"/> All 8	Other Metals
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)	<input type="checkbox"/> All 3
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input type="checkbox"/> Lead (Pb)	<input type="checkbox"/> Copper (Cu)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Nickel (Ni)
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify) _____		<input type="checkbox"/> Zinc (Zn)
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0915-3-7		
2		3-8		
3		3-9		
4		3-10		
5		3-11		
6		3-12		
7		3-13		
8		3-14		
9		3-15		
10		3-16		
11		3-17		
12		3-18		
13		3-19		
14		3-20		
15		3-21		

	Print Below	Sign Below	Company	Date	Time
Sampled by	Jason Lindall	[Signature]	NVL	1/7/19	7:30
Relinquished by	Jason Lindall	[Signature]	NVL	1/7/19	3:00
Received by	Emily S	[Signature]	NVL	1/7/19	1500
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**CHAIN of CUSTODY
SAMPLE LOG**
1900413

Client NVL Laboratories Inc

Street 4708 Aurora Ave N

Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 20" 111 8th Ave.

Seattle, WA 98104

NVL Batch Number
Client Job Number 2018-0915

Total Samples 45

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☐ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Asbestos Bulk	<input checked="" type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS		Det. Limit		Matrix	
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Soil		
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Paint Chips in %		
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Paint Chips in cr		
<input type="checkbox"/> Other Types of Analysis		<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify) _____	
		<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust		
Condition of Package: <input type="checkbox"/> Good <input type="checkbox"/> Damaged (no spillage) <input type="checkbox"/> Severe damage (spillage)					

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0915-3-22		
2		3-23		
3		3-24		
4		3-25		
5		3-26		
6		3-27		
7		3-28		
8		3-29		
9		3-30		
10		3-31		
11		3-32		
12		3-33		
13		3-34		
14		3-35		
15		3-36		

Print Below		Sign Below		Company	Date	Time
Sampled by	Jason Lindahl			NVL	1/7/19	7:30
Relinquished by	Jason Lindahl			NVL	1/7/19	3:00
Received by	Emulip			NVL	1/7/19	1500
Analyzed by						
Results Called by						
Results Faxed by						

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

January 8, 2019



Jason Lindahl
NVL Field Services Division
4708 Aurora Ave. N.
Seattle, WA 98103

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1900422.00

Client Project: 2018-0915
Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Dear Mr. Lindahl,

Enclosed please find test results for the 25 sample(s) submitted to our laboratory for analysis on 1/7/2019.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, 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,

A handwritten signature in black ink, appearing to read "Matt Macfarlane".

Matt Macfarlane, Asbestos Lab Supervisor



Enc.: Sample Results

Lab Code: 102063-0

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900422.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Lab ID: 19001657 **Client Sample #: 2018-0915-3-37**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3 **Description:** White rubbery material with paint

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
Caulking compound, Paint, Calcareous particles	Cellulose 2%	None Detected ND

Layer 2 of 3 **Description:** Brown flat hard compressed fibrous material with white surface and paint

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
Binder/Filler, Laminate/binder, Paint	Cellulose 95%	None Detected ND
Fine particles		

Layer 3 of 3 **Description:** Brown mastic on wood

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
Mastic/Binder, Wood flakes, Fine particles	Cellulose 7%	None Detected ND

Lab ID: 19001660 **Client Sample #: 2018-0915-3-38**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4 **Description:** Yellow sheet vinyl

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
Vinyl/Binder	None Detected ND	None Detected ND

Layer 2 of 4 **Description:** White fibrous backing with mastic

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
Binder/Filler, Mastic/Binder, Fine particles	Cellulose 36%	None Detected ND
	Glass fibers 25%	

Layer 3 of 4 **Description:** Gray soft material

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
Binder/Filler, Fine particles, Calcareous particles	Cellulose 8%	None Detected ND


Sampled by: Client

Analyzed by: William Minor

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900422.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 4 of 4	Description: White mastic on wood			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Wood flakes, Fine particles	Cellulose 5%		None Detected ND

Lab ID: 19001661 **Client Sample #: 2018-0915-3-39**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: Brown flat hard compressed fibrous material with off-white surface			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Laminate/binder, Fine particles	Cellulose 96%		None Detected ND

Layer 2 of 4	Description: Brown mastic with white foamy material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Synthetic foam, Fine particles	Cellulose 4%		None Detected ND

Layer 3 of 4	Description: Green mastic on paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Fine particles, Calcareous particles	Cellulose 4%		None Detected ND

Layer 4 of 4	Description: Brown chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine particles	Cellulose 17%		None Detected ND
		Glass fibers 4%		

Lab ID: 19001662 **Client Sample #: 2018-0915-3-40**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 5	Description: White vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Vinyl/Binder, Calcareous particles	None Detected ND		None Detected ND

Sampled by: Client

Analyzed by: William Minor

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900422.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 2 of 5	Description: Yellow mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Calcareous particles, Fine particles	Cellulose 2%		None Detected ND
Layer 3 of 5	Description: Beige vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Vinyl/Binder, Calcareous particles	Cellulose <1%		Chrysotile 3%
Layer 4 of 5	Description: Black asphaltic material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Calcareous particles	Cellulose 3%		Chrysotile 6%
Layer 5 of 5	Description: Black asphaltic fibrous material with brown mastic and wood			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Wood flakes, Mastic/Binder	Cellulose 86%		None Detected ND
	Fine particles, Calcareous particles			

Lab ID: 19001663 **Client Sample #: 2018-0915-3-41**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: White vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Vinyl/Binder, Calcareous particles	None Detected ND		None Detected ND
Layer 2 of 3	Description: Brown soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Fine particles, Calcareous particles	Cellulose 5%		None Detected ND
Layer 3 of 3	Description: Black asphaltic fibrous material with brown brittle mastic and wood			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Wood flakes, Mastic/Binder	Cellulose 91%		None Detected ND
	Fine particles, Calcareous particles			

Sampled by: Client

Analyzed by: William Minor

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

Reviewed by: Matt Macfarlane

Date: 01/08/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900422.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Lab ID: 19001664 Client Sample #: 2018-0915-3-42

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: Black asphaltic material with paper and foil

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Asphalt/Binder, Fine particles

Cellulose 56%

None Detected ND

Layer 2 of 2 Description: Brown fibrous material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Glass beads, Glass debris, Fine particles

Glass fibers 94%

None Detected ND

Cellulose <1%

Lab ID: 19001665 Client Sample #: 2018-0915-3-43

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4 Description: Yellow sheet vinyl

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Vinyl/Binder

None Detected ND

None Detected ND

Layer 2 of 4 Description: Gray fibrous backing with mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Mastic/Binder, Fine particles

Cellulose 39%

None Detected ND

Glass fibers 20%

Layer 3 of 4 Description: Gray soft material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Fine particles, Calcareous particles

Cellulose 10%

None Detected ND

Layer 4 of 4 Description: White soft mastic on wood

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Mastic/Binder, Fine particles, Wood flakes

Cellulose 8%

None Detected ND

Sampled by: Client

Analyzed by: William Minor

Date: 01/08/2019

Reviewed by: Matt Macfarlane

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900422.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Lab ID: 19001666 Client Sample #: 2018-0915-3-44

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4 Description: White vinyl tile

Non-Fibrous Materials:

Vinyl/Binder, Calcareous particles

Other Fibrous Materials:%

None Detected ND

Asbestos Type: %

None Detected ND

Layer 2 of 4 Description: Yellow/brown soft sticky mastic

Non-Fibrous Materials:

Mastic/Binder, Asphalt/Binder, Calcareous particles

Fine particles

Other Fibrous Materials:%

Cellulose 6%

Asbestos Type: %

None Detected ND

Layer 3 of 4 Description: Black asphaltic fibrous material with brown brittle mastic and wood

Non-Fibrous Materials:

Asphalt/Binder, Mastic/Binder, Wood flakes

Other Fibrous Materials:%

Cellulose 88%

Asbestos Type: %

None Detected ND

Layer 4 of 4 Description: Black asphaltic material on paper

Non-Fibrous Materials:

Asphalt/Binder, Calcareous particles

Other Fibrous Materials:%

Cellulose 3%

Asbestos Type: %

None Detected ND

Lab ID: 19001667 Client Sample #: 2018-0915-3-45

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3 Description: Beige sheet vinyl

Non-Fibrous Materials:

Vinyl/Binder

Other Fibrous Materials:%

None Detected ND

Asbestos Type: %

None Detected ND

Layer 2 of 3 Description: White fibrous backing with mastic

Non-Fibrous Materials:

Mastic/Binder, Binder/Filler, Fine particles

Other Fibrous Materials:%

Glass fibers 33%

Asbestos Type: %

Chrysotile 59%

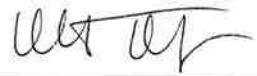
Sampled by: Client

Analyzed by: William Minor

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900422.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 3 of 3 **Description:** White chalky material with wood flakes

Non-Fibrous Materials:	Other Fibrous Materials:%
Gypsum/Binder, Fine grains, Wood flakes	Cellulose 6%
	Glass fibers 3%

Asbestos Type: %
None Detected ND

Lab ID: 19001668 **Client Sample #: 2018-0915-3-46**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 2 **Description:** Beige sheet vinyl

Non-Fibrous Materials:	Other Fibrous Materials:%
Vinyl/Binder	None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 2 **Description:** White fibrous backing with black asphaltic material and wood

Non-Fibrous Materials:	Other Fibrous Materials:%
Mastic/Binder, Binder/Filler, Fine particles	Glass fibers 37%

Asbestos Type: %
Chrysotile 51%

Lab ID: 19001669 **Client Sample #: 2018-0915-3-47**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

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

Non-Fibrous Materials:	Other Fibrous Materials:%
Asphalt/Binder, Calcareous particles	Glass fibers 2%
	Glass fibers 2%

Asbestos Type: %
Chrysotile 5%

Lab ID: 19001670 **Client Sample #: 2018-0915-3-48**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4 **Description:** White vinyl tile

Non-Fibrous Materials:	Other Fibrous Materials:%
Vinyl/Binder, Calcareous particles	Cellulose <1%

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: William Minor

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900422.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 2 of 4	Description: Brown soft sticky mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Calcareous particles, Fine particles	Cellulose 5%		None Detected ND
Layer 3 of 4	Description: Black asphaltic fibrous material with brown brittle mastic and wood			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Mastic/Binder, Wood flakes	Cellulose 90%		None Detected ND
	Calcareous particles, Fine particles			
Layer 4 of 4	Description: Black asphaltic material on paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Calcareous particles	Cellulose 3%		None Detected ND

Lab ID: 19001671	Client Sample #: 2018-0915-3-49			
Location: "Building 20" 111 8th Ave. Seattle, WA 98104				
Layer 1 of 4	Description: Black vinyl with white surface			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Vinyl/Binder, Laminate/binder, Calcareous particles	None Detected ND		None Detected ND
Layer 2 of 4	Description: Colorless soft sticky mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Fine particles	Cellulose 2%		None Detected ND
Layer 3 of 4	Description: Yellow sheet vinyl			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Vinyl/Binder	None Detected ND		None Detected ND
Layer 4 of 4	Description: White fibrous backing with mastic and wood flakes			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mastic/Binder, Wood flakes	Cellulose 41%		None Detected ND
	Fine particles, Calcareous particles	Glass fibers 21%		

Sampled by: Client

Analyzed by: William Minor

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

Reviewed by: Matt Macfarlane

Date: 01/08/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900422.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Lab ID: 19001672 Client Sample #: 2018-0915-3-50

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 5	Description: White sheet vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Vinyl/Binder, Calcareous particles	None Detected ND	
Layer 2 of 5	Description: Yellow soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder, Asphalt/Binder, Calcareous particles	Cellulose 3%	
Layer 3 of 5	Description: Off-white sheet vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Vinyl/Binder, Calcareous particles	Cellulose 2%	
Layer 4 of 5	Description: Brown soft sticky mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder, Fine particles	Cellulose 6%	
Layer 5 of 5	Description: Black asphaltic fibrous material with brown brittle mastic and wood flakes	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder, Mastic/Binder, Fine particles	Cellulose 90%	
		Wood flakes, Calcareous particles		

Lab ID: 19001673 Client Sample #: 2018-0915-3-51

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Beige sheet vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Vinyl/Binder, Fine particles	Cellulose 5%	

Sampled by: Client

Analyzed by: William Minor

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900422.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 2 of 3	Description: Beige fibrous backing with mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Mastic/Binder, Calcareous particles	Cellulose 31%		Chrysotile 54%
Layer 3 of 3	Description: White brittle material with wood flakes			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Fine particles, Wood flakes	Cellulose 5%		None Detected ND
<hr/>				
Lab ID: 19001674	Client Sample #: 2018-0915-3-52			
Location: "Building 20" 111 8th Ave. Seattle, WA 98104				
Layer 1 of 5	Description: Off-white vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Vinyl/Binder, Calcareous particles	None Detected ND		None Detected ND
Layer 2 of 5	Description: Yellow brittle mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder, Calcareous particles	Cellulose 2%		None Detected ND
Layer 3 of 5	Description: Beige vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Vinyl/Binder, Calcareous particles	Cellulose <1%		Chrysotile 4%
Layer 4 of 5	Description: Black asphaltic material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Asphalt/Binder, Calcareous particles	Cellulose 3%		Chrysotile 5%
Layer 5 of 5	Description: Black asphaltic fibrous material with brown brittle mastic and wood			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Asphalt/Binder, Wood flakes, Fine particles	Cellulose 91%		None Detected ND
	Calcareous particles			

Sampled by: Client

Analyzed by: William Minor

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900422.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Lab ID: 19001675 Client Sample #: 2018-0915-3-53

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3 Description: Beige sheet vinyl

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Vinyl/Binder, Fine particles

Cellulose 7%

None Detected ND

Layer 2 of 3 Description: White fibrous backing with mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Mastic/Binder, Fine particles

Cellulose 29%

Chrysotile 58%

Layer 3 of 3 Description: Black asphaltic material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Asphalt/Binder, Calcareous particles, Fine particles

Cellulose 3%

Chrysotile 5%

Lab ID: 19001676 Client Sample #: 2018-0915-3-54

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: Brown rubbery material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Vinyl/Binder

None Detected ND

None Detected ND

Layer 2 of 2 Description: Brown brittle mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Mastic/Binder, Vinyl/Binder, Calcareous particles

Cellulose 2%

None Detected ND

Lab ID: 19001677 Client Sample #: 2018-0915-3-55

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3 Description: Off-white vinyl tile

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Vinyl/Binder, Calcareous particles

Cellulose <1%

None Detected ND

Sampled by: Client

Analyzed by: William Minor

Date: 01/08/2019



Reviewed by: Matt Macfarlane

Date: 01/08/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900422.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 2 of 3	Description: Yellow brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder, Calcareous particles	Cellulose 2%	
Layer 3 of 3	Description: White brittle material with wood flakes	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Fine particles, Wood flakes	Cellulose 16%	
Lab ID: 19001678 Client Sample #: 2018-0915-3-56				
Location: "Building 20" 111 8th Ave. Seattle, WA 98104				
Layer 1 of 5	Description: Off-white vinyl tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Vinyl/Binder, Calcareous particles	None Detected ND	
Layer 2 of 5	Description: Yellow brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder, Calcareous particles	Cellulose 3%	
Layer 3 of 5	Description: Brown vinyl tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % Chrysotile 6%
		Vinyl/Binder, Calcareous particles, Fine particles	Cellulose <1%	
Layer 4 of 5	Description: Black asphaltic material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % Chrysotile 5%
		Asphalt/Binder, Calcareous particles, Fine particles	Cellulose 3%	
Layer 5 of 5	Description: Black asphaltic fibrous material with brown brittle mastic and wood	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder, Mastic/Binder, Wood flakes	Cellulose 87%	
		Fine particles, Calcareous particles		

Sampled by: Client

Analyzed by: William Minor

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900422.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Lab ID: 19001679 Client Sample #: 2018-0915-3-57

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4 Description: White vinyl tile

Non-Fibrous Materials:

Vinyl/Binder, Calcareous particles

Other Fibrous Materials: %

None Detected ND

Asbestos Type: %

None Detected ND

Layer 2 of 4 Description: Yellow brittle mastic

Non-Fibrous Materials:

Mastic/Binder, Calcareous particles

Other Fibrous Materials: %

Cellulose 4%

Asbestos Type: %

None Detected ND

Layer 3 of 4 Description: Tan compressed fibrous material

Non-Fibrous Materials:

Binder/Filler, Fine particles

Other Fibrous Materials: %

Cellulose 97%

Asbestos Type: %

None Detected ND

Layer 4 of 4 Description: Gray powdery material on paper

Non-Fibrous Materials:

Binder/Filler, Fine particles

Other Fibrous Materials: %

Cellulose 13%

Asbestos Type: %

None Detected ND

Lab ID: 19001680 Client Sample #: 2018-0915-3-58

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: Brown flat hard compressed fibrous material with white surface

Non-Fibrous Materials:

Binder/Filler, Laminate/binder

Other Fibrous Materials: %

Cellulose 97%

Asbestos Type: %

None Detected ND

Layer 2 of 2 Description: Brown firm mastic

Non-Fibrous Materials:

Mastic/Binder, Wood flakes, Fine particles

Other Fibrous Materials: %

Cellulose 8%

Asbestos Type: %

None Detected ND

Lab ID: 19001681 Client Sample #: 2018-0915-3-59

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: William Minor

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900422.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 1	Description: Black flaky asphaltic material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Asphalt/Binder, Calcareous particles, Fine particles	Cellulose 2%		Chrysotile 5%

Lab ID: 19001682 **Client Sample #: 2018-0915-3-60**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Beige sheet vinyl			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Vinyl/Binder, Fine particles	Cellulose 6%		None Detected ND

Layer 2 of 2	Description: White fibrous backing with mastic and wood			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Mastic/Binder, Wood flakes	Cellulose 33%		Chrysotile 54%

Lab ID: 19001683 **Client Sample #: 2018-0915-3-61**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 7	Description: Off-white vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Vinyl/Binder, Calcareous particles	Cellulose 2%		None Detected ND

Layer 2 of 7	Description: Yellow brittle mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder, Calcareous particles, Fine particles	Cellulose 3%		None Detected ND

Layer 3 of 7	Description: Beige vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Vinyl/Binder, Calcareous particles	None Detected ND		Chrysotile 3%

Layer 4 of 7	Description: Black asphaltic material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Asphalt/Binder, Calcareous particles	Cellulose 3%		Chrysotile 5%

Sampled by: Client

Analyzed by: William Minor

Date: 01/08/2019

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900422.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 25

Samples Analyzed: 25

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 5 of 7 **Description:** Tan vinyl tile

Non-Fibrous Materials:

Vinyl/Binder, Calcareous particles, Fine particles

Other Fibrous Materials: %

Cellulose <1%

Asbestos Type: %

Chrysotile 6%

Layer 6 of 7 **Description:** Black asphaltic material

Non-Fibrous Materials:

Asphalt/Binder, Calcareous particles, Fine particles

Other Fibrous Materials: %

Cellulose 4%

Asbestos Type: %

None Detected ND

Layer 7 of 7 **Description:** Black asphaltic material on paper

Non-Fibrous Materials:

Asphalt/Binder, Fine particles

Other Fibrous Materials: %

Cellulose 5%

Asbestos Type: %

None Detected ND

Sampled by: Client

Analyzed by: William Minor

Reviewed by: Matt Macfarlane

Date: 01/08/2019

Date: 01/08/2019


Matt Macfarlane, Asbestos Lab Supervisor

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

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Jason Lindahl
Phone (206) 547-0100
Cell (763) 286-3494
NVL Batch Number 1900422.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/9/2019 **Time** 3:45 PM
Email jason.l@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0915 **Project Location:** "Building 20" 111 8th Ave. Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 25

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19001657	2018-0915-3-37		A
2	19001660	2018-0915-3-38		A
3	19001661	2018-0915-3-39		A
4	19001662	2018-0915-3-40		A
5	19001663	2018-0915-3-41		A
6	19001664	2018-0915-3-42		A
7	19001665	2018-0915-3-43		A
8	19001666	2018-0915-3-44		A
9	19001667	2018-0915-3-45		A
10	19001668	2018-0915-3-46		A
11	19001669	2018-0915-3-47		A
12	19001670	2018-0915-3-48		A
13	19001671	2018-0915-3-49		A
14	19001672	2018-0915-3-50		A
15	19001673	2018-0915-3-51		A
16	19001674	2018-0915-3-52		A
17	19001675	2018-0915-3-53		A
18	19001676	2018-0915-3-54		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/7/19	1545
Analyzed by	William Minor		NVL	1/8/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special
Instructions:

Date: 1/7/2019
 Time: 3:24 PM
 Entered By: Shaina Mitchell

ASBESTOS LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Jason Lindahl
Phone (206) 547-0100
Cell (763) 286-3494
NVL Batch Number 1900422.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/9/2019 **Time** 3:45 PM
Email jason.l@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0915 **Project Location:** "Building 20" 111 8th Ave. Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 25

Rush Samples

	Lab ID	Sample ID	Description	A/R
19	19001677	2018-0915-3-55		A
20	19001678	2018-0915-3-56		A
21	19001679	2018-0915-3-57		A
22	19001680	2018-0915-3-58		A
23	19001681	2018-0915-3-59		A
24	19001682	2018-0915-3-60		A
25	19001683	2018-0915-3-61		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/7/19	1545
Analyzed by	William Minor		NVL	1/8/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/7/2019
 Time: 3:24 PM
 Entered By: Shaina Mitchell

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206 547.0100 | f 206 634.1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900422



Client NVL Laboratories Inc

Street 4708 Aurora Ave N

Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 20" 111 8th Ave.

Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0915

Total Samples 25

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hrs

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Asbestos Bulk	<input checked="" type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	<input type="checkbox"/> All 8	Other Metals
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)	<input type="checkbox"/> All 3
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input type="checkbox"/> Lead (Pb)	<input type="checkbox"/> Copper (Cu)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Nickel (Ni)
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify)		<input type="checkbox"/> Zinc (Zn)
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0915-3-37		
2		3-38		
3		3-39		
4		3-40		
5		3-41		
6		3-42		
7		3-43		
8		3-44		
9		3-45		
10		3-46		
11		3-47		
12		3-48		
13		3-49		
14		3-50		
15		3-51		

Print Below	Sign Below	Company	Date	Time
Sampled by Jason Lindahl	[Signature]	NVL	1/7/19	7:30
Relinquished by Jason Lindahl	[Signature]	NVL	1/7/19	
Received by Smith	[Signature]	NVL	1/7/19	1545
Analyzed by				
Results Called by				
Results Faxed by				

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**CHAIN of CUSTODY
SAMPLE LOG****1900422**L
5

Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 20" 111 8th Ave.
Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0915

Total Samples 25

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hrs

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

☐ Asbestos Air ☐ PCM (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II) ☐ Other
☒ Asbestos Bulk ☒ PLM (EPA/600/R-93/116) ☐ PLM (EPA Point Count) ☐ PLM (EPA Gravimetry) ☐ TEM BULK
☐ Mold/Fungus ☐ Mold Air ☐ Mold Bulk ☐ Rotometer Calibration

METALS☐ Total Metals
☐ TCLP
☐ Cr 6**Det. Limit**☐ FAA (ppm)
☐ ICP (ppm)
☐ GFAA (ppb)**Matrix**☐ Air Filter ☐ Soil
☐ Drinking water ☐ Paint Chips in %
☐ Dust/wipe (Area) ☐ Paint Chips in cr**RCRA Metals**☐ Arsenic (As) ☐ Chromium (Cr)
☐ Barium (Ba) ☐ Lead (Pb)
☐ Cadmium (Cd) ☐ Mercury (Hg)**Other Metals**☐ All 8
☐ All 3
☐ Copper (Cu)
☐ Nickel (Ni)
☐ Zinc (Zn)

☐ Other Types of Analysis ☐ Fiberglass ☐ Nuisance Dust ☐ Other (Specify)
☐ Silica ☐ Respirable Dust

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0915-3-52		
2		3-53		
3		3-54		
4		3-55		
5		3-56		
6		3-57		
7		3-58		
8		3-59		
9		3-60		
10		3-61		
11				
12				
13				
14				
15				

Print Below

Sign Below

Company

Date

Time

Sampled by

Relinquished by

Received by

Analyzed by

Results Called by

Results Faxed by

Jason Lindahl
Jason Lindahl
S. MitchellNVL
NVL
NVL1/7/19 7:30
1/7/19
1/7/19 1545**Special Instructions:** Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

January 9, 2019



Jason Lindahl
NVL Field Services Division
4708 Aurora Ave. N.
Seattle, WA 98103

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1900425.00

Client Project: 2018-0915
Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Dear Mr. Lindahl,

Enclosed please find test results for the 21 sample(s) submitted to our laboratory for analysis on 1/7/2019.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, 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,

A handwritten signature in black ink, appearing to read "Matt Macfarlane".

Matt Macfarlane, Asbestos Lab Supervisor



Lab Code: 102063-0

Enc.: Sample Results

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900425.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Lab ID: 19001687 Client Sample #: 2018-0915-3-62

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: Tan compressed fibrous material with paint

Non-Fibrous Materials: Other Fibrous Materials: %

Binder/Filler, Fine particles, Paint Cellulose 28%

Asbestos Type: %

None Detected ND

Layer 2 of 2 Description: Beige soft mastic (on wood)

Non-Fibrous Materials: Other Fibrous Materials: %

Mastic/Binder, Fine particles, Wood flakes Cellulose 6%

Asbestos Type: %

None Detected ND

Lab ID: 19001688 Client Sample #: 2018-0915-3-63

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: Brown rubbery material

Non-Fibrous Materials: Other Fibrous Materials: %

Rubber/Binder, Fine particles None Detected ND

Asbestos Type: %

None Detected ND

Layer 2 of 2 Description: Beige soft mastic

Non-Fibrous Materials: Other Fibrous Materials: %

Mastic/Binder, Fine grains, Fine particles Cellulose 2%

Asbestos Type: %

None Detected ND

Lab ID: 19001689 Client Sample #: 2018-0915-3-64

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3 Description: Beige patterned vinyl

Non-Fibrous Materials: Other Fibrous Materials: %

Vinyl/Binder, Fine grains, Fine particles None Detected ND

Asbestos Type: %

None Detected ND

Layer 2 of 3 Description: Off-white fibrous material with beige mastic

Non-Fibrous Materials: Other Fibrous Materials: %

Binder/Filler, Fine grains, Fine particles Cellulose 4%

Asbestos Type: %

Chrysotile 29%

Mastic/Binder, Wood flakes

Sampled by: Client

Analyzed by: Akane Yoshikawa

Date: 01/09/2019

Reviewed by: Matt Macfarlane

Date: 01/09/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900425.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 3 of 3 **Description:** Black asphaltic fibrous material

Non-Fibrous Materials:	Other Fibrous Materials:%
Asphalt/Binder, Fine particles, Wood flakes	Cellulose 26%

Asbestos Type: %
None Detected ND

Lab ID: 19001690 **Client Sample #: 2018-0915-3-65**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4 **Description:** Tan compressed fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Fine particles, Paint	Cellulose 28%

Asbestos Type: %
None Detected ND

Layer 2 of 4 **Description:** White foamy material with paper

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Synthetic foam	Cellulose 12%

Asbestos Type: %
None Detected ND

Layer 3 of 4 **Description:** Beige soft adhesive(on paper)

Non-Fibrous Materials:	Other Fibrous Materials:%
Adhesive/Binder, Fine particles	Cellulose 13%

Asbestos Type: %
None Detected ND

Layer 4 of 4 **Description:** Beige chalky material with paper

Non-Fibrous Materials:	Other Fibrous Materials:%
Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 14%
Mica	Glass fibers 3%

Asbestos Type: %
None Detected ND

Lab ID: 19001691 **Client Sample #: 2018-0915-3-66**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3 **Description:** White vinyl tile

Non-Fibrous Materials:	Other Fibrous Materials:%
Vinyl/Binder, Fine grains, Fine particles	None Detected ND

Asbestos Type: %
None Detected ND


Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/09/2019

Date: 01/09/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900425.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 2 of 3	Description: Yellow brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder, Fine grains, Fine particles	Cellulose 2%	
Layer 3 of 3	Description: Black asphaltic fibrous backing with brown mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder, Fine grains, Fine particles	Cellulose 27%	
		Mastic/Binder, Wood flakes		

Lab ID: 19001692 **Client Sample #: 2018-0915-3-67**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: White vinyl tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Vinyl/Binder, Fine grains, Fine particles	None Detected ND	
Layer 2 of 2	Description: Yellow brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder, Fine grains, Fine particles	Cellulose 3%	
		Wood flakes		

Lab ID: 19001693 **Client Sample #: 2018-0915-3-68**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: White vinyl tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Vinyl/Binder, Fine grains, Fine particles	None Detected ND	
Layer 2 of 4	Description: Yellow brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder, Fine grains, Fine particles	None Detected ND	

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/09/2019

Date: 01/09/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900425.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 3 of 4	Description: Brown crumbly material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % Chrysotile 4%
		Binder/Filler, Fine grains, Fine particles	Cellulose 3%	
Layer 4 of 4	Description: Black asphaltic fibrous backing with brown mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder, Fine grains, Fine particles	Cellulose 28%	
		Mastic/Binder, Wood flakes	Synthetic fibers 4%	

Lab ID: 19001694 **Client Sample #: 2018-0915-3-69**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 5	Description: Beige vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Vinyl/Binder, Fine grains, Fine particles	None Detected ND	
Layer 2 of 5	Description: Off-white fibrous material with beige mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Fine grains, Fine particles	Cellulose 28%	
		Mastic/Binder	Glass fibers 3%	
Layer 3 of 5	Description: White crumbly material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 6%	
Layer 4 of 5	Description: Gray sandy brittle material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Mineral grains, Fine grains	None Detected ND	
		Sand		

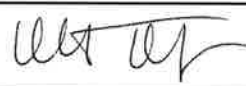
Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/09/2019

Date: 01/09/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900425.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 5 of 5	Description: White flaky material	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Binder/Filler, Fine grains, Fine particles		None Detected ND	None Detected ND

Lab ID: 19001695 **Client Sample #: 2018-0915-3-70**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: White vinyl tile	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Vinyl/Binder, Fine grains, Fine particles		None Detected ND	None Detected ND

Layer 2 of 4	Description: Black asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Asphalt/Binder, Fine grains, Fine particles		Cellulose 8%	None Detected ND

Layer 3 of 4	Description: Black asphaltic fibrous backing with brown mastic	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Binder/Filler, Fine grains, Fine particles		Cellulose 29%	None Detected ND
	Mastic/Binder, Wood flakes		Synthetic fibers 2%	

Layer 4 of 4	Description: Black asphaltic material (on paper)	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Asphalt/Binder, Fine particles		Cellulose 12%	None Detected ND

Lab ID: 19001696 **Client Sample #: 2018-0915-3-71**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Comments: Unable to separate mastics for analysis (Layer 2).

Layer 1 of 3	Description: Beige vinyl	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Vinyl/Binder, Fine particles		None Detected ND	None Detected ND


Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/09/2019

Date: 01/09/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900425.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 2 of 3	Description: White fibrous material with white and gray mastic		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Binder/Filler, Fine grains, Fine particles	Cellulose 29%	None Detected ND
	Mastic/Binder, Wood flakes	Glass fibers 3%	

Layer 3 of 3	Description: Brown-red adhesive (on wood)		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Adhesive/Binder, Wood flakes	Cellulose 12%	None Detected ND

Lab ID: 19001697 **Client Sample #: 2018-0915-3-72**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Brown crumbly material		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Binder/Filler, Fine grains, Fine particles	Cellulose 7%	None Detected ND
		Synthetic fibers 3%	

Layer 2 of 3	Description: Brown rubbery material		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Rubber/Binder, Fine particles	None Detected ND	None Detected ND

Layer 3 of 3	Description: White soft mastic (on wood)		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Mastic/Binder, Fine grains, Fine particles	Cellulose 6%	None Detected ND

Lab ID: 19001698 **Client Sample #: 2018-0915-3-73**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: White vinyl tile		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Vinyl/Binder, Fine grains, Fine particles	Cellulose 2%	None Detected ND

Sampled by: Client

Analyzed by: Akane Yoshikawa

Date: 01/09/2019

Reviewed by: Matt Macfarlane

Date: 01/09/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900425.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 2 of 3	Description: Yellow soft mastic (on wood)	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
		Mastic/Binder, Fine particles, Wood flakes	Cellulose 5%		None Detected ND
Layer 3 of 3	Description: Black asphaltic fibrous material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
		Asphalt/Binder, Fine particles	Cellulose 27%		None Detected ND
Lab ID: 19001699 Client Sample #: 2018-0915-3-74					
Location: "Building 20" 111 8th Ave. Seattle, WA 98104					
Layer 1 of 4	Description: Beige vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
		Vinyl/Binder, Fine particles	None Detected ND		None Detected ND
Layer 2 of 4	Description: White fibrous material with white soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
		Binder/Filler, Fine grains, Fine particles	Cellulose 27%		None Detected ND
		Mastic/Binder, Wood flakes	Glass fibers 3%		
Layer 3 of 4	Description: Tan adhesive (on wood)	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
		Adhesive/Binder, Wood flakes	Cellulose 6%		None Detected ND
Layer 4 of 4	Description: Black asphaltic fibrous material with trace of white powdery material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %	
		Asphalt/Binder, Fine grains, Fine particles	Cellulose 27%		None Detected ND

Lab ID: 19001700 Client Sample #: 2018-0915-3-75

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/09/2019

Date: 01/09/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900425.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: White vinyl tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Vinyl/Binder, Fine grains, Fine particles	None Detected ND	
Layer 2 of 3	Description: Clear soft adhesive	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Adhesive/Binder	Cellulose 2%	
Layer 3 of 3	Description: Brown-red adhesive (on wood)	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Adhesive/Binder, Fine particles, Wood flakes	Cellulose 7%	

Lab ID: 19001701 Client Sample #: 2018-0915-3-76

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Beige vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Vinyl/Binder, Fine particles	None Detected ND	
Layer 2 of 3	Description: White fibrous material with white soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Fine grains, Fine particles	Cellulose 26%	
		Mastic/Binder	Glass fibers 4%	
Layer 3 of 3	Description: Gray crumbly material (on wood) with trace of brown-red adhesive	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Fine grains, Fine particles	Cellulose 8%	
		Wood flakes, Adhesive/Binder		

Lab ID: 19001702 Client Sample #: 2018-0915-3-77

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/09/2019

Date: 01/09/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900425.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 1 **Description:** White soft rubbery material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%
Rubber/Binder, Fine particles, Paint	None Detected ND

Asbestos Type: %
None Detected ND

Lab ID: 19001703 **Client Sample #: 2018-0915-3-78**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

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

Non-Fibrous Materials:	Other Fibrous Materials:%
Asphalt/Binder	Cellulose 28%

Asbestos Type: %
None Detected ND

Lab ID: 19001704 **Client Sample #: 2018-0915-3-79**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 2 **Description:** Black asphaltic fibrous material with granules

Non-Fibrous Materials:	Other Fibrous Materials:%
Asphalt/Binder, Granules, Fine grains	Glass fibers 30%
Fine particles, Organic/binder	Cellulose 4%

Asbestos Type: %
None Detected ND

Layer 2 of 2 **Description:** Black asphaltic fibrous material

Non-Fibrous Materials:	Other Fibrous Materials:%
Asphalt/Binder, Fine particles	Cellulose 27%

Asbestos Type: %
None Detected ND

Lab ID: 19001705 **Client Sample #: 2018-0915-3-80**

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 1 **Description:** Black asphaltic built-up fibrous material with granules

Non-Fibrous Materials:	Other Fibrous Materials:%
Asphalt/Binder, Granules, Fine grains	Glass fibers 29%
Fine particles, Wood flakes	Cellulose 2%

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/09/2019

Date: 01/09/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900425.00

Client Project #: 2018-0915

Date Received: 1/7/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Lab ID: 19001706 Client Sample #: 2018-0915-3-81

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 1 Description: Black asphaltic fibrous material with granules

Non-Fibrous Materials:	Other Fibrous Materials: %
Asphalt/Binder, Granules, Fine grains	Glass fibers 28%
Fine particles, Organic/binder	

Asbestos Type: %
None Detected ND

Lab ID: 19001707 Client Sample #: 2018-0915-3-82

Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Layer 1 of 1 Description: Black asphaltic fibrous material with granules

Non-Fibrous Materials:	Other Fibrous Materials: %
Asphalt/Binder, Granules, Fine grains	Glass fibers 29%
Fine particles, Organic/binder	Cellulose 3%

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/09/2019

Date: 01/09/2019


Matt Macfarlane, Asbestos Lab Supervisor

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

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Jason Lindahl
Phone (206) 547-0100
Cell (763) 286-3494
NVL Batch Number 1900425.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/9/2019 **Time** 3:45 PM
Email jason.l@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0915 **Project Location:** "Building 20" 111 8th Ave. Seattle, WA 98104

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

Total Number of Samples 21 **Rush Samples**

	Lab ID	Sample ID	Description	A/R
1	19001687	2018-0915-3-62		A
2	19001688	2018-0915-3-63		A
3	19001689	2018-0915-3-64		A
4	19001690	2018-0915-3-65		A
5	19001691	2018-0915-3-66		A
6	19001692	2018-0915-3-67		A
7	19001693	2018-0915-3-68		A
8	19001694	2018-0915-3-69		A
9	19001695	2018-0915-3-70		A
10	19001696	2018-0915-3-71		A
11	19001697	2018-0915-3-72		A
12	19001698	2018-0915-3-73		A
13	19001699	2018-0915-3-74		A
14	19001700	2018-0915-3-75		A
15	19001701	2018-0915-3-76		A
16	19001702	2018-0915-3-77		A
17	19001703	2018-0915-3-78		A
18	19001704	2018-0915-3-79		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/7/19	1545
Analyzed by	Akane Yoshikawa		NVL	1/9/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/7/2019
 Time: 3:48 PM
 Entered By: Shaina Mitchell

ASBESTOS LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Jason Lindahl
Phone (206) 547-0100
 Cell (763) 286-3494
NVL Batch Number 1900425.00
TAT 2 Days **AH** No.
Rush TAT
Due Date 1/9/2019 **Time** 3:45 PM
Email jason.l@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0915 **Project Location:** "Building 20" 111 8th Ave. Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 21

Rush Samples

	Lab ID	Sample ID	Description	A/R
19	19001705	2018-0915-3-80		A
20	19001706	2018-0915-3-81		A
21	19001707	2018-0915-3-82		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/7/19	1545
Analyzed by	Akane Yoshikawa		NVL	1/9/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/7/2019
 Time: 3:48 PM
 Entered By: Shaina Mitchell

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900425



Client NVL Laboratories Inc
Street 4708 Aurora Ave N
 Seattle, WA 98103
Project Manager Syed Hasan
Project Location "Building 20" 111 8th Ave.
 Seattle, WA 98104

NVL Batch Number
Client Job Number 2018-0915
Total Samples 21

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hrs

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745 **Fax:** (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Asbestos Bulk	<input checked="" type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	<input type="checkbox"/> All 8	Other Metals
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)	<input type="checkbox"/> All 3
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input type="checkbox"/> Lead (Pb)	<input type="checkbox"/> Copper (Cu)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Nickel (Ni)
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify) _____		<input type="checkbox"/> Zinc (Zn)
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0915-3-62	2018-0915-3-77	
2		3-63	3-78	
3		3-64	3-79	
4		3-65	3-80	
5		3-66	3-81	
6		3-67	3-82	
7		3-68		
8		3-69		
9		3-70		
10		3-71		
11		3-72		
12		3-73		
13		3-74		
14		3-75		
15		3-76		

Print Below	Sign Below	Company	Date	Time
Sampled by Jason Lindahl		NVL	1/7/19	7:30
Relinquished by Jason Lindahl		NVL	1/7/19	
Received by Smithell		NVL	1/7/19	1545
Analyzed by				
Results Called by				
Results Faxed by				

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

January 8, 2019

Jason Lindahl

NVL Field Services Division

4708 Aurora Ave. N.

Seattle, WA 98103



RE: Metals Analysis; NVL Batch # 1900415.00

Dear Mr. Lindahl,

Enclosed please find the test results for samples submitted to our laboratory for analysis. Preparation of these samples was conducted following protocol outlined in EPA Method SW 846 -3051 unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with U.S. EPA, NIOSH, OSHA and other ASTM methods.

For matrix materials submitted as paint, dust wipe, soil or TCLP samples, analysis for the presence of total metals is conducted using published U.S. EPA Methods. Paint and soil results are usually expressed in mg/Kg which is equivalent to parts per million (ppm). Lead (Pb) in paint is usually expressed in mg/Kg (ppm), Percent (%) or mg/cm² by area. Dust wipe sample results are usually expressed in ug/wipe and ug/ft². TCLP samples are reported in mg/L (ppm). For air filter samples, analyses are conducted using NIOSH and OSHA Methods. Results are expressed in ug/filter and ug/m³. Other matrix materials are analyzed accordingly using published methods or specified by client. The reported test results pertain only to items tested and 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 details.

This report is considered highly confidential and will not be released without your approval. 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. If you need further assistance please feel free to call us at 206-547-0100 or 1-888-NVLLABS.

Sincerely,

A handwritten signature in black ink, appearing to read "Shalini Patel".

Shalini Patel, Lab Supervisor

Enc.: Sample results



Analysis Report

Total Lead (Pb)

NVL

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900415.00

Matrix: Paint
Method: EPA 3051/7000B
Client Project #: 2018-0915
Date Received: 1/7/2019
Samples Received: 6
Samples Analyzed: 6

Attention: Mr. Jason Lindahl

Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Lab ID	Client Sample #	Sample Weight (g)	RL in mg/Kg	Results in mg/Kg	Results in percent
19001584	2018-0915-Pb-1	0.1799	56	< 56	<0.0056
19001585	2018-0915-Pb-2	0.2058	49	2000	0.20
19001586	2018-0915-Pb-3	0.1863	54	4800	0.48
19001587	2018-0915-Pb-4	0.1934	52	8200	0.82
19001588	2018-0915-Pb-5	0.1998	50	< 50	<0.0050
19001589	2018-0915-Pb-6	0.0591	170	< 170	<0.017

Sampled by: Client

Analyzed by: Yasuyuki Hida

Reviewed by: Shalini Patel

Date Analyzed: 01/08/2019

Date Issued: 01/08/2019


Shalini Patel, Lab Supervisor

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: 2019-0108-3

FAA-02

LEAD LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Jason Lindahl
Phone (206) 547-0100
Cell (763) 286-3494
NVL Batch Number 1900415.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/9/2019 **Time** 3:00 PM
Email jason.l@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0915 **Project Location:** "Building 20" 111 8th Ave. Seattle, WA 98104

Subcategory Flame AA (FAA)

Item Code FAA-02 EPA 7000B Lead by FAA <paint>

Total Number of Samples 6

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19001584	2018-0915-Pb-1		A
2	19001585	2018-0915-Pb-2		A
3	19001586	2018-0915-Pb-3		A
4	19001587	2018-0915-Pb-4		A
5	19001588	2018-0915-Pb-5		A
6	19001589	2018-0915-Pb-6		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/7/19	1500
Analyzed by	Yasuyuki Hida		NVL	1/8/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/7/2019
 Time: 3:02 PM
 Entered By: Shaina Mitchell

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**CHAIN of CUSTODY
SAMPLE LOG****1900415**

Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 20" 111 8th Ave.
Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0915

Total Samples 6

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input type="checkbox"/> Asbestos Bulk	<input type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	<input type="checkbox"/> All 8	Other Metals
<input checked="" type="checkbox"/> Total Metals	<input checked="" type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)	<input type="checkbox"/> All 3
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input checked="" type="checkbox"/> Lead (Pb)	<input type="checkbox"/> Copper (Cu)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Nickel (Ni)
		<input checked="" type="checkbox"/> Soil			<input type="checkbox"/> Zinc (Zn)
		<input checked="" type="checkbox"/> Paint Chips in %			
		<input type="checkbox"/> Paint Chips in cr			
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify) _____		
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0915-Pb-1		
2		Pb-2		
3		Pb-3		
4		Pb-4		
5		Pb-5		
6		Pb-6		
7				
8				
9				
10				
11				
12				
13				
14				
15				

Print Below	Sign Below	Company	Date	Time
Sampled by Jason Lindahl	[Signature]	NVL	1/7/19	7:30
Relinquished by Jason Lindahl	[Signature]	NVL	1/7/19	3:00
Received by S. Mitchell	[Signature]	NVL	1/7/19	1:50
Analyzed by				
Results Called by				
Results Faxed by				

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

January 11, 2019

Jason Lindahl

NVL Field Services Division

4708 Aurora Ave. N.

Seattle, WA 98103



RE: Metals Analysis; NVL Batch # 1900412.01

Dear Mr. Lindahl,

Enclosed please find the test results for samples submitted to our laboratory for analysis. Preparation of these samples was conducted following protocol outlined in EPA Method SW 846 -3051 unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with U.S. EPA, NIOSH, OSHA and other ASTM methods.

For matrix materials submitted as paint, dust wipe, soil or TCLP samples, analysis for the presence of total metals is conducted using published U.S. EPA Methods. Paint and soil results are usually expressed in mg/Kg which is equivalent to parts per million (ppm). Lead (Pb) in paint is usually expressed in mg/Kg (ppm), Percent (%) or mg/cm² by area. Dust wipe sample results are usually expressed in ug/wipe and ug/ft². TCLP samples are reported in mg/L (ppm). For air filter samples, analyses are conducted using NIOSH and OSHA Methods. Results are expressed in ug/filter and ug/m³. Other matrix materials are analyzed accordingly using published methods or specified by client. The reported test results pertain only to items tested and 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 details.

This report is considered highly confidential and will not be released without your approval. 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. If you need further assistance please feel free to call us at 206-547-0100 or 1-888-NVLLABS.

Sincerely,

A handwritten signature in black ink, appearing to read "Shalini Patel".

Shalini Patel, Lab Supervisor

Enc.: Sample results



Analysis Report

Toxicity Characteristic Leaching Procedure - Lead (Pb)

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900412.01

Matrix: Bulk
Method: EPA 1311/7000B
Client Project #: 2018-0915
Date Received: 1/7/2019
Samples Received: 1
Samples Analyzed: 1

Attention: Mr. Jason Lindahl
Project Location: "Building 20" 111 8th Ave. Seattle, WA 98104

Lab ID	Client Sample #	RL mg/ L	Results in mg/L	Results in ppm
19001537	2018-0915-TCLP	0.5	0.6	0.6

Sampled by: Client

Analyzed by: Yasuyuki Hida

Reviewed by: Shalini Patel

Date Analyzed: 01/08/2019

Date Issued: 01/11/2019


Shalini Patel, Lab Supervisor

mg/ L =Milligrams per liter

ppm = parts per million

Note : Method QC results are acceptable unless stated otherwise.

Unless otherwise indicated, the condition of all samples was acceptable at time of receipt.

RL = Reporting Limit

'<' = Below the reporting Limit

Bench Run No: 2019-0107-6

TCLP-1

LEAD LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Jason Lindahl
Phone (206) 547-0100
Cell (763) 286-3494
NVL Batch Number 1900412.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/9/2019 **Time** 3:00 PM
Email jason.l@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0915 **Project Location:** "Building 20" 111 8th Ave. Seattle, WA 98104

Subcategory Flame AA (FAA)

Item Code TCLP-1 EPA 1311/7000B Lead by FAA <TCLP>

Total Number of Samples 1

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19001537	2018-0915-TCLP		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/7/19	1500
Analyzed by	Yasuyuki Hida		NVL	1/8/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/7/2019
 Time: 2:59 PM
 Entered By: Shaina Mitchell

NVL Laboratories, Inc.

4708 Aurora Ave N. Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**CHAIN of CUSTODY
SAMPLE LOG****1900412**

L A B S

Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 20" 111 8th Ave.
Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0915

Total Samples 1

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input type="checkbox"/> Asbestos Bulk	<input type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	<input type="checkbox"/> All 8	Other Metals
<input type="checkbox"/> Total Metals	<input checked="" type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)	<input type="checkbox"/> All 3
<input checked="" type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input checked="" type="checkbox"/> Lead (Pb)	<input type="checkbox"/> Copper (Cu)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Nickel (Ni)
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify) _____		<input type="checkbox"/> Zinc (Zn)
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0915-TCLP		
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Print Below	Sign Below	Company	Date	Time
Sampled by: Jason Lindahl		NVL	1/7/19	7:30
Relinquished by: Jason Lindahl		NVL	1/7/19	3:00
Received by: S. Mitchell		NVL	1/7/19	1500
Analyzed by:				
Results Called by:				
Results Faxed by:				

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to



Appendix C

AHERA Certifications & Laboratory Qualification



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 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

LABORATORY ACCREDITATION PROGRAMS

- ✓ INDUSTRIAL HYGIENE
- ✓ ENVIRONMENTAL LEAD
- ✓ ENVIRONMENTAL MICROBIOLOGY
- ☐ FOOD
- ✓ UNIQUE SCOPES

Accreditation Expires: June 01, 2019
Accreditation Expires: June 01, 2019
Accreditation Expires: June 01, 2019
Accreditation Expires:
Accreditation Expires: June 01, 2019

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 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

William Walsh

William Walsh, CIH

Chairperson, Analytical Accreditation Board

Revision 15: 03/30/2016

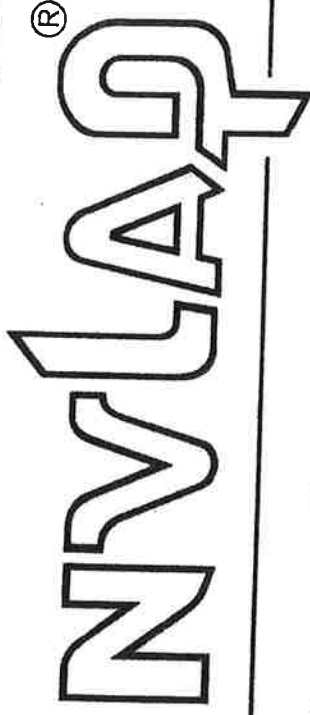
Cheryl O. Morton

Cheryl O. Morton

Managing Director, AIHA Laboratory Accreditation Programs, LLC

Date Issued: 05/31/2017

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

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 17025:2005.
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).*

2018-10-01 through 2019-09-30

Effective Dates



A handwritten signature in black ink, which appears to read "Peter S. Gaudin".

For the National Voluntary Laboratory Accreditation Program



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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

Code

Description

18/A01

EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples

18/A03

EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

A handwritten signature in black ink, appearing to read "Tisha S. Laman".

For the National Voluntary Laboratory Accreditation Program

Certificate of Completion

This is to certify that
Derrick S. Gallard
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

169720

Certificate Number



Oct 10, 2018 Expires in 1 year.

Date(s) of Training

Exam Score: N/A
if appropriate:

A handwritten signature in black ink, appearing to be "S. Gallard", written over a horizontal line.

Instructor

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

STATE OF WASHINGTON

Department of Commerce

Lead-Based Paint Abatement Program

Derrick Gallard

*Has fulfilled the certification requirements of
WAC 365-230
and has been certified to conduct lead-based
paint activities as a
Inspector*

<u>Certification #</u>	<u>Issuance Date</u>	<u>Expiration Date</u>
7090	02/13/2018	02/13/2021

Certificate of Completion

This is to certify that

Jason Lindahl

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

167717

Certificate Number



May 23, 2018 Expires in 1 year.

Date(s) of Training

Exam Score: N/A
if appropriate:

Instructor

ARGUS PACIFIC, INC / 1900 WEST NICKERSON ST, SUITE 315 / SEATTLE, WASHINGTON 98119 / 206.285.3373 / ARGUSPACIFIC.COM

STATE OF WASHINGTON

Department of Commerce

Lead-Based Paint Abatement Program

Jason Lindahl

*Has fulfilled the certification requirements of
WAC 365-230
and has been certified to conduct lead-based
paint activities as a
Inspector*

Certification #

7145

Issuance Date

03/20/2018

Expiration Date

03/20/2021



Hazardous Materials Survey

"Building #21"
101-103 8th Avenue
Seattle, WA 98104



Prepared For
Mr. George Barlet
Seattle Housing Authority
190 Queen Anne Avenue N
Seattle, WA 98109

Project Number:	2018-0916
Inspection Date:	January 8 & 9, 2019
Report Date:	January 14, 2019
Inspected By	Derrick Gallard / Jason Lindahl
AHERA Certification	# 169720 / 167717
Certification Expiration Date	October 10, 2019 / May 23, 2019

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APPENDICIES

- A** Sample Locations (Floor Plan)
- B** Laboratory Analysis Results
- C** AHERA Certifications & Laboratory Qualifications

1.0 SCOPE OF WORK

A Hazardous Materials Survey was conducted on apartment building #21 located at 101-103 8th Avenue Seattle, WA 98104 on January 8 & 9, 2019.

Derrick Gallard and Jason Lindahl (AHERA Building Inspectors and WA – Commerce Certified Lead Inspectors), conducted this survey at the request of Mr. George Barlet of Seattle Housing Authority.

The purpose of this survey was to identify suspect asbestos containing building materials, lead paint coatings, and Mercury (Hg) / PCB containing devices which would be impacted by the planned demolition of the structure. Destructive sampling methods were utilized to collect samples of suspect building materials. No soft/limited demolition was performed during this inspection. Hidden materials may exist within the structure, and all suspect materials must be treated as hazardous until testing proves otherwise.

This survey constitutes a survey of accessible suspect ACM in the project area and was conducted in accordance with:

The National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 Code of Federal Regulations (CFR) Part 61, Subpart M requires a survey by an accredited asbestos inspector prior to demolition of a structure.

This asbestos survey also satisfies the requirements for "Good Faith" inspection outlined in Washington Administrative Code (WAC) 296-62-07721 (2) Communication of hazards, which requires the owner of a structure to provide contractors with a written report identifying the asbestos-containing materials expected to be disturbed during renovation or demolition.

The asbestos survey section is written to comply with the AHERA asbestos sampling procedure as stated in 40 CFR 763.86. This protocol is required under the Puget Sound Clean Air Agency (PSCAA) Regulation III, Article IV, rev. March 26, 2009) for all asbestos surveys prior to a building demolition.

Recommendations have been included for compliance with WAC 296-155-176 "Lead in Construction" and WAC 173-090 "Waste Disposal Regulations". The Lead in Construction regulations are designed to protect workers from lead hazards during construction and demolition activities.

Fluorescent light tubes, HID lamps, and thermostats contain Mercury (Hg) are classified as universal waste by the EPA and Washington Department of Ecology. Recommendations have been included for compliance with WAC 173-303-573, "The Universal Waste Rule for Dangerous Waste".

A floor plan indicating locations of samples collected by NVL personnel has been included in **Appendix A**.

2.0 SURVEY METHOD

Asbestos Survey Method

The NVL Labs field inspector is an Asbestos Building Inspector, certified under the requirements of the United States Environmental Protection Agency (EPA) Asbestos Hazard Emergency Response Act (AHERA) regulation 40 CFR 763, Subpart E. A copy of his certificate is provided in Appendix C.

The AHERA Guidelines dictate the following:

The inspector must determine *homogenous areas*, which are defined as an area of Thermal System Insulation, Surfacing Material, or Miscellaneous Material that is uniform in texture and color.

Once homogenous areas have been determined, the inspector must determine whether or not material is friable or non-friable. **Friable** is defined as a material, that when dry, can be crushed, pulverized, or reduced to dust using hand pressure, and **non-friable** material is defined as a material, that when dry, *cannot* be crushed pulverized or reduced to dust using hand pressure. Materials normally defined as non-friable can become friable by definition if sufficiently damaged.

Once friability has been determined, the materials suspected of containing asbestos are divided into one of three categories: Thermal System Insulation (TSI), Surfacing Material (SM), or Miscellaneous Material (MM). Generally speaking, TSI and SM are considered to be friable, with the exception of TSI where the structural integrity of the insulation is intact and the protective out wrap is undamaged.

Once materials are divided into one of the categories, samples are collected in the following manner:

Friable Thermal System Insulation:

1. Inspector shall collect three (3) randomly distributed samples;
2. Inspector shall collect a minimum of one sample of each TSI materials that appears to have been used as a patch, as long as the patch is less than 6 linear feet or 6 square feet;
3. Inspector shall collect in a manner sufficient, samples from areas of TSI applied to fittings, tees, and joints.

Friable Surfacing Material:

1. Inspector shall collect samples in random manner of surfacing materials as follows:
 - a. Collect three bulk samples from an area believed to be homogeneous (defined as a material that appears to be the same or similar and was installed at the same time) that is 1,000 square feet or less in size;
 - b. Collect five bulk samples from an area believed to be homogeneous that is greater than 1,000 square feet in size, but less than 5,000 square feet in size;
 - c. Collect seven bulk samples from an area believed to be homogeneous that is greater than 5,000 square feet.

2.0 SURVEY METHOD (continued)

Miscellaneous Materials:

1. Inspector shall collect samples in a manner and number sufficient to determine if the material is asbestos-containing or not.

All Materials Determined to Be Non-Friable:

1. Inspector shall collect samples in a manner and number sufficient to determine if the material is asbestos containing or not.

In addition to these sampling requirements, the AHERA Building Inspector is required to assess the following of each material that is found to be positive for asbestos:

1. The condition of each material;
2. Accessibility;
3. Possibility for air erosion.

Once the samples have been collected, they must be analyzed by an accredited laboratory, and they must be analyzed using polarized light microscopy methods, commonly referred to as EPA Method 600/R-93/116.

NVL Labs collected samples and obtained analytical data for suspect asbestos-containing materials identified in the building. Once collected, each bulk sample was sealed in an unadulterated plastic bag to eliminate the possibility of cross-contamination. "Chain-of-Custody" tracking was followed to maintain sample integrity during handling and data reporting at NVL Labs.

A walk-through inspection of all accessible areas of the structures was performed to identify potential asbestos-containing materials. The walk-through inspection included a review of the internal and external aspects of the structures. The locations and types of potential asbestos-containing materials were noted.

Homogeneous Materials

Homogeneous materials are defined as an area of asbestos-containing material or presumed asbestos-containing material which appears similar throughout in terms of color, texture, and date of material application. The report listing for homogenous materials will appear as follows:

Sample Number	Material Description by Layer	Location	Asbestos	Quantity	Friable
#	Layer 1 is not asbestos-containing Layer 2 is asbestos-containing	Location description	1. % 2. %	"X" LF/ft ²	Yes/No

Lead Survey Method

NVL Labs collected representative samples of paint from the interior and exterior of the building within the project scope. Once collected, each bulk sample was sealed in an unadulterated plastic bag to eliminate the possibility of cross-contamination. "Chain-of-Custody" tracking was followed to maintain sample integrity during handling and data reporting at NVL Labs. Sampling was representative of all layers of paint. Copies of laboratory reports and field data forms for lead paint are in Appendix B.

2.0 SURVEY METHOD (continued)

TCLP Sampling Method

A representative composite sample of the proportionate components which make up the areas to be demolished was collected and analyzed according to ASTM Standard. E 1908-97, as suggested by the Washington State Department of Ecology. Waste Characterization Plan number three of this standard, "Composite Sample and Demolish", was used to access the lead (Pb) content of the total debris.

3.0 LABORATORY INFORMATION

Laboratory Analysis: Asbestos

In accordance with 40 CFR Chapter 1 (7-01-07 Edition) Part 763, Subpart E, Appendix E, asbestos samples are analyzed at NVL Labs using polarized light microscopy (PLM) with dispersion staining. If samples are not homogeneous, then sub-samples of the components are analyzed separately. All bulk samples are analyzed using EPA Method 600/R-93/116 with the following measurement uncertainties for reported % asbestos: 1%=0-3%, 5%≥1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%. Only materials containing more than 1% total asbestos were classified as "asbestos-containing" based on EPA, state, and local regulations.

Findings for samples containing more than one separable layer of materials are reported for each layer. The asbestos concentration in the sample is determined by visual estimation.

NVL Labs is accredited by the National Institute of Standards and Technology (NIST) under the National Volunteer Laboratory Accreditation Program (NVLAP) program for bulk asbestos fiber analysis; *NVLAP Lab Code 102063-0*

Laboratory Analysis: Lead (Pb)

Samples are analyzed for the presence of inorganic lead using atomic absorption spectroscopy (AAS) in accordance with method EPA 3051/7000B. This method reports results in milligrams per kilogram (mg/kg) or its equivalent, parts per million (ppm).

Laboratory Accreditation

Professional accreditations for NVL Laboratories, Inc. include the following:

NVL Laboratories, Inc. is currently accredited by the National Institute of Standards and Technology (NIST) under the National Volunteer Laboratory Accreditation Program (NVLAP) program for bulk asbestos fiber analysis.

NVLAP Lab Code 102063-0

NVL Laboratories, Inc. is approved by the American Industrial Hygiene Association (AIHA) Asbestos Analysts Registry (AAR) program for airborne asbestos fiber analysis.

AAR Counter ID 7412

NVL Laboratories, Inc. is currently accredited by the American Industrial Hygiene Association (AIHA) under the Industrial Hygiene Laboratory Accreditation Program (IHLAP). The IHLAP program is designed specifically for laboratories involved in analyzing samples to evaluate workplace exposure. *IHLAP Certification Number 563*

4.0 BUILDING DESCRIPTION

General Building Type	This is a two-story 14-unit apartment building of traditional wood framed construction.
Primary External Components	The exterior of the building has vinyl and wood siding.
Foundation Type	The building has an on-grade concrete foundation.
Roofing Material(s)	The building has tri-tab shingle and rolled asphalt roofing.
Window Type(s)	The building has vinyl framed windows with exterior caulking.
Flooring	The building has carpet, vinyl tiles and sheet vinyl flooring.
Thermal Systems with Insulation	The building has baseboard heating system, with no visible suspect thermal insulation.
Finishing	The building is finished with drywall and plaster.

5.0 FINDINGS

Inventory of Suspect Asbestos-Containing Materials

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0916-1-1	1: Plaster with paint 2: Drywall	Upper level, room 4, ceiling	1: ND 2: ND		
2018-0916-1-2	1: Plaster with paint 2: Drywall	Upper level, room 10, wall	1: ND 2: ND		
2018-0916-1-3	1: Skim coating with paint 2: Plaster with paint 3: Drywall	Lower level, room 15, wall	1: ND 2: ND 3: ND		
2018-0916-1-4	1: Skim coating with paint 2: Plaster 3: Drywall	Lower level, room 23, wall	1: ND 2: ND 3: ND		
2018-0916-1-5	1: Plaster with paint 2: Drywall	Upper level, room 28, wall	1: ND 2: ND		
2018-0916-1-6	1: Plaster with paint 2: Drywall	Upper level, room 33, wall	1: ND 2: ND		
2018-0916-1-7	1: Skim coating with paint 2: Plaster 3: Drywall	Lower level, room 40, wall	1: ND 2: ND 3: ND		
2018-0916-1-8	1: Plaster with paint 2: Drywall	Lower level, room 44, wall	1: ND 2: ND		
2018-0916-1-9	1: Plaster with paint 2: Drywall	Upper level, room 52, ceiling	1: ND 2: ND		
2018-0916-1-10	1: Plaster with paint 2: Drywall	Upper level, room 56, wall	1: ND 2: ND		
2018-0916-1-11	1: Plaster with paint 2: Drywall	Lower level, room 62, wall	1: ND 2: ND		
2018-0916-1-12	1: Plaster with paint 2: Drywall	Lower level, room 69, wall	1: ND 2: ND		
2018-0916-1-13	1: Plaster with paint 2: Drywall	Upper level, room 77, wall	1: ND 2: ND		
2018-0916-1-14	1: Skim coating with paint 2: Joint compound 3: Plaster with paint 4: Drywall	Lower level, room 81, wall	1: ND 2: ND 3: ND 4: ND		

ND

None Detected

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0916-3-1	1: Joint compound with paint 2: Drywall	Upper level, room 18, wall joint	1: ND 2: ND		
2018-0916-3-2	Drywall with paint	Upper level, room 37, mid-wall	ND		
2018-0916-3-3	1: 12*12 white vinyl tile 2: Yellow / black mastic 3: Black felt 4: Black mastic	Lower level, rooms 1 & 12, floor	1: 2% 2: ND 3: ND 4: 3%	50 ft ²	No
2018-0916-3-4	1: Brown sheet vinyl 2: White backing with mastic	Lower level, room 1, stair steps	1: ND 2: 29%	40 ft ²	Yes
2018-0916-3-5	1: 6" brown vinyl cove base 2: Tan mastic	Lower level, room 1, stair risers	1: ND 2: ND		
2018-0916-3-6	1: Beige sheet vinyl 2: White backing with mastic 3: Black felt	Lower level, room 2, floor	1: ND 2: ND 3: ND		
2018-0916-3-7	1: Beige laminate 2: Beige mastic 3: White foam	Lower level, rooms 2, 13, 19, & 37, tub surround	1: ND 2: ND 3: ND		
2018-0916-3-8	1: 12*12 white vinyl tile 2: Beige vinyl tile 3: Tan mesh with mastic 4: Black felt 5: Beige vinyl tile	Lower level, room 3, floor	1: 2% 2: ND 3: ND 4: ND 5: ND	90 ft ²	No
2018-0916-3-9	Black sink undercoating	Lower level, rooms 3, 8, 14 & 20, aluminum sinks	3%	4 sinks	No
2018-0916-3-10	1: White vinyl tile 2: Brown mastic 3: Black felt with mastic 4: Asphalt on paper	Lower level, rooms 4-6, floor	1: ND 2: ND 3: ND 4: ND		
2018-0916-3-11	1: Black asphalt with foil 2: Gray insulation	Lower level, room 5, wall cavity	1: ND 2: ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0916-3-12	1: Tan sheet vinyl 2: White backing with mastic	Lower level, room 7, floor	1: ND 2: 31%	35 ft ²	Yes
2018-0916-3-13	1: White vinyl tile 2: Compressed board 3: Tan felt	Lower level, room 8, floor	1: ND 2: ND 3: ND		
2018-0916-3-14	1: Tan laminate 2: Red adhesive	Lower level, rooms 3, 8, 14 & 20, counter	1: ND 2: ND		
2018-0916-3-15	1: 12*12 white vinyl tile 2: Beige vinyl tile 3: Black mastic 4: Black felt	Lower level, rooms 9-11, floor	1: ND 2: 4% 3: ND 4: ND	375 ft ²	No
2018-0916-3-16	1: Tan sheet vinyl 2: White backing with mastic 3: Black felt 4: White leveler	Upper level, room 13, floor	1: ND 2: 28% 3: ND 4: ND	35 ft ²	Yes
2018-0916-3-17	1: 12*12 white vinyl tile 2: Yellow mastic 3: Beige vinyl tile 4: Black mastic 5: Beige linoleum 6: Brown mastic	Upper level, rooms 14, 15, 17 & 18, floor	1: 2% 2: ND 3: 4% 5: ND 6: ND	465 ft ²	No
2018-0916-3-18	1: White caulking 2: Cream laminate 3: Red adhesive	Upper level, room 15, window sill	1: ND 2: ND 3: ND		
2018-0916-3-19	1: Tan sheet vinyl 2: White backing with mastic 3: Black felt with mastic	Upper level, room 19, floor	1: ND 2: 29% 3: ND	35 ft ²	Yes

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0916-3-20	1: 12*12 white vinyl tile 2: Yellow mastic 3: Beige vinyl tile 4: Black mastic 5: Beige linoleum 6: Brown mastic with mesh 7: Beige mastic with compressed board 8: Brown mastic	Upper level, room 20, floor	1: 2% 2: ND 3: 4% 4: ND 5: ND 6: ND 7: ND 8: ND	90 ft ²	No
2018-0916-3-21	1: 3" brown vinyl cove base 2: Beige mastic	Upper level, room 21, wall base	1: ND 2: ND		
2018-0916-3-22	1: Gray deck coating 2: Tan adhesive	Upper level, rooms 16, 22, floor	1: ND 2: ND		
2018-0916-3-23	1: 12*12 white vinyl tile 2: Tan mastic 3: Beige vinyl tile 4: Black mastic 5: Black felt with mastic	Upper level, rooms 21, 23 & 24, floor	1: ND 2: ND 3: 4% 4: ND 5: ND	375 ft ²	No
2018-0916-3-24	1: 12*12 white vinyl tile 2: Yellow mastic 3: Drywall 4: Black felt 5: Off-white vinyl tile 6: Yellow mastic 7: Brown linoleum 8: Black backing	Lower level, rooms 25, 36 landings, floor	1: 2% 2: ND 3: ND 4: ND 5: ND 6: ND 7: ND 8: ND	105 ft ²	No
2018-0916-3-25	1: Brown sheet vinyl 2: White backing with mastic 3: Black mastic	Lower level, room 25, stair steps	1: ND 2: 29% 3: 3%	40 ft ²	Yes
2018-0916-3-26	1: 6" brown vinyl cove base 2: Brown mastic	Lower level, room 25, stair risers	1: ND 2: ND		

ND None Detected

*

The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

**

These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0916-3-27	1: Cream laminate 2: Paper with yellow mastic 3: White foam 4: Paper with yellow mastic 5: Green / tan paper	Lower level, rooms 26, 31, 37 & 43, tub surround	1: ND 2: ND 3: ND 4: ND 5: ND		
2018-0916-3-28	1: Beige sheet vinyl 2: White backing with mastic 3: Black felt	Lower level, rooms 26, 27, floor	1: ND 2: ND 3: ND		
2018-0916-3-29	1: 3" brown vinyl cove base 2: Off-white mastic 3: Brown mastic 4: Trace plaster with paint	Lower level, room 29, wall base	1: ND 2: ND 3: ND 4: ND		
2018-0916-3-30	1: 12*12 vinyl tile 2: Black mastic 3: Black felt	Lower level, rooms 28-30, floor	1: ND 2: ND 3: ND		
2018-0916-3-31	1: Tan sheet vinyl 2: White backing with mastic 3: Wood with adhesive	Lower level, room 31, floor	1: ND 2: 32% 3: ND	35 ft ²	Yes
2018-0916-3-32	1: 12*12 white vinyl tile 2: Yellow mastic 3: Beige vinyl tile 4: Black mastic 5: Tan linoleum 6: Tan mesh 7: Gray backing with mastic	Lower level, room 32, floor	1: ND 2: ND 3: 4% 4: 2% 5: ND 6: ND 7: ND	90 ft ²	No
2018-0916-3-33	Black sink undercoating	Lower level, rooms 27, 32, 43, aluminum sinks	2%	3 sinks	No
2018-0916-3-34	1: 12*12 white vinyl tile 2: Brown mastic 3: Black mastic 4: Black felt 5: Gold mastic	Lower level, rooms 33, 35, floor	1: ND 2: ND 3: 2% 4: ND 5: ND	235 ft ²	No

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0916-3-35	1: 12*12 beige vinyl tile 2: Tan mastic 3: Beige vinyl tile 4: Black mastic 5: Black felt with mastic 6: Gold mastic 7: Paper with asphalt	Lower level, room 34, floor	1: ND 2: ND 3: 5% 4: 2% 5: ND 6: ND 7: ND	140 ft ²	No
2018-0916-3-36	1: Beige sheet vinyl 2: Off-white backing with mastic 3: Wood with adhesive	Upper level, rooms 37 & 38, floor	1: ND 2: ND 3: ND		
2018-0916-3-37	1: Cream laminate 2: Pink / yellow adhesive	Upper level, rooms 27, 32, 37 & 43, counter / window sill	1: ND 2: ND		
2018-0916-3-38	1: 12*12 vinyl tile 2: Black mastic 3: Wood with adhesive	Upper level, rooms 39-41, floor	1: ND 2: ND 3: ND		
2018-0916-3-39	1: Tan sheet vinyl 2: White backing with mastic	Upper level, room 42, floor	1: ND 2: 32%	35 ft ²	Yes
2018-0916-3-40	1: 12*12 vinyl tile 2: Tan mastic 3: Beige vinyl tile 4: Tan mastic 5: Black mastic 6: Tan mesh with mastic 7: Gray backing with mastic	Upper level, room 43, floor	1: ND 2: ND 3: 3% 4: ND 5: 2% 6: ND 7: ND	90 ft ²	No
2018-0916-3-41	1: 12*12 white vinyl tile 2: Brown mastic 3: Black felt with mastic 4: Gold mastic	Upper level, rooms 44, 46 & 47, floor	1: ND 2: ND 3: ND 4: ND		
2018-0916-3-42	1: 12*12 white vinyl tile 2: Tan mastic 3: Brown linoleum 4: Black backing with mastic	Lower level, rooms 48, 59, landings, floor	1: ND 2: ND 3: ND 4: ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

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5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0916-3-43	1: Brown sheet vinyl 2: White backing with mastic 3: Black mastic	Lower level, room 48, stair steps	1: ND 2: 27% 3: 2%	40 ft ²	Yes
2018-0916-3-44	1: 6" brown vinyl cove base 2: Tan mastic 3: Gold mastic	Lower level, room 48, stair risers	1: ND 2: ND 3: ND		
2018-0916-3-45	1: Tan sheet vinyl 2: White backing with mastic 3: Wood with adhesive 4: Black felt	Lower level, room 49, floor	1: ND 2: 28% 3: ND 4: ND	35 ft ²	Yes
2018-0916-3-46	1: Cream laminate 2: Tan paper with yellow mastic 3: White foam	Lower level, rooms 49, 54, 60 & 66, tub surround	1: ND 2: ND 3: ND		
2018-0916-3-47	1: 12*12 white vinyl tile 2: Tan mastic 3: Drywall	Lower level, room 50, floor	1: ND 2: ND 3: ND		
2018-0916-3-48	Black sink undercoating	Lower level, rooms 50, 55, 61 & 67, aluminum sink	2%	4 sinks	No
2018-0916-3-49	1: 12*12 white vinyl tile 2: Tan mastic 3: Beige vinyl tile 4: Black mastic 5: Black felt with mastic 6: Paper with asphalt	Lower level, room 51, floor	1: ND 2: ND 3: 2% 4: ND 5: ND 6: ND	215 ft ²	No
2018-0916-3-50	1: 12*12 white vinyl tile 2: Tan mastic 3: Beige vinyl tile 4: Black mastic 5: Black felt with mastic	Lower level, rooms 52, 53, floor	1: ND 2: ND 3: 2% 4: ND 5: ND	160 ft ²	No
2018-0916-3-51	1: Tan sheet vinyl 2: White backing with mastic 3: Black felt with mastic	Lower level, room 54, floor	1: ND 2: 26% 3: ND	35 ft ²	Yes

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0916-3-52	1: 12*12 white vinyl tile 2: Tan mastic	Lower level, room 55, floor	1: 2% 2: ND	90 ft ²	No
2018-0916-3-53	1: 12*12 white vinyl tile 2: Tan mastic 3: Brown vinyl tile 4: Tan mastic 5: Black mastic 6: Black felt with mastic	Lower level, rooms 56-58, floor	1: 2% 2: ND 3: 5% 4: ND 5: ND 6: ND	375 ft ²	No
2018-0916-3-54	1: 3" brown vinyl cove base 2: Brown mastic	Lower level, room 57, wall base	1: ND 2: ND		
2018-0916-3-55	1: Beige sheet vinyl 2: Clear adhesive 3: Gray leveler	Upper level, rooms 60, 61, floor	1: ND 2: ND 3: ND		
2018-0916-3-56	1: Cream laminate 2: Red mastic 3: Tan mastic	Upper level, rooms 50, 55, 61 & 67, counter	1: ND 2: ND 3: ND		
2018-0916-3-57	1: White tile with adhesive 2: Yellow mastic 3: Leveler	Upper level, room 62-64, floor	1: ND 2: ND 3: ND		
2018-0916-3-58	1: Gray coating 2: Tan adhesive	Upper level, room 65 / 71 / 83, floor	1: ND 2: ND		
2018-0916-3-59	1: Beige sheet vinyl 2: Off-white backing with mastic 3: Leveler 4: Tan adhesive 5: Tan material 6: Black felt	Upper level, room 66, floor	1: ND 2: ND 3: ND 4: ND 5: ND 6: ND		
2018-0916-3-60	1: Beige sheet vinyl 2: Off-white backing with mastic 3: Leveler 4: Debris	Upper level, room 67, floor	1: ND 2: ND 3: ND 4: ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0916-3-61	1: White tile 2: Yellow mastic 3: Leveler 4: Tan material	Upper level, rooms 68-70, floor	1: ND 2: ND 3: ND 4: ND		
2018-0916-3-62	1: Tan laminate 2: Yellow mastic with leveler	Upper level, room 69, window sill	1: ND 2: ND		
2018-0916-3-63	1: Beige sheet vinyl 2: Clear adhesive 3: White tile 4: Brown mastic 5: Black backing with mastic	Lower level, rooms 72, 76, floor	1: ND 2: ND 3: ND 4: ND 5: ND		
2018-0916-3-64	1: Beige tile 2: Tan mastic 3: Leveler	Lower level, rooms 73, 77, floor (under carpet)	1: ND 2: ND 3: ND		
2018-0916-3-65	1: Tan sheet vinyl / adhesive 2: Off-white backing with mastic 3: Black felt with mastic	Lower level, room 74, floor	1: ND 2: 28% 3: ND	40 ft ²	Yes
2018-0916-3-66	1: Tan sheet vinyl 2: White tile 3: Tan mastic	Lower level, room 75, floor	1: ND 2: ND 3: ND		
2018-0916-3-67	Black sink undercoating	Lower level, room 75, sink	2%	1 sink	No
2018-0916-3-68	1: Tan laminate 2: Red mastic	Lower level, room 75, counter	1: ND 2: ND		
2018-0916-3-69	1: Tan paper with asphalt 2: Fiberglass insulation	Lower level, room 76, crawl space	1: ND 2: ND		
2018-0916-3-70	1: Tan sheet vinyl 2: White tile 3: Black mastic 4: Black felt with mastic	Upper level, room 78, stair landing, floor	1: ND 2: ND 3: ND 4: ND		
2018-0916-3-71	1: Brown sheet vinyl / adhesive 2: Off-white backing with mastic 3: Trace black mastic	Upper level, room 78, stair steps	1: ND 2: 27% 3: ND	20 ft ²	Yes

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

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5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0916-3-72	1: 6" Brown vinyl cove base 2: Brown mastic	Upper level, room 78, stair risers	1: ND 2: ND		
2018-0916-3-73	1: Tan laminate 2: Tan mastic	Upper level, room 78, window sill	1: ND 2: ND		
2018-0916-3-74	1: Beige sheet vinyl 2: Tan sheet vinyl 3: Off-white backing with mastic	Upper level, room 79, floor	1: ND 2: ND 3: 30%	40 ft ²	Yes
2018-0916-3-75	1: Cream laminate 2: Tan material with mastic 3: Foamy board 4: Tan material with mastic 5: Light green material 6: Drywall	Upper level, room 79, tub surround	1: ND 2: ND 3: ND 4: ND 5: ND 6: ND		
2018-0916-3-76	1: Tan sheet vinyl 2: White tile 3: Yellow mastic 4: Leveler	Upper level, room 80, floor	1: ND 2: ND 3: ND 4: ND		
2018-0916-3-77	1: 3" Brown vinyl cove base 2: Off-white mastic 3: Brown mastic	Upper level, room 80, wall base	1: ND 2: ND 3: ND		
2018-0916-3-78	1: Carpet with mastic 2: White tile 3: Tan mastic 4: Black mastic 5: Black felt with mastic	Upper level, rooms 81-82, floor	1: ND 2: ND 3: ND 4: ND 5: ND		
2018-0916-3-79	White caulking	Exterior, perimeter vinyl windows	ND		
2018-0916-3-80	Black asphaltic felt	Exterior, behind vinyl & wood siding	ND		
2018-0916-3-81	1: Black mastic 2: Tri-tab asphaltic shingle 3: Black felt	Awning pitched roof	1: ND 2: ND 3: ND		
2018-0916-3-82	Rolled black asphaltic sheeting	Flat roof	ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0916-3-83	Rolled black asphaltic sheeting	Flat roof	ND		
2018-0916-3-84	Rolled black asphaltic sheeting	Flat roof	ND		
2018-0916-3-85	Brown caulking with paint	On exterior wood siding	ND		

ND None Detected

The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

Any suspect material(s) not identified above should not be disturbed and should be tested immediately. The suspect material must be treated as asbestos-containing until testing proves otherwise.

Inventory of Suspect Lead-Containing Paint Coatings

Sample Number	Material Description	Location	Lead in mg/kg	Lead in %
2018-0916-Pb-1	White paint on plaster	Interior walls / ceilings	< 55	< 0.0055
2018-0916-Pb-2	White paint on GWB	Interior walls / ceilings	< 52	< 0.0052
2018-0916-Pb-3	Brown paint on wood	Interior railings / stair stringers / door & closet components	13000	1.3
2018-0916-Pb-4	Red paint on metal	Interior & exterior door components	< 190	< 0.019
2018-0916-Pb-5	White paint on wood	Exterior siding walls / soffit / columns / fascia & deck railing	4500	0.45
2018-0916-Pb-6	Beige paint on wood	Exterior siding (behind vinyl siding)	12000	1.2

< Lead content of material analyzed is below the Lower Detection Limit.

Samples in bold contain lead in excess of detectable levels

Mercury

A visual inspection was conducted to identify Mercury and Poly Chlorinated Biphenyls (PCB) containing devices. This includes Mercury thermostats, HID lamps, florescent light tubes (including the newer "green tubes" which still contain low levels of Mercury) and PCB containing light ballasts. Following devices were identified and assumed to contain Mercury and Poly Chlorinated Biphenyls (PCB).

Material	Location	Quantity
HID lamp	Exterior North Elevation	3 lamps
HID lamp	Exterior East Elevation	1 lamp

5.0 FINDINGS (continued)

Poly Chlorinated Biphenyls (PCB) Light Ballasts

Material	Location	Quantity
HID light ballast	Exterior North Elevation	3 ballasts
HID light ballast	Exterior East Elevation	1 ballast

Location of Mercury and Poly Chlorinated Biphenyls (PCB) containing HID lamps are highlighted with green in the attached floor plan.

TCLP Sampling

Sample Number	Sample Location	Results in ppm
2018-0916-TCLP	"Building #21" 101-103 8th Avenue, Seattle, WA 98104	0.6

6.0 CONCLUSIONS AND RECOMMENDATIONS

The following is an inventory of asbestos-containing building materials identified during the Hazardous Materials Survey of building #21 located at 101-103 8th Avenue, Seattle, WA 98104.

1. White / beige vinyl floor tiles / black mastic (Non-friable)

Sample numbers: 2018-0916-3-3, 3-32, 3-35, 3-40



There is approximately 370 square feet of asbestos-containing white / beige vinyl floor tiles with black mastic located under vinyl floor tiles in rooms 1, 12, 32, 34, & 43 of building #21. The substrate is wood.

2. Brown sheet vinyl backing / mastic (Friable)

Sample numbers: 2018-0916-3-4, 3-25, 3-43 & 3-71



There is approximately 140 square feet of asbestos-containing off-white backing with mastic associated with brown sheet vinyl flooring / steps located in rooms 1, 25, 48 & 78 of building #21. The substrate is wood.

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

3. White / beige vinyl floor tiles (Non-friable)

Sample numbers: 2018-0916-3-8, 3-15, 3-17, 3-20, 3-23, 3-24, 3-49, 3-50, 3-52, 3-53



There is approximately 2340 square feet of asbestos-containing white / beige vinyl floor tiles located under vinyl floor tiles in rooms 3, 9, 10, 11, 14, 15, 17, 18, 20, 21, 23, 24, 25, 34, 36, 51, 52, 53, 55, 56, 58 of building #21. The associated mastic is not asbestos containing. The substrate is wood.

4. Black sink undercoating (Non-friable)

Sample numbers: 2018-0916-3-9, 3-33, 3-48, 3-67



There is a total of twelve (12) aluminum sinks with asbestos containing black undercoating located in rooms 3, 8, 14, 20, 27, 32, 43, 50, 55, 61, 67, 75 of building #21.

5. Tan sheet vinyl backing / mastic (Friable)

Sample numbers: 2018-0916-3-12, 3-16, 3-19, 3-31, 3-39, 3-45, 3-51, 3-65, 3-74



There is approximately 325 square feet of asbestos-containing white backing with mastic associated with tan sheet vinyl flooring located in rooms 7, 13, 19, 31, 42, 49, 54, 74, 79 of building #21. The substrate is wood.

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

6. Black floor mastic (Non-friable)

Sample number: 2018-0916-3-34



There is approximately 235 square feet of asbestos-containing black floor mastic associated with white vinyl tiles in rooms 33 & 35 of building #21. The substrate is wood.

Contractors should be aware that concealed suspect asbestos-containing building materials may be uncovered during the course of demolition or renovation work. Contractors should have contingency plans that include stopping work, evacuation of the immediate area and sampling by a certified AHERA Building Inspector whenever these materials are found. Concealed suspect materials may include but are not limited to: non-fiberglass pipe or roof drain insulation; spray-applied coatings; cement board; asphalt or paper vapor barriers; floorings and adhesives.

If discovered, all asbestos-containing materials that will be disturbed as a natural part of renovation and/or demolition are required to be removed and disposed of in accordance with Washington State regulations. Washington State Department of Labor and Industries and PSCAA requires that the Abatement be performed using Certified Asbestos Workers under the direct on-site supervision by a Certified Asbestos Supervisor. Further, NVL suggests that an AHERA inspector review this property after abatement to ensure all asbestos-containing materials have been removed by the contractor.

NVL recommends that an AHERA inspector/project manager be on site at the time of demolition to ensure that any potentially asbestos-containing materials uncovered during the process of renovation/demolition be dealt with properly.

NVL Labs, Inc. is making the following recommendations regarding asbestos:

1. A copy of this inspection report should be maintained at the project site during the duration of renovation / demolition.
2. A copy of this inspection report should be provided to the General Contractor and any Sub Contractors working on the renovation / demolition project.
3. The inspection report is not intended to serve as a design / bidding document, or scope of work prior to renovation / demolition.
4. Abatement specifications should be prepared by a Hazardous Materials Consulting firm covering the regulated building materials that will be impacted by the renovations / demolition, and these specifications should be part of any contract documents prepared for this project.
5. A licensed asbestos abatement contractor must be utilized to remove any asbestos-containing materials that will be impacted by the planned renovation / demolition.
6. A Hazardous Materials Consulting Firm should provide project oversight and air monitoring during the removal of the asbestos-containing materials.

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

Lead

Lead-containing paint was identified in the following paint samples. Worker protection protocols are applicable for this project.

1. Brown paint: interior railings / stair stringers / door & closet components. (approx. 2220 ft²)
2. White paint: exterior siding walls, soffits / columns / fascia, & deck railings. (approx. 600 ft²)
3. Beige paint: exterior wood siding, behind vinyl siding. (approx. 6050 ft²)

The Federal Occupational Safety & Health Administration's (OSHA) interim lead safety standard (29 CFR 1926.59) for the construction industry became effective on June 3, 1993. Lead exposure in construction is regulated in Washington State by WAC 296-155-176. These regulations protect workers disturbing building surfaces with lead containing paints. Paint with "any detectable level" of lead is classified as a lead containing paint by federal and state regulations and the applicable worker safety provisions must be implemented.

WORKER EXPOSURE

WAC 296-155-176, Lead (Pb), applies to all construction work where an employee may be occupationally exposed to Lead (Pb). Construction work includes activities such as demolition or salvage, removal or encapsulation, and renovation of materials that contain Lead (Pb). When an employee may be occupationally exposed to Lead (Pb), the employer must perform an exposure assessment according to WAC 296-155-176.

The exposure assessment consists of personal air monitoring to determine representative Lead (Pb) exposure levels for the work being performed. During the exposure assessment, the employer must provide the following:

- As a minimum, a half mask air purifying respirators equipped with high efficiency particulate air (HEPA) filters in accordance with WAC 296-155-17613.
- Appropriate personal protective clothing / equipment in accordance with WAC 296-155-17615.
- A designated change area which allows for separate storage areas for work and street clothing to prevent cross contamination in accordance with WAC 296-155-17619(2).
- Hand washing facilities to wash their hands and faces WAC 296-155-17619(5).
- Biological monitoring in the form of blood survey and analysis for Lead (Pb) and zinc protoporphyrin levels in accordance with WAC 296-155-17621 (1) (a).
- Training to include hazard communication, safety, and the limitations, proper use, and maintenance of respirators in accordance with WAC 296-155-100.

In addition to the protective equipment and hygiene requirements, the employer must attempt to reduce the levels of airborne Lead (Pb) through engineering controls such as ventilation and wet methods.

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

Mercury

Four (4) HID lamps were identified and assumed to contain Mercury (Hg) at building #21.

Fluorescent light tubes, HID lamps, and thermostats contain mercury (Hg) are classified as universal waste by the EPA and Ecology. The Universal Waste Rule for Dangerous Waste Lamps (WAC 173-303-573) included the following requirements:

- Immediately place lamps showing evidence of leakage, damage, etc. in a container following removal;
- Containerize in closed, structurally sound, compatible containers;
- Cardboard containers may be used for inside storage only;
- Labeling container required: "Waste Lamps," or "Universal Waste Lamps;"
- Track the length of time since waste lamp generation. Acceptable methods of proof include: date on label, inventory system, etc.
- Respond immediately to potential releases. If determined to be a release, contain and determine if it designates as a dangerous waste. If so, manage the release as specified in WAC 173-303;
- Disposal of universal waste as general or construction debris is not permitted;
- The crushing of fluorescent light tubes on-site is not allowed. In addition, measures should be taken to prevent breakage of fluorescent light tubes while the light tubes are in transit to their destination.
- Provide training to employees on the proper handling and emergency procedures of universal waste lamps;
- Track shipments of universal waste lamps with records (invoice, manifest, etc.) kept for a minimum of 3 years.

Poly Chlorinated Biphenyls (PCB) Light Ballasts

Four (4) HID light ballasts were identified and assumed to contain Poly Chlorinated Biphenyls (PCB).

The Washington statutes definition of a PCB-containing material require that any material with more than 2 parts per million (ppm) to be treated as PCB-containing material. Federal regulations dictated that any material with less than 50 ppm PCBs could be labeled as a non-PCB containing material. Because of this regulatory change, NVL recommends that all light ballasts be observed, removed, handled, and disposed of in an appropriate manner. The ballasts labeled with "PCB Free" and "Non-PCB" shall be packaged for recycle by an approved recycling facility.

TCLP

The TCLP sample result is below the threshold of 5.0 ppm. Thus, the solid waste stream of the demolition debris from the structure is considered as regular demolition debris.

A solid waste exhibits the characteristic of toxicity if, using the *Toxicity Characteristic Leaching Procedure* (TCLP) testing method, as incorporated in WAC 173-303-090, the extract from a representative sample of the waste contains lead (Pb) contaminants equal to or greater than 5.0 ppm. A material "fails" the TCLP when there is 5.0 parts per million or greater of lead (Pb) in the leachate.

7.0 LIMITATIONS OF SURVEY

The purpose of this hazardous materials survey report is to document asbestos containing building materials, lead paint coatings and Mercury / PCB containing devices discovered at "Building #21" 101-103 8th Avenue, Seattle, WA 98104.

The purpose of this survey was to identify suspect asbestos containing building materials, lead paint coatings, and Mercury (Hg) / PCB containing devices which would be impacted by the planned demolition of the structure. Destructive sampling methods were utilized to collect samples of suspect building materials. No soft/limited demolition was performed during this inspection. Hidden materials may exist within the structure, and all suspect materials must be treated as hazardous until testing proves otherwise.

As hazardous material surveys are non-comprehensive by nature, NVL Laboratories, Inc. cannot be held liable for materials which require destructive means to access, materials which are hidden from sight (e.g. materials hidden behind walls), materials which cannot be found due to their obscure nature, or which otherwise cannot be discovered with reasonable diligence.

This document is the sole property of NVL Laboratories and the property owner, or his agent, authorizing this survey.

Inspected By



Derrick Gallard

AHERA Building Inspector
AHERA Certification: 169720
Expiration Date: October 10, 2019

Prepared By



Tanveer Khan

Project Manager
AHERA Certification: 167087
Expiration Date: April 25, 2019

Inspected By



Jason Lindahl

AHERA Building Inspector
AHERA Certification: 167717
Expiration Date: May 23, 2019

Reviewed By



Syed Hasan

Manager Field Services
AHERA Certification: # 168599
Expiration Date: July 18, 2019



Appendix A

Sample Locations (Floor Plan)



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NVL Project # 2018-0916

Client Seattle Housing Authority - George Barlet

Location "Building 21" 101-103 8th Ave

City Seattle

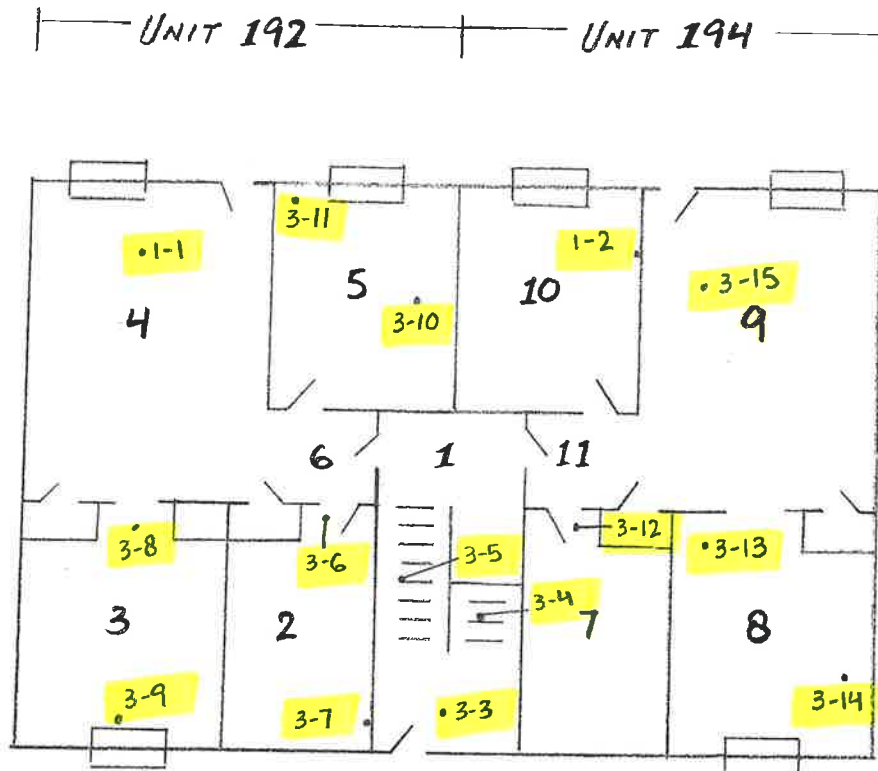
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Date 1/8/2019

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LOWER LEVEL

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SUSPECT ASBESTOS SAMPLES

(NOT TO SCALE)



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Location "Building 21" 101-103 8th Ave

City Seattle

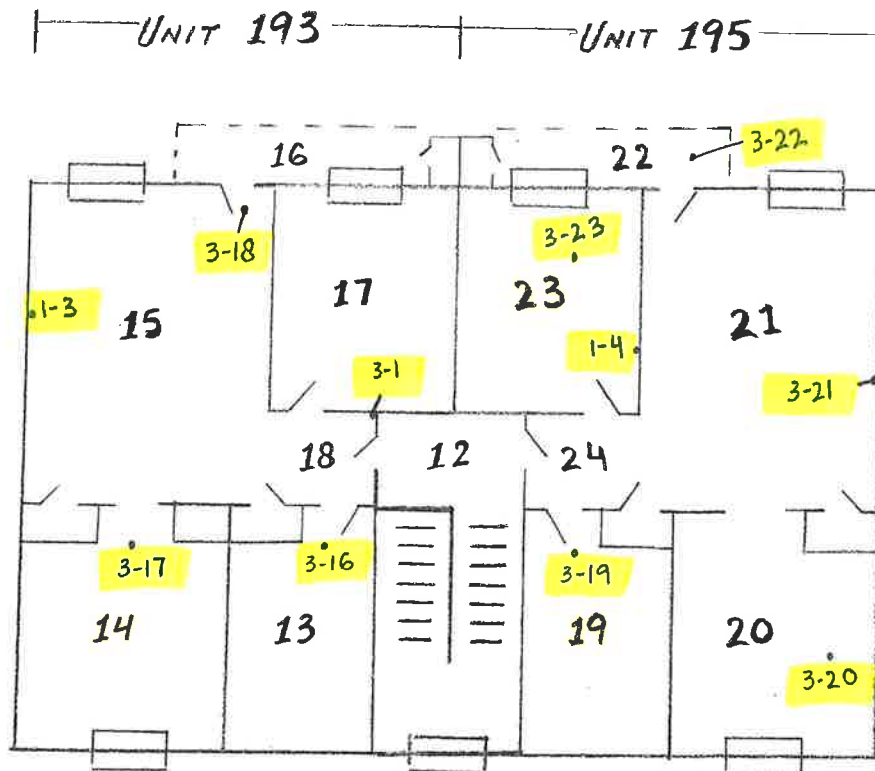
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UPPER LEVEL



SUSPECT ASBESTOS SAMPLES

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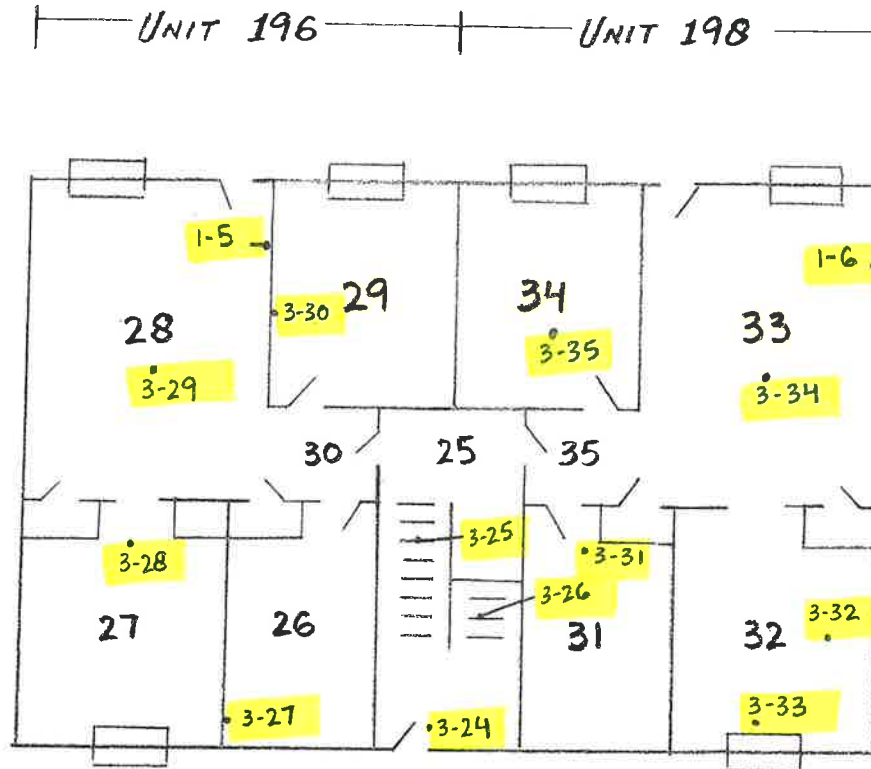
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Date 1/8/2019

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LOWER LEVEL



(NOT TO SCALE)

SUSPECT ASBESTOS SAMPLES

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Client Seattle Housing Authority - George Barlet

Location "Building 21" 101-103 8th Ave

City Seattle

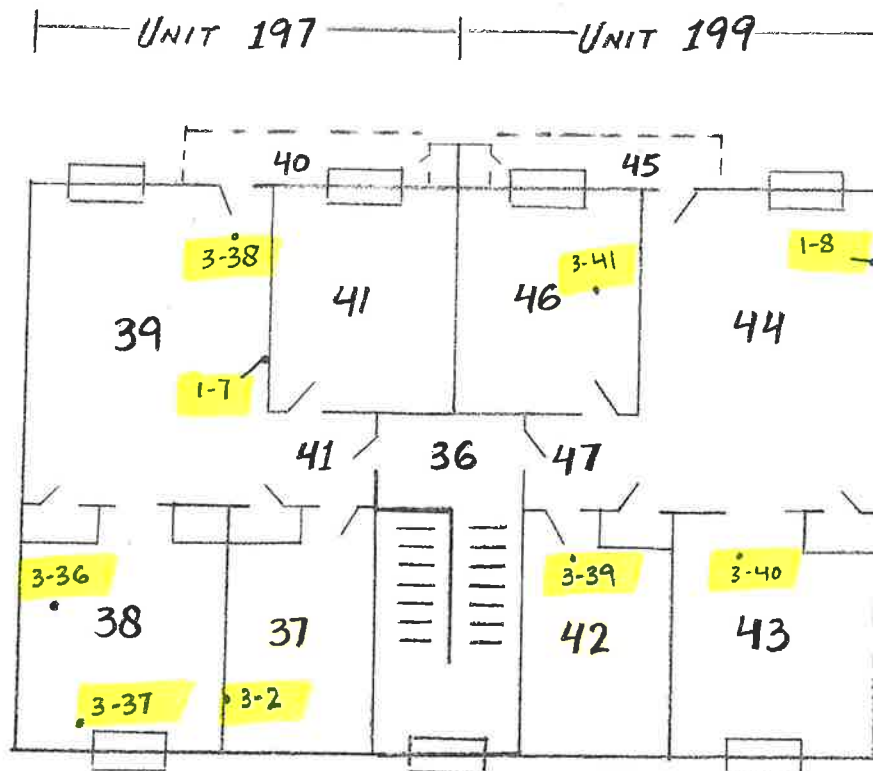
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Date 1/8/2019

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UPPER LEVEL



(NOT TO SCALE)

SUSPECT ASBESTOS SAMPLES



L A B S

INDUSTRIAL
HYGIENE
SERVICES

Laboratory | Management | Training

NVL Project # 2018-0916

Client Seattle Housing Authority - George Barlet

Location "Building 21" 101-103 8th Ave

City Seattle

Page 5 of 14

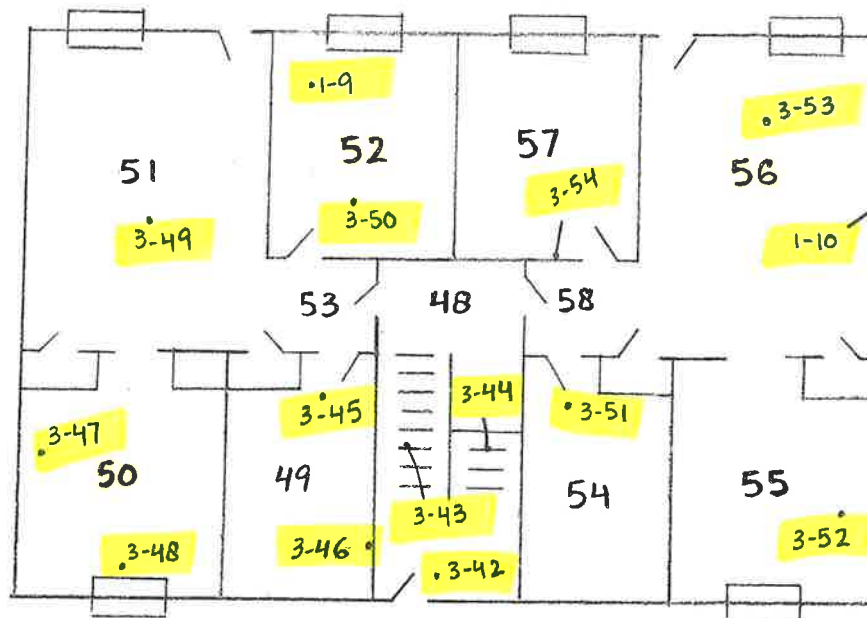
Date 1/8/2019

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LOWER LEVEL



UNIT 200 UNIT 202



SUSPECT ASBESTOS SAMPLES

(NOT TO SCALE)



L A B S

INDUSTRIAL
HYGIENE
SERVICES

Laboratory | Management | Training

NVL Project # 2018-0916

Client Seattle Housing Authority - George Barlet

Location "Building 21" 101-103 8th Ave

City Seattle

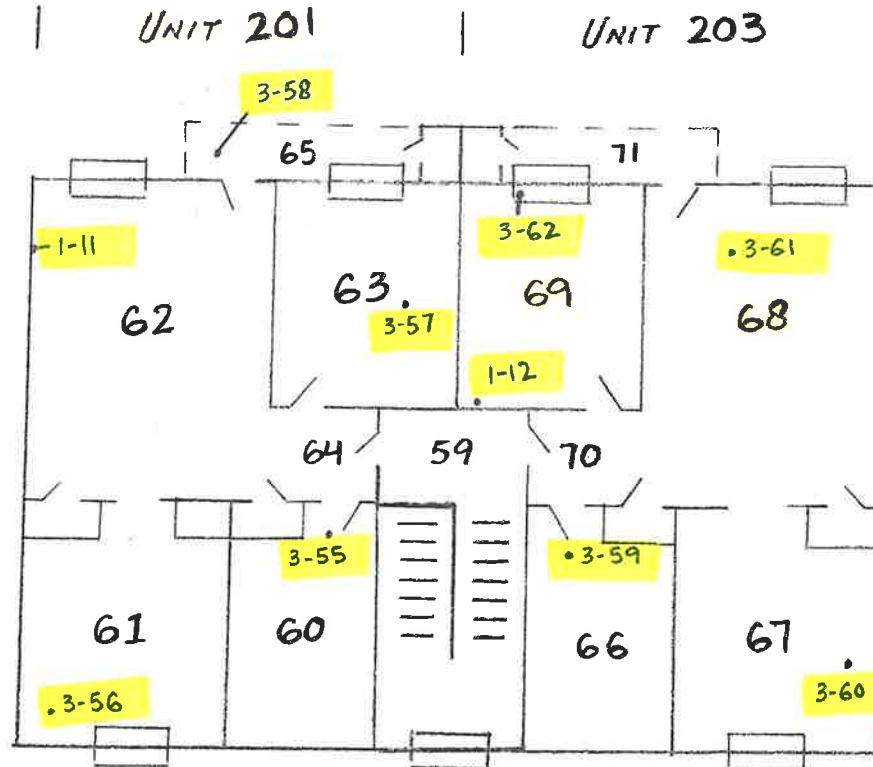
Page 6 of 14

Date 1/8/2019

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UPPER LEVEL



(NOT TO SCALE)

SUSPECT ASBESTOS SAMPLES

Phone: 206.547.0100 | Fax: 206.634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516



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HYGIENE
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NVL Project # 2018-0916

Client Seattle Housing Authority - George Barlet

Location "Building 21" 101-103 8th Ave

City Seattle

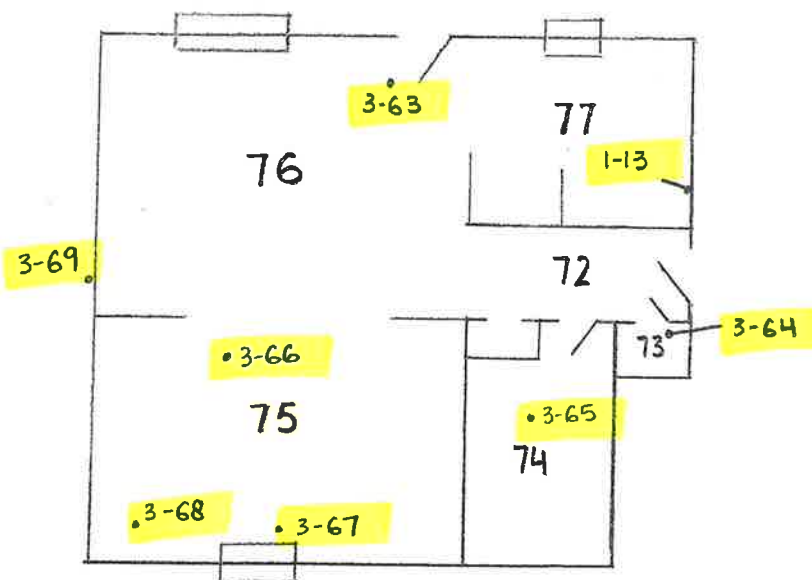
Page 7 of 14

Date 1/8/2019

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LOWER LEVEL

UNIT 204



(NOT TO SCALE)

SUSPECT ASBESTOS SAMPLES



L A B S

INDUSTRIAL
HYGIENE
SERVICES

Laboratory | Management | Training

NVL Project # 2018-0916

Client Seattle Housing Authority - George Barlet

Location "Building 21" 101-103 8th Ave

City Seattle

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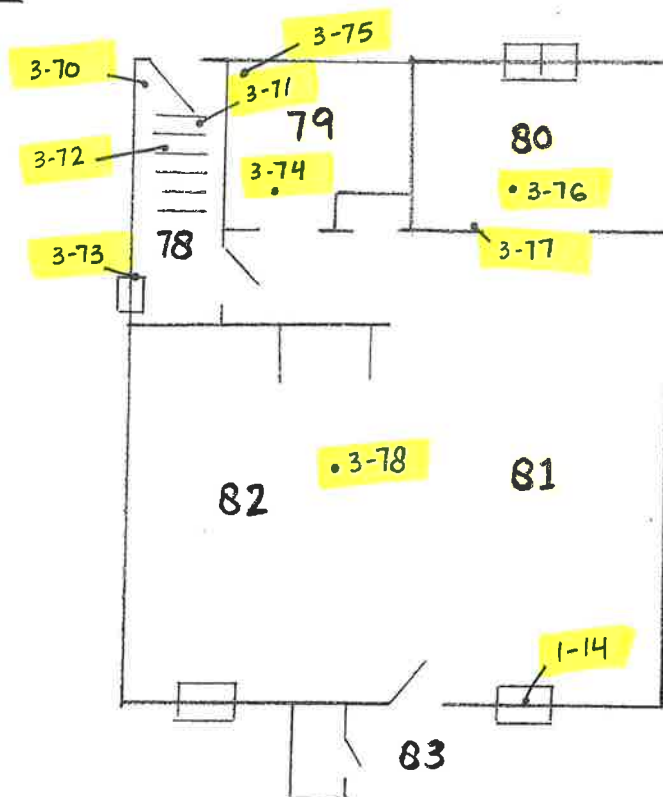
Date 1/8/2019

Made by Derrick Gallard

UPPER LEVEL



UNIT 205



SUSPECT ASBESTOS SAMPLES

(NOT TO SCALE)



L A B S

INDUSTRIAL
HYGIENE
SERVICES

Laboratory | Management | Training

NVL Project # 2018-0916

Client Seattle Housing Authority - George Barlet

Location "Building 21" 101-103 8th Ave

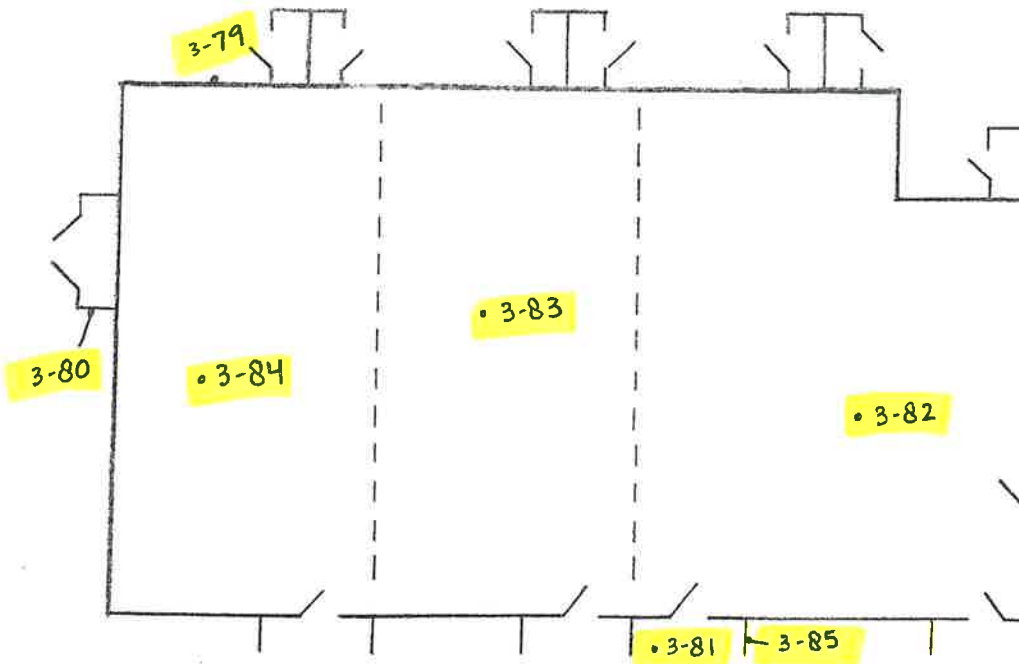
City Seattle

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Date 1/8/2019

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EXTERIOR



(NOT TO SCALE)

SUSPECT ASBESTOS SAMPLES

L A B S

INDUSTRIAL
HYGIENE
SERVICES

Laboratory | Management | Training

NVL Project # 2018-0916

Client Seattle Housing Authority - George Barlet

Location "Building 21" 101-103 8th Ave

City Seattle

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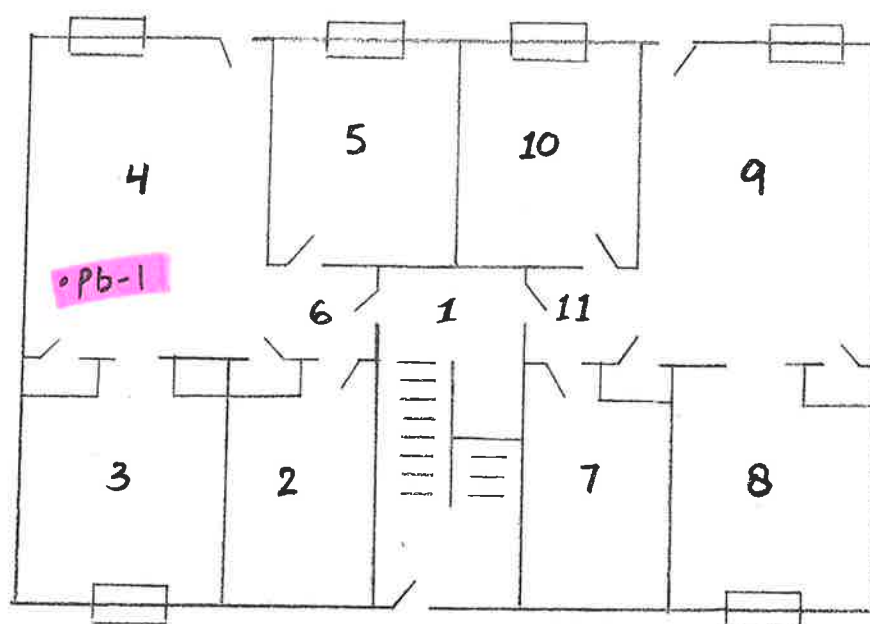
Date 1/8/2019

Made by Derrick Gallard

LOWER LEVEL

↓

UNIT 192 UNIT 194



LEAD PAINT SAMPLES

(NOT TO SCALE)



L A B S

INDUSTRIAL
HYGIENE
SERVICES

Laboratory | Management | Training

NVL Project # 2018-0916

Client Seattle Housing Authority - George Barlet

Location "Building 21" 101-103 8th Ave

City Seattle

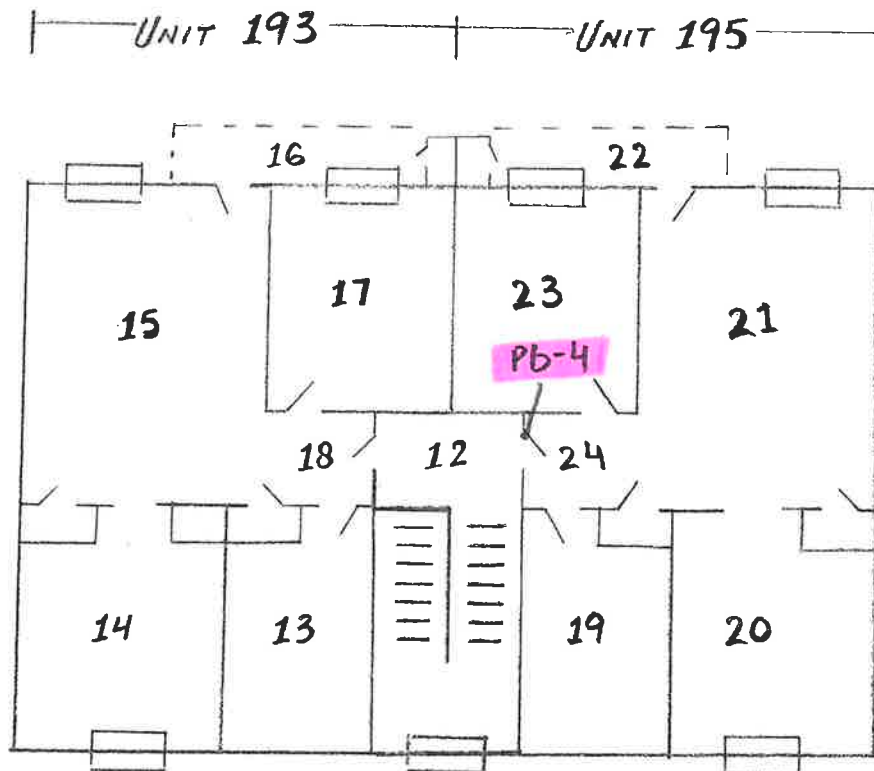
Page 11 of 14

Date 1/8/2019

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UPPER LEVEL



LEAD PAINT SAMPLES

(NOT TO SCALE)



L A B S

INDUSTRIAL
HYGIENE
SERVICES

Laboratory | Management | Training

NVL Project # 2018-0916

Client Seattle Housing Authority - George Barlet

Location "Building 21" 101-103 8th Ave

City Seattle

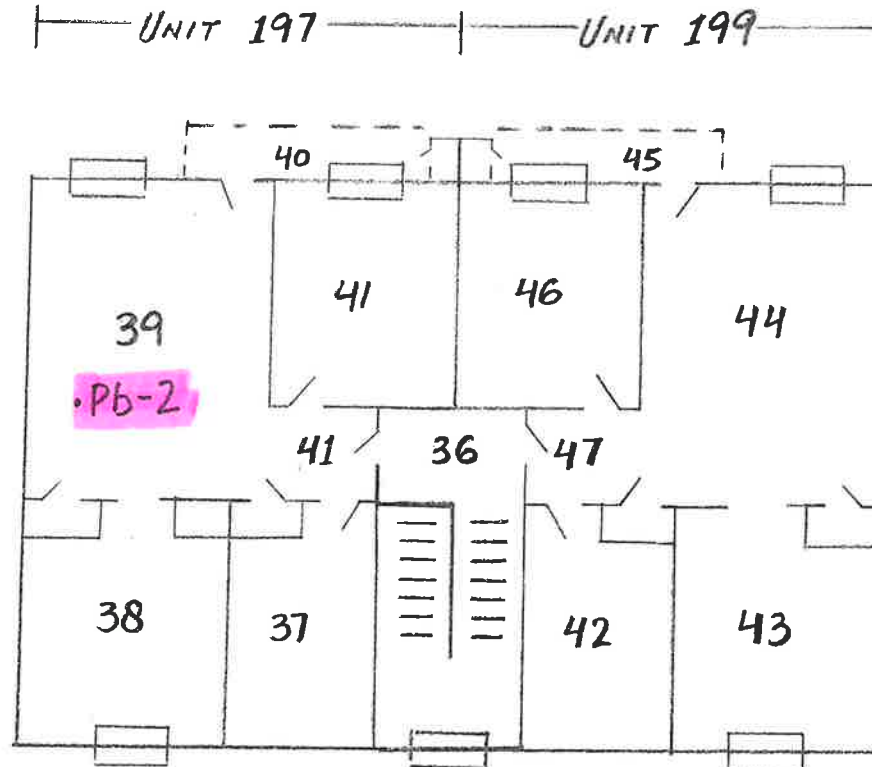
Page 12 of 14

Date 1/8/2019

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UPPER LEVEL



LEAD PAINT SAMPLES

(NOT TO SCALE)



L A B S

INDUSTRIAL
HYGIENE
SERVICES

Laboratory | Management | Training

NVL Project # 2018-0916

Client Seattle Housing Authority - George Barlet

Location "Building 21" 101-103 8th Ave

City Seattle

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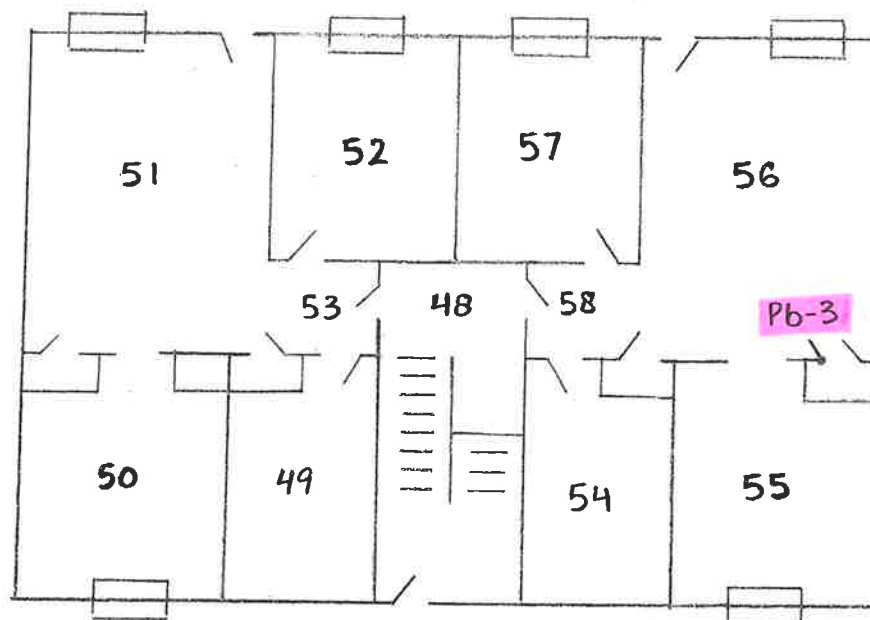
Date 1/8/2019

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LOWER LEVEL



UNIT 200 UNIT 202



LEAD PAINT SAMPLES

(NOT TO SCALE)



L A B S

INDUSTRIAL
HYGIENE
SERVICES

Laboratory | Management | Training

NVL Project # 2018-0916

Client Seattle Housing Authority - George Barlet

Location "Building 21" 101-103 8th Ave

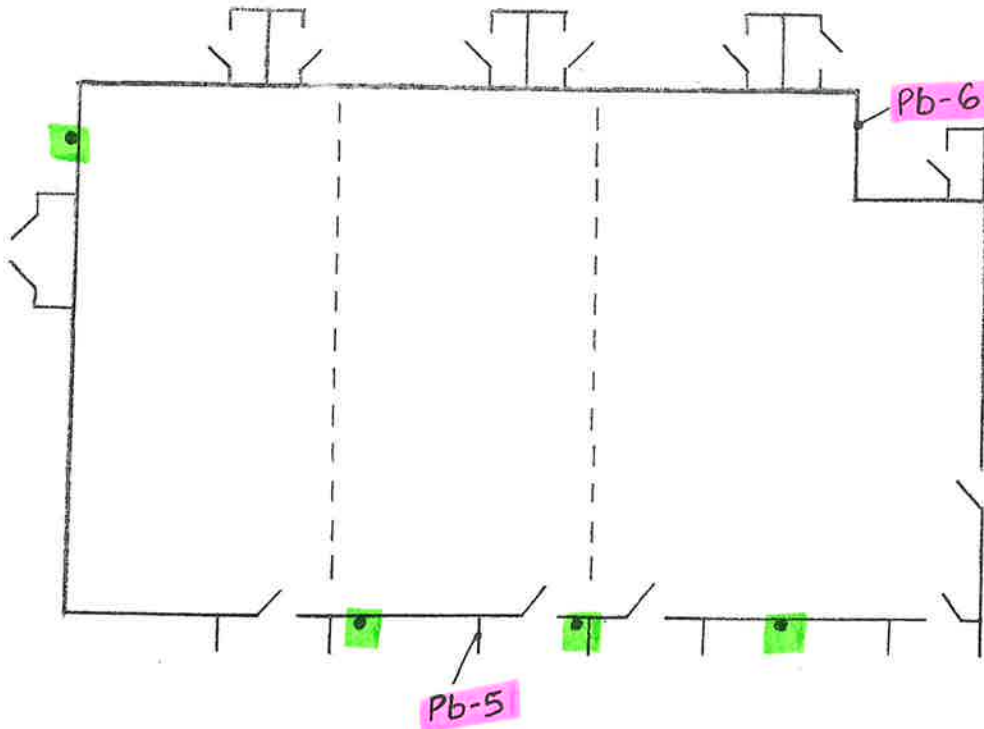
City Seattle

Page 14 of 14

Date 1/8/2019

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EXTERIOR



LEAD PAINT SAMPLES

MERCURY & PCB CONTAINING DEVICES

(NOT TO SCALE)



Appendix B

Laboratory Analysis Results

January 10, 2019



INDUSTRIAL HYGIENE SERVICES
LABORATORY + MANAGEMENT + TRAINING

Jason Lindahl
NVL Field Services Division
4708 Aurora Ave. N.
Seattle, WA 98103

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1900519.00

Client Project: 2018-0916

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Dear Mr. Lindahl,

Enclosed please find test results for the 35 sample(s) submitted to our laboratory for analysis on 1/8/2019.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, 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,

A handwritten signature in black ink, appearing to read "Matt Macfarlane", is located above the name of the Asbestos Lab Supervisor.

Matt Macfarlane, Asbestos Lab Supervisor



Enc.: Sample Results

Lab Code: 102063-0

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

NVL

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900519.00
Client Project #: 2018-0916
Date Received: 1/8/2019
Samples Received: 35
Samples Analyzed: 35
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Lab ID: 19002127 Client Sample #: 2018-0916-1-1

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: White sandy brittle material with paint

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Binder/Filler, Mineral grains, Fine grains	Cellulose 4%	
Fine particles, Paint		

Layer 2 of 2 Description: White chalky material with paper

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 17%	

Lab ID: 19002128 Client Sample #: 2018-0916-1-2

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: White sandy brittle material with paint

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Binder/Filler, Mineral grains, Fine grains	Cellulose 5%	
Fine particles, Paint		

Layer 2 of 2 Description: White chalky material with paper

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 18%	

Lab ID: 19002129 Client Sample #: 2018-0916-1-3

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 3 Description: White compacted powdery material with paint

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Binder/Filler, Fine grains, Fine particles	None Detected ND	
Paint		

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/10/2019

Date: 01/10/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900519.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 2 of 3	Description: White sandy brittle material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mineral grains, Fine grains	Cellulose 4%		None Detected ND
	Fine particles			

Layer 3 of 3	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 16%		None Detected ND

Lab ID: 19002130 **Client Sample #: 2018-0916-1-4**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: White compacted powdery material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Fine grains, Fine particles	None Detected ND		None Detected ND
	Paint			

Layer 2 of 3	Description: White sandy brittle material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mineral grains, Fine grains	Cellulose 4%		None Detected ND
	Fine particles			

Layer 3 of 3	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 17%		None Detected ND

Lab ID: 19002131 **Client Sample #: 2018-0916-1-5**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/10/2019

Date: 01/10/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900519.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: White sandy brittle material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Mineral grains, Fine grains	Cellulose 6%		None Detected ND
	Fine particles, Paint			

Layer 2 of 2	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 18%		None Detected ND

Lab ID: 19002132 **Client Sample #: 2018-0916-1-6**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: White sandy brittle material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Mineral grains, Fine grains	Cellulose 5%		None Detected ND
	Fine particles, Paint			

Layer 2 of 2	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 18%		None Detected ND

Lab ID: 19002133 **Client Sample #: 2018-0916-1-7**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: White compacted powdery material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Fine grains, Fine particles	None Detected ND		None Detected ND
	Paint			

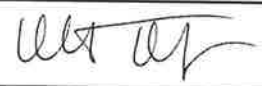
Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/10/2019

Date: 01/10/2019


Matt Macfarlane, Asbestos Lab Supervisor

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

NVL

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: **Mr. Jason Lindahl**
Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Batch #: 1900519.00
Client Project #: 2018-0916
Date Received: 1/8/2019
Samples Received: 35
Samples Analyzed: 35
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 2 of 3	Description: White sandy brittle material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mineral grains, Fine grains	Cellulose 6%		None Detected ND
	Fine particles			

Layer 3 of 3	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 19%		None Detected ND

Lab ID: 19002134 **Client Sample #: 2018-0916-1-8**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: White sandy brittle material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mineral grains, Fine grains	Cellulose 6%		None Detected ND
	Fine particles, Paint			

Layer 2 of 2	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 18%		None Detected ND

Lab ID: 19002135 **Client Sample #: 2018-0916-1-9**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: White sandy brittle material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mineral grains, Fine grains	Cellulose 8%		None Detected ND
	Fine particles, Paint			

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/10/2019

Date: 01/10/2019


Matt Macfarlane, Asbestos Lab Supervisor

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

NVL

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900519.00
Client Project #: 2018-0916
Date Received: 1/8/2019
Samples Received: 35
Samples Analyzed: 35
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 2 of 2 **Description:** White chalky material with paper

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 18%	

Lab ID: 19002136 **Client Sample #: 2018-0916-1-10**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2 **Description:** White sandy brittle material with paint

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Binder/Filler, Mineral grains, Fine grains	Cellulose 7%	
Fine particles, Paint		

Layer 2 of 2 **Description:** White chalky material with paper

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 18%	

Lab ID: 19002137 **Client Sample #: 2018-0916-1-11**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2 **Description:** White sandy brittle material with paint

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Binder/Filler, Mineral grains, Fine grains	Cellulose 7%	
Fine particles, Paint		

Layer 2 of 2 **Description:** White chalky material with paper

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 19%	

Lab ID: 19002138 **Client Sample #: 2018-0916-1-12**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/10/2019

Date: 01/10/2019


Matt Macfarlane, Asbestos Lab Supervisor

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

NVL

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900519.00
Client Project #: 2018-0916
Date Received: 1/8/2019
Samples Received: 35
Samples Analyzed: 35
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: White sandy brittle material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Mineral grains, Fine grains	Cellulose 8%		None Detected ND
	Fine particles, Paint			

Layer 2 of 2	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 18%		None Detected ND

Lab ID: 19002139 **Client Sample #: 2018-0916-1-13**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: White sandy brittle material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Mineral grains, Fine grains	Cellulose 7%		None Detected ND
	Fine particles, Paint			

Layer 2 of 2	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 17%		None Detected ND

Lab ID: 19002140 **Client Sample #: 2018-0916-1-14**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: White compacted powdery material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Fine grains, Fine particles	None Detected ND		None Detected ND
	Paint			


Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/10/2019

Date: 01/10/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900519.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl
Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 2 of 4	Description: White compacted powdery material with paper	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Binder/Filler, Fine grains, Fine particles	Cellulose 5%	
Layer 3 of 4	Description: White sandy brittle material with paint	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Binder/Filler, Mineral grains, Fine grains	Cellulose 7%	
		Fine particles, Paint		None Detected ND
Layer 4 of 4	Description: White chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 18%	
				None Detected ND

Lab ID: 19002141 **Client Sample #: 2018-0916-3-1**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: White compacted powdery material with paint	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Binder/Filler, Fine grains, Fine particles	None Detected ND	
		Paint		None Detected ND
Layer 2 of 2	Description: White chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 15%	
		Mica	Glass fibers 2%	None Detected ND

Lab ID: 19002142 **Client Sample #: 2018-0916-3-2**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

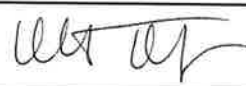
Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/10/2019

Date: 01/10/2019


Matt Macfarlane, Asbestos Lab Supervisor

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

NVL

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900519.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 1	Description: White chalky material with paper and paint			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Gypsum/Binder, Fine grains, Calcareous particles	Cellulose 16%		None Detected ND
	Mica, Paint			

Lab ID: 19002143 **Client Sample #: 2018-0916-3-3**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Comments: Unable to separate mastics for analysis (Layer 2).

Layer 1 of 4	Description: Beige vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Vinyl/Binder, Fine grains, Fine particles	None Detected ND		Chrysotile 2%

Layer 2 of 4	Description: Yellow and black brittle mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder, Fine grains, Fine particles	Cellulose 3%		None Detected ND

Layer 3 of 4	Description: Black asphaltic fibrous material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Asphalt/Binder, Fine particles	Cellulose 27%		None Detected ND
		Synthetic fibers 4%		

Layer 4 of 4	Description: Black asphaltic mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Asphalt/Binder, Fine particles, Wood flakes	Cellulose 6%		Chrysotile 3%

Lab ID: 19002144 **Client Sample #: 2018-0916-3-4**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Tan patterned vinyl			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Vinyl/Binder, Fine grains, Fine particles	None Detected ND		None Detected ND

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/10/2019

Date: 01/10/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900519.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 2 of 2	Description: White fibrous material with beige mastic (on wood)			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Fine grains, Fine particles	Cellulose 8%		Chrysotile 29%
	Mastic/Binder, Wood flakes			

Lab ID: 19002145 **Client Sample #: 2018-0916-3-5**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Brown rubbery material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Rubber/Binder, Fine particles	None Detected ND		None Detected ND

Layer 2 of 2	Description: Tan soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder, Fine grains, Fine particles	None Detected ND		None Detected ND

Lab ID: 19002146 **Client Sample #: 2018-0916-3-6**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Beige patterned vinyl			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Vinyl/Binder, Fine particles	None Detected ND		None Detected ND

Layer 2 of 3	Description: White fibrous material with beige mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Fine grains, Fine particles	Cellulose 26%		None Detected ND
	Mastic/Binder, Wood flakes	Glass fibers 3%		

Layer 3 of 3	Description: Black asphaltic fibrous material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Asphalt/Binder, Fine particles	Cellulose 28%		None Detected ND

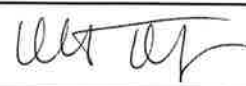
Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/10/2019

Date: 01/10/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900519.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Lab ID: 19002147 Client Sample #: 2018-0916-3-7

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Tan compressed fibrous material with paint	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
		Binder/Filler, Fine particles, Paint	Cellulose 28%	
Layer 2 of 3	Description: Beige soft adhesive with paper	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
		Adhesive/Binder	Cellulose 7%	
Layer 3 of 3	Description: White foamy material with paper	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
		Binder/Filler, Synthetic foam	Cellulose 8%	

Lab ID: 19002148 Client Sample #: 2018-0916-3-8

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 5	Description: White vinyl tile	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % Chrysotile 2%
		Vinyl/Binder, Fine grains, Fine particles	None Detected ND	
Layer 2 of 5	Description: Beige crumbly material	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
		Binder/Filler, Fine grains, Fine particles	Cellulose 8%	
Layer 3 of 5	Description: Tan fibrous mesh with trace of brown mastic	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
		Binder/Filler, Fine grains, Fine particles	Cellulose 17%	
Layer 4 of 5	Description: Black asphaltic fibrous material	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
		Asphalt/Binder, Fine particles	Cellulose 28%	

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/10/2019

Date: 01/10/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900519.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Synthetic fibers 3%

Layer 5 of 5 Description: White/beige crumbly material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Fine grains, Fine particles

Cellulose 8%

None Detected ND

Synthetic fibers 2%

Lab ID: 19002149 **Client Sample #: 2018-0916-3-9**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 1 Description: Black asphaltic flaky material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Asphalt/Binder, Fine particles

None Detected ND

Chrysotile 3%

Lab ID: 19002150 **Client Sample #: 2018-0916-3-10**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 4 Description: White vinyl tile

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Vinyl/Binder, Fine grains, Fine particles

None Detected ND

None Detected ND

Layer 2 of 4 Description: Brown soft mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Mastic/Binder, Fine grains, Fine particles

Cellulose 3%

None Detected ND

Layer 3 of 4 Description: Black asphaltic fibrous backing with brown mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Asphalt/Binder, Fine grains, Fine particles

Cellulose 26%

None Detected ND

Mastic/Binder, Wood flakes

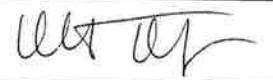
Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/10/2019

Date: 01/10/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900519.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 4 of 4 **Description:** Black asphaltic material with paper

Non-Fibrous Materials:	Other Fibrous Materials: %
Asphalt/Binder, Fine particles	Cellulose 18%

Asbestos Type: %

None Detected ND

Lab ID: 19002151 **Client Sample #: 2018-0916-3-11**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2 **Description:** Black asphaltic material with silver foil and paper

Non-Fibrous Materials:	Other Fibrous Materials: %
Asphalt/Binder, Metal foil	Cellulose 12%
	Glass fibers 4%

Asbestos Type: %

None Detected ND

Layer 2 of 2 **Description:** Gray fibrous material

Non-Fibrous Materials:	Other Fibrous Materials: %
Binder/Filler, Glass beads	Glass fibers 95%

Asbestos Type: %

None Detected ND

Lab ID: 19002152 **Client Sample #: 2018-0916-3-12**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2 **Description:** Beige vinyl

Non-Fibrous Materials:	Other Fibrous Materials: %
Vinyl/Binder, Fine grains, Fine particles	None Detected ND

Asbestos Type: %

None Detected ND

Layer 2 of 2 **Description:** White fibrous material with beige mastic (on wood)

Non-Fibrous Materials:	Other Fibrous Materials: %
Binder/Filler, Fine grains, Fine particles	Cellulose 9%
Mastic/Binder, Wood flakes	

Asbestos Type: %

Chrysotile 31%

Lab ID: 19002153 **Client Sample #: 2018-0916-3-13**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Comments: Unsure of correct layer sequence.


Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/10/2019

Date: 01/10/2019


Matt Macfarlane, Asbestos Lab Supervisor

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

NVL

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900519.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: White vinyl tile	Non-Fibrous Materials: Vinyl/Binder, Fine grains, Fine particles	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND
Layer 2 of 3	Description: Gray fibrous material	Non-Fibrous Materials: Binder/Filler, Fine particles, Wood flakes	Other Fibrous Materials:% Cellulose 28%	Asbestos Type: % None Detected ND
Layer 3 of 3	Description: Tan fibrous material	Non-Fibrous Materials: Binder/Filler, Wood flakes	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND
Lab ID: 19002154 Client Sample #: 2018-0916-3-14				
Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104				
Layer 1 of 2	Description: Tan compressed fibrous material with paint	Non-Fibrous Materials: Binder/Filler, Fine particles, Paint	Other Fibrous Materials:% Cellulose 29%	Asbestos Type: % None Detected ND
Layer 2 of 2	Description: Brown-red adhesive	Non-Fibrous Materials: Adhesive/Binder, Fine particles	Other Fibrous Materials:% Cellulose 4%	Asbestos Type: % None Detected ND
Lab ID: 19002155 Client Sample #: 2018-0916-3-15				
Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104				
Layer 1 of 4	Description: White vinyl tile with trace of yellow mastic	Non-Fibrous Materials: Vinyl/Binder, Fine grains, Fine particles Mastic/Binder	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/10/2019

Date: 01/10/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900519.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 2 of 4	Description: Pink crumbly material	Non-Fibrous Materials: Binder/Filler, Fine grains, Fine particles	Other Fibrous Materials:% None Detected ND	Asbestos Type: % Chrysotile 4%
Layer 3 of 4	Description: Black asphaltic mastic	Non-Fibrous Materials: Asphalt/Binder, Fine particles	Other Fibrous Materials:% Cellulose 4%	Asbestos Type: % None Detected ND
Layer 4 of 4	Description: Black asphaltic fibrous backing with brown mastic	Non-Fibrous Materials: Asphalt/Binder, Fine grains, Fine particles Mastic/Binder, Wood flakes	Other Fibrous Materials:% Cellulose 27%	Asbestos Type: % None Detected ND
<hr/>				
Lab ID: 19002156		Client Sample #: 2018-0916-3-16		
Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104				
Layer 1 of 4	Description: Beige vinyl	Non-Fibrous Materials: Vinyl/Binder, Fine grains, Fine particles	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND
Layer 2 of 4	Description: White fibrous material with beige mastic	Non-Fibrous Materials: Binder/Filler, Fine grains, Fine particles Mastic/Binder	Other Fibrous Materials:% None Detected ND	Asbestos Type: % Chrysotile 28%
Layer 3 of 4	Description: Black asphaltic fibrous material	Non-Fibrous Materials: Asphalt/Binder, Fine particles	Other Fibrous Materials:% Cellulose 27%	Asbestos Type: % None Detected ND
Layer 4 of 4	Description: White crumbly material (on wood)	Non-Fibrous Materials: Binder/Filler, Fine grains, Fine particles	Other Fibrous Materials:% Cellulose 6%	Asbestos Type: % None Detected ND

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/10/2019

Date: 01/10/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900519.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Wood flakes

Lab ID: 19002157	Client Sample #: 2018-0916-3-17
Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104	
Comments: Unable to separate mastics for analysis (Layer 6).	
Layer 1 of 6	Description: White vinyl tile
	Non-Fibrous Materials: Vinyl/Binder, Fine grains, Fine particles
	Other Fibrous Materials: % None Detected ND
	Asbestos Type: % Chrysotile 2%
Layer 2 of 6	Description: Yellow brittle mastic
	Non-Fibrous Materials: Mastic/Binder, Fine particles
	Other Fibrous Materials: % None Detected ND
	Asbestos Type: % None Detected ND
Layer 3 of 6	Description: Pink crumbly material
	Non-Fibrous Materials: Binder/Filler, Fine grains, Fine particles
	Other Fibrous Materials: % None Detected ND
	Asbestos Type: % Chrysotile 4%
Layer 4 of 6	Description: Black soft mastic
	Non-Fibrous Materials: Mastic/Binder, Fine grains, Fine particles
	Other Fibrous Materials: % Cellulose 3%
	Asbestos Type: % None Detected ND
Layer 5 of 6	Description: Beige linoleum
	Non-Fibrous Materials: Binder/Filler, Fine grains, Fine particles
	Other Fibrous Materials: % Cellulose 6%
	Asbestos Type: % None Detected ND
Layer 6 of 6	Description: Beige and brown brittle mastic
	Non-Fibrous Materials: Mastic/Binder, Fine grains, Fine particles
	Other Fibrous Materials: % Cellulose 7%
	Asbestos Type: % None Detected ND
Wood flakes	

Lab ID: 19002158 **Client Sample #: 2018-0916-3-18**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/10/2019

Date: 01/10/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900519.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: White soft rubbery material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Rubber/Binder	None Detected ND	
Layer 2 of 3	Description: Tan compressed fibrous material with paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Fine particles, Paint	Cellulose 28%	
Layer 3 of 3	Description: Brown-red adhesive	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Adhesive/Binder, Fine particles	Cellulose 5%	
<hr/>				
Lab ID: 19002159		Client Sample #: 2018-0916-3-19		
Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104				
Layer 1 of 3	Description: Beige patterned vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Vinyl/Binder, Fine grains, Fine particles	None Detected ND	
Layer 2 of 3	Description: White fibrous material with beige mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % Chrysotile 29%
		Binder/Filler, Fine grains, Fine particles	None Detected ND	
	Mastic/Binder			
Layer 3 of 3	Description: Black asphaltic fibrous material with beige mastic (on wood)	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder, Fine grains, Fine particles	Cellulose 28%	
	Mastic/Binder, Wood flakes			

Lab ID: 19002160 **Client Sample #: 2018-0916-3-20**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

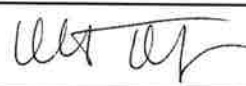
Sampled by: Client

Analyzed by: Akane Yoshikawa

Reviewed by: Matt Macfarlane

Date: 01/10/2019

Date: 01/10/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900519.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 8	Description: White vinyl tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % Chrysotile 2%
		Vinyl/Binder, Fine grains, Fine particles	None Detected ND	
Layer 2 of 8	Description: Yellow brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder, Fine grains, Fine particles	None Detected ND	
Layer 3 of 8	Description: Pink crumbly material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % Chrysotile 4%
		Binder/Filler, Fine grains, Fine particles	None Detected ND	
Layer 4 of 8	Description: Black soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder, Fine grains, Fine particles	Cellulose 6%	
Layer 5 of 8	Description: Beige linoleum	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Fine grains, Fine particles	Cellulose 9%	
Layer 6 of 8	Description: Brown brittle mastic with tan fibrous mesh	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Fine grains, Fine particles	Cellulose 16%	
		Mastic/Binder		
Layer 7 of 8	Description: Beige mastic with gray fibrous material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Fine grains, Fine particles	Cellulose 27%	
		Mastic/Binder	Wollastonite 2%	

Sampled by: Client

Analyzed by: Akane Yoshikawa

Date: 01/10/2019

Reviewed by: Matt Macfarlane

Date: 01/10/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900519.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 8 of 8	Description: Brown brittle mastic (on wood)			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder, Fine grains, Fine particles	Cellulose 8%		None Detected ND
	Wood flakes			

Lab ID: 19002161 **Client Sample #: 2018-0916-3-21**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Comments: Unable to separate mastics for analysis (Layer 2).

Layer 1 of 2	Description: Brown rubbery material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Rubber/Binder, Fine particles	None Detected ND		None Detected ND

Layer 2 of 2	Description: Beige soft mastic with trace of black asphaltic mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder, Fine grains, Fine particles	Cellulose 3%		None Detected ND
	Asphalt/Binder			

Sampled by: Client

Analyzed by: Akane Yoshikawa

Date: 01/10/2019

Reviewed by: Matt Macfarlane

Date: 01/10/2019

Matt Macfarlane, Asbestos Lab Supervisor

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

NVL

Company NVL Field Services Division

NVL Batch Number **1900519.00**

Address 4708 Aurora Ave. N.
Seattle, WA 98103

TAT 2 Days AH No.

Rush TAT

Project Manager Mr. Jason Lindahl

Due Date 1/10/2019 Time 3:10 PM

Phone (206) 547-0100

Email jason.l@nvlabs.com

Cell (763) 286-3494

Fax (206) 634-1936

Project Name/Number: 2018-0916

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 35

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19002127	2018-0916-1-1		A
2	19002128	2018-0916-1-2		A
3	19002129	2018-0916-1-3		A
4	19002130	2018-0916-1-4		A
5	19002131	2018-0916-1-5		A
6	19002132	2018-0916-1-6		A
7	19002133	2018-0916-1-7		A
8	19002134	2018-0916-1-8		A
9	19002135	2018-0916-1-9		A
10	19002136	2018-0916-1-10		A
11	19002137	2018-0916-1-11		A
12	19002138	2018-0916-1-12		A
13	19002139	2018-0916-1-13		A
14	19002140	2018-0916-1-14		A
15	19002141	2018-0916-3-1	Composite	A
16	19002142	2018-0916-3-2		A
17	19002143	2018-0916-3-3		A
18	19002144	2018-0916-3-4		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/8/19	1510
Analyzed by	Akane Yoshikawa		NVL	1/10/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/8/2019

Time: 3:08 PM

Entered By: Shaina Mitchell

ASBESTOS LABORATORY SERVICES



Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Jason Lindahl
Phone (206) 547-0100
Cell (763) 286-3494
NVL Batch Number 1900519.00
TAT 2 Days **AH** No.
Rush TAT
Due Date 1/10/2019 **Time** 3:10 PM
Email jason.l@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0916 **Project Location:** "Building 21" 101-103 8th Ave. Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 35

Rush Samples

	Lab ID	Sample ID	Description	A/R
19	19002145	2018-0916-3-5		A
20	19002146	2018-0916-3-6		A
21	19002147	2018-0916-3-7		A
22	19002148	2018-0916-3-8		A
23	19002149	2018-0916-3-9		A
24	19002150	2018-0916-3-10		A
25	19002151	2018-0916-3-11		A
26	19002152	2018-0916-3-12		A
27	19002153	2018-0916-3-13		A
28	19002154	2018-0916-3-14		A
29	19002155	2018-0916-3-15		A
30	19002156	2018-0916-3-16		A
31	19002157	2018-0916-3-17		A
32	19002158	2018-0916-3-18		A
33	19002159	2018-0916-3-19		A
34	19002160	2018-0916-3-20		A
35	19002161	2018-0916-3-21		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/8/19	1510
Analyzed by	Akane Yoshikawa		NVL	1/10/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/8/2019
 Time: 3:08 PM
 Entered By: Shaina Mitchell

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900519

Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 21" 101-103 8th Ave
Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0916

Total Samples 35

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

☐ Asbestos Air ☐ PCM (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II) ☐ Other

☒ Asbestos Bulk ☒ PLM (EPA/600/R-93/116) ☐ PLM (EPA Point Count) ☐ PLM (EPA Gravimetry) ☐ TEM BULK

☐ Mold/Fungus ☐ Mold Air ☐ Mold Bulk ☐ Rotometer Calibration

METALS

☐ Total Metals
☐ TCLP
☐ Cr 6

Det. Limit

☐ FAA (ppm)
☐ ICP (ppm)
☐ GFAA (ppb)

Matrix

☐ Air Filter ☐ Soil
☐ Drinking water ☐ Paint Chips in %
☐ Dust/wipe (Area) ☐ Paint Chips in cr

RCRA Metals

☐ All 8
☐ Arsenic (As) ☐ Chromium (Cr)
☐ Barium (Ba) ☐ Lead (Pb)
☐ Cadmium (Cd) ☐ Mercury (Hg)

Other Metals

☐ All 3
☐ Copper (Cu)
☐ Nickel (Ni)
☐ Zinc (Zn)

☐ Other Types
of Analysis

☐ Fiberglass ☐ Nuisance Dust ☐ Other (Specify) _____
☐ Silica ☐ Respirable Dust

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0916-1-1		
2		1-2		
3		1-3		
4		1-4		
5		1-5		
6		1-6		
7		1-7		
8		1-8		
9		1-9		
10		1-10		
11		1-11		
12		1-12		
13		1-13		
14		1-14		
15		3-1 Composite		

	Print Below	Sign Below	Company	Date	Time
Sampled by	Jason Lindahl		NVL	1/8/19	7:30
Relinquished by	Jason Lindahl		NVL	1/8/19	
Received by	S. Mitchell		NVL	1/8/19	1510
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206 547 0100 | f 206 634 1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900519

L A B S

Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 21" 101-103 8th Ave
Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0916

Total Samples 35

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

☐ Asbestos Air ☐ PCM (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II) ☐ Other

☒ Asbestos Bulk ☒ PLM (EPA/600/R-93/116) ☐ PLM (EPA Point Count) ☐ PLM (EPA Gravimetry) ☐ TEM BULK

☐ Mold/Fungus ☐ Mold Air ☐ Mold Bulk ☐ Rotometer Calibration

METALS

☐ Total Metals
☐ TCLP
☐ Cr 6

Det. Limit

☐ FAA (ppm)
☐ ICP (ppm)
☐ GFAA (ppb)

Matrix

☐ Air Filter ☐ Soil
☐ Drinking water ☐ Paint Chips in %
☐ Dust/wipe (Area) ☐ Paint Chips in cr

RCRA Metals

☐ All 8
☐ Arsenic (As) ☐ Chromium (Cr)
☐ Barium (Ba) ☐ Lead (Pb)
☐ Cadmium (Cd) ☐ Mercury (Hg)

Other Metals

☐ All 3
☐ Copper (Cu)
☐ Nickel (Ni)
☐ Zinc (Zn)

☐ Other Types of Analysis ☐ Fiberglass ☐ Nuisance Dust ☐ Other (Specify) _____
☐ Silica ☐ Respirable Dust

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0916-3-2	2018-0916-3-17	
2		3-3	3-18	
3		3-4	3-19	
4		3-5	3-20	
5		3-6	3-21	
6		3-7		
7		3-8		
8		3-9		
9		3-10		
10		3-11		
11		3-12		
12		3-13		
13		3-14		
14		3-15		
15		3-16		

	Print Below	Sign Below	Company	Date	Time
Sampled by	Jason Lindahl	[Signature]	NVL	1/8/19	7:30
Relinquished by	Jason Lindahl	[Signature]	NVL	1/8/19	
Received by	S. Mitchell	[Signature]	NVL	1/8/19	1510
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

January 14, 2019



Jason Lindahl
NVL Field Services Division
4708 Aurora Ave. N.
Seattle, WA 98103

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1900520.00

Client Project: 2018-0916
Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Dear Mr. Lindahl,

Enclosed please find test results for the 35 sample(s) submitted to our laboratory for analysis on 1/8/2019.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, 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,

A handwritten signature in black ink, appearing to read "Nick Ly".

Nick Ly, Technical Director

The logo for NVLAP (National Voluntary Laboratory Accreditation Program). It features the letters "NVLAP" in a stylized, outlined font. The "A" is slightly larger and more prominent.

Lab Code: 102063-0

Enc.: Sample Results

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900520.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl
Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Lab ID: 19002162 Client Sample #: 2018-0916-3-22

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 2 Description: Gray soft material with gray paint

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Paint

None Detected ND

None Detected ND

Layer 2 of 2 Description: Tan thin soft adhesive on wood

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Adhesive/Binder, Wood

None Detected ND

None Detected ND

Lab ID: 19002163 Client Sample #: 2018-0916-3-23

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 5 Description: Off-white tile with tan streaks

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Calcareous particles, Mineral grains

None Detected ND

None Detected ND

Layer 2 of 5 Description: Tan brittle mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Mastic/Binder

None Detected ND

None Detected ND

Layer 3 of 5 Description: Tan tile

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Calcareous particles, Mineral grains

None Detected ND

Chrysotile 4%

Layer 4 of 5 Description: Black soft asphaltic mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Asphalt/Binder, Mastic/Binder

None Detected ND

None Detected ND

Layer 5 of 5 Description: Black asphaltic fibrous backing with brown mastic on wood

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Asphalt/Binder, Mastic/Binder, Wood

Cellulose 35%

None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/09/2019

Reviewed by: Nick Ly

Date: 01/14/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900520.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Synthetic fibers 2%

Lab ID: 19002164 Client Sample #: 2018-0916-3-24

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 8 Description: Off-white tile

Non-Fibrous Materials:
Binder/Filler, Calcareous particles, Mineral grains

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
Chrysotile 2%

Layer 2 of 8 Description: Yellow brittle mastic

Non-Fibrous Materials:
Mastic/Binder

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Layer 3 of 8 Description: Off-white chalky material

Non-Fibrous Materials:
Gypsum/Binder, Calcareous particles

Other Fibrous Materials:%
Cellulose 2%

Asbestos Type: %
None Detected ND

Layer 4 of 8 Description: Black asphaltic fibrous backing

Non-Fibrous Materials:
Asphalt/Binder

Other Fibrous Materials:%
Cellulose 32%

Asbestos Type: %
None Detected ND

Synthetic fibers 2%

Layer 5 of 8 Description: Off-white tile with tan streaks

Non-Fibrous Materials:
Binder/Filler, Calcareous particles, Mineral grains

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Layer 6 of 8 Description: Yellow brittle mastic

Non-Fibrous Materials:
Mastic/Binder

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Layer 7 of 8 Description: Brown linoleum

Non-Fibrous Materials:
Fine particles, Linoleum/Binder

Other Fibrous Materials:%
None Detected ND

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Nick Ly

Date: 01/09/2019

Date: 01/14/2019



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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900520.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 8 of 8	Description: Black asphaltic fibrous backing			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder	Cellulose 28%		None Detected ND
		Synthetic fibers 2%		

Lab ID: 19002165 **Client Sample #: 2018-0916-3-25**

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 3	Description: Light brown sheet vinyl with thin clear adhesive surface			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Adhesive/Binder, Calcareous particles, Vinyl/Binder	None Detected ND		None Detected ND
Layer 2 of 3	Description: Off-white fibrous backing with tan brittle mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mastic/Binder	None Detected ND		Chrysotile 29%
Layer 3 of 3	Description: Black soft asphaltic mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder	None Detected ND		Chrysotile 3%

Lab ID: 19002166 **Client Sample #: 2018-0916-3-26**

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 3	Description: Brown rubbery material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Calcareous particles, Rubber/Binder	None Detected ND		None Detected ND
Layer 2 of 3	Description: Brown soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Calcareous particles	None Detected ND		None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Nick Ly

Date: 01/09/2019

Date: 01/14/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900520.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 3 of 3 **Description:** Gold brittle mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Mastic/Binder

None Detected ND

None Detected ND

Lab ID: 19002167 **Client Sample #: 2018-0916-3-27**

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 5 **Description:** Brown flat hard compressed fibrous material with cream surface

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Adhesive/Binder, Binder/Filler

Cellulose 89%

None Detected ND

Layer 2 of 5 **Description:** Tan fibrous material with yellow mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Mastic/Binder

Cellulose 45%

None Detected ND

Layer 3 of 5 **Description:** White soft foamy material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Synthetic/Binder

None Detected ND

None Detected ND

Layer 4 of 5 **Description:** Tan fibrous material with yellow soft mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Mastic/Binder

Cellulose 23%

None Detected ND

Layer 5 of 5 **Description:** Light green/tan fibrous material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler

Cellulose 36%

None Detected ND

Lab ID: 19002168 **Client Sample #: 2018-0916-3-28**

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 3 **Description:** Tan sheet vinyl

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Vinyl/Binder

None Detected ND

None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/09/2019

Reviewed by: Nick Ly

Date: 01/14/2019

Nick Ly, Technical Director

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Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 2 of 3	Description: Off-white fibrous backing with yellow mastic on wood			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Fine particles, Mastic/Binder	Cellulose 42%		None Detected ND
	Wood	Glass fibers 3%		

Layer 3 of 3	Description: Black asphaltic fibrous backing with trace wood flakes			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Wood flakes	Cellulose 33%		None Detected ND

Lab ID: 19002169 **Client Sample #: 2018-0916-3-29**

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 4	Description: Brown rubbery material with thin clear adhesive surface			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Adhesive/Binder, Rubber/Binder	None Detected ND		None Detected ND

Layer 2 of 4	Description: Off-white soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Calcareous particles, Mastic/Binder	None Detected ND		None Detected ND

Layer 3 of 4	Description: Light brown soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder	None Detected ND		None Detected ND

Layer 4 of 4	Description: Trace thin white brittle textured material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Fine particles, Mineral grains	None Detected ND		None Detected ND
	Paint			

Lab ID: 19002170 **Client Sample #: 2018-0916-3-30**

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Nick Ly

Date: 01/09/2019

Date: 01/14/2019



Nick Ly, Technical Director

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Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 3	Description: Off-white tile			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains	None Detected ND		None Detected ND
Layer 2 of 3	Description: Black soft asphaltic mastic on wood			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Wood	None Detected ND		None Detected ND
Layer 3 of 3	Description: Black asphaltic fibrous backing with wood flakes			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Wood flakes	Cellulose 23%		None Detected ND

Lab ID: 19002171 Client Sample #: 2018-0916-3-31

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 3	Description: Cream sheet vinyl			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Calcareous particles, Vinyl/Binder	None Detected ND		None Detected ND
Layer 2 of 3	Description: Off-white fibrous backing with yellow soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mastic/Binder	None Detected ND		Chrysotile 32%
Layer 3 of 3	Description: Tan wooden material with thin tan adhesive			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Adhesive/Binder, Wood	Wood fibers 97%		None Detected ND

Lab ID: 19002172 Client Sample #: 2018-0916-3-32

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 7	Description: Off-white tile			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains	None Detected ND		None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Nick Ly

Date: 01/09/2019

Date: 01/14/2019

Nick Ly, Technical Director

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Samples Analyzed: 35

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 2 of 7	Description: Yellow brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder	None Detected ND	None Detected ND
Layer 3 of 7	Description: Tan thin tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains		None Detected ND	Chrysotile 4%
Layer 4 of 7	Description: Black soft asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Asphalt/Binder		None Detected ND	Chrysotile 2%
Layer 5 of 7	Description: Tan linoleum	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Linoleum/Binder		Cellulose 10%	None Detected ND
Layer 6 of 7	Description: Tan woven fibrous backing with tan/brown mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Fine particles, Mastic/Binder		Wood fibers 28%	None Detected ND
Layer 7 of 7	Description: Gray fibrous backing with brown mastic on wood	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Mastic/Binder, Wood		Cellulose 43%	None Detected ND
			Synthetic fibers 3%	
			Wood fibers 2%	

Lab ID: 19002173 **Client Sample #: 2018-0916-3-33**

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

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

Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Asphalt/Binder, Calcareous particles	None Detected ND	Chrysotile 2%

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Nick Ly

Date: 01/09/2019

Date: 01/14/2019

Nick Ly, Technical Director

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& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl
Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Lab ID: 19002174 Client Sample #: 2018-0916-3-34

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 5 Description: Off-white tile with brown streaks and clear thin adhesive surface

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
Adhesive/Binder, Binder/Filler, Calcareous particles	None Detected ND	None Detected ND
Mineral grains		

Layer 2 of 5 Description: Brown soft mastic

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
Mastic/Binder	None Detected ND	None Detected ND

Layer 3 of 5 Description: Black thin soft asphaltic mastic

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
Asphalt/Binder	Cellulose 2%	Chrysotile 2%

Layer 4 of 5 Description: Black asphaltic fibrous backing with brown mastic

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
Asphalt/Binder, Mastic/Binder	Cellulose 35%	None Detected ND
	Synthetic fibers 2%	

Layer 5 of 5 Description: Gold thin brittle mastic with wood flakes

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
Mastic/Binder, Wood flakes	None Detected ND	None Detected ND

Lab ID: 19002175 Client Sample #: 2018-0916-3-35

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 7 Description: Beige tile with clear thin adhesive surface

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
Adhesive/Binder, Binder/Filler, Calcareous particles	None Detected ND	None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Nick Ly

Date: 01/09/2019

Date: 01/14/2019

Nick Ly, Technical Director

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Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Mineral grains

Layer 2 of 7	Description: Tan brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder	None Detected ND	None Detected ND
Layer 3 of 7	Description: Tan tile with brown streaks	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains		None Detected ND	Chrysotile 5%
Layer 4 of 7	Description: Black thin soft asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Asphalt/Binder	None Detected ND	Chrysotile 2%
Layer 5 of 7	Description: Black asphaltic fibrous backing with brown mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Asphalt/Binder, Mastic/Binder	Cellulose 29%	None Detected ND
			Synthetic fibers 2%	
Layer 6 of 7	Description: Gold thin brittle mastic with wood flakes	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder, Wood flakes	None Detected ND	None Detected ND
Layer 7 of 7	Description: Tan paper with asphalt	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Asphalt/Binder, Binder/Filler, Fine particles	Cellulose 50%	None Detected ND

Lab ID: 19002176 **Client Sample #: 2018-0916-3-36**

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 3	Description: Tan sheet vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Vinyl/Binder	None Detected ND	None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Nick Ly

Date: 01/09/2019

Date: 01/14/2019

Nick Ly, Technical Director

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Layer 2 of 3 **Description:** Off-white fibrous backing with soft mastic

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Fine particles, Mastic/Binder	Cellulose 32%
Perlite	Glass fibers 2%

Asbestos Type: %
None Detected ND

Layer 3 of 3 **Description:** Tan wooden material with tan thin soft adhesive

Non-Fibrous Materials:	Other Fibrous Materials:%
Adhesive/Binder, Wood	Wood fibers 99%

Asbestos Type: %
None Detected ND

Lab ID: 19002177 **Client Sample #: 2018-0916-3-37**

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 2 **Description:** Brown flat hard compressed fibrous material with cream surface

Non-Fibrous Materials:	Other Fibrous Materials:%
Adhesive/Binder, Binder/Filler	Cellulose 94%

Asbestos Type: %
None Detected ND

Layer 2 of 2 **Description:** Yellow/pink soft mastic

Non-Fibrous Materials:	Other Fibrous Materials:%
Mastic/Binder, Fine particles, Starch grains	Cellulose 2%

Asbestos Type: %
None Detected ND

Lab ID: 19002178 **Client Sample #: 2018-0916-3-38**

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 3 **Description:** Off-white tile

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Calcareous particles, Mineral grains	None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 3 **Description:** Black soft asphaltic mastic

Non-Fibrous Materials:	Other Fibrous Materials:%
Asphalt/Binder, Mastic/Binder	None Detected ND

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Nick Ly

Date: 01/09/2019

Date: 01/14/2019



Nick Ly, Technical Director

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Layer 3 of 3	Description: Tan wooden material with tan adhesive			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Adhesive/Binder, Wood	Wood fibers 99%		None Detected ND
Lab ID: 19002179	Client Sample #: 2018-0916-3-39			
	Location: "Building 21" 101-103 8th Ave Seattle, WA 98104			
Layer 1 of 2	Description: Yellow sheet vinyl			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Calcareous particles, Vinyl/Binder	None Detected ND		None Detected ND
Layer 2 of 2	Description: Off-white fibrous backing with tan mastic with wood flakes			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mastic/Binder, Wood flakes	None Detected ND		Chrysotile 32%
Lab ID: 19002180	Client Sample #: 2018-0916-3-40			
	Location: "Building 21" 101-103 8th Ave Seattle, WA 98104			
Layer 1 of 7	Description: Off-white tile with clear thin adhesive			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Adhesive/Binder, Binder/Filler, Calcareous particles	None Detected ND		None Detected ND
	Mineral grains			
Layer 2 of 7	Description: Tan brittle mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder	None Detected ND		None Detected ND
Layer 3 of 7	Description: Tan tile			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains	None Detected ND		Chrysotile 3%

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Nick Ly

Date: 01/09/2019

Date: 01/14/2019

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Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 4 of 7	Description: Tan brittle mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Fine particles, Mastic/Binder	None Detected ND		None Detected ND
Layer 5 of 7	Description: Trace thin black soft asphaltic mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Asphalt/Binder	Cellulose 2%		Chrysotile 2%
Layer 6 of 7	Description: Tan woven fibrous backing with tan mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Calcareous particles, Mastic/Binder	Wood fibers 32%		None Detected ND
Layer 7 of 7	Description: Gray fibrous backing with mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Mastic/Binder	Cellulose 38%		None Detected ND
		Synthetic fibers 3%		

Lab ID: 19002181 **Client Sample #: 2018-0916-3-41**

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 4	Description: Off-white tile with clear thin adhesive surface			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Adhesive/Binder, Binder/Filler, Calcareous particles	None Detected ND		None Detected ND
	Mineral grains			
Layer 2 of 4	Description: Brown soft asphaltic mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Asphalt/Binder	None Detected ND		None Detected ND
Layer 3 of 4	Description: Black asphaltic fibrous backing with brown mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Asphalt/Binder, Mastic/Binder	Cellulose 28%		None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Nick Ly

Date: 01/09/2019

Date: 01/14/2019

Nick Ly, Technical Director

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Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 4 of 4 **Description:** Gold thin brittle mastic with wood flakes

Non-Fibrous Materials:	Other Fibrous Materials: %
Mastic/Binder, Wood flakes	None Detected ND

Asbestos Type: %
None Detected ND

Lab ID: 19002182 **Client Sample #: 2018-0916-3-42**

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 4 **Description:** Off-white tile with clear thin adhesive surface

Non-Fibrous Materials:	Other Fibrous Materials: %
Adhesive/Binder, Binder/Filler, Calcareous particles	None Detected ND
Mineral grains	

Asbestos Type: %
None Detected ND

Layer 2 of 4 **Description:** Tan brittle mastic

Non-Fibrous Materials:	Other Fibrous Materials: %
Mastic/Binder	None Detected ND

Asbestos Type: %
None Detected ND

Layer 3 of 4 **Description:** Brown linoleum

Non-Fibrous Materials:	Other Fibrous Materials: %
Linoleum/Binder	None Detected ND

Asbestos Type: %
None Detected ND

Layer 4 of 4 **Description:** Black asphaltic fibrous backing with soft asphaltic mastic

Non-Fibrous Materials:	Other Fibrous Materials: %
Asphalt/Binder	Cellulose 30%

Asbestos Type: %
None Detected ND

Lab ID: 19002183 **Client Sample #: 2018-0916-3-43**

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 3 **Description:** Brown sheet vinyl

Non-Fibrous Materials:	Other Fibrous Materials: %
Calcareous particles, Vinyl/Binder	None Detected ND

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Nick Ly

Date: 01/09/2019

Date: 01/14/2019

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: NVL Field Services Division

Address: 4708 Aurora Ave. N.

Seattle, WA 98103

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Batch #: 1900520.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Layer 2 of 3	Description: Off-white fibrous backing with tan mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Mastic/Binder	None Detected ND		Chrysotile 27%
Layer 3 of 3	Description: Black soft asphaltic mastic on wood			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Asphalt/Binder, Wood flakes	None Detected ND		Chrysotile 2%

Lab ID: 19002184 Client Sample #: 2018-0916-3-44

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 3	Description: Brown rubbery material with trace thin clear adhesive			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Adhesive/Binder, Calcareous particles, Rubber/Binder	None Detected ND		None Detected ND
Layer 2 of 3	Description: Tan soft mastic with brown thin paint			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Calcareous particles, Mastic/Binder, Paint	None Detected ND		None Detected ND
Layer 3 of 3	Description: Gold thin brittle mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder	None Detected ND		None Detected ND

Lab ID: 19002185 Client Sample #: 2018-0916-3-45

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 4	Description: Yellow sheet vinyl			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Calcareous particles, Vinyl/Binder	None Detected ND		None Detected ND
Layer 2 of 4	Description: Off-white fibrous backing with mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Mastic/Binder	Wood fibers 2%		Chrysotile 28%

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Nick Ly

Date: 01/09/2019

Date: 01/14/2019

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: NVL Field Services Division

Address: 4708 Aurora Ave. N.

Seattle, WA 98103

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Batch #: 1900520.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Layer 3 of 4	Description: Tan wooden material with thin tan adhesive	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Adhesive/Binder, Wood	Wood fibers 99%	None Detected ND
Layer 4 of 4	Description: Black asphaltic fibrous backing	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Asphalt/Binder	Cellulose 30%	None Detected ND
Lab ID: 19002186 Client Sample #: 2018-0916-3-46				
Location: "Building 21" 101-103 8th Ave Seattle, WA 98104				
Layer 1 of 3	Description: Brown flat hard compressed fibrous material with cream surface	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Adhesive/Binder, Binder/Filler	Cellulose 95%	None Detected ND
Layer 2 of 3	Description: Tan fibrous material with yellow mastic	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Binder/Filler, Mastic/Binder	Cellulose 55%	None Detected ND
Layer 3 of 3	Description: White soft foamy material	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Synthetic/Binder	None Detected ND	None Detected ND

Lab ID: 19002187 Client Sample #: 2018-0916-3-47

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 3	Description: Off-white tile with clear thin adhesive surface	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Adhesive/Binder, Binder/Filler, Calcareous particles	None Detected ND	None Detected ND
		Mineral grains		

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Nick Ly

Date: 01/09/2019

Date: 01/14/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900520.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 2 of 3	Description: Tan brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder	None Detected ND	None Detected ND
Layer 3 of 3	Description: Off-white chalky material with wood flakes	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Calcareous particles, Gypsum/Binder, Wood flakes		Cellulose 2%	None Detected ND
Lab ID: 19002188 Client Sample #: 2018-0916-3-48				
Location: "Building 21" 101-103 8th Ave Seattle, WA 98104				
Layer 1 of 1	Description: Black asphaltic flaky material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Asphalt/Binder, Calcareous particles	None Detected ND	Chrysotile 2%
Lab ID: 19002189 Client Sample #: 2018-0916-3-49				
Location: "Building 21" 101-103 8th Ave Seattle, WA 98104				
Layer 1 of 6	Description: Off-white tile with tan streaks and clear thin adhesive surface	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Adhesive/Binder, Binder/Filler, Calcareous particles	None Detected ND	None Detected ND
		Mineral grains		
Layer 2 of 6	Description: Tan brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder	None Detected ND	None Detected ND
Layer 3 of 6	Description: Tan tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	Chrysotile 2%

Sampled by: Client

Analyzed by: Alla Prysyzhnyuk

Reviewed by: Nick Ly

Date: 01/09/2019

Date: 01/14/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900520.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 4 of 6	Description: Black soft asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Asphalt/Binder	None Detected ND	None Detected ND
Layer 5 of 6	Description: Black asphaltic fibrous backing with brown mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Asphalt/Binder, Mastic/Binder	Cellulose 29%	None Detected ND
Layer 6 of 6	Description: Tan paper with asphalt	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Asphalt/Binder, Binder/Filler	Cellulose 25%	None Detected ND

Lab ID: 19002190 **Client Sample #: 2018-0916-3-50**

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 5	Description: Off-white tile with tan streaks and clear thin adhesive surface	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Adhesive/Binder, Binder/Filler, Calcareous particles	None Detected ND	None Detected ND
		Mineral grains		
Layer 2 of 5	Description: Tan brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder	None Detected ND	None Detected ND
Layer 3 of 5	Description: Tan tile	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	Chrysotile 2%
Layer 4 of 5	Description: Black soft asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Asphalt/Binder	None Detected ND	None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Nick Ly

Date: 01/09/2019

Date: 01/14/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900520.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 5 of 5	Description: Black asphaltic fibrous backing with brown mastic and wood flakes		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Asphalt/Binder, Mastic/Binder, Wood flakes	Cellulose 31%	None Detected ND

Lab ID: 19002191 **Client Sample #: 2018-0916-3-51**

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 3	Description: Tan sheet vinyl with clear thin adhesive surface		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Adhesive/Binder, Calcareous particles, Vinyl/Binder	None Detected ND	None Detected ND

Layer 2 of 3	Description: Tan fibrous backing with mastic		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Binder/Filler, Mastic/Binder	None Detected ND	Chrysotile 26%

Layer 3 of 3	Description: Black asphaltic fibrous backing with brown mastic		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Asphalt/Binder, Mastic/Binder	Cellulose 30%	None Detected ND

Lab ID: 19002192 **Client Sample #: 2018-0916-3-52**

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 2	Description: Beige tile with clear adhesive surface		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Adhesive/Binder, Binder/Filler, Calcareous particles	None Detected ND	Chrysotile 2%
	Mineral grains		

Layer 2 of 2	Description: Tan brittle/soft mastic on wood flakes		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Fine particles, Mastic/Binder, Wood flakes	None Detected ND	None Detected ND

Lab ID: 19002193 **Client Sample #: 2018-0916-3-53**

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Nick Ly

Date: 01/09/2019

Date: 01/14/2019

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: NVL Field Services Division

Address: 4708 Aurora Ave. N.

Seattle, WA 98103

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Batch #: 1900520.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Layer 1 of 6	Description: Beige tile with clear adhesive surface	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Adhesive/Binder, Binder/Filler, Calcareous particles		None Detected ND	Chrysotile 2%
	Mineral grains			
Layer 2 of 6	Description: Tan brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Fine particles, Mastic/Binder, Wood flakes		None Detected ND	None Detected ND
Layer 3 of 6	Description: Dark brown tile with red streaks	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains		None Detected ND	Chrysotile 5%
Layer 4 of 6	Description: Trace tan soft/brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Mastic/Binder		None Detected ND	None Detected ND
Layer 5 of 6	Description: Trace thin black soft asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Asphalt/Binder		None Detected ND	None Detected ND
Layer 6 of 6	Description: Black asphaltic fibrous backing with brown mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Asphalt/Binder, Mastic/Binder		Cellulose 32%	None Detected ND

Lab ID: 19002194 Client Sample #: 2018-0916-3-54

Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 1 of 2	Description: Brown rubbery material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Calcareous particles, Rubber/Binder		None Detected ND	None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Nick Ly

Date: 01/09/2019

Date: 01/14/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900520.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 2 of 2	Description: Light brown soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder	None Detected ND	None Detected ND
<hr/>				
Lab ID: 19002195	Client Sample #: 2018-0916-3-55			
Location: "Building 21" 101-103 8th Ave Seattle, WA 98104				
Layer 1 of 3	Description: Tan vinyl with trace clear adhesive	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Adhesive/Binder, Calcareous particles, Synthetic foam		Glass fibers 5%	None Detected ND
	Vinyl/Binder			
Layer 2 of 3	Description: Clear soft adhesive	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Adhesive/Binder		None Detected ND	None Detected ND
Layer 3 of 3	Description: Gray thin crumbly material on wood	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Calcareous particles, Wood		Cellulose 2%	None Detected ND
<hr/>				
Lab ID: 19002196	Client Sample #: 2018-0916-3-56			
Location: "Building 21" 101-103 8th Ave Seattle, WA 98104				
Layer 1 of 3	Description: Brown flat hard compressed fibrous material with cream surface	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Adhesive/Binder, Binder/Filler		Cellulose 97%	None Detected ND
Layer 2 of 3	Description: Red soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Mastic/Binder, Wood flakes		Cellulose 2%	None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Nick Ly

Date: 01/09/2019

Date: 01/14/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900520.00

Client Project #: 2018-0916

Date Received: 1/8/2019

Samples Received: 35

Samples Analyzed: 35

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Layer 3 of 3	Description: Tan brittle mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Calcareous particles, Mastic/Binder	None Detected ND		None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/09/2019

Reviewed by: Nick Ly

Date: 01/14/2019


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

ASBESTOS LABORATORY SERVICES

NVL

Company NVL Field Services Division

NVL Batch Number **1900520.00**

Address 4708 Aurora Ave. N.
Seattle, WA 98103

TAT 2 Days AH No

Rush TAT

Project Manager Mr. Jason Lindahl

Due Date 1/10/2019 Time 3:10 PM

Phone (206) 547-0100

Email jason.l@nvlabs.com

Cell (763) 286-3494

Fax (206) 634-1936

Project Name/Number: 2018-0916

Project Location: "Building 21" 101-103 8th Ave Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 35

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19002162	2018-0916-3-22		A
2	19002163	2018-0916-3-23		A
3	19002164	2018-0916-3-24		A
4	19002165	2018-0916-3-25		A
5	19002166	2018-0916-3-26		A
6	19002167	2018-0916-3-27		A
7	19002168	2018-0916-3-28		A
8	19002169	2018-0916-3-29		A
9	19002170	2018-0916-3-30		A
10	19002171	2018-0916-3-31		A
11	19002172	2018-0916-3-32		A
12	19002173	2018-0916-3-33		A
13	19002174	2018-0916-3-34		A
14	19002175	2018-0916-3-35		A
15	19002176	2018-0916-3-36		A
16	19002177	2018-0916-3-37		A
17	19002178	2018-0916-3-38		A
18	19002179	2018-0916-3-39		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Emily Schubert		NVL	1/8/19	1510
Analyzed by	Alla Prysyazhnyuk		NVL	1/9/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/8/2019

Time: 3:09 PM

Entered By: Emily Schubert

ASBESTOS LABORATORY SERVICES



Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Jason Lindahl
Phone (206) 547-0100
Cell (763) 286-3494
NVL Batch Number 1900520.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/10/2019 **Time** 3:10 PM
Email jason.l@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0916 **Project Location:** "Building 21" 101-103 8th Ave Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 35

Rush Samples

	Lab ID	Sample ID	Description	A/R
19	19002180	2018-0916-3-40		A
20	19002181	2018-0916-3-41		A
21	19002182	2018-0916-3-42		A
22	19002183	2018-0916-3-43		A
23	19002184	2018-0916-3-44		A
24	19002185	2018-0916-3-45		A
25	19002186	2018-0916-3-46		A
26	19002187	2018-0916-3-47		A
27	19002188	2018-0916-3-48		A
28	19002189	2018-0916-3-49		A
29	19002190	2018-0916-3-50		A
30	19002191	2018-0916-3-51		A
31	19002192	2018-0916-3-52		A
32	19002193	2018-0916-3-53		A
33	19002194	2018-0916-3-54		A
34	19002195	2018-0916-3-55		A
35	19002196	2018-0916-3-56		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Emily Schubert		NVL	1/8/19	1510
Analyzed by	Alla Prysyazhnyuk		NVL	1/9/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/8/2019
 Time: 3:09 PM
 Entered By: Emily Schubert

NVL Laboratories, Inc.

4708 Aurora Ave N. Seattle, WA 98103

p 206.547 0100 | f 206 634 1936 | www.nvllabs.com

**CHAIN of CUSTODY
SAMPLE LOG****1900520****Client** NVL Laboratories Inc**Street** 4708 Aurora Ave N

Seattle, WA 98103

Project Manager Syed Hasan**Project Location** "Building 21" 101-103 8th Ave
Seattle, WA 98104**NVL Batch Number****Client Job Number** 2018-0916**Total Samples** 35**Turn Around Time** ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org**Phone:** (206) 770-6745**Fax:** (206) 722-2814**Direct No** (206) 615-3596**Cell** (206) 769-7299☐ **Asbestos Air** ☐ PCM (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II) ☐ Other☒ **Asbestos Bulk** ☒ PLM (EPA/600/R-93/116) ☐ PLM (EPA Point Count) ☐ PLM (EPA Gravimetry) ☐ TEM BULK☐ **Mold/Fungus** ☐ Mold Air ☐ Mold Bulk ☐ Rotometer Calibration**METALS**☐ Total Metals☐ TCLP☐ Cr 6**Det. Limit**☐ FAA (ppm)☐ ICP (ppm)☐ GFAA (ppb)**Matrix**☐ Air Filter☐ Drinking water☐ Dust/wipe (Area)☐ Soil☐ Paint Chips in %☐ Paint Chips in cr**RCRA Metals**☐ Arsenic (As)☐ Barium (Ba)☐ Cadmium (Cd)☐ All 8☐ Chromium (Cr)☐ Lead (Pb)☐ Mercury (Hg)**Other Metals**☐ All 3☐ Copper (Cu)☐ Nickel (Ni)☐ Zinc (Zn)☐ **Other Types
of Analysis**☐ Fiberglass☐ Silica☐ Nuisance Dust☐ Respirable Dust☐ Other (Specify) _____**Condition of Package:** ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0916-3-22		
2		3-23		
3		3-24		
4		3-25		
5		3-26		
6		3-27		
7		3-28		
8		3-29		
9		3-30		
10		3-31		
11		3-32		
12		3-33		
13		3-34		
14		3-35		
15		3-36		

	Print Below	Sign Below	Company	Date	Time
Sampled by	Jason Lindahl		NVL	1/8/19	7:30
Relinquished by	Jason Lindahl		NVL	1/8/19	
Received by	Emily S		NVL	1/8/19	1510
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**CHAIN of CUSTODY
SAMPLE LOG****1900520****Client** NVL Laboratories Inc**Street** 4708 Aurora Ave N
Seattle, WA 98103**Project Manager** Syed Hasan**Project Location** "Building 21" 101-103 8th Ave
Seattle, WA 98104**NVL Batch Number****Client Job Number** 2018-0916**Total Samples** 35**Turn Around Time** ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org**Phone:** (206) 770-6745**Fax:** (206) 722-2814**Direct No** (206) 615-3596**Cell** (206) 769-7299☐ **Asbestos Air** ☐ PCM (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II) ☐ Other☒ **Asbestos Bulk** ☒ PLM (EPA/600/R-93/116) ☐ PLM (EPA Point Count) ☐ PLM (EPA Gravimetry) ☐ TEM BULK**Mold/Fungus** ☐ Mold Air ☐ Mold Bulk ☐ Rotometer Calibration**METALS**☐ Total Metals
☐ TCLP
☐ Cr 6**Det. Limit**☐ FAA (ppm)
☐ ICP (ppm)
☐ GFAA (ppb)**Matrix**☐ Air Filter ☐ Soil
☐ Drinking water ☐ Paint Chips in %
☐ Dust/wipe (Area) ☐ Paint Chips in cr**RCRA Metals**☐ Arsenic (As) ☐ Chromium (Cr)
☐ Barium (Ba) ☐ Lead (Pb)
☐ Cadmium (Cd) ☐ Mercury (Hg)**Other Metals**☐ All 3
☐ Copper (Cu)
☐ Nickel (Ni)
☐ Zinc (Zn)☐ **Other Types of Analysis** ☐ Fiberglass ☐ Nuisance Dust ☐ Other (Specify) _____
☐ Silica ☐ Respirable Dust**Condition of Package:** ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0916-3-37	2018-0916-3-52	
2		3-38	3-53	
3		3-39	3-54	
4		3-40	3-55	
5		3-41	3-56	
6		3-42		
7		3-43		
8		3-44		
9		3-45		
10		3-46		
11		3-47		
12		3-48		
13		3-49		
14		3-50		
15		3-51		

Print Below

Sign Below

Company

Date

Time

Sampled by

Jason Lindahl

[Signature]

NVL

1/8/19

7:30

Relinquished by

Jason Lindahl

[Signature]

NVL

1/8/19

Received by

Emily S

[Signature]

NVL

1/8/19

15:10

Analyzed by

Results Called by

Results Faxed by

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

January 11, 2019



Jason Lindahl
NVL Field Services Division
4708 Aurora Ave. N.
Seattle, WA 98103

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1900609.00

Client Project: 2018-0916
Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Dear Mr. Lindahl,

Enclosed please find test results for the 29 sample(s) submitted to our laboratory for analysis on 1/9/2019.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, 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,

A handwritten signature in black ink, appearing to read "Matt Macfarlane".

Matt Macfarlane, Asbestos Lab Supervisor

The logo for NVLAP (National Voluntary Laboratory Accreditation Program). It features the letters "NVLAP" in a stylized, outlined font. The "P" is larger and more prominent, with a small circle at its base.

Lab Code: 102063-0

Enc.: Sample Results

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900609.00

Client Project #: 2018-0916

Date Received: 1/9/2019

Samples Received: 29

Samples Analyzed: 29

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl
Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Lab ID: 19002557 Client Sample #: 2018-0916-3-57

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 3 Description: Cream tile with tan streaks and clear thin adhesive surface

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
Adhesive/Binder, Binder/Filler, Calcareous particles	None Detected ND	None Detected ND
Mineral grains		

Layer 2 of 3 Description: Yellow soft mastic

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
Mastic/Binder	None Detected ND	None Detected ND

Layer 3 of 3 Description: Gray thin crumbly material on wood

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
Binder/Filler, Calcareous particles, Wood	Cellulose 5%	None Detected ND

Lab ID: 19002558 Client Sample #: 2018-0916-3-58

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2 Description: Light gray soft material on wood

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
Binder/Filler, Mineral grains, Fine particles	Synthetic fibers 3%	None Detected ND

Layer 2 of 2 Description: Tan thin brittle adhesive

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
Adhesive/Binder	None Detected ND	None Detected ND

Lab ID: 19002559 Client Sample #: 2018-0916-3-59

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 6 Description: Light tan sheet vinyl

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
Vinyl/Binder	None Detected ND	None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900609.00

Client Project #: 2018-0916

Date Received: 1/9/2019

Samples Received: 29

Samples Analyzed: 29

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 2 of 6	Description: Off-white fibrous backing with off-white soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Calcareous particles, Mastic/Binder	Cellulose 29%		None Detected ND
		Glass fibers 5%		
		Synthetic fibers 2%		
Layer 3 of 6	Description: Gray crumbly material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Calcareous particles	Cellulose 4%		None Detected ND
Layer 4 of 6	Description: Tan thin brittle adhesive on wood			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Adhesive/Binder, Wood	None Detected ND		None Detected ND
Layer 5 of 6	Description: Tan fibrous material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler	Cellulose 42%		None Detected ND
Layer 6 of 6	Description: Black asphaltic fibrous felt			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder	Cellulose 60%		None Detected ND

Lab ID: 19002560 **Client Sample #: 2018-0916-3-60**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Comments: Qualitative analysis was conducted for the presence of asbestos fibers in this 4.

Layer 1 of 4	Description: Light tan sheet vinyl			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Vinyl/Binder	None Detected ND		None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900609.00

Client Project #: 2018-0916

Date Received: 1/9/2019

Samples Received: 29

Samples Analyzed: 29

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl
Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 2 of 4	Description: Off-white fibrous backing with soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %	
	Binder/Filler, Calcareous particles, Mastic/Binder	Cellulose 37%	None Detected ND	
		Glass fibers 4%		
		Synthetic fibers 2%		
Layer 3 of 4	Description: Gray tin crumbly material on wood			
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %	
	Binder/Filler, Calcareous particles, Wood	Cellulose 2%	None Detected ND	
Layer 4 of 4	Description: Gray fibrous debris			
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %	
	Fine particles	Cellulose	None Detected ND	
		Synthetic fibers		

Lab ID: 19002561 **Client Sample #: 2018-0916-3-61**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: Off-white tile with trace thin debris			
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %	
	Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	None Detected ND	
	Sand			
Layer 2 of 4	Description: Yellow brittle mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %	
	Mastic/Binder	None Detected ND	None Detected ND	
Layer 3 of 4	Description: Trace thin gray crumbly material on wood			
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %	
	Binder/Filler, Calcareous particles, Wood	Cellulose 2%	None Detected ND	

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019


Matt Macfarlane, Asbestos Lab Supervisor

Reviewed by: Matt Macfarlane

Date: 01/11/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900609.00

Client Project #: 2018-0916

Date Received: 1/9/2019

Samples Received: 29

Samples Analyzed: 29

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 4 of 4	Description: Tan compressed fibrous material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Wood flakes	Wood fibers 62%		None Detected ND

Lab ID: 19002562 **Client Sample #: 2018-0916-3-62**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Comments: Qualitative analysis was conducted for the presence of asbestos fibers in this layer 2.

Layer 1 of 2	Description: Brown flat hard compressed fibrous material with cream surface and trace paint			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Adhesive/Binder, Binder/Filler, Paint	Cellulose 97%		None Detected ND

Layer 2 of 2	Description: Yellow soft mastic with trace off-white compacted powdery and debris			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder, Calcareous particles, Insect parts	Cellulose		None Detected ND
		Synthetic fibers		
		Spider silk		

Lab ID: 19002563 **Client Sample #: 2018-0916-3-63**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 5	Description: Tan soft vinyl			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Calcareous particles, Synthetic foam, Vinyl/Binder	Glass fibers 4%		None Detected ND

Layer 2 of 5	Description: Clear soft adhesive			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Adhesive/Binder	None Detected ND		None Detected ND

Layer 3 of 5	Description: Cream tile			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains	None Detected ND		None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900609.00
Client Project #: 2018-0916
Date Received: 1/9/2019
Samples Received: 29
Samples Analyzed: 29
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl
Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 4 of 5	Description: Brown brittle/soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder	None Detected ND	
Layer 5 of 5	Description: Black asphaltic fibrous backing with brown mastic an trace thin wood flakes	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder, Mastic/Binder, Wood flakes	Cellulose 32%	

Lab ID: 19002564 **Client Sample #: 2018-0916-3-64**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Beige tile with light brown streaks	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	
Layer 2 of 3	Description: Tan brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder	None Detected ND	
Layer 3 of 3	Description: Off-white chalky material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Calcareous particles, Gypsum/Binder	Cellulose 2%	

Lab ID: 19002565 **Client Sample #: 2018-0916-3-65**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Yellow sheet vinyl with thin adhesive surface	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Adhesive/Binder, Calcareous particles, Vinyl/Binder	None Detected ND	
Layer 2 of 3	Description: Off-white fibrous backing with mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % Chrysotile 28%
		Binder/Filler, Mastic/Binder	None Detected ND	

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/11/2019

Date: 01/11/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900609.00

Client Project #: 2018-0916

Date Received: 1/9/2019

Samples Received: 29

Samples Analyzed: 29

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl
Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 3 of 3	Description: Black asphaltic fibrous backing with mastic		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Asphalt/Binder, Mastic/Binder, Wood flakes	Cellulose 37%	None Detected ND

Lab ID: 19002566 **Client Sample #: 2018-0916-3-66**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Tan soft vinyl		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Calcareous particles, Synthetic foam, Vinyl/Binder	Glass fibers 5%	None Detected ND

Layer 2 of 3	Description: Cream tile		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	None Detected ND

Layer 3 of 3	Description: Tan brittle mastic		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Mastic/Binder	None Detected ND	None Detected ND

Lab ID: 19002567 **Client Sample #: 2018-0916-3-67**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 1	Description: Black asphaltic flaky material		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Asphalt/Binder, Calcareous particles	None Detected ND	Chrysotile 2%

Lab ID: 19002568 **Client Sample #: 2018-0916-3-68**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Brown flat hard compressed fibrous material with beige surface		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Adhesive/Binder, Binder/Filler	Cellulose 95%	None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900609.00

Client Project #: 2018-0916

Date Received: 1/9/2019

Samples Received: 29

Samples Analyzed: 29

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 2 of 2 **Description:** Red soft mastic with trace wood flakes

Non-Fibrous Materials:	Other Fibrous Materials: %
Mastic/Binder, Wood flakes	Wood fibers 2%

Asbestos Type: %
None Detected ND

Lab ID: 19002569 **Client Sample #: 2018-0916-3-69**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2 **Description:** Tan paper with asphalt

Non-Fibrous Materials:	Other Fibrous Materials: %
Asphalt/Binder	Cellulose 50%

Asbestos Type: %
None Detected ND

Layer 2 of 2 **Description:** Pink fibrous material

Non-Fibrous Materials:	Other Fibrous Materials: %
Adhesive/Binder	Glass fibers 72%

Asbestos Type: %
None Detected ND

Lab ID: 19002570 **Client Sample #: 2018-0916-3-70**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 4 **Description:** Tan soft vinyl

Non-Fibrous Materials:	Other Fibrous Materials: %
Calcareous particles, Synthetic foam, Vinyl/Binder	Glass fibers 4%

Asbestos Type: %
None Detected ND

Layer 2 of 4 **Description:** Cream tile with white paint

Non-Fibrous Materials:	Other Fibrous Materials: %
Binder/Filler, Calcareous particles, Mineral grains	None Detected ND
Paint	

Asbestos Type: %
None Detected ND

Layer 3 of 4 **Description:** Black soft asphaltic mastic

Non-Fibrous Materials:	Other Fibrous Materials: %
Asphalt/Binder	None Detected ND

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900609.00

Client Project #: 2018-0916

Date Received: 1/9/2019

Samples Received: 29

Samples Analyzed: 29

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl
Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 4 of 4	Description: Black asphaltic fibrous backing with brown mastic and trace wood flakes			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Mastic/Binder, Wood flakes	Cellulose 33%		None Detected ND

Lab ID: 19002571 **Client Sample #: 2018-0916-3-71**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Brown sheet vinyl with thin adhesive surface			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Adhesive/Binder, Calcareous particles, Vinyl/Binder	None Detected ND		None Detected ND

Layer 2 of 3	Description: Off-white fibrous backing with tan mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mastic/Binder	Cellulose 2%		Chrysotile 27%

Layer 3 of 3	Description: Trace thin soft back asphaltic mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder	None Detected ND		None Detected ND

Lab ID: 19002572 **Client Sample #: 2018-0916-3-72**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Brown rubbery material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Calcareous particles, Rubber/Binder	None Detected ND		None Detected ND

Layer 2 of 2	Description: Brown soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder	None Detected ND		None Detected ND

Lab ID: 19002573 **Client Sample #: 2018-0916-3-73**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900609.00

Client Project #: 2018-0916

Date Received: 1/9/2019

Samples Received: 29

Samples Analyzed: 29

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 2	Description: Brown flat hard compressed fibrous material with cream surface and trace paint			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Adhesive/Binder, Binder/Filler, Paint	Cellulose 93%		None Detected ND
Layer 2 of 2	Description: Tan soft mastic on wood			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Calcareous particles, Mastic/Binder, Wood	None Detected ND		None Detected ND

Lab ID: 19002574 **Client Sample #: 2018-0916-3-74**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Tan sheet vinyl			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Calcareous particles, Synthetic foam, Vinyl/Binder	Glass fibers 5%		None Detected ND
Layer 2 of 3	Description: Tan sheet vinyl with off-white paint			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Calcareous particles, Paint, Vinyl/Binder	None Detected ND		None Detected ND
Layer 3 of 3	Description: Off-white fibrous backing with mastic on wood			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Mastic/Binder, Wood	None Detected ND		Chrysotile 30%

Lab ID: 19002575 **Client Sample #: 2018-0916-3-75**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 6	Description: Brown flat hard compressed fibrous material with off-white surface			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Adhesive/Binder, Binder/Filler	Cellulose 95%		None Detected ND
Layer 2 of 6	Description: Tan fibrous material with yellow mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Mastic/Binder	Cellulose 36%		None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/11/2019

Date: 01/11/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900609.00

Client Project #: 2018-0916

Date Received: 1/9/2019

Samples Received: 29

Samples Analyzed: 29

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 3 of 6	Description: White foamy material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Synthetic foam	None Detected ND	
Layer 4 of 6	Description: Tan fibrous material with tan soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Mastic/Binder	Cellulose 25%	
Layer 5 of 6	Description: Light green fibrous material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler	Cellulose 19%	
Layer 6 of 6	Description: Tan chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Gypsum/Binder, Fine particles, Mica	Cellulose 20%	
			Glass fibers 2%	

Lab ID: 19002576 **Client Sample #: 2018-0916-3-76**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 4	Description: Tan soft vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Calcareous particles, Synthetic foam, Vinyl/Binder	Glass fibers 5%	
Layer 2 of 4	Description: Off-white tile with off-white paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	
		Paint		
Layer 3 of 4	Description: Yellow brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder	None Detected ND	

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Jason Lindahl
Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Batch #: 1900609.00
Client Project #: 2018-0916
Date Received: 1/9/2019
Samples Received: 29
Samples Analyzed: 29
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 4 of 4	Description: Trace thin gray crumbly material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Binder/Filler, Calcareous particles	Cellulose 2%	
				None Detected ND
Lab ID: 19002577 Client Sample #: 2018-0916-3-77				
Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104				
Layer 1 of 3	Description: Brown rubbery material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Calcareous particles, Rubber/Binder	None Detected ND	
				None Detected ND
Layer 2 of 3	Description: Off-white soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Calcareous particles, Mastic/Binder	None Detected ND	
				None Detected ND
Layer 3 of 3	Description: Brown soft mastic with white paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder, Paint	None Detected ND	
				None Detected ND
Lab ID: 19002578 Client Sample #: 2018-0916-3-78				
Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104				
Layer 1 of 5	Description: Gray woven fibrous material with white mesh and off-white mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Binder/Filler, Calcareous particles, Mastic/Binder	Synthetic fibers 88%	
				None Detected ND
Layer 2 of 5	Description: Off-white tile with white paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	
				None Detected ND
				Paint

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900609.00
Client Project #: 2018-0916
Date Received: 1/9/2019
Samples Received: 29
Samples Analyzed: 29
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl
Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 3 of 5	Description: Tan brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder	None Detected ND	
Layer 4 of 5	Description: Black soft asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder	None Detected ND	
Layer 5 of 5	Description: Black asphaltic fibrous backing with brown mastic on wood	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder, Mastic/Binder, Wood	Cellulose 35%	

Lab ID: 19002579 **Client Sample #: 2018-0916-3-79**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 1	Description: White soft putty material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Calcareous particles, Sand	None Detected ND	

Lab ID: 19002580 **Client Sample #: 2018-0916-3-80**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 1	Description: Black asphaltic fibrous material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder, Mica	Cellulose 58%	

Lab ID: 19002581 **Client Sample #: 2018-0916-3-81**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 3	Description: Black asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder	None Detected ND	

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Reviewed by: Matt Macfarlane

Date: 01/11/2019

Date: 01/11/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900609.00

Client Project #: 2018-0916

Date Received: 1/9/2019

Samples Received: 29

Samples Analyzed: 29

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 2 of 3	Description: Black asphaltic fibrous material with granules/mineral grains and trace white paint		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Asphalt/Binder, Granules, Mineral grains	Glass fibers 23%	None Detected ND
	Paint		

Layer 3 of 3	Description: Black asphaltic fibrous felt		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Asphalt/Binder	Cellulose 60%	None Detected ND

Lab ID: 19002582 **Client Sample #: 2018-0916-3-82**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 1	Description: Black asphaltic fibrous built-up material with granules and trace wood flakes		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Asphalt/Binder, Granules, Mineral grains	Glass fibers 35%	None Detected ND
	Wood flakes		

Lab ID: 19002583 **Client Sample #: 2018-0916-3-83**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 1	Description: Black asphaltic fibrous built-up material with granules and trace wood flakes		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Asphalt/Binder, Granules, Mineral grains	Glass fibers 32%	None Detected ND
	Wood flakes		

Lab ID: 19002584 **Client Sample #: 2018-0916-3-84**

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 1	Description: Black asphaltic fibrous built-up material with granules and trace wood flakes		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Asphalt/Binder, Granules, Mineral grains	Glass fibers 33%	None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900609.00

Client Project #: 2018-0916

Date Received: 1/9/2019

Samples Received: 29

Samples Analyzed: 29

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Wood flakes

Lab ID: 19002585

Client Sample #: 2018-0916-3-85

Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Layer 1 of 1 **Description:** Brown soft putty material with white paint on wood

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Calcareous particles, Insect parts

Spider silk <1%

None Detected ND

Paint, Wood

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019


Matt Macfarlane, Asbestos Lab Supervisor

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

NVL

Company NVL Field Services Division Address 4708 Aurora Ave. N. Seattle, WA 98103 Project Manager Mr. Jason Lindahl Phone (206) 547-0100 Cell (763) 286-3494	NVL Batch Number 1900609.00 TAT 2 Days AH No Rush TAT Due Date 1/11/2019 Time 3:15 PM Email jason.l@nvlabs.com Fax (206) 634-1936
--	--

Project Name/Number: 2018-0916 **Project Location:** "Building 21" 101-103 8th Ave. Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 29

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19002557	2018-0916-3-57		A
2	19002558	2018-0916-3-58		A
3	19002559	2018-0916-3-59		A
4	19002560	2018-0916-3-60		A
5	19002561	2018-0916-3-61		A
6	19002562	2018-0916-3-62		A
7	19002563	2018-0916-3-63		A
8	19002564	2018-0916-3-64		A
9	19002565	2018-0916-3-65		A
10	19002566	2018-0916-3-66		A
11	19002567	2018-0916-3-67		A
12	19002568	2018-0916-3-68		A
13	19002569	2018-0916-3-69		A
14	19002570	2018-0916-3-70		A
15	19002571	2018-0916-3-71		A
16	19002572	2018-0916-3-72		A
17	19002573	2018-0916-3-73		A
18	19002574	2018-0916-3-74		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/9/19	1515
Analyzed by	Alla Prysyazhnyuk		NVL	1/11/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/9/2019
 Time: 3:45 PM
 Entered By: Shaina Mitchell

ASBESTOS LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Jason Lindahl
Phone (206) 547-0100
Cell (763) 286-3494
NVL Batch Number 1900609.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/11/2019 **Time** 3:15 PM
Email jason.l@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0916 **Project Location:** "Building 21" 101-103 8th Ave. Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 29

Rush Samples

	Lab ID	Sample ID	Description	A/R
19	19002575	2018-0916-3-75		A
20	19002576	2018-0916-3-76		A
21	19002577	2018-0916-3-77		A
22	19002578	2018-0916-3-78		A
23	19002579	2018-0916-3-79		A
24	19002580	2018-0916-3-80		A
25	19002581	2018-0916-3-81		A
26	19002582	2018-0916-3-82		A
27	19002583	2018-0916-3-83		A
28	19002584	2018-0916-3-84		A
29	19002585	2018-0916-3-85		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/9/19	1515
Analyzed by	Alla Prysazhnyuk		NVL	1/11/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special
Instructions:

Date: 1/9/2019
 Time: 3:45 PM
 Entered By: Shaina Mitchell

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900609

S

Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 21" 101-103 8th Ave
Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0916

Total Samples 29

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Asbestos Bulk	<input checked="" type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	<input type="checkbox"/> All 8	Other Metals
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)	<input type="checkbox"/> All 3
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input type="checkbox"/> Lead (Pb)	<input type="checkbox"/> Copper (Cu)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Nickel (Ni)
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify) _____		<input type="checkbox"/> Zinc (Zn)
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0916-3-57		
2		3-58		
3		3-59		
4		3-60		
5		3-61		
6		3-62		
7		3-63		
8		3-64		
9		3-65		
10		3-66		
11		3-67		
12		3-68		
13		3-69		
14		3-70		
15		3-71		

Print Below	Sign Below	Company	Date	Time
Sampled by Jason Lindahl	[Signature]	NVL	1/9/19	7:30
Relinquished by Jason Lindahl	[Signature]	NVL	1/9/19	
Received by S. Mitchell	[Signature]	NVL	1/9/19	1515
Analyzed by				
Results Called by				
Results Faxed by				

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206 547.0100 | f 206 634.1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900609

Client NVL Laboratories Inc
Street 4708 Aurora Ave N
Seattle, WA 98103
Project Manager Syed Hasan
Project Location "Building 21" 101-103 8th Ave
Seattle, WA 98104

NVL Batch Number _____
Client Job Number 2018-0916
Total Samples ~~28~~ 29
Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

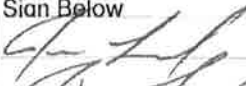
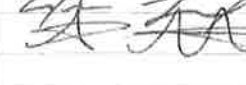

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Asbestos Bulk	<input checked="" type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	<input type="checkbox"/> All 8	Other Metals
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)	<input type="checkbox"/> All 3
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input type="checkbox"/> Lead (Pb)	<input type="checkbox"/> Copper (Cu)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Nickel (Ni)
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify) _____		<input type="checkbox"/> Zinc (Zn)
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0916-3-72		
2		3-73		
3		3-74		
4		3-75		
5		3-76		
6		3-77		
7		3-78		
8		3-79		
9		3-80		
10		3-81		
11		3-82		
12		3-83		
13		3-84		
14		3-85		
15				

Print Below	Sign Below	Company	Date	Time
Sampled by Jason Lindahl		NVL	1/9/19	7:30
Relinquished by Jason Lindahl		NVL	1/9/19	
Received by S. Mitchell		NVL	1/9/19	1515
Analyzed by				
Results Called by				
Results Faxed by				

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

January 10, 2019

Derrick Gallard

NVL Field Services Division

4708 Aurora Ave. N.
Seattle, WA 98103



RE: Metals Analysis; NVL Batch # 1900608.00

Dear Mr. Gallard,

Enclosed please find the test results for samples submitted to our laboratory for analysis. Preparation of these samples was conducted following protocol outlined in EPA Method SW 846 -3051 unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with U.S. EPA, NIOSH, OSHA and other ASTM methods.

For matrix materials submitted as paint, dust wipe, soil or TCLP samples, analysis for the presence of total metals is conducted using published U.S. EPA Methods. Paint and soil results are usually expressed in mg/Kg which is equivalent to parts per million (ppm). Lead (Pb) in paint is usually expressed in mg/Kg (ppm), Percent (%) or mg/cm² by area. Dust wipe sample results are usually expressed in ug/wipe and ug/ft². TCLP samples are reported in mg/L (ppm). For air filter samples, analyses are conducted using NIOSH and OSHA Methods. Results are expressed in ug/filter and ug/m³. Other matrix materials are analyzed accordingly using published methods or specified by client. The reported test results pertain only to items tested and 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 details.

This report is considered highly confidential and will not be released without your approval. 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. If you need further assistance please feel free to call us at 206-547-0100 or 1-888-NVLLABS.

Sincerely,

A handwritten signature in black ink, appearing to read "Shalini Patel".

Shalini Patel, Lab Supervisor

Enc.: Sample results



Analysis Report

Total Lead (Pb)

NVL

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900608.00

Matrix: Paint
Method: EPA 3051/7000B
Client Project #: 2018-0916
Date Received: 1/9/2019
Samples Received: 6
Samples Analyzed: 6

Attention: Mr. Derrick Gallard

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Lab ID	Client Sample #	Sample Weight (g)	RL in mg/Kg	Results in mg/Kg	Results in percent
19002551	2018-0916-Pb-1	0.1830	55	< 55	<0.0055
19002552	2018-0916-Pb-2	0.1920	52	< 52	<0.0052
19002553	2018-0916-Pb-3	0.1281	78	13000	1.3
19002554	2018-0916-Pb-4	0.0530	190	< 190	<0.019
19002555	2018-0916-Pb-5	0.1914	52	4500	0.45
19002556	2018-0916-Pb-6	0.1832	55	12000	1.2


Sampled by: Client

Analyzed by: Yasuyuki Hida

Reviewed by: Shalini Patel

Date Analyzed: 01/09/2019

Date Issued: 01/10/2019


Shalini Patel, Lab Supervisor

mg/ Kg =Milligrams per kilogram

Percent = Milligrams per kilogram / 10000

Note : Method QC results are acceptable unless stated otherwise.

Unless otherwise indicated, the condition of all samples was acceptable at time of receipt.

RL = Reporting Limit

'<' = Below the reporting Limit

Bench Run No: 2019-0109-2

FAA-02

LEAD LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Derrick Gallard
Phone (206) 547-0100
Cell (206) 707-3236
NVL Batch Number 1900608.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/11/2019 **Time** 3:15 PM
Email derrick.g@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0916 **Project Location:** "Building 21" 101-103 8th Ave. Seattle, WA 98104

Subcategory Flame AA (FAA)

Item Code FAA-02 EPA 7000B Lead by FAA <paint>

Total Number of Samples 6

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19002551	2018-0916-Pb-1		A
2	19002552	2018-0916-Pb-2		A
3	19002553	2018-0916-Pb-3		A
4	19002554	2018-0916-Pb-4		A
5	19002555	2018-0916-Pb-5		A
6	19002556	2018-0916-Pb-6		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/9/19	1515
Analyzed by	Yasuyuki Hida		NVL	1/9/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					
Special Instructions:					

Date: 1/9/2019
 Time: 3:42 PM
 Entered By: Shaina Mitchell

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900608

Client NVL Laboratories Inc

Street 4708 Aurora Ave N

Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 21" 101-103 8th Ave
Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0916

Total Samples 6

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

☐ Asbestos Air ☐ PCM (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II) ☐ Other

☐ Asbestos Bulk ☐ PLM (EPA/600/R-93/116) ☐ PLM (EPA Point Count) ☐ PLM (EPA Gravimetry) ☐ TEM BULK

☐ Mold/Fungus ☐ Mold Air ☐ Mold Bulk ☐ Rotometer Calibration

METALS

☒ Total Metals

☐ TCLP

☐ Cr 6

Det. Limit

☒ FAA (ppm)

☐ ICP (ppm)

☐ GFAA (ppb)

Matrix

☐ Air Filter

☐ Drinking water

☐ Dust/wipe (Area)

☐ Soil

☒ Paint Chips in %

☐ Paint Chips in cr

RCRA Metals

☐ Arsenic (As)

☐ Barium (Ba)

☐ Cadmium (Cd)

☐ All 8

☐ Chromium (Cr)

☒ Lead (Pb)

☐ Mercury (Hg)

Other Metals

☐ All 3

☐ Copper (Cu)

☐ Nickel (Ni)

☐ Zinc (Zn)

☐ Other Types
of Analysis

☐ Fiberglass

☐ Silica

☐ Nuisance Dust

☐ Respirable Dust

☐ Other (Specify) _____

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0916-Pb-1		
2		-Pb-2		
3		-Pb-3		
4		-Pb-4		
5		-Pb-5		
6		-Pb-6		
7				
8				
9				
10				
11				
12				
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	DEPRICK		NVL	11/9/19	7:30
Relinquished by	DEPRICK		NVL	11/9/19	
Received by	S. Mitchell		NVL	11/9/19	15:15
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

January 11, 2019

Derrick Gallard

NVL Field Services Division

4708 Aurora Ave. N.

Seattle, WA 98103



RE: Metals Analysis; NVL Batch # 1900599.00

Dear Mr. Gallard,

Enclosed please find the test results for samples submitted to our laboratory for analysis. Preparation of these samples was conducted following protocol outlined in EPA Method SW 846 -3051 unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with U.S. EPA, NIOSH, OSHA and other ASTM methods.

For matrix materials submitted as paint, dust wipe, soil or TCLP samples, analysis for the presence of total metals is conducted using published U.S. EPA Methods. Paint and soil results are usually expressed in mg/Kg which is equivalent to parts per million (ppm). Lead (Pb) in paint is usually expressed in mg/Kg (ppm), Percent (%) or mg/cm² by area. Dust wipe sample results are usually expressed in ug/wipe and ug/ft². TCLP samples are reported in mg/L (ppm). For air filter samples, analyses are conducted using NIOSH and OSHA Methods. Results are expressed in ug/filter and ug/m³. Other matrix materials are analyzed accordingly using published methods or specified by client. The reported test results pertain only to items tested and 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 details.

This report is considered highly confidential and will not be released without your approval. 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. if you need further assistance please feel free to call us at 206-547-0100 or 1-888-NVLLABS.

Sincerely,

A handwritten signature in black ink, appearing to read "Shalini Patel".

Shalini Patel, Lab Supervisor

Enc.: Sample results



Analysis Report

Toxicity Characteristic Leaching Procedure - Lead (Pb)

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900599.00

Matrix: Bulk

Method: EPA 1311/7000B

Client Project #: 2018-0916

Date Received: 1/9/2019

Samples Received: 1

Samples Analyzed: 1

Attention: Mr. Derrick Gallard

Project Location: "Building 21" 101-103 8th Ave. Seattle, WA 98104

Lab ID	Client Sample #	RL mg/ L	Results in mg/L	Results in ppm
19002508	2018-0916-TCLP	0.5	0.6	0.6

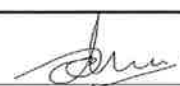
Sampled by: Client

Analyzed by: Yasuyuki Hida

Reviewed by: Shalini Patel

Date Analyzed: 01/11/2019

Date Issued: 01/11/2019


Shalini Patel, Lab Supervisor

mg/ L =Milligrams per liter

ppm = parts per million

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.

Bench Run No: 2019-0110-10

TCLP-1

LEAD LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Derrick Gallard
Phone (206) 547-0100
Cell (206) 707-3236
NVL Batch Number 1900599.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/11/2019 **Time** 3:15 PM
Email derrick.g@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0916 **Project Location:** "Building 21" 101-103 8th Ave. Seattle, WA 98104

Subcategory Flame AA (FAA)

Item Code TCLP-1 EPA 1311/7000B Lead by FAA <TCLP>

Total Number of Samples 1

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19002508	2018-0916-TCLP		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/9/19	1515
Analyzed by	Yasuyuki Hida		NVL	1/11/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special
Instructions:

Date: 1/9/2019
 Time: 3:15 PM
 Entered By: Shaina Mitchell

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206 547 0100 | f 206 634 1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900599



Client NVL Laboratories Inc
Street 4708 Aurora Ave N
 Seattle, WA 98103
Project Manager Syed Hasan
Project Location "Building 21" 101-103 8th Ave
 Seattle, WA 98104

NVL Batch Number
Client Job Number 2018-0916
Total Samples 1

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

☐ **Asbestos Air** ☐ PCM (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II) ☐ Other

☐ **Asbestos Bulk** ☐ PLM (EPA/600/R-93/116) ☐ PLM (EPA Point Count) ☐ PLM (EPA Gravimetry) ☐ TEM BULK

☐ **Mold/Fungus** ☐ Mold Air ☐ Mold Bulk ☐ Rotometer Calibration

METALS

☐ Total Metals

☒ TCLP

☐ Cr 6

Det. Limit

☐ FAA (ppm)

☐ ICP (ppm)

☐ GFAA (ppb)

Matrix

☐ Air Filter

☐ Drinking water

☐ Dust/wipe (Area)

☐ Soil

☐ Paint Chips in %

☐ Paint Chips in cr

RCRA Metals

☐ Arsenic (As)

☐ Barium (Ba)

☐ Cadmium (Cd)

☐ All 8

☐ Chromium (Cr)

☒ Lead (Pb)

☐ Mercury (Hg)

Other Metals

☐ All 3

☐ Copper (Cu)

☐ Nickel (Ni)

☐ Zinc (Zn)

☐ **Other Types of Analysis**

☐ Fiberglass

☐ Silica

☐ Nuisance Dust

☐ Respirable Dust

☐ Other (Specify) _____

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0916-TCLP		
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	DEBILK	74	NVL	11/9/19	7:30
Relinquished by	DEBILK		NVL	11/9/19	
Received by	S M Farrell	[Signature]	NVL	11/9/19	1515
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to



Appendix C

AHERA Certifications & Laboratory Qualification



AIHA

Laboratory Accreditation
Programs, LLC

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 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

LABORATORY ACCREDITATION PROGRAMS

- | | |
|-------------------------------|--------------------------------------|
| ✓ INDUSTRIAL HYGIENE | Accreditation Expires: June 01, 2019 |
| ✓ ENVIRONMENTAL LEAD | Accreditation Expires: June 01, 2019 |
| ✓ ENVIRONMENTAL MICROBIOLOGY | Accreditation Expires: June 01, 2019 |
| <input type="checkbox"/> FOOD | Accreditation Expires: |
| ✓ UNIQUE SCOPES | Accreditation Expires: June 01, 2019 |

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 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

Wm Walsh

William Walsh, CIH

Chairperson, Analytical Accreditation Board

Cheryl O. Morton

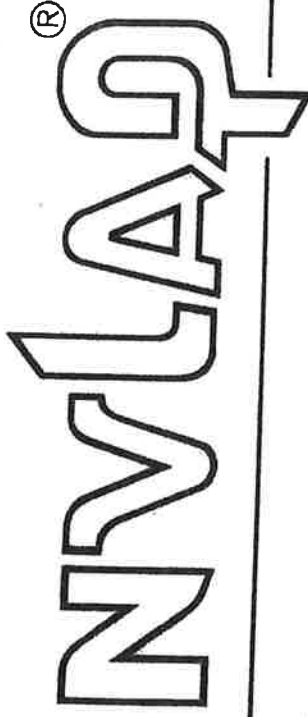
Cheryl O. Morton

Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision 15: 03/30/2016

Date Issued: 05/31/2017

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

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 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).*

2018-10-01 through 2019-09-30

Effective Dates



John S. Gorman

For the National Voluntary Laboratory Accreditation Program



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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

Code

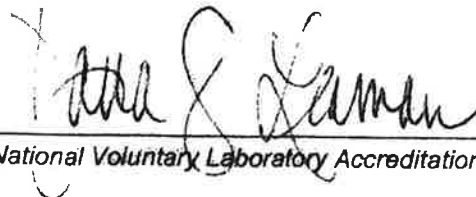
Description

18/A01

EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples

18/A03

EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials


For the National Voluntary Laboratory Accreditation Program

Certificate of Completion

This is to certify that

Derrick S. Gallard

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

169720

Certificate Number



Oct 10, 2018 Expires in 1 year.

Date(s) of Training

Exam Score: N/A
if appropriate.

A handwritten signature in black ink, appearing to be "R. D.", written over a horizontal line.

Instructor

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

STATE OF WASHINGTON

Department of Commerce

Lead-Based Paint Abatement Program

Derrick Gallard

*Has fulfilled the certification requirements of
WAC 365-230
and has been certified to conduct lead-based
paint activities as a
Inspector*

<u>Certification #</u>	<u>Issuance Date</u>	<u>Expiration Date</u>
7090	02/13/2018	02/13/2021

Certificate of Completion

This is to certify that

Jason Lindahl

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

167717

Certificate Number



May 23, 2018 Expires in 1 year.

Date(s) of Training

Exam Score: N/A
if appropriate:

A handwritten signature in black ink, appearing to be "R. B.", written over a horizontal line.

Instructor

ARGUS PACIFIC, INC / 1900 WEST NICKERSON ST, SUITE 315 / SEATTLE, WASHINGTON 98119 / 206.285.3373 / ARGUSPACIFIC.COM

STATE OF WASHINGTON

Department of Commerce

Lead-Based Paint Abatement Program

Jason Lindahl

*Has fulfilled the certification requirements of
WAC 365-230
and has been certified to conduct lead-based
paint activities as a
Inspector*

<u>Certification #</u>	<u>Issuance Date</u>	<u>Expiration Date</u>
7145	03/20/2018	03/20/2021



Hazardous Materials Survey

"Building #22"
718 Yesler Way
Seattle, WA 98104



Prepared For
Mr. George Barlet
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190 Queen Anne Avenue N
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Inspected By	Derrick Gallard / Jason Lindahl
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1.0 SCOPE OF WORK

A Hazardous Materials Survey was conducted on apartment building #22 located at 718 Yesler Way, Seattle, WA 98104 on January 10, 2019.

Derrick Gallard and Jason Lindahl (AHERA Building Inspectors and WA – Commerce Certified Lead Inspectors), conducted this survey at the request of Mr. George Barlet of Seattle Housing Authority.

The purpose of this survey was to identify suspect asbestos containing building materials, lead paint coatings, and Mercury (Hg) / PCB containing devices which would be impacted by the planned demolition of the structure. Destructive sampling methods were utilized to collect samples of suspect building materials. No soft/limited demolition was performed during this inspection. Hidden materials may exist within the structure, and all suspect materials must be treated as hazardous until testing proves otherwise.

This survey constitutes a survey of accessible suspect ACM in the project area and was conducted in accordance with:

The National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 Code of Federal Regulations (CFR) Part 61, Subpart M requires a survey by an accredited asbestos inspector prior to demolition of a structure.

This asbestos survey also satisfies the requirements for "Good Faith" inspection outlined in Washington Administrative Code (WAC) 296-62-07721 (2) Communication of hazards, which requires the owner of a structure to provide contractors with a written report identifying the asbestos-containing materials expected to be disturbed during renovation or demolition.

The asbestos survey section is written to comply with the AHERA asbestos sampling procedure as stated in 40 CFR 763.86. This protocol is required under the Puget Sound Clean Air Agency (PSCAA) Regulation III, Article IV, rev. March 26, 2009) for all asbestos surveys prior to a building demolition.

Recommendations have been included for compliance with WAC 296-155-176 "Lead in Construction" and WAC 173-090 "Waste Disposal Regulations". The Lead in Construction regulations are designed to protect workers from lead hazards during construction and demolition activities.

Fluorescent light tubes, HID lamps, and thermostats contain Mercury (Hg) are classified as universal waste by the EPA and Washington Department of Ecology. Recommendations have been included for compliance with WAC 173-303-573, "The Universal Waste Rule for Dangerous Waste".

A floor plan indicating locations of samples collected by NVL personnel has been included in **Appendix A**.

2.0 SURVEY METHOD

Asbestos Survey Method

The NVL Labs field inspector is an Asbestos Building Inspector, certified under the requirements of the United States Environmental Protection Agency (EPA) Asbestos Hazard Emergency Response Act (AHERA) regulation 40 CFR 763, Subpart E. A copy of his certificate is provided in Appendix C.

The AHERA Guidelines dictate the following:

The inspector must determine *homogenous areas*, which are defined as an area of Thermal System Insulation, Surfacing Material, or Miscellaneous Material that is uniform in texture and color.

Once homogenous areas have been determined, the inspector must determine whether or not material is friable or non-friable. **Friable** is defined as a material, that when dry, can be crushed, pulverized, or reduced to dust using hand pressure, and **non-friable** material is defined as a material, that when dry, *cannot* be crushed pulverized or reduced to dust using hand pressure. Materials normally defined as non-friable can become friable by definition if sufficiently damaged.

Once friability has been determined, the materials suspected of containing asbestos are divided into one of three categories: Thermal System Insulation (TSI), Surfacing Material (SM), or Miscellaneous Material (MM). Generally speaking, TSI and SM are considered to be friable, with the exception of TSI where the structural integrity of the insulation is intact and the protective out wrap is undamaged.

Once materials are divided into one of the categories, samples are collected in the following manner:

Friable Thermal System Insulation:

1. Inspector shall collect three (3) randomly distributed samples;
2. Inspector shall collect a minimum of one sample of each TSI materials that appears to have been used as a patch, as long as the patch is less than 6 linear feet or 6 square feet;
3. Inspector shall collect in a manner sufficient, samples from areas of TSI applied to fittings, tees, and joints.

Friable Surfacing Material:

1. Inspector shall collect samples in random manner of surfacing materials as follows:
 - a. Collect three bulk samples from an area believed to be homogeneous (defined as a material that appears to be the same or similar and was installed at the same time) that is 1,000 square feet or less in size;
 - b. Collect five bulk samples from an area believed to be homogeneous that is greater than 1,000 square feet in size, but less than 5,000 square feet in size;
 - c. Collect seven bulk samples from an area believed to be homogeneous that is greater than 5,000 square feet.

2.0 SURVEY METHOD (continued)

Miscellaneous Materials:

1. Inspector shall collect samples in a manner and number sufficient to determine if the material is asbestos-containing or not.

All Materials Determined to Be Non-Friable:

1. Inspector shall collect samples in a manner and number sufficient to determine if the material is asbestos containing or not.

In addition to these sampling requirements, the AHERA Building Inspector is required to assess the following of each material that is found to be positive for asbestos:

1. The condition of each material;
2. Accessibility;
3. Possibility for air erosion.

Once the samples have been collected, they must be analyzed by an accredited laboratory, and they must be analyzed using polarized light microscopy methods, commonly referred to as EPA Method 600/R-93/116.

NVL Labs collected samples and obtained analytical data for suspect asbestos-containing materials identified in the building. Once collected, each bulk sample was sealed in an unadulterated plastic bag to eliminate the possibility of cross-contamination. "Chain-of-Custody" tracking was followed to maintain sample integrity during handling and data reporting at NVL Labs.

A walk-through inspection of all accessible areas of the structures was performed to identify potential asbestos-containing materials. The walk-through inspection included a review of the internal and external aspects of the structures. The locations and types of potential asbestos-containing materials were noted.

Homogeneous Materials

Homogeneous materials are defined as an area of asbestos-containing material or presumed asbestos-containing material which appears similar throughout in terms of color, texture, and date of material application. The report listing for homogenous materials will appear as follows:

Sample Number	Material Description by Layer	Location	Asbestos	Quantity	Friable
#	Layer 1 is not asbestos-containing Layer 2 is asbestos-containing	Location description	1. % 2. %	"X" LF/ft ²	Yes/No

Lead Survey Method

NVL Labs collected representative samples of paint from the interior and exterior of the building within the project scope. Once collected, each bulk sample was sealed in an unadulterated plastic bag to eliminate the possibility of cross-contamination. "Chain-of-Custody" tracking was followed to maintain sample integrity during handling and data reporting at NVL Labs. Sampling was representative of all layers of paint. Copies of laboratory reports and field data forms for lead paint are in Appendix B.

2.0 SURVEY METHOD (continued)

TCLP Sampling Method

A representative composite sample of the proportionate components which make up the areas to be demolished was collected and analyzed according to ASTM Standard. E 1908-97, as suggested by the Washington State Department of Ecology. Waste Characterization Plan number three of this standard, "Composite Sample and Demolish", was used to access the lead (Pb) content of the total debris.

3.0 LABORATORY INFORMATION

Laboratory Analysis: Asbestos

In accordance with 40 CFR Chapter 1 (7-01-07 Edition) Part 763, Subpart E, Appendix E, asbestos samples are analyzed at NVL Labs using polarized light microscopy (PLM) with dispersion staining. If samples are not homogeneous, then sub-samples of the components are analyzed separately. All bulk samples are analyzed using EPA Method 600/R-93/116 with the following measurement uncertainties for reported % asbestos: 1%=0-3%, 5%≥1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%. Only materials containing more than 1% total asbestos were classified as "asbestos-containing" based on EPA, state, and local regulations.

Findings for samples containing more than one separable layer of materials are reported for each layer. The asbestos concentration in the sample is determined by visual estimation.

NVL Labs is accredited by the National Institute of Standards and Technology (NIST) under the National Volunteer Laboratory Accreditation Program (NVLAP) program for bulk asbestos fiber analysis; *NVLAP Lab Code 102063-0*

Laboratory Analysis: Lead (Pb)

Samples are analyzed for the presence of inorganic lead using atomic absorption spectroscopy (AAS) in accordance with method EPA 3051/7000B. This method reports results in milligrams per kilogram (mg/kg) or its equivalent, parts per million (ppm).

Laboratory Accreditation

Professional accreditations for NVL Laboratories, Inc. include the following:

NVL Laboratories, Inc. is currently accredited by the National Institute of Standards and Technology (NIST) under the National Volunteer Laboratory Accreditation Program (NVLAP) program for bulk asbestos fiber analysis.

NVLAP Lab Code 102063-0

NVL Laboratories, Inc. is approved by the American Industrial Hygiene Association (AIHA) Asbestos Analysts Registry (AAR) program for airborne asbestos fiber analysis.

AAR Counter ID 7412

NVL Laboratories, Inc. is currently accredited by the American Industrial Hygiene Association (AIHA) under the Industrial Hygiene Laboratory Accreditation Program (IHLAP). The IHLAP program is designed specifically for laboratories involved in analyzing samples to evaluate workplace exposure. *IHLAP Certification Number 563*

4.0 BUILDING DESCRIPTION

General Building Type	This is a two-story 6-unit apartment building of traditional wood framed construction.
Primary External Components	The exterior of the building has vinyl and wood siding.
Foundation Type	The building has an on-grade concrete foundation.
Roofing Material(s)	The building has tri-tab shingle and rolled asphalt roofing.
Window Type(s)	The building has vinyl framed windows with exterior caulking.
Flooring	The building has vinyl tiles and sheet vinyl flooring.
Thermal Systems with Insulation	The building has baseboard heating system, with no visible suspect thermal insulation.
Finishing	The building is finished with drywall and plaster.

5.0 FINDINGS

Inventory of Suspect Asbestos-Containing Materials

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0917-1-1	1: Skim coat with paint	Lower level, room 5, wall	1: ND		
2018-0917-1-2	2: Drywall	Upper level, room 12, wall	2: ND		
2018-0917-1-3	1: Skim coat with paint	Lower level, room 14, wall	1: ND		
2018-0917-1-4	2: Drywall	Lower level, room 18, ceiling	2: ND		
2018-0917-1-5	1: Skim coat with paint 2: Skim coat with paint 3: Drywall	Lower level, room 23, ceiling	1: ND 2: ND 3: ND		
2018-0917-1-6	1: Skim coat with paint	Upper level, room 29, wall	1: ND		
2018-0917-1-7	2: Drywall	Upper level, room 35, wall	2: ND		
2018-0917-3-1	1: Joint compound with paint 2: Joint compound 3: Drywall	Upper level, room 11, wall joint	1: ND 2: ND 3: ND		
2018-0917-3-2	Drywall with paint	Upper level, room 21, mid wall	ND		
2018-0917-3-3	1: White tile 2: Tan mastic 3: Black felt	Lower level, room 2 & 4, floor	1: ND 2: ND 3: ND		
2018-0917-3-4	1: Tan sheet vinyl 2: White backing with mastic 3: Black felt	Lower level, room 3, floor	1: ND 2: 56% 3: ND	35 ft ²	Yes
2018-0917-3-5	1: Caulking 2: Tan laminate 3: Brown mastic 4: Foamy board 5: Colorless mastic 6: Leveler	Lower level, room 3 & 9, tub surround	1: ND 2: ND 3: ND 4: ND 5: ND 6: ND		
2018-0917-3-6	1: 3" Brown vinyl cove base 2: Tan mastic 3: Leveler	Lower level, room 1, wall base	1: ND 2: ND 3: ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0917-3-7	Black sink undercoating	Lower level, room 4 & 10, sinks	5%	2 sinks	No
2018-0917-3-8	1: Tan laminate 2: Red mastic	Lower level, room 4 & 10, counter	1: ND 2: ND		
2018-0917-3-9	1: White tile 2: Yellow mastic 3: Leveler 4: Beige tile 5: Black felt with brown mastic 6: Black mastic	Lower level, room 1, 5, 6, floor	1: ND 2: ND 3: ND 4: 5% 5: ND 6: ND	260 ft ²	No
2018-0917-3-10	1: Black material with paper & foil 2: Brown insulation 3: Drywall	Lower level, room 5, wall base	1: ND 2: ND 3: ND		
2018-0917-3-11	1: White tile 2: Yellow mastic	Upper level, room 7, landings / floor	1: ND 2: ND		
2018-0917-3-12	1: Brown sheet vinyl 2: White backing with mastic	Upper level, room 7, steps	1: ND 2: 52%	20 ft ²	Yes
2018-0917-3-13	1: 6" Brown vinyl cove base 2: Brown mastic	Upper level, room 7, riser	1: ND 2: ND		
2018-0917-3-14	1: Tan sheet vinyl 2: White backing with mastic	Upper level, room 9, floor	1: ND 2: 53%	35 ft ²	Yes
2018-0917-3-15	1: White tile 2: White mastic 3: Leveler 4: White tile 5: Black material with mastic 6: Leveler 7: Tan mastic	Upper level, room 10, floor	1: ND 2: ND 3: ND 4: ND 5: ND 6: ND 7: ND		
2018-0917-3-16	1: White tile 2: Yellow mastic 3: Beige tile	Upper level, room 7, 8, 11, 12, floor	1: ND 2: ND 3: ND		
2018-0917-3-17	Gray coating	Upper level, room 13, floor	ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0917-3-18	1: White tile 2: Brown material with mastic 3: Black mastic 4: Black felt	Lower level, room 14, landings / floor	1: ND 2: ND 3: 6% 4: ND	70 ft ²	No
2018-0917-3-19	1: Brown sheet vinyl 2: White backing with mastic	Lower level, room 14, steps	1: ND 2: 53%	40 ft ²	Yes
2018-0917-3-20	1: 6" Brown vinyl cove base 2: Brown mastic	Lower level, room 14, risers	1: ND 2: ND		
2018-0917-3-21	1: Beige sheet vinyl 2: White backing with mastic 3: Caulking 4: Black felt	Lower level, room 16 & 17, floor	1: ND 2: ND 3: ND 4: ND		
2018-0917-3-22	1: Tan laminate 2: Brown mastic 3: Foamy board 4: Colorless mastic 5: Brown GWB	Lower level, room 16, 21, 27, 34, tub surround	1: ND 2: ND 3: ND 4: ND 5: ND		
2018-0917-3-23	1: White tile 2: Brown material & black mastic	Lower level, room 18 & 19, floor	1: ND 2: ND		
2018-0917-3-24	1: Tan sheet vinyl 2: White backing with mastic 3: Black felt with mastic	Lower level, room 21, floor	1: ND 2: 27% 3: ND	35 ft ²	Yes
2018-0917-3-25	1: Beige tile 2: Tan mastic 3: Black felt with mastic	Lower level, room 22, floor	1: ND 2: ND 3: ND		
2018-0917-3-26	Black sink undercoating	Lower level, room 17, 22, 28, 34, sink	2%	4 sinks	No
2018-0917-3-27	1: White tile 2: Yellow mastic 3: Beige tile 4: Black mastic 5: Black felt with mastic	Lower level, room 20, 23, 24, floor	1: ND 2: ND 3: 5% 4: ND 5: ND	375 ft ²	No

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0917-3-28	1: Tan laminate 2: Tan mastic 3: Leveler	Lower level, room 24, window-sill	1: ND 2: ND 3: ND		
2018-0917-3-29	1: White tile 2: Brown mastic 3: Black felt with mastic	Upper level, room 25, floor	1: ND 2: ND 3: ND		
2018-0917-3-30	1: Tan sheet vinyl 2: White backing with mastic 3: Leveler 4: Tan adhesive	Upper level, room 27 & 28, floor	1: ND 2: ND 3: ND 4: ND		
2018-0917-3-31	1: Tan laminate 2: Yellow mastic 3: Beige laminate 4: Red mastic	Lower level, room 17, 22, 28, 34, counter	1: ND 2: ND 3: ND 4: ND		
2018-0917-3-32	1: White tile 2: Yellow mastic 3: Leveler	Upper level, room 26 & 29, floor	1: ND 2: ND 3: ND		
2018-0917-3-33	1: White tile 2: Yellow mastic 3: Red adhesive	Upper level, room 30, floor	1: ND 2: ND 3: ND		
2018-0917-3-34	1: Beige sheet vinyl 2: Clear adhesive with leveler 3: Red adhesive	Upper level, room 33 & 34, floor	1: ND 2: ND 3: ND		
2018-0917-3-35	1: 3" Brown vinyl cove base 2: Cream mastic	Upper level, room 34, wall base	1: ND 2: ND		
2018-0917-3-36	1: White tile 2: Yellow mastic 3: Leveler 4: Red adhesive 5: Black felt	Upper level, room 32, 35, 36, floor	1: ND 2: ND 3: ND 4: ND 5: ND		
2018-0917-3-37	1: Tan laminate 2: Tan mastic	Upper level, room 35, window-sill	1: ND 2: ND		

ND None Detected

5.0 FINDINGS (continued)

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2018-0917-3-38	1: Tan paper with foil 2: Black mastic 3: Fiberglass insulation	Upper level, room 35, wall cavity	1: ND 2: ND 3: ND		
2018-0917-3-39	1: Gray coating 2: Red adhesive	Upper level, room 31 & 37, floor	1: ND 2: ND		
2018-0917-3-40	1: Tri-tab asphaltic shingle 2: Black mastic 3: Black felt	Exterior awning pitched roof	1: ND 2: ND 3: ND		
2018-0917-3-41	Black asphaltic felt	Behind exterior siding	ND		
2018-0917-3-42	White caulking	Around exterior window frame	ND		
2018-0917-3-43	Beige caulking	On exterior wood siding	ND		
2018-0917-3-44	Rolled black asphaltic sheeting	Flat roof	ND		

ND None Detected

Any suspect material(s) not identified above should not be disturbed and should be tested immediately. The suspect material must be treated as asbestos-containing until testing proves otherwise.

Inventory of Suspect Lead-Containing Paint Coatings

Sample Number	Material Description	Location	Lead in mg/kg	Lead in %
2018-0917-Pb-1	White paint on plaster	Interior walls / ceilings	400	0.040
2018-0917-Pb-2	White paint on GWB	Interior walls / ceilings	< 51	< 0.0051
2018-0917-Pb-3	Brown paint on wood	Interior railings / stair stringers / door & closet components	< 54	< 0.0054
2018-0917-Pb-4	Blue paint on metal	Interior & exterior door components	< 160	< 0.016
2018-0917-Pb-5	White paint on wood	Exterior siding walls / soffit / columns / deck railing & fascia	< 56	< 0.0056
2018-0917-Pb-6	Beige paint on wood	Exterior siding (behind vinyl siding)	5800	0.58

< Lead content of material analyzed is below the Lower Detection Limit.

Samples in bold contain lead in excess of detectable levels

5.0 FINDINGS (continued)

Mercury

A visual inspection was conducted to identify Mercury and Poly Chlorinated Biphenyls (PCB) containing devices. This includes Mercury thermostats, HID lamps, florescent light tubes (including the newer "green tubes" which still contain low levels of Mercury) and PCB containing light ballasts. Following devices were identified and assumed to contain Mercury and Poly Chlorinated Biphenyls (PCB).

Material	Location	Quantity
HID lamp	Exterior North Elevation	4 lamps
HID lamp	Exterior East Elevation	2 lamps
HID lamp	Exterior West Elevation	1 lamp

Poly Chlorinated Biphenyls (PCB) Light Ballasts

Material	Location	Quantity
HID light ballast	Exterior North Elevation	4 ballasts
HID light ballast	Exterior East Elevation	2 ballasts
HID light ballast	Exterior West Elevation	1 ballast

Location of Mercury and Poly Chlorinated Biphenyls (PCB) containing HID lamps are highlighted with green in the attached floor plan.

TCLP Sampling

Sample Number	Sample Location	Results in ppm
2018-0917-TCLP	"Building #22" 718 Yesler Way, Seattle, WA 98104	1.0

6.0 CONCLUSIONS AND RECOMMENDATIONS

The following is an inventory of asbestos-containing building materials identified during the Hazardous Materials Survey of building #22 located at 718 Yesler Way, Seattle, WA 98104.

1. Tan sheet vinyl backing / mastic (Friable)

Sample numbers: 2018-0917-3-4, 3-14, 3-24



There is approximately 105 square feet of asbestos-containing white backing with mastic associated with tan sheet vinyl flooring located in room 3, 9, 21 of building #22. The substrate is wood.

2. Black sink undercoating (Non-friable)

Sample numbers: 2018-0917-3-7, 3-26



There is a total of six (6) aluminum sinks with asbestos containing black undercoating located in room 4, 10, 17, 22, 28, 34 of building #22.

3. Beige vinyl floor tiles (Non-friable)

Sample numbers: 2018-0917-3-9, 3-27



There is approximately 635 square feet of asbestos-containing beige vinyl floor tiles located under white vinyl floor tiles in room 1, 5, 6, 20, 23, 24 of building #22. The associated mastic is not asbestos containing. The substrate is wood.

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

4. Brown sheet vinyl backing / mastic (Friable)

Sample numbers: 2018-0917-3-12, 3-19



There is approximately 60 square feet of asbestos-containing white backing with mastic associated with brown sheet vinyl flooring / steps located in room 7, 14 of building #22. The substrate is wood.

5. Black floor mastic (Non-friable)

Sample number: 2018-0917-3-18



There is approximately 70 square feet of asbestos-containing black floor mastic associated with white vinyl floor tiles in rooms 14 of building #22. The substrate is wood.

Contractors should be aware that concealed suspect asbestos-containing building materials may be uncovered during the course of demolition or renovation work. Contractors should have contingency plans that include stopping work, evacuation of the immediate area and sampling by a certified AHERA Building Inspector whenever these materials are found. Concealed suspect materials may include but are not limited to: non-fiberglass pipe or roof drain insulation; spray-applied coatings; cement board; asphalt or paper vapor barriers; floorings and adhesives.

If discovered, all asbestos-containing materials that will be disturbed as a natural part of renovation and/or demolition are required to be removed and disposed of in accordance with Washington State regulations. Washington State Department of Labor and Industries and PSCAA requires that the Abatement be performed using Certified Asbestos Workers under the direct on-site supervision by a Certified Asbestos Supervisor. Further, NVL suggests that an AHERA inspector review this property after abatement to ensure all asbestos-containing materials have been removed by the contractor.

NVL recommends that an AHERA inspector/project manager be on site at the time of demolition to ensure that any potentially asbestos-containing materials uncovered during the process of renovation/demolition be dealt with properly.

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

NVL Labs, Inc. is making the following recommendations regarding asbestos:

1. A copy of this inspection report should be maintained at the project site during the duration of renovation / demolition.
2. A copy of this inspection report should be provided to the General Contractor and any Sub Contractors working on the renovation / demolition project.
3. The inspection report is not intended to serve as a design / bidding document, or scope of work prior to renovation / demolition.
4. Abatement specifications should be prepared by a Hazardous Materials Consulting firm covering the regulated building materials that will be impacted by the renovations / demolition, and these specifications should be part of any contract documents prepared for this project.
5. A licensed asbestos abatement contractor must be utilized to remove any asbestos-containing materials that will be impacted by the planned renovation / demolition.
6. A Hazardous Materials Consulting Firm should provide project oversight and air monitoring during the removal of the asbestos-containing materials.

Lead

Lead-containing paint **was** identified in the following paint samples. Worker protection protocols are applicable for this project.

1. White paint: interior plaster walls / ceilings. (approx. 5705 ft²)
2. Beige paint: exterior wood siding, behind vinyl siding. (approx. 3520 ft²)

The Federal Occupational Safety & Health Administration's (OSHA) interim lead safety standard (29 CFR 1926.59) for the construction industry became effective on June 3, 1993. Lead exposure in construction is regulated in Washington State by WAC 296-155-176. These regulations protect workers disturbing building surfaces with lead containing paints. Paint with "any detectable level" of lead is classified as a lead containing paint by federal and state regulations and the applicable worker safety provisions must be implemented.

WORKER EXPOSURE

WAC 296-155-176, Lead (Pb), applies to all construction work where an employee may be occupationally exposed to Lead (Pb). Construction work includes activities such as demolition or salvage, removal or encapsulation, and renovation of materials that contain Lead (Pb). When an employee may be occupationally exposed to Lead (Pb), the employer must perform an exposure assessment according to WAC 296-155-176.

The exposure assessment consists of personal air monitoring to determine representative Lead (Pb) exposure levels for the work being performed.

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

During the exposure assessment, the employer must provide the following:

- As a minimum, a half mask air purifying respirators equipped with high efficiency particulate air (HEPA) filters in accordance with WAC 296-155-17613.
- Appropriate personal protective clothing / equipment in accordance with WAC 296-155-17615.
- A designated change area which allows for separate storage areas for work and street clothing to prevent cross contamination in accordance with WAC 296-155-17619(2).
- Hand washing facilities to wash their hands and faces WAC 296-155-17619(5).
- Biological monitoring in the form of blood survey and analysis for Lead (Pb) and zinc protoporphyrin levels in accordance with WAC 296-155-17621 (1) (a).
- Training to include hazard communication, safety, and the limitations, proper use, and maintenance of respirators in accordance with WAC 296-155-100.

In addition to the protective equipment and hygiene requirements, the employer must attempt to reduce the levels of airborne Lead (Pb) through engineering controls such as ventilation and wet methods.

Mercury

Seven (7) HID lamps were identified and assumed to contain Mercury (Hg) at building #22.

Fluorescent light tubes, HID lamps, and thermostats contain mercury (Hg) are classified as universal waste by the EPA and Ecology. The Universal Waste Rule for Dangerous Waste Lamps (WAC 173-303-573) included the following requirements:

- Immediately place lamps showing evidence of leakage, damage, etc. in a container following removal;
- Containerize in closed, structurally sound, compatible containers;
- Cardboard containers may be used for inside storage only;
- Labeling container required: "Waste Lamps," or "Universal Waste Lamps;"
- Track the length of time since waste lamp generation. Acceptable methods of proof include: date on label, inventory system, etc.
- Respond immediately to potential releases. If determined to be a release, contain and determine if it designates as a dangerous waste. If so, manage the release as specified in WAC 173-303;
- Disposal of universal waste as general or construction debris is not permitted;
- The crushing of fluorescent light tubes on-site is not allowed. In addition, measures should be taken to prevent breakage of fluorescent light tubes while the light tubes are in transit to their destination.
- Provide training to employees on the proper handling and emergency procedures of universal waste lamps;
- Track shipments of universal waste lamps with records (invoice, manifest, etc.) kept for a minimum of 3 years.

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

Poly Chlorinated Biphenyls (PCB) Light Ballasts

Seven (7) HID light ballasts were identified and assumed to contain Poly Chlorinated Biphenyls (PCB).

The Washington statutes definition of a PCB-containing material require that any material with more than 2 parts per million (ppm) to be treated as PCB-containing material. Federal regulations dictated that any material with less than 50 ppm PCBs could be labeled as a non-PCB containing material. Because of this regulatory change, NVL recommends that all light ballasts be observed, removed, handled, and disposed of in an appropriate manner. The ballasts labeled with "PCB Free" and "Non-PCB" shall be packaged for recycle by an approved recycling facility.

TCLP

The TCLP sample result is below the threshold of 5.0 ppm. Thus, the solid waste stream of the demolition debris from the structure is considered as regular demolition debris.

A solid waste exhibits the characteristic of toxicity if, using the *Toxicity Characteristic Leaching Procedure* (TCLP) testing method, as incorporated in WAC 173-303-090, the extract from a representative sample of the waste contains lead (Pb) contaminants equal to or greater than 5.0 ppm. A material "fails" the TCLP when there is 5.0 parts per million or greater of lead (Pb) in the leachate.

7.0 LIMITATIONS OF SURVEY

The purpose of this hazardous materials survey report is to document asbestos containing building materials, lead paint coatings and Mercury / PCB containing devices discovered at "Building #22" 718 Yesler Way, Seattle, WA 98104.

The purpose of this survey was to identify suspect asbestos containing building materials, lead paint coatings, and Mercury (Hg) / PCB containing devices which would be impacted by the planned demolition of the structure. Destructive sampling methods were utilized to collect samples of suspect building materials. No soft/limited demolition was performed during this inspection. Hidden materials may exist within the structure, and all suspect materials must be treated as hazardous until testing proves otherwise.

As hazardous material surveys are non-comprehensive by nature, NVL Laboratories, Inc. cannot be held liable for materials which require destructive means to access, materials which are hidden from sight (e.g. materials hidden behind walls), materials which cannot be found due to their obscure nature, or which otherwise cannot be discovered with reasonable diligence.

This document is the sole property of NVL Laboratories and the property owner, or his agent, authorizing this survey.

Inspected By



Derrick Gallard
AHERA Building Inspector
AHERA Certification: 169720
Expiration Date: October: 10, 2019

Prepared By



Tanveer Khan
Project Manager
AHERA Certification: 167087
Expiration Date: April 25, 2019

Inspected By



Jason Lindahl
AHERA Building Inspector
AHERA Certification: 167717
Expiration Date: May 23, 2019

Reviewed By



Syed Hasan
Manager Field Services
AHERA Certification: # 168599
Expiration Date: July 18, 2019



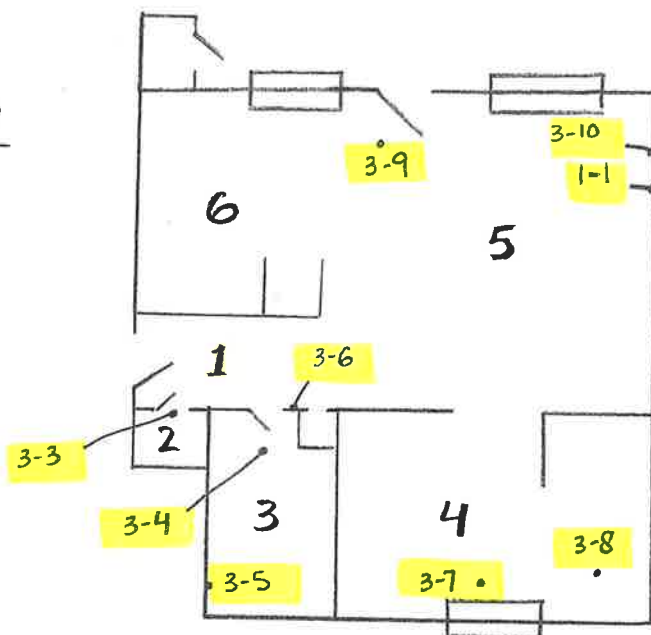
Appendix A

Sample Locations (Floor Plan)

LOWER LEVEL

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UNIT 206



SUSPECT ASBESTOS SAMPLES

(NOT TO SCALE)



L A B S

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NVL Project # 2018-0917

Client Seattle Housing Authority - George Barlet

Location "Building 22" 718 Yesler Way

City Seattle

Page 2 of 9

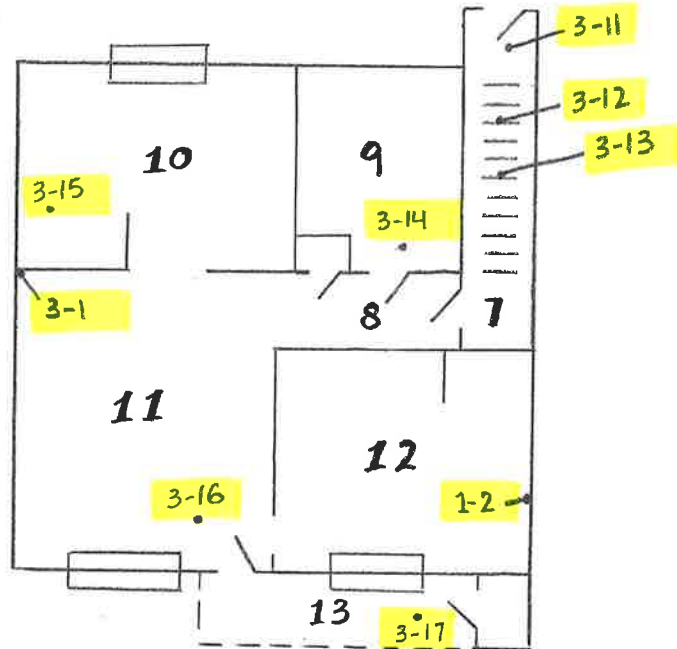
Date 1/10/2019

Made by Derrick Gallard

UPPER LEVEL

↑
N

UNIT 207



SUSPECT ASBESTOS SAMPLES

(NOT TO SCALE)



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NVL Project # 2018-0917

Client Seattle Housing Authority - George Barlet

Location "Building 22" 718 Yesler Way

City Seattle

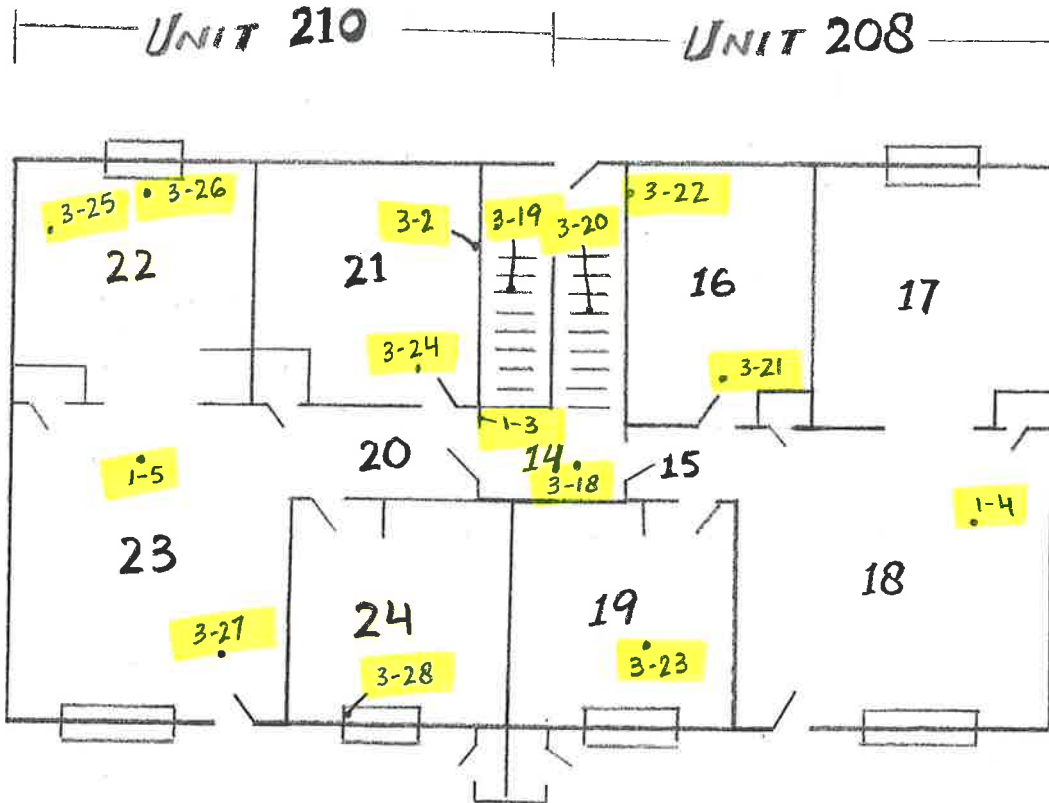
Page 3 of 9

Date 1/10/2019

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LOWER LEVEL

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N



SUSPECT ASBESTOS SAMPLES

(NOT TO SCALE)



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NVL Project # 2018-0917

Client Seattle Housing Authority - George Barlet

Location "Building 22" 718 Yesler Way

City Seattle

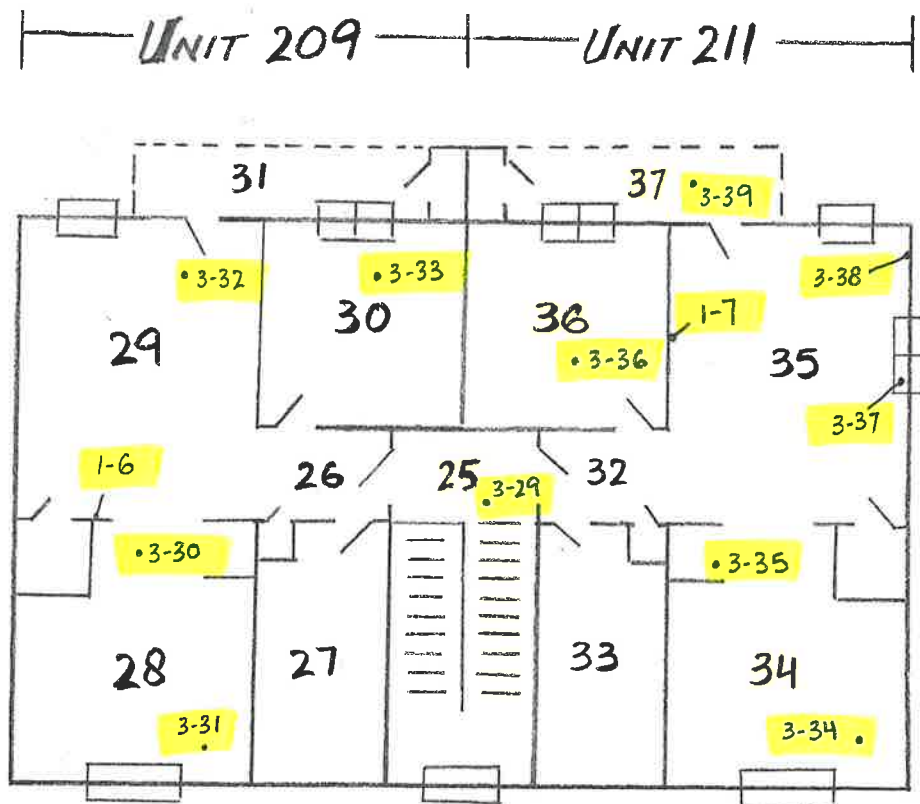
Page 4 of 9

Date 1/10/2019

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UPPER LEVEL

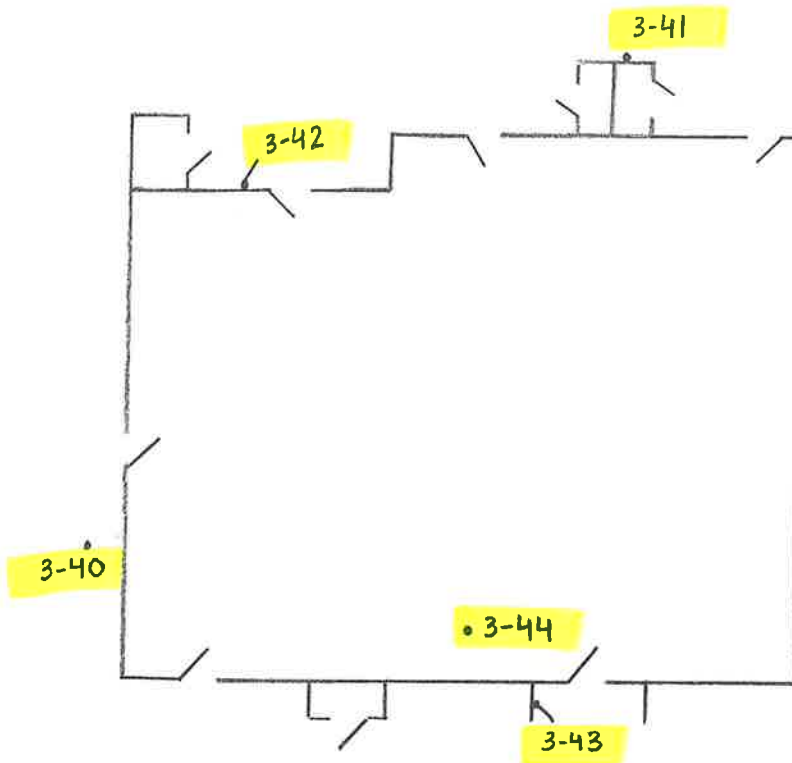
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SUSPECT ASBESTOS SAMPLES

(NOT TO SCALE)

EXTERIOR



SUSPECT ASBESTOS SAMPLES

(NOT TO SCALE)



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NVL Project # 2018-0917

Client Seattle Housing Authority - George Barlet

Location "Building 22" 718 Yesler Way

City Seattle

Page 6 of 9

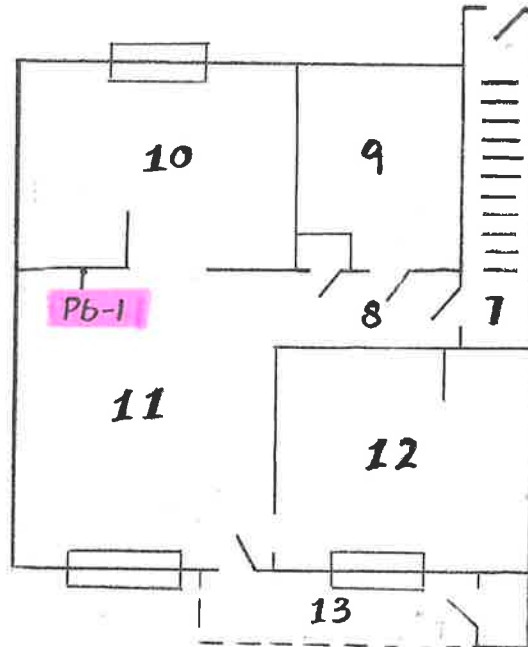
Date 1/10/2019

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UPPER LEVEL

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UNIT 207



LEAD PAINT SAMPLES

(NOT TO SCALE)



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NVL Project # 2018-0917

Client Seattle Housing Authority - George Barlet

Location "Building 22" 718 Yesler Way

City Seattle

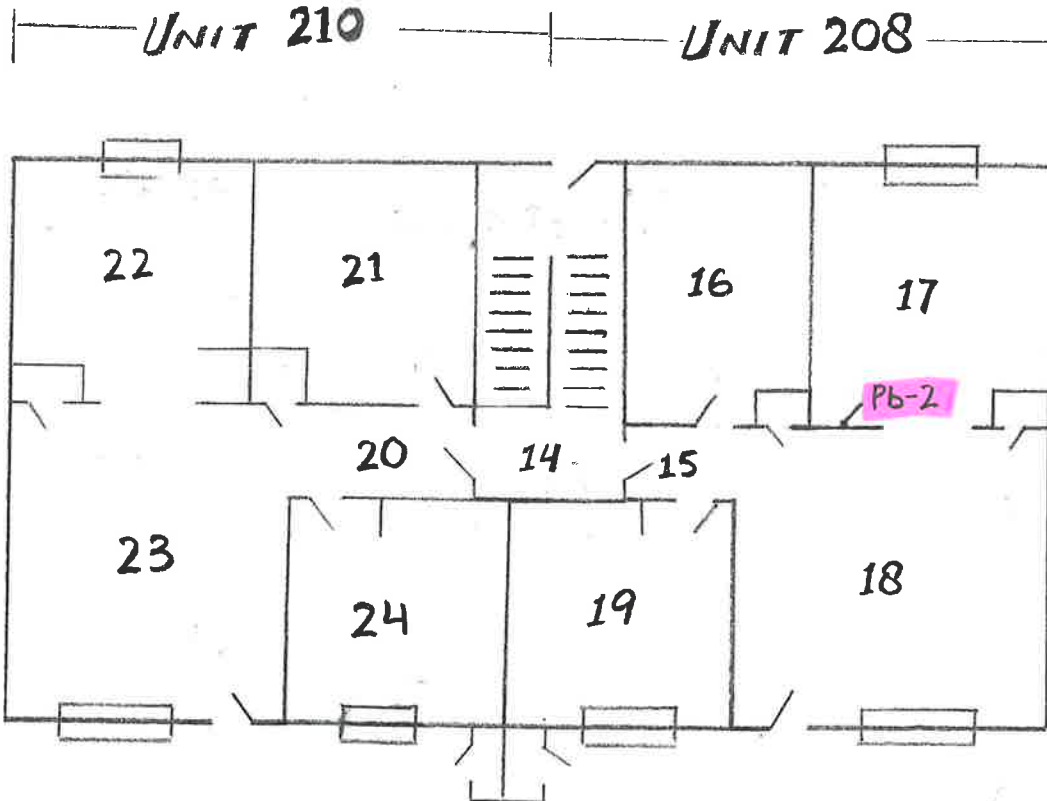
Page 7 of 9

Date 1/10/2019

Made by Derrick Gallard

LOWER LEVEL

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N

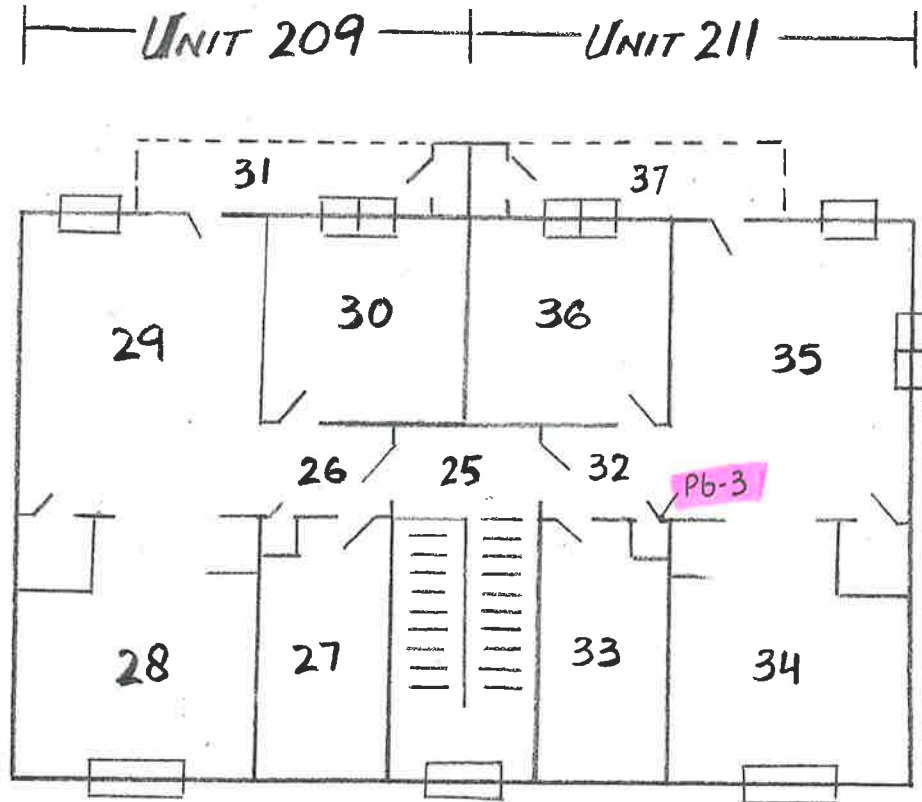


LEAD PAINT SAMPLES

(NOT TO SCALE)

UPPER LEVEL

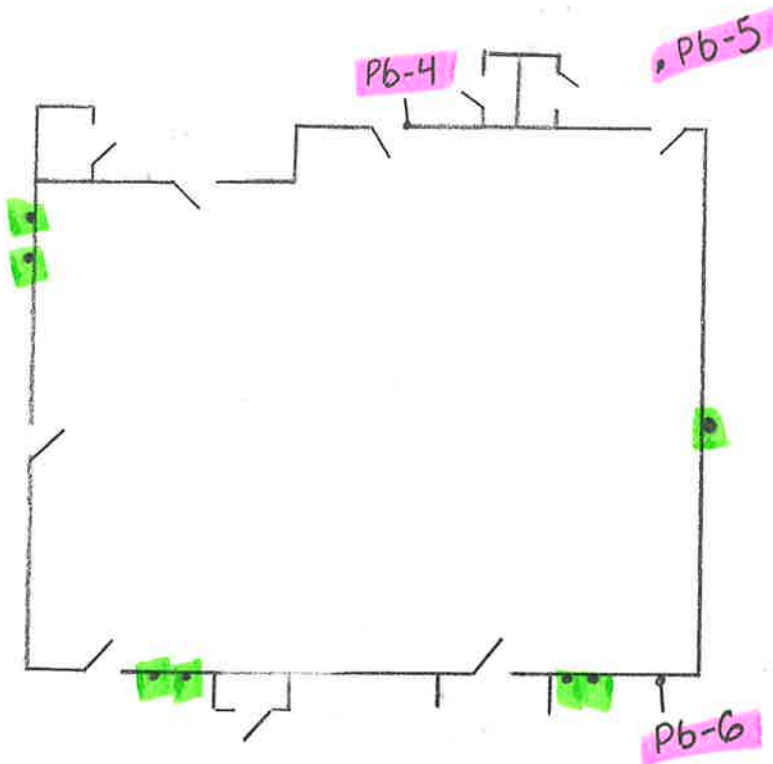
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LEAD PAINT SAMPLES

(NOT TO SCALE)

EXTERIOR



LEAD PAINT SAMPLES

MERCURY & PCB CONTAINING DEVICES

(NOT TO SCALE)



Appendix B

Laboratory Analysis Results

January 12, 2019



Jason Lindahl
NVL Field Services Division
4708 Aurora Ave. N.
Seattle, WA 98103

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1900598.00

Client Project: 2018-0917
Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Dear Mr. Lindahl,

Enclosed please find test results for the 30 sample(s) submitted to our laboratory for analysis on 1/9/2019.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, 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,

A handwritten signature in black ink, appearing to read "Nick Ly".

Nick Ly, Technical Director

The logo for NVLAP (National Voluntary Laboratory Accreditation Program). It features the letters "NVLAP" in a stylized, outlined font. The "A" is unique, with a small circle at the top right and a small tail at the bottom right.

Lab Code: 102063-0

Enc.: Sample Results

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900598.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Lab ID: 19002478 Client Sample #: 2018-0917-1-1

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 2 Description: White brittle sandy material with paint

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Mineral grains, Sand

Cellulose 6%

None Detected ND

Calcareous particles, Quartz, Paint

Layer 2 of 2 Description: White chalky material with paper

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Gypsum/Binder, Fine grains, Fine particles

Cellulose 21%

None Detected ND

Lab ID: 19002479 Client Sample #: 2018-0917-1-2

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 2 Description: White brittle sandy material with paint

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Mineral grains, Sand

Cellulose 8%

None Detected ND

Calcareous particles, Quartz, Paint

Layer 2 of 2 Description: White chalky material with paper

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Gypsum/Binder, Fine grains, Fine particles

Cellulose 24%

None Detected ND

Lab ID: 19002480 Client Sample #: 2018-0917-1-3

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 2 Description: White brittle sandy material with paint

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Mineral grains, Sand

Cellulose 6%

None Detected ND

Calcareous particles, Quartz, Paint

Sampled by: Client

Analyzed by: William Minor

Date: 01/11/2019

Reviewed by: Nick Ly

Date: 01/12/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900598.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 2 of 2	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Mineral grains, Fine particles	Cellulose 26%		None Detected ND

Lab ID: 19002481 **Client Sample #: 2018-0917-1-4**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 2	Description: White brittle sandy material with paint and paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mineral grains, Sand	Cellulose 9%		None Detected ND
	Calcareous particles, Quartz, Paint			

Layer 2 of 2	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine grains, Fine particles	Cellulose 25%		None Detected ND

Lab ID: 19002482 **Client Sample #: 2018-0917-1-5**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 3	Description: Off-white compacted powdery material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Calcareous binder, Calcareous particles, Paint	Cellulose 2%		None Detected ND

Layer 2 of 3	Description: White brittle sandy material with paint and paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mineral grains, Sand	Cellulose 6%		None Detected ND
	Calcareous particles, Quartz, Paint			

Layer 3 of 3	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine grains, Fine particles	Cellulose 24%		None Detected ND

Sampled by: Client

Analyzed by: William Minor

Reviewed by: Nick Ly

Date: 01/11/2019

Date: 01/12/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900598.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Lab ID: 19002483 Client Sample #: 2018-0917-1-6

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 2 Description: White brittle sandy material with paint

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Mineral grains, Sand

Cellulose 4%

None Detected ND

Quartz, Calcareous particles, Paint

Layer 2 of 2 Description: White chalky material with paper

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Gypsum/Binder, Fine grains, Fine particles

Cellulose 25%

None Detected ND

Lab ID: 19002484 Client Sample #: 2018-0917-1-7

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 2 Description: White brittle sandy material with paint

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Mineral grains, Sand

Cellulose 6%

None Detected ND

Quartz, Calcareous particles, Paint

Layer 2 of 2 Description: White chalky material with paper

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Gypsum/Binder, Fine grains, Fine particles

Cellulose 24%

None Detected ND

Lab ID: 19002485 Client Sample #: 2018-0917-3-1

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 3 Description: White compacted powdery material with paint

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Calcareous binder, Calcareous particles, Paint

Cellulose <1%

None Detected ND

Sampled by: Client

Analyzed by: William Minor

Date: 01/11/2019

Reviewed by: Nick Ly

Date: 01/12/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900598.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 2 of 3	Description: White compacted powdery material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Calcareous binder, Calcareous particles	Cellulose 3%		None Detected ND
Layer 3 of 3	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine grains, Fine particles	Cellulose 21%		None Detected ND
		Glass fibers 3%		

Lab ID: 19002486 **Client Sample #: 2018-0917-3-2**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 1	Description: White chalky material with paper and paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine particles, Paint	Cellulose 19%		None Detected ND
		Glass fibers 5%		

Lab ID: 19002487 **Client Sample #: 2018-0917-3-3**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 3	Description: Off-white vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Vinyl/Binder, Calcareous particles	Cellulose <1%		None Detected ND
Layer 2 of 3	Description: Tan soft mastic with wood flakes			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Fine particles, Wood flakes	Cellulose 5%		None Detected ND
Layer 3 of 3	Description: Black asphaltic material on paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Calcareous particles	Cellulose 4%		None Detected ND

Sampled by: Client

Analyzed by: William Minor

Reviewed by: Nick Ly

Date: 01/11/2019

Date: 01/12/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900598.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl
Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Lab ID: 19002488 Client Sample #: 2018-0917-3-4

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 3 Description: Beige sheet vinyl

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Vinyl/Binder, Fine particles

Cellulose 4%

None Detected ND

Layer 2 of 3 Description: White fibrous backing with mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Mastic/Binder, Fine particles

Cellulose 31%

Chrysotile 56%

Layer 3 of 3 Description: Black asphaltic fibrous material with mastic and wood

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Asphalt/Binder, Calcareous particles, Fine particles

Cellulose 78%

None Detected ND

Wood flakes

Lab ID: 19002489 Client Sample #: 2018-0917-3-5

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 6 Description: Yellow rubbery material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Caulking compound, Fine particles, Calcareous particles

None Detected ND

None Detected ND

Layer 2 of 6 Description: Brown flat hard compressed fibrous material with off-white surface

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Laminate/binder

Cellulose 97%

None Detected ND

Layer 3 of 6 Description: Brown mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Mastic/Binder, Fine particles

Cellulose 11%

None Detected ND

Sampled by: Client

Analyzed by: William Minor

Date: 01/11/2019

Reviewed by: Nick Ly

Date: 01/12/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900598.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 4 of 6	Description: White foamy material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Synthetic foam, Adhesive/Binder	Cellulose 2%		None Detected ND
Layer 5 of 6	Description: Colorless mastic on paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Fine particles	Cellulose 3%		None Detected ND
Layer 6 of 6	Description: White compacted powdery material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Calcareous binder, Calcareous particles, Paint	Cellulose 2%		None Detected ND

Lab ID: 19002490 Client Sample #: 2018-0917-3-6

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 3	Description: Brown rubbery material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Vinyl/Binder	None Detected ND		None Detected ND
Layer 2 of 3	Description: Tan firm mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder, Fine particles	Cellulose 2%		None Detected ND
Layer 3 of 3	Description: White compacted powdery material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Calcareous binder, Calcareous particles, Paint	Cellulose 4%		None Detected ND

Lab ID: 19002491 Client Sample #: 2018-0917-3-7

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 1	Description: Black asphaltic flaky material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Calcareous particles, Fine particles	Cellulose 3%		Chrysotile 5%

Sampled by: Client

Analyzed by: William Minor

Reviewed by: Nick Ly

Date: 01/11/2019

Date: 01/12/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900598.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl
Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Lab ID: 19002492 Client Sample #: 2018-0917-3-8

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 2 Description: Brown flat hard compressed fibrous material with white surface

Non-Fibrous Materials:	Other Fibrous Materials: %
Binder/Filler, Laminate/binder	Cellulose 96%

Asbestos Type: %
None Detected ND

Layer 2 of 2 Description: Red mastic

Non-Fibrous Materials:	Other Fibrous Materials: %
Mastic/Binder, Fine particles	Cellulose 9%

Asbestos Type: %
None Detected ND

Lab ID: 19002493 Client Sample #: 2018-0917-3-9

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 6 Description: White vinyl tile

Non-Fibrous Materials:	Other Fibrous Materials: %
Vinyl/Binder, Calcareous particles	None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 6 Description: Yellow brittle mastic

Non-Fibrous Materials:	Other Fibrous Materials: %
Mastic/Binder, Fine particles, Calcareous particles	Cellulose 2%

Asbestos Type: %
None Detected ND

Layer 3 of 6 Description: White powdery material

Non-Fibrous Materials:	Other Fibrous Materials: %
Binder/Filler, Fine particles	Cellulose 4%

Asbestos Type: %
None Detected ND

Layer 4 of 6 Description: Beige vinyl tile

Non-Fibrous Materials:	Other Fibrous Materials: %
Vinyl/Binder, Calcareous particles	None Detected ND

Asbestos Type: %
Chrysotile 5%

Layer 5 of 6 Description: Black asphaltic fibrous material with brown mastic and wood flakes

Non-Fibrous Materials:	Other Fibrous Materials: %
Asphalt/Binder, Calcareous particles, Mastic/Binder	Cellulose 82%

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: William Minor

Reviewed by: Nick Ly

Date: 01/11/2019

Date: 01/12/2019



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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900598.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Wood flakes

Layer 6 of 6 Description: Black asphaltic material on paper

Non-Fibrous Materials:	Other Fibrous Materials: %
Asphalt/Binder, Calcareous particles	Cellulose 5%

Asbestos Type: %
None Detected ND

Lab ID: 19002494 **Client Sample #: 2018-0917-3-10**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 3 Description: Black asphaltic material on with paper and foil

Non-Fibrous Materials:	Other Fibrous Materials: %
Metal foil, Asphalt/Binder, Fine particles	Cellulose 4%

Asbestos Type: %
None Detected ND

Layer 2 of 3 Description: Brown fibrous material

Non-Fibrous Materials:	Other Fibrous Materials: %
Glass beads, Glass debris, Fine particles	Glass fibers 97%

Asbestos Type: %
None Detected ND

Layer 3 of 3 Description: White chalky material

Non-Fibrous Materials:	Other Fibrous Materials: %
Gypsum/Binder, Fine particles	Glass fibers 9%

Asbestos Type: %
None Detected ND

Lab ID: 19002495 **Client Sample #: 2018-0917-3-11**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 2 Description: White vinyl tile

Non-Fibrous Materials:	Other Fibrous Materials: %
Vinyl/Binder, Calcareous particles	Cellulose 2%

Asbestos Type: %
None Detected ND

Layer 2 of 2 Description: Yellow brittle mastic

Non-Fibrous Materials:	Other Fibrous Materials: %
Mastic/Binder, Fine particles, Calcareous particles	Cellulose 5%

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: William Minor

Reviewed by: Nick Ly

Date: 01/11/2019

Date: 01/12/2019



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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900598.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Lab ID: 19002496 Client Sample #: 2018-0917-3-12

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Comments: Unable to separate mastics for analysis

Layer 1 of 2 Description: Brown sheet vinyl

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Vinyl/Binder, Fine particles	Cellulose 4%	

Layer 2 of 2 Description: White fibrous backing with tan brittle mastic and black asphaltic material

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % Chrysotile 52%
Binder/Filler, Mastic/Binder, Asphalt/Binder	Cellulose 31%	

Lab ID: 19002497 Client Sample #: 2018-0917-3-13

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 2 Description: Brown rubbery material

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Vinyl/Binder	None Detected ND	

Layer 2 of 2 Description: Brown mastic with paint speckles

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Mastic/Binder, Paint, Fine particles	Cellulose 2%	

Lab ID: 19002498 Client Sample #: 2018-0917-3-14

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 2 Description: Yellow sheet vinyl

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % None Detected ND
Vinyl/Binder, Fine particles	Cellulose 3%	

Layer 2 of 2 Description: White fibrous backing with mastic and wood flakes

Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: % Chrysotile 53%
Mastic/Binder, Wood flakes, Binder/Filler	Cellulose 33%	

Sampled by: Client

Analyzed by: William Minor

Reviewed by: Nick Ly

Date: 01/11/2019

Date: 01/12/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900598.00
Client Project #: 2018-0917
Date Received: 1/9/2019
Samples Received: 30
Samples Analyzed: 30
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Fine particles, Calcareous particles

Lab ID: 19002499 **Client Sample #: 2018-0917-3-15**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 7	Description: White vinyl tile	Non-Fibrous Materials: Vinyl/Binder, Calcareous particles	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND
Layer 2 of 7	Description: White firm mastic	Non-Fibrous Materials: Mastic/Binder, Calcareous particles	Other Fibrous Materials:% Cellulose 3%	Asbestos Type: % None Detected ND
Layer 3 of 7	Description: Gray soft material	Non-Fibrous Materials: Binder/Filler, Calcareous particles, Fine particles	Other Fibrous Materials:% Cellulose 7%	Asbestos Type: % None Detected ND
Layer 4 of 7	Description: White vinyl tile	Non-Fibrous Materials: Vinyl/Binder, Calcareous particles	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND
Layer 5 of 7	Description: Black asphaltic fibrous material with brown mastic	Non-Fibrous Materials: Mastic/Binder, Asphalt/Binder, Calcareous particles	Other Fibrous Materials:% Cellulose 79%	Asbestos Type: % None Detected ND
Layer 6 of 7	Description: White compacted powdery material	Non-Fibrous Materials: Binder/Filler, Fine particles, Calcareous particles	Other Fibrous Materials:% Cellulose 2%	Asbestos Type: % None Detected ND
Layer 7 of 7	Description: Tan brittle mastic	Non-Fibrous Materials: Mastic/Binder, Fine particles	Other Fibrous Materials:% Cellulose 3%	Asbestos Type: % None Detected ND

Sampled by: Client

Analyzed by: William Minor

Reviewed by: Nick Ly

Date: 01/11/2019

Date: 01/12/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900598.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Lab ID: 19002500 Client Sample #: 2018-0917-3-16

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 3 Description: White vinyl tile

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Vinyl/Binder, Calcareous particles

None Detected ND

None Detected ND

Layer 2 of 3 Description: Yellow brittle mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Mastic/Binder, Calcareous particles, Fine particles

Cellulose 3%

None Detected ND

Layer 3 of 3 Description: Beige vinyl tile

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Vinyl/Binder, Calcareous particles

None Detected ND

None Detected ND

Lab ID: 19002501 Client Sample #: 2018-0917-3-17

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 1 Description: Beige firm material on wood

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Fine particles, Wood flakes

Cellulose 3%

None Detected ND

Lab ID: 19002502 Client Sample #: 2018-0917-3-18

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 4 Description: White vinyl tile

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Vinyl/Binder, Calcareous particles

None Detected ND

None Detected ND

Layer 2 of 4 Description: Brown brittle material with yellow mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Mastic/Binder, Binder/Filler, Fine particles

Cellulose 4%

None Detected ND

Sampled by: Client

Analyzed by: William Minor

Date: 01/11/2019

Reviewed by: Nick Ly

Date: 01/12/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900598.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 3 of 4 **Description:** Black asphaltic material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Asphalt/Binder, Fine particles, Calcareous particles

Cellulose 2%

Chrysotile 6%

Layer 4 of 4 **Description:** Black asphaltic fibrous material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Asphalt/Binder, Fine particles, Calcareous particles

Cellulose 83%

None Detected ND

Lab ID: 19002503 **Client Sample #: 2018-0917-3-19**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Comments: Unable to separate mastics for analysis

Layer 1 of 2 **Description:** Brown sheet vinyl

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Vinyl/Binder, Fine particles

Cellulose 3%

None Detected ND

Layer 2 of 2 **Description:** White fibrous backing with brown mastic and black asphaltic material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Mastic/Binder, Asphalt/Binder

Cellulose 34%

Chrysotile 53%

Wood flakes, Fine particles, Calcareous particles

Lab ID: 19002504 **Client Sample #: 2018-0917-3-20**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 2 **Description:** Brown rubbery material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Vinyl/Binder

None Detected ND

None Detected ND

Layer 2 of 2 **Description:** Brown brittle mastic with orange coating

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Mastic/Binder, Binder/Filler, Fine particles

Cellulose 5%

None Detected ND

Sampled by: Client

Analyzed by: William Minor

Reviewed by: Nick Ly

Date: 01/11/2019

Date: 01/12/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900598.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Lab ID: 19002505 Client Sample #: 2018-0917-3-21

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 4 Description: Off-white sheet vinyl

Non-Fibrous Materials:

Other Fibrous Materials:%

Asbestos Type: %

Vinyl/Binder

None Detected ND

None Detected ND

Layer 2 of 4 Description: White fibrous backing with mastic

Non-Fibrous Materials:

Other Fibrous Materials:%

Asbestos Type: %

Binder/Filler, Mastic/Binder, Fine particles

Cellulose 37%

None Detected ND

Glass fibers 19%

Layer 3 of 4 Description: Gray soft material with wood flakes

Non-Fibrous Materials:

Other Fibrous Materials:%

Asbestos Type: %

Binder/Filler, Fine particles, Calcareous particles

Cellulose 8%

None Detected ND

Wood flakes

Layer 4 of 4 Description: Black asphaltic fibrous material

Non-Fibrous Materials:

Other Fibrous Materials:%

Asbestos Type: %

Asphalt/Binder, Fine particles

Cellulose 86%

None Detected ND

Lab ID: 19002506 Client Sample #: 2018-0917-3-22

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 5 Description: Brown flat hard compressed fibrous material with white surface

Non-Fibrous Materials:

Other Fibrous Materials:%

Asbestos Type: %

Binder/Filler, Laminate/binder

Cellulose 96%

None Detected ND

Layer 2 of 5 Description: Brown mastic

Non-Fibrous Materials:

Other Fibrous Materials:%

Asbestos Type: %

Mastic/Binder, Fine particles

Cellulose 11%

None Detected ND

Sampled by: Client

Analyzed by: William Minor

Reviewed by: Nick Ly

Date: 01/11/2019

Date: 01/12/2019

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900598.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 30

Samples Analyzed: 30

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 3 of 5	Description: White foamy material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Synthetic foam, Adhesive/Binder	Cellulose 3%		None Detected ND
Layer 4 of 5	Description: Colorless mastic on paper			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder, Fine particles, Calcareous particles	Cellulose 7%		None Detected ND
Layer 5 of 5	Description: Brown chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Gypsum/Binder	Cellulose 21%		None Detected ND
		Glass fibers 3%		

Lab ID: 19002507 **Client Sample #: 2018-0917-3-23**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 2	Description: White vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Vinyl/Binder, Calcareous particles	Cellulose <1%		None Detected ND
Layer 2 of 2	Description: Brown soft material with black asphaltic material on wood			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Asphalt/Binder, Binder/Filler, Fine particles	Cellulose 12%		None Detected ND
	Calcareous particles, Wood flakes			

Sampled by: Client

Analyzed by: William Minor

Reviewed by: Nick Ly

Date: 01/11/2019

Date: 01/12/2019



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

ASBESTOS LABORATORY SERVICES



Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Jason Lindahl
Phone (206) 547-0100
Cell (763) 286-3494
NVL Batch Number 1900598.00
TAT 2 Days **AH** No.
Rush TAT
Due Date 1/11/2019 **Time** 3:15 PM
Email jason.l@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0917 **Project Location:** "Building 22" 718 Yesler Way Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 30

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19002478	2018-0917-1-1		A
2	19002479	2018-0917-1-2		A
3	19002480	2018-0917-1-3		A
4	19002481	2018-0917-1-4		A
5	19002482	2018-0917-1-5		A
6	19002483	2018-0917-1-6		A
7	19002484	2018-0917-1-7		A
8	19002485	2018-0917-3-1	Composite	A
9	19002486	2018-0917-3-2		A
10	19002487	2018-0917-3-3		A
11	19002488	2018-0917-3-4		A
12	19002489	2018-0917-3-5		A
13	19002490	2018-0917-3-6		A
14	19002491	2018-0917-3-7		A
15	19002492	2018-0917-3-8		A
16	19002493	2018-0917-3-9		A
17	19002494	2018-0917-3-10		A
18	19002495	2018-0917-3-11		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Emily Schubert		NVL	1/9/19	1515
Analyzed by	William Minor		NVL	1/11/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/9/2019
 Time: 3:15 PM
 Entered By: Emily Schubert

ASBESTOS LABORATORY SERVICES

NVL

Company NVL Field Services Division

NVL Batch Number **1900598.00**

Address 4708 Aurora Ave. N.

TAT 2 Days

AH No.

Seattle, WA 98103

Rush TAT

Project Manager Mr. Jason Lindahl

Due Date 1/11/2019 Time 3:15 PM

Phone (206) 547-0100

Email jason.l@nvlabs.com

Cell (763) 286-3494

Fax (206) 634-1936

Project Name/Number: 2018-0917

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 30

Rush Samples

	Lab ID	Sample ID	Description	A/R
19	19002496	2018-0917-3-12		A
20	19002497	2018-0917-3-13		A
21	19002498	2018-0917-3-14		A
22	19002499	2018-0917-3-15		A
23	19002500	2018-0917-3-16		A
24	19002501	2018-0917-3-17		A
25	19002502	2018-0917-3-18		A
26	19002503	2018-0917-3-19		A
27	19002504	2018-0917-3-20		A
28	19002505	2018-0917-3-21		A
29	19002506	2018-0917-3-22		A
30	19002507	2018-0917-3-23		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Emily Schubert		NVL	1/9/19	1515
Analyzed by	William Minor		NVL	1/11/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special
Instructions:

Date: 1/9/2019

Time: 3:15 PM

Entered By: Emily Schubert

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900598



Client NVL Laboratories Inc
Street 4708 Aurora Ave N
Seattle, WA 98103
Project Manager Syed Hasan
Project Location "Building 22" 718 Yesler Way
Seattle, WA 98104

NVL Batch Number
Client Job Number 2018-0917

Total Samples 30

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Asbestos Bulk	<input checked="" type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	All 8	Other Metals
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)	<input type="checkbox"/> All 3
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input type="checkbox"/> Lead (Pb)	<input type="checkbox"/> Copper (Cu)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Nickel (Ni)
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify)		<input type="checkbox"/> Zinc (Zn)
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0917-1-1		
2		1-2		
3		1-3		
4		1-4		
5		1-5		
6		1-6		
7		1-7		
8		3-1	Composite	
9		3-2		
10		3-3		
11		3-4		
12		3-5		
13		3-6		
14		3-7		
15		3-8		

Print Below	Sign Below	Company	Date	Time
Sampled by Jason Lindahl		NVL	1/9/19	7:30
Relinquished by Jason Lindahl		NVL	1/9/19	
Received by Emilee S		NVL	1/9/19	1515
Analyzed by				
Results Called by				
Results Faxed by				

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.
Results report to

NVL Laboratories, Inc.

4708 Aurora Ave N. Seattle, WA 98103

p 206 547.0100 | f 206.634.1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900598

S

Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 22" 718 Yesler Way
Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0917

Total Samples 30

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Asbestos Bulk	<input checked="" type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	<input type="checkbox"/> All 8	Other Metals
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)	<input type="checkbox"/> All 3
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input type="checkbox"/> Lead (Pb)	<input type="checkbox"/> Copper (Cu)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Nickel (Ni)
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify)		<input type="checkbox"/> Zinc (Zn)
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0917-3-9		
2		3-10		
3		3-11		
4		3-12		
5		3-13		
6		3-14		
7		3-15		
8		3-16		
9		3-17		
10		3-18		
11		3-19		
12		3-20		
13		3-21		
14		3-22		
15		3-23		

Print Below	Sign Below	Company	Date	Time
Sampled by Jason Lindahl	[Signature]	NVL	1/9/19	7:30
Relinquished by Jason Lindahl	[Signature]	NVL	1/9/19	
Received by Emilius	[Signature]	NVL	1/9/19	1515
Analyzed by				
Results Called by				
Results Faxed by				

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

January 11, 2019



Jason Lindahl
NVL Field Services Division
4708 Aurora Ave. N.
Seattle, WA 98103

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1900607.00

Client Project: 2018-0917
Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Dear Mr. Lindahl,

Enclosed please find test results for the 21 sample(s) submitted to our laboratory for analysis on 1/9/2019.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, 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,

A handwritten signature in black ink, appearing to read "Matt Macfarlane".

Matt Macfarlane, Asbestos Lab Supervisor



Lab Code: 102063-0

Enc.: Sample Results

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900607.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Lab ID: 19002530 Client Sample #: 2018-0917-3-24

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 3 Description: Yellow sheet vinyl

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Calcareous particles, Vinyl/Binder

None Detected ND

None Detected ND

Layer 2 of 3 Description: Off-white fibrous backing with mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Mastic/Binder

None Detected ND

Chrysotile 27%

Layer 3 of 3 Description: Black asphaltic fibrous backing with brown mastic and trace wood flakes

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Asphalt/Binder, Mastic/Binder, Wood flakes

Cellulose 32%

None Detected ND

Lab ID: 19002531 Client Sample #: 2018-0917-3-25

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 3 Description: Beige tile

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Calcareous particles, Mineral grains

None Detected ND

None Detected ND

Layer 2 of 3 Description: Tan brittle mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Mastic/Binder

None Detected ND

None Detected ND

Layer 3 of 3 Description: Black asphaltic fibrous backing with mastic on wood

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Asphalt/Binder, Mastic/Binder, Wood

Cellulose 30%

None Detected ND

Lab ID: 19002532 Client Sample #: 2018-0917-3-26

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900607.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 1	Description: Black asphaltic flaky material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Calcareous particles, Asphalt/Binder	None Detected ND		Chrysotile 2%
<hr/>				
Lab ID: 19002533	Client Sample #: 2018-0917-3-27			
Location: "Building 22" 718 Yesler Way Seattle, WA 98104				
Layer 1 of 5	Description: Cream tile with light brown streaks			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains	None Detected ND		None Detected ND
Layer 2 of 5	Description: Yellow brittle mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Mastic/Binder	None Detected ND		None Detected ND
Layer 3 of 5	Description: Beige tile			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Calcareous particles, Mineral grains	None Detected ND		Chrysotile 5%
Layer 4 of 5	Description: Black soft asphaltic mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Asphalt/Binder	None Detected ND		None Detected ND
Layer 5 of 5	Description: Black asphaltic fibrous backing with brown/gold mastic and trace wood flakes			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Asphalt/Binder, Mastic/Binder, Wood flakes	Cellulose 28%		None Detected ND

Lab ID: 19002534 **Client Sample #: 2018-0917-3-28**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 3	Description: Brown flat hard compressed fibrous material with cream surface			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Adhesive/Binder, Binder/Filler	Cellulose 95%		None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900607.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl
Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 2 of 3	Description: Tan soft mastic	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Mastic/Binder	None Detected ND	None Detected ND
Layer 3 of 3	Description: Trace thin off-white compacted powdery material	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Calcareous binder, Calcareous particles	None Detected ND	None Detected ND

Lab ID: 19002535 **Client Sample #: 2018-0917-3-29**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 3	Description: Cream tile with light brown streaks	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	None Detected ND
Layer 2 of 3	Description: Light brown soft mastic	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Mastic/Binder	None Detected ND	None Detected ND
Layer 3 of 3	Description: Black asphaltic fibrous backing with tan mastic	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Asphalt/Binder, Mastic/Binder	Cellulose 34%	None Detected ND

Lab ID: 19002536 **Client Sample #: 2018-0917-3-30**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 4	Description: Tan sheet vinyl	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Vinyl/Binder	None Detected ND	None Detected ND
Layer 2 of 4	Description: Off-white fibrous backing with soft mastic	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Binder/Filler, Calcareous particles, Mastic/Binder	Cellulose 26%	None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900607.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Glass fibers 5%

Synthetic fibers 2%

Layer 3 of 4 Description: Gray thin crumbly material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Calcareous particles

Cellulose 3%

None Detected ND

Layer 4 of 4 Description: Tan thin brittle adhesive on wood

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Adhesive/Binder, Wood

None Detected ND

None Detected ND

Lab ID: 19002537 **Client Sample #: 2018-0917-3-31**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 4 Description: Brown flat hard compressed fibrous material with cream surface

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Adhesive/Binder, Binder/Filler, Calcareous particles

Cellulose 92%

None Detected ND

Layer 2 of 4 Description: Yellow soft mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Mastic/Binder

None Detected ND

None Detected ND

Layer 3 of 4 Description: Brown flat hard compressed fibrous material with beige surface

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Adhesive/Binder, Binder/Filler

Cellulose 90%

None Detected ND

Layer 4 of 4 Description: Red soft mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Mastic/Binder

Wood fibers 2%

None Detected ND

Lab ID: 19002538 **Client Sample #: 2018-0917-3-32**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900607.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 3	Description: Off-white tile with tan streaks	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	
Layer 2 of 3	Description: Yellow soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder	None Detected ND	
Layer 3 of 3	Description: Gray thin crumbly material on wood	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Calcareous particles, Wood	Cellulose 2%	

Lab ID: 19002539 **Client Sample #: 2018-0917-3-33**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 3	Description: Off-white tile with tan streaks	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	
Layer 2 of 3	Description: Yellow soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder	None Detected ND	
Layer 3 of 3	Description: Red thin brittle adhesive on wood	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Adhesive/Binder, Wood	None Detected ND	

Lab ID: 19002540 **Client Sample #: 2018-0917-3-34**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 3	Description: Tan soft vinyl	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Calcareous particles, Synthetic foam, Vinyl/Binder	Cellulose 5%	

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division

Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Batch #: 1900607.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 2 of 3	Description: Clear soft adhesive with trace thin gray crumbly material	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Adhesive/Binder, Binder/Filler, Calcareous particles	Cellulose 2%	None Detected ND

Layer 3 of 3	Description: Red thin brittle adhesive on wood	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Adhesive/Binder, Wood	None Detected ND	None Detected ND

Lab ID: 19002541 Client Sample #: 2018-0917-3-35

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 2	Description: Brown rubbery material	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Calcareous particles, Rubber/Binder	None Detected ND	None Detected ND

Layer 2 of 2	Description: Cream soft mastic with wood flakes	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Calcareous particles, Mastic/Binder, Wood flakes	None Detected ND	None Detected ND

Lab ID: 19002542 Client Sample #: 2018-0917-3-36

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 5	Description: Off-white tile with tan streaks	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Binder/Filler, Calcareous particles, Mineral grains	None Detected ND	None Detected ND

Layer 2 of 5	Description: Yellow soft mastic	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Mastic/Binder	None Detected ND	None Detected ND

Layer 3 of 5	Description: Gray thin crumbly material	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
		Binder/Filler, Calcareous particles	Cellulose 2%	None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyzhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019

Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900607.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 4 of 5	Description: Red thin brittle adhesive on wood	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Adhesive/Binder, Wood	None Detected ND	
Layer 5 of 5	Description: Black asphaltic fibrous backing	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder	Cellulose 34%	

Lab ID: 19002543 **Client Sample #: 2018-0917-3-37**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 2	Description: Brown flat hard compressed fibrous material with cream surface	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Adhesive/Binder, Binder/Filler	Cellulose 95%	
Layer 2 of 2	Description: Tan soft mastic with wood flakes	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder, Wood flakes	None Detected ND	

Lab ID: 19002544 **Client Sample #: 2018-0917-3-38**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 3	Description: Tan paper with foil	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Metal foil	Cellulose 50%	
Layer 2 of 3	Description: Black asphaltic mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Asphalt/Binder	None Detected ND	
Layer 3 of 3	Description: Pink fibrous material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Adhesive/Binder, Gypsum/Binder	Glass fibers 60%	

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019

Matt Macfarlane, Asbestos Lab Supervisor

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

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Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900607.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Lab ID: 19002545 Client Sample #: 2018-0917-3-39

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 2 Description: Gray soft material

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Mineral grains	None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 2 Description: Red thin brittle adhesive on wood

Non-Fibrous Materials:	Other Fibrous Materials:%
Adhesive/Binder, Wood	None Detected ND

Asbestos Type: %
None Detected ND

Lab ID: 19002546 Client Sample #: 2018-0917-3-40

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 3 Description: Layered black asphaltic fibrous material with granules

Non-Fibrous Materials:	Other Fibrous Materials:%
Asphalt/Binder, Granules	Glass fibers 23%

Asbestos Type: %
None Detected ND

Layer 2 of 3 Description: Layered black asphaltic mastic

Non-Fibrous Materials:	Other Fibrous Materials:%
Asphalt/Binder	None Detected ND

Asbestos Type: %
None Detected ND

Layer 3 of 3 Description: Black asphaltic fibrous material

Non-Fibrous Materials:	Other Fibrous Materials:%
Asphalt/Binder	Cellulose 37%

Asbestos Type: %
None Detected ND

Lab ID: 19002547 Client Sample #: 2018-0917-3-41

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 1 Description: Black asphaltic fibrous material

Non-Fibrous Materials:	Other Fibrous Materials:%
Asphalt/Binder	Cellulose 65%

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019


Matt Macfarlane, Asbestos Lab Supervisor

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: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900607.00

Client Project #: 2018-0917

Date Received: 1/9/2019

Samples Received: 21

Samples Analyzed: 21

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Attention: Mr. Jason Lindahl
Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Lab ID: 19002548 **Client Sample #: 2018-0917-3-42**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 1 **Description:** White soft material with paint

Non-Fibrous Materials:	Other Fibrous Materials: %
Binder/Filler, Calcareous particles, Paint	None Detected ND

Asbestos Type: %
None Detected ND

Lab ID: 19002549 **Client Sample #: 2018-0917-3-43**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 1 **Description:** Brown soft material with off-white paint on wood flakes

Non-Fibrous Materials:	Other Fibrous Materials: %
Binder/Filler, Calcareous particles, Paint	None Detected ND
Wood flakes	

Asbestos Type: %
None Detected ND

Lab ID: 19002550 **Client Sample #: 2018-0917-3-44**

Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Layer 1 of 1 **Description:** Black asphaltic fibrous built-up material with granules

Non-Fibrous Materials:	Other Fibrous Materials: %
Asphalt/Binder, Granules, Mineral grains	Glass fibers 25%
Wood	

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Alla Prysyazhnyuk

Date: 01/11/2019

Reviewed by: Matt Macfarlane

Date: 01/11/2019

Matt Macfarlane, Asbestos Lab Supervisor

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

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Jason Lindahl
Phone (206) 547-0100
Cell (763) 286-3494
NVL Batch Number 1900607.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/11/2019 **Time** 3:15 PM
Email jason.l@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0917 **Project Location:** "Building 22" 718 Yesler Way Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 21

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19002530	2018-0917-3-24		A
2	19002531	2018-0917-3-25		A
3	19002532	2018-0917-3-26		A
4	19002533	2018-0917-3-27		A
5	19002534	2018-0917-3-28		A
6	19002535	2018-0917-3-29		A
7	19002536	2018-0917-3-30		A
8	19002537	2018-0917-3-31		A
9	19002538	2018-0917-3-32		A
10	19002539	2018-0917-3-33		A
11	19002540	2018-0917-3-34		A
12	19002541	2018-0917-3-35		A
13	19002542	2018-0917-3-36		A
14	19002543	2018-0917-3-37		A
15	19002544	2018-0917-3-38		A
16	19002545	2018-0917-3-39		A
17	19002546	2018-0917-3-40		A
18	19002547	2018-0917-3-41		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Emily Schubert		NVL	1/9/19	1515
Analyzed by	Alla Prysyazhnyuk		NVL	1/11/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special
Instructions:

Date: 1/9/2019
 Time: 3:40 PM
 Entered By: Emily Schubert

ASBESTOS LABORATORY SERVICES

NVL

Company NVL Field Services Division

NVL Batch Number **1900607.00**

Address 4708 Aurora Ave. N.
Seattle, WA 98103

TAT 2 Days AH No

Rush TAT

Project Manager Mr. Jason Lindahl

Due Date 1/11/2019 Time 3:15 PM

Phone (206) 547-0100

Email jason.l@nvlabs.com

Cell (763) 286-3494

Fax (206) 634-1936

Project Name/Number: 2018-0917 Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Subcategory PLM Bulk

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

Total Number of Samples 21

Rush Samples

	Lab ID	Sample ID	Description	A/R
19	19002548	2018-0917-3-42		A
20	19002549	2018-0917-3-43		A
21	19002550	2018-0917-3-44		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Emily Schubert		NVL	1/9/19	1515
Analyzed by	Alla Prysyazhnyuk		NVL	1/11/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special
Instructions:

Date: 1/9/2019

Time: 3:40 PM

Entered By: Emily Schubert

NVL Laboratories, Inc.

4708 Aurora Ave N. Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900607



Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 22" 718 Yesler Way
Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0917

Total Samples 21

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

☐ **Asbestos Air** ☐ PCM (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II) ☐ Other
☒ **Asbestos Bulk** ☒ PLM (EPA/600/R-93/116) ☐ PLM (EPA Point Count) ☐ PLM (EPA Gravimetry) ☐ TEM BULK
☐ **Mold/Fungus** ☐ Mold Air ☐ Mold Bulk ☐ **Rotometer Calibration**

METALS

☐ Total Metals
☐ TCLP
☐ Cr 6

Det. Limit

☐ FAA (ppm)
☐ ICP (ppm)
☐ GFAA (ppb)

Matrix

☐ Air Filter ☐ Soil
☐ Drinking water ☐ Paint Chips in %
☐ Dust/wipe (Area) ☐ Paint Chips in cr

RCRA Metals

☐ Arsenic (As) ☐ Chromium (Cr)
☐ Barium (Ba) ☐ Lead (Pb)
☐ Cadmium (Cd) ☐ Mercury (Hg)

Other Metals

☐ All 3
☐ Copper (Cu)
☐ Nickel (Ni)
☐ Zinc (Zn)

☐ **Other Types of Analysis**

☐ Fiberglass ☐ Nuisance Dust ☐ Other (Specify) _____
☐ Silica ☐ Respirable Dust

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0917-3-24	2018-0917-3-39	
2		3-25	3-40	
3		3-26	3-41	
4		3-27	3-42	
5		3-28	3-43	
6		3-29	3-44	
7		3-30		
8		3-31		
9		3-32		
10		3-33		
11		3-34		
12		3-35		
13		3-36		
14		3-37		
15		3-38		

Print Below

Sign Below

Company

Date

Time

Sampled by

Jason Lindahl

[Signature]

NVL

1/9/19

7130

Relinquished by

Jason Lindahl

[Signature]

NVL

1/9/19

Received by

Emily

[Signature]

NVL

1/9/19

1515

Analyzed by

Results Called by

Results Faxed by

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

January 9, 2019

Jason Lindahl

NVL Field Services Division

4708 Aurora Ave. N.
Seattle, WA 98103



RE: Metals Analysis; NVL Batch # 1900601.00

Dear Mr. Lindahl,

Enclosed please find the test results for samples submitted to our laboratory for analysis. Preparation of these samples was conducted following protocol outlined in EPA Method SW 846 -3051 unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with U.S. EPA, NIOSH, OSHA and other ASTM methods.

For matrix materials submitted as paint, dust wipe, soil or TCLP samples, analysis for the presence of total metals is conducted using published U.S. EPA Methods. Paint and soil results are usually expressed in mg/Kg which is equivalent to parts per million (ppm). Lead (Pb) in paint is usually expressed in mg/Kg (ppm), Percent (%) or mg/cm² by area. Dust wipe sample results are usually expressed in ug/wipe and ug/ft². TCLP samples are reported in mg/L (ppm). For air filter samples, analyses are conducted using NIOSH and OSHA Methods. Results are expressed in ug/filter and ug/m³. Other matrix materials are analyzed accordingly using published methods or specified by client. The reported test results pertain only to items tested and 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 details.

This report is considered highly confidential and will not be released without your approval. 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. If you need further assistance please feel free to call us at 206-547-0100 or 1-888-NVLLABS.

Sincerely,

A handwritten signature in black ink, appearing to read "Shalini Patel".

Shalini Patel, Lab Supervisor

Enc.: Sample results



Analysis Report

Total Lead (Pb)

NVL

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900601.00

Matrix: Paint
Method: EPA 3051/7000B
Client Project #: 2018-0917
Date Received: 1/9/2019
Samples Received: 6
Samples Analyzed: 6

Attention: Mr. Jason Lindahl

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Lab ID	Client Sample #	Sample Weight (g)	RL in mg/Kg	Results in mg/Kg	Results in percent
19002512	2018-0917-Pb-1	0.1845	54	400	0.040
19002513	2018-0917-Pb-2	0.1954	51	< 51	<0.0051
19002514	2018-0917-Pb-3	0.1846	54	< 54	<0.0054
19002515	2018-0917-Pb-4	0.0309	160	< 160	<0.016
19002516	2018-0917-Pb-5	0.1781	56	< 56	<0.0056
19002517	2018-0917-Pb-6	0.1089	92	5800	0.58

Comments: Small sample size (<0.05g) for 2018-0917-Pb-4.

Sampled by: Client

Analyzed by: Yasuyuki Hida

Reviewed by: Shalini Patel

Date Analyzed: 01/09/2019

Date Issued: 01/09/2019


Shalini Patel, Lab Supervisor

mg/ Kg =Milligrams per kilogram

Percent = Milligrams per kilogram / 10000

Note : Method QC results are acceptable unless stated otherwise.

Unless otherwise indicated, the condition of all samples was acceptable at time of receipt.

RL = Reporting Limit

'<' = Below the reporting Limit

Bench Run No: 2019-0109-2

FAA-02

LEAD LABORATORY SERVICES

NVL

Company NVL Field Services Division
Address 4708 Aurora Ave. N.
 Seattle, WA 98103
Project Manager Mr. Jason Lindahl
Phone (206) 547-0100
Cell (763) 286-3494
NVL Batch Number 1900601.00
TAT 2 Days **AH** No
Rush TAT
Due Date 1/11/2019 **Time** 3:15 PM
Email jason.l@nvlabs.com
Fax (206) 634-1936

Project Name/Number: 2018-0917 **Project Location:** "Building 22" 718 Yesler Way Seattle, WA 98104

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

Total Number of Samples 6 **Rush Samples**

	Lab ID	Sample ID	Description	A/R
1	19002512	2018-0917-Pb-1		A
2	19002513	2018-0917-Pb-2		A
3	19002514	2018-0917-Pb-3		A
4	19002515	2018-0917-Pb-4		A
5	19002516	2018-0917-Pb-5		A
6	19002517	2018-0917-Pb-6		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shaina Mitchell		NVL	1/9/19	1515
Analyzed by	Yasuyuki Hida		NVL	1/9/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/9/2019
 Time: 3:24 PM
 Entered By: Shaina Mitchell

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900601

Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 22" 718 Yesler Way
Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0917

Total Samples 6

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input type="checkbox"/> Asbestos Bulk	<input type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	<input type="checkbox"/> All 8	Other Metals
<input checked="" type="checkbox"/> Total Metals	<input checked="" type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)	<input type="checkbox"/> All 3
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input checked="" type="checkbox"/> Lead (Pb)	<input type="checkbox"/> Copper (Cu)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Nickel (Ni)
		<input checked="" type="checkbox"/> Paint Chips in %			<input type="checkbox"/> Zinc (Zn)
		<input type="checkbox"/> Paint Chips in cr			
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify) _____		
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0917-Pb-1		
2		Pb-2		
3		Pb-3		
4		Pb-4		
5		Pb-5		
6		Pb-6		
7				
8				
9				
10				
11				
12				
13				
14				
15				

Print Below	Sign Below	Company	Date	Time
Sampled by Jason Lindahl		NVL	1/9/19	7:30
Relinquished by Jason Lindahl		NVL	1/9/19	
Received by S. Mitchell		NVL	1/9/19	1515
Analyzed by				
Results Called by				
Results Faxed by				

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

January 11, 2019

Derrick Gallard

NVL Field Services Division

4708 Aurora Ave. N.

Seattle, WA 98103

NVL

INDUSTRIAL HYGIENE SERVICES
LABORATORY + MANAGEMENT + TRAINING

RE: Metals Analysis; NVL Batch # 1900603.00

Dear Mr. Gallard,

Enclosed please find the test results for samples submitted to our laboratory for analysis. Preparation of these samples was conducted following protocol outlined in EPA Method SW 846 -3051 unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with U.S. EPA, NIOSH, OSHA and other ASTM methods.

For matrix materials submitted as paint, dust wipe, soil or TCLP samples, analysis for the presence of total metals is conducted using published U.S. EPA Methods. Paint and soil results are usually expressed in mg/Kg which is equivalent to parts per million (ppm). Lead (Pb) in paint is usually expressed in mg/Kg (ppm), Percent (%) or mg/cm² by area. Dust wipe sample results are usually expressed in ug/wipe and ug/ft². TCLP samples are reported in mg/L (ppm). For air filter samples, analyses are conducted using NIOSH and OSHA Methods. Results are expressed in ug/filter and ug/m³. Other matrix materials are analyzed accordingly using published methods or specified by client. The reported test results pertain only to items tested and 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 details.

This report is considered highly confidential and will not be released without your approval. 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. If you need further assistance please feel free to call us at 206-547-0100 or 1-888-NVLLABS.

Sincerely,



Shalini Patel, Lab Supervisor

Enc.: Sample results



Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516

Analysis Report

Toxicity Characteristic Leaching Procedure - Lead (Pb)

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1900603.00

Matrix: Bulk
Method: EPA 1311/7000B
Client Project #: 2018-0917
Date Received: 1/9/2019
Samples Received: 1
Samples Analyzed: 1

Attention: Mr. Derrick Gallard

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Lab ID	Client Sample #	RL mg/ L	Results in mg/L	Results in ppm
19002521	2018-0917-TCLP	0.5	1.0	1.0


Sampled by: Client

Analyzed by: Yasuyuki Hida

Reviewed by: Shalini Patel

Date Analyzed: 01/11/2019

Date Issued: 01/11/2019


Shalini Patel, Lab Supervisor

mg/ L =Milligrams per liter

ppm = parts per million

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.

Bench Run No: 2019-0110-10

TCLP-1

LEAD LABORATORY SERVICES

NVL

Company NVL Field Services Division

NVL Batch Number 1900603.00

Address 4708 Aurora Ave. N.
Seattle, WA 98103

TAT 2 Days **AH** No

Rush TAT

Project Manager Mr. Derrick Gallard

Due Date 1/11/2019 **Time** 3:15 PM

Phone (206) 547-0100

Email derrick.g@nvlabs.com

Cell (206) 707-3236

Fax (206) 634-1936

Project Name/Number: 2018-0917

Project Location: "Building 22" 718 Yesler Way Seattle, WA 98104

Subcategory Flame AA (FAA)

Item Code TCLP-1 EPA 1311/7000B Lead by FAA <TCLP>

Total Number of Samples 1

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	19002521	2018-0917-TCLP		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Emily Schubert		NVL	1/9/19	1515
Analyzed by	Yasuyuki Hida		NVL	1/11/19	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 1/9/2019

Time: 3:28 PM

Entered By: Shaina Mitchell

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

CHAIN of CUSTODY SAMPLE LOG

1900603



Client NVL Laboratories Inc

Street 4708 Aurora Ave N

Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Building 22" 718 Yesler Way

Seattle, WA 98104

NVL Batch Number

Client Job Number 2018-0917

Total Samples 1

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days

☐ 2 Hrs ☐ 1 Day ☐ 4 Days

☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hr:

Email address George.Barlet@seattlehousing.org

Phone: (206) 770-6745

Fax: (206) 722-2814

Direct No (206) 615-3596

Cell (206) 769-7299

☐ **Asbestos Air** ☐ PCM (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II) ☐ Other

☐ **Asbestos Bulk** ☐ PLM (EPA/600/R-93/116) ☐ PLM (EPA Point Count) ☐ PLM (EPA Gravimetry) ☐ TEM BULK

☐ **Mold/Fungus** ☐ Mold Air ☐ Mold Bulk ☐ Rotometer Calibration

METALS

☐ Total Metals

☒ TCLP

☐ Cr 6

Det. Limit

☐ FAA (ppm)

☐ ICP (ppm)

☐ GFAA (ppb)

Matrix

☐ Air Filter

☐ Drinking water

☐ Dust/wipe (Area)

☐ Soil

☐ Paint Chips in %

☐ Paint Chips in cr

RCRA Metals

☐ Arsenic (As)

☐ Barium (Ba)

☐ Cadmium (Cd)

☐ All 8

☐ Chromium (Cr)

☒ Lead (Pb)

☐ Mercury (Hg)

Other Metals

☐ All 3

☐ Copper (Cu)

☐ Nickel (Ni)

☐ Zinc (Zn)

☐ **Other Types of Analysis**

☐ Fiberglass

☐ Nuisance Dust

☐ Other (Specify) _____

☐ Silica

☐ Respirable Dust

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2018-0917-TCLP		
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	DERRICK		NVL	11/9/18	7:30
Relinquished by	DERRICK		NVL	11/9/18	
Received by	Emilia S		NVL	11/19/19	1515
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.
Results report to



Appendix C

AHERA Certifications & Laboratory Qualification



AIHA

Laboratory Accreditation
Programs, LLC

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 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

LABORATORY ACCREDITATION PROGRAMS

- | | |
|--|--------------------------------------|
| <input checked="" type="checkbox"/> INDUSTRIAL HYGIENE | Accreditation Expires: June 01, 2019 |
| <input checked="" type="checkbox"/> ENVIRONMENTAL LEAD | Accreditation Expires: June 01, 2019 |
| <input checked="" type="checkbox"/> ENVIRONMENTAL MICROBIOLOGY | Accreditation Expires: June 01, 2019 |
| <input type="checkbox"/> FOOD | Accreditation Expires: |
| <input checked="" type="checkbox"/> UNIQUE SCOPES | Accreditation Expires: June 01, 2019 |

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 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

William Walsh

William Walsh, CIH

Chairperson, Analytical Accreditation Board

Revision 15: 03/30/2016

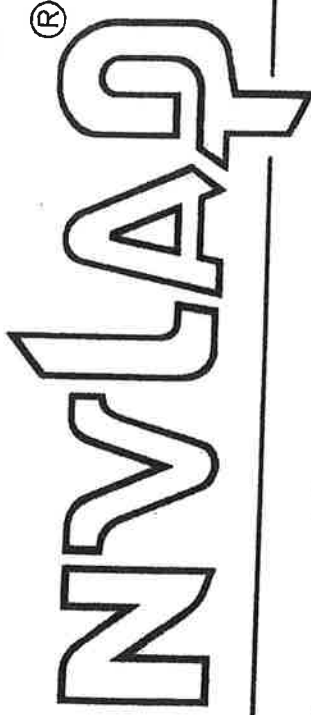
Cheryl O. Morton

Cheryl O. Morton

Managing Director, AIHA Laboratory Accreditation Programs, LLC

Date Issued: 05/31/2017

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

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 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).

2018-10-01 through 2019-09-30

Effective Dates



[Signature]

For the National Voluntary Laboratory Accreditation Program



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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

Code

Description

18/A01

EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples

18/A03

EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

A handwritten signature in black ink, appearing to read "John S. Laman".

For the National Voluntary Laboratory Accreditation Program

Certificate of Completion

This is to certify that

Derrick S. Gallard

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

169720

Certificate Number



Oct 10, 2018 Expires in 1 year.

Date(s) of Training

Exam Score: N/A
if appropriate:

A handwritten signature in black ink, appearing to be "D. S. Gallard", written over a horizontal line.

Instructor

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

STATE OF WASHINGTON

Department of Commerce

Lead-Based Paint Abatement Program

Derrick Gallard

*Has fulfilled the certification requirements of
WAC 365-230
and has been certified to conduct lead-based
paint activities as a
Inspector*

<u>Certification #</u>	<u>Issuance Date</u>	<u>Expiration Date</u>
7090	02/13/2018	02/13/2021

Certificate of Completion

This is to certify that

Jason Lindahl

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

167717

Certificate Number



May 23, 2018 Expires in 1 year.

Date(s) of Training

Exam Score: N/A
if appropriate:

A handwritten signature in black ink, appearing to be "R. B.", written over a horizontal line.

Instructor

ARGUS PACIFIC, INC. / 1900 WEST NICKERSON ST, SUITE 315 / SEATTLE, WASHINGTON 98119 / 206.285.3373 / ARGUSPACIFIC.COM

STATE OF WASHINGTON

Department of Commerce

Lead-Based Paint Abatement Program

Jason Lindahl

*Has fulfilled the certification requirements of
WAC 365-230
and has been certified to conduct lead-based
paint activities as a
Inspector*

Certification #

7145

Issuance Date

03/20/2018

Expiration Date

03/20/2021

Phase 1
"Building 18-22"
Yesler Terrace
Seattle, WA 98104

DIVISION 2 - SITEWORK

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including Division 0 – Bidding Requirements, Forms and Terms and Conditions, and Division 1 - General Requirements Sections, the Drawings, and the applicable provisions of the other Divisions are hereby made a part of this Section and all its Articles.

SCOPE OF WORK

Hazardous materials surveys, including asbestos and lead, exist with Seattle Housing Authority. The results of a hazardous materials survey of the building and specification sections directing, asbestos abatement, lead containing paint work plan, disposal of asbestos containing materials, and removal & disposal of PCB light ballasts and mercury containing fluorescent light tubes will be incorporated into the Contract Documents.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

Phase 1
"Building 18-22"
Yesler Terrace
Seattle, WA 98104

SECTION 02 80 00

EXISTING CONDITIONS ASSESSMENT

PART 1 GENERAL

1.01 SUMMARY

- A. This section provides information concerning asbestos, lead, polychlorinated biphenyl (PCB) and mercury-containing materials pursuant to Federal regulations (29 CFR 1926.1101 and 29 CFR 1926.62); Washington State regulations (Chapter 296-62 Part 1 WAC and Chapter 296-62-07521); and other applicable requirements concerning reporting on asbestos, lead, PCB and mercury containing materials in the areas affected by the work under this Contract.
- B. This section provides notice to the Contractor of the existing site conditions and the Contractor's responsibility to remove all materials in the buildings including but not limited to general debris, appliances, garbage, wastes and left behind storage items.
- C. The information in this Section is based on the results of inspections, material sampling or assessments of the project areas and materials therein that will be affected by work under this Contract.

1.02 RELATED SECTIONS

- A. Section 02 82 00 – Removal of Asbestos-Containing Material
- B. Section 02 83 00 – Lead-containing Paint (LCP) Work Controls
- C. Section 02 84 00 –Disposal of Asbestos-Containing Material
- D. Section 02 90 00 – Removal and disposal of PCB Light Ballasts and Fluorescent Tube Lights / HID lamps

1.03 ASBESTOS SECTION

- A. An assessment of the project areas and plan review to identify asbestos-containing materials was performed in conformance with the requirements of
 - 1. 40 CFR Part 763 – Subpart E, as applicable to public and commercial buildings
 - 2. Chapter WAC 296-62-07721
 - 3. Puget Sound Clean Air Agency (PSCAA), Regulation III, Article 4
- B. A Good Faith Survey for asbestos was conducted on building 18-22 (5 buildings) located at the project site, and was reported in date by NVL Laboratories, Inc. (NVL Project # 2018-0913 thru 2018-0917).
- C. Based on the results of the inspection, it has been determined that the building areas that will be affected by work under this Contract, and materials therein, do contain asbestos in the form of

Building #18

- 1) Approx. 900 ft² of asbestos containing beige vinyl floor tiles identified in the attached drawings # 1, 2, 3.
- 2) Approx. 140 ft² of asbestos containing brown sheet vinyl flooring with mastic identified in the attached drawings # 1, 2, 3, 4.
- 3) A total of 3 sinks with asbestos containing black undercoating identified in the attached drawings # 1, 2, 4.
- 4) Approx. 140 ft² of asbestos containing beige vinyl floor tiles with black mastic identified in the attached drawing # 1.
- 5) Approx. 200 ft² of asbestos containing cream sheet vinyl with mastic identified in the attached drawings # 1, 2, 3, 4.
- 6) Approx. 175 ft² of asbestos containing 12x12 vinyl floor tiles identified in the attached drawing # 1.

Building #19

- 1) Approx. 75 ft² of asbestos containing brown sheet vinyl flooring with mastic identified in the attached drawings # 6, 7.
- 2) A total of 4 sinks with asbestos containing black undercoating identified in the attached drawings # 6, 7, 8, 9.
- 3) Approx. 300 ft² of asbestos containing beige vinyl floor tiles identified in the attached drawing # 6.
- 4) Approx. 95 ft² of asbestos containing cream sheet vinyl with mastic identified in the attached drawings # 6, 7.

Building #20

- 1) Approx. 255 ft² of asbestos containing brown sheet vinyl flooring with mastic identified in the attached drawings # 11, 12, 13, 15, 16, 17, 18.
- 2) Approx. 1580 ft² of asbestos containing vinyl floor tiles identified in the attached drawings # 11, 12, 13, 18.
- 3) A total of 6 sinks with asbestos containing black undercoating identified in the attached drawings # 11, 12, 13, 15, 16, 17.
- 4) Approx. 365 ft² of asbestos containing beige sheet vinyl flooring with mastic identified in the attached drawings # 11, 12, 13, 15, 16, 17, 18.
- 5) Approx. 570 ft² of asbestos containing vinyl floor tiles with mastic identified in the attached drawings # 15, 17.

Building #21

- 1) Approx. 370 ft² of asbestos containing beige vinyl floor tiles with black mastic identified in the attached drawings # 21, 22, 23, 24.
- 2) Approx. 140 ft² of asbestos containing brown sheet vinyl flooring with mastic identified in the attached drawings # 21, 23, 25, 28.
- 3) Approx. 2340 ft² of asbestos containing vinyl floor tiles identified in the attached drawings # 21, 22, 23, 24, 25.
- 4) A total of 12 sinks with asbestos containing black undercoating identified in the attached drawings # 21, 22, 23, 24, 25, 26, 27.
- 5) Approx. 325 ft² of asbestos containing tan sheet vinyl flooring with mastic identified in the attached drawings # 21, 22, 23, 24, 25, 27, 28.
- 6) Approx. 235 ft² of asbestos containing black floor mastic associated with vinyl floor tiles identified in the attached drawing # 23.

Building #22

- 1) Approx. 105 ft² of asbestos containing tan sheet vinyl with mastic identified in the attached drawings # 30, 31, 32.
- 2) A total of 6 sinks with asbestos containing black undercoating identified in the attached drawings # 30, 31, 32, 33.
- 3) Approx. 635 ft² of asbestos containing vinyl floor tiles identified in the attached drawings # 30, 32.
- 4) Approx. 60 ft² of asbestos containing brown sheet vinyl flooring with mastic identified in the attached drawings # 31, 32.
- 5) Approx. 70 ft² of asbestos containing black floor mastic associated with vinyl floor tiles identified in the attached drawing # 32.

- D. Reports summarizing the site investigation for hazardous building materials are available with the owner.

1.04 LEAD INSPECTION

- A. Assessments of the project areas and plan review to identify lead- containing materials was performed in conformance with the requirements of

- 1. WAC 296-155-17609
- 2. 29 CFR 1926.62
- 3. 40 CFR Part 745.220

Good Faith Surveys of each building for lead-containing paint components were conducted at Yesler Terrace (building 18-22), Seattle, WA 98104 and were reported in date by NVL Laboratories, Inc. (NVL Project # 2018-0913, 0914, 0915, 0916, 0917)

- B. Based on the results of the inspection, it has been determined that all the building areas that will be affected by work under this Contract, and materials therein, do contain lead in the form of lead-containing paint / lead-based paint.
- C. Reports summarizing the site investigations for hazardous building materials are available with the owner.

1.05 PCB INSPECTION

- A. Based on the site survey, the project areas that will be affected by work under this Contract, and materials therein, contain PCB (assumed) in the form of:

- 1. 29 HID Lamp ballasts

1.06 MERCURY INSPECTION

- A. Based on the site survey, the project area that will be affected by work under this Contract, and materials therein, contain mercury (assumed) in the form of:

- 1. 29 HID Lamps

1.07 CONTRACTOR'S RESPONSIBILITIES

- A. The Contractor shall comply promptly and completely with all local, state government regulations and requirements for the proper removal, transportation, and disposal of asbestos, lead, and mercury-containing materials that is classified as hazardous or dangerous waste, and within 7 calendar days of disposal furnish all disposal documentation and receipts as well as a brief written abatement summary to the Owner's representative.
- B. Should suspect material not identified in this Section be encountered, immediately suspend all work that could disturb said material and notify the Owners Consultant who will implement the proper action. Do not proceed with work that could disturb the material until authorized by the Owners Consultant, in writing, to do so.

1.08 OWNER'S RESPONSIBILITIES

- A. Upon notification by the Contractor of the existence of suspect material, the Owner's Consultant will have said material inspected and analyzed for the presence of asbestos, lead, PCBs or Mercury as required.
- B. If the inspection and analytical results confirm the presence of asbestos, lead, PCBs, or Mercury in the suspect material, Owner will take the necessary actions for compliance with applicable regulations. After compliance is obtained, the Owner's Consultant will notify the Contractor in writing so that work under this Contract can proceed.
- C. If the inspection and analytical results confirm that the suspect material is free of asbestos, lead, or PCBs; the Owner's Consultant will notify the Contractor in writing so that work under the Contract can proceed.

1.09 REFERENCE REPORTS, ADDENDUMS, DRAWINGS

- A. Review the available reference information available from the Owner that describe the conditions, testing results, and background investigations at the project site. Incorporate the information in these documents into the understanding, planning, and conduct of the work under this contract.
- B. The following documents are available with the owner. The bidder may review these documents, and may make copies at their own expense. The Contractor will be given one copy of these documents as needed, at time of contract execution. The information presented in the below cited reports is not intended as the Owner's representations of specific conditions, except for those conditions at the specific times and locations of the investigations.

Hazardous Materials Survey Reports – Available with the owner
Building drawings – Included in contract specification

Phase 1
"Building 18-22"
Yesler Terrace
Seattle, WA 98104

- C. The Owner does not warrant and specifically disclaims responsibility for the interpretation by Contractor of such information in referenced reports. The Contractor shall make its own interpretations, deductions, and conclusions as to the nature of the materials and the difficulties of doing other work affected by site conditions; and shall accept full responsibility thereof. The contract price includes full consideration of all costs of the Contractor based on the Contractor's interpretation of such information.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

Phase 1
"Building 18-22"
Yesler Terrace
Seattle, WA 98104

SECTION 02 82 00

ASBESTOS ABATEMENT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings, General Conditions of Contract and other Division Specification sections apply to work of this section.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Section 02 80 00 – Existing Conditions Assessment

B. Section 02 84 00 – Disposal of Asbestos Containing Material

1.03 DESCRIPTION OF WORK:

- A. The work specified herein shall include the removal of asbestos containing materials within the project area in accordance with all applicable Federal, State and Local regulations and these specifications. The work upon the contract can be summarized as follows:
1. The project areas consists of five multi-family structures at Yesler Terrace, Seattle, WA.
 2. The project involves the removal and disposal of all ACM identified in Section 02 80 00 Sub-section 1.03 (c).
 3. Removal of all fixed cabinetry to access any ACM to be included with the work. Owner may salvage some existing cabinetry, appliances and building material.
 4. Owner would be responsible to remove all movable objects from the project area.
 5. The owner and the "Contractor" acknowledge that some materials may be non-asbestos containing according to the asbestos survey. These materials shall be included in the Asbestos work plan as Presumed Asbestos Containing Materials (PACM).
- B. The "Contractor" will obtain all required permits and notifications, which shall be kept valid for the duration of the work addressed by the permit. This includes Copies of Labor and Industries Notice of Intent to Remove Asbestos and Puget Sound Clean Air Agency Notice of Intent to Remove Asbestos.
- C. The "Contractor" is responsible for restoring the work area and auxiliary areas utilized during the abatement to conditions equal to or better than original. Damages caused during the performance of abatement activities shall be repaired

by the Contractor (e.g., paint peeled off by barrier tape, nail holes, water damage, broken glass) at no additional expense to the Owner.

- D. All air and bulk monitoring information shall be legibly filled out on approved forms.
- E. All employees involved in asbestos abatement activities shall be the bearer of a current Certified Asbestos Worker card issued by the Washington State Department of Labor and Industries. The "Contractor" shall also provide, as a minimum, one (1) person certified by L&I as an Asbestos Abatement Supervisor and this person shall be responsible for overall abatement activities. This person shall be immediately available on-site when any project work is done.
- F. All materials transported onto or away from the project area, including waste materials, shall be labeled in accordance with DOT, EPA and L&I standards.
- G. Separate Contracts are being issued for bid to perform work at the site which will follow the work of this Contract. Separate contract work can be summarized as follows:
- H. Asbestos Containing Materials: **As outlined in Section 02 80 00 Sub-section 1.03 (c).**
- I. Use of the Site: Confine operations at the site to the areas permitted under the Contract. Portions of the site beyond areas on which work is indicated are not to be disturbed. Conform to site rules and regulations affecting the work while engaged in the project construction.
- J. Contractor's Use of the Existing Building: Maintain existing building in a safe and weather tight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period.
- K. Keep public areas such as adjacent street, parking lots, alleys and toilet rooms free of accumulation of waste, rubbish, or construction debris.
- L. Smoking or open fires will not be permitted within the building enclosure or on the premises.
- M. Occupancy:

Owner Occupancy: The Building Owner will not occupy the site and the existing buildings during the entire period of asbestos abatement. Cooperate fully with the Building Owner or his representative during abatement operations to minimize conflicts and to facilitate Building Owner usage. Perform the work so as not to interfere with the Owner's operation.

Partial Building Owner Occupancy: The Building Owner reserves the right to place and install equipment as necessary in areas of the building in which all asbestos abatement and project decontamination procedures have been completed, and to occupy such completed areas prior to substantial completion, provided that such occupancy does not substantially interfere with completion of work. Such placing

of equipment and partial occupancy shall not constitute acceptance of the work or any part of the work.

- N. Site Conditions: The removal area may have domestic water and sewer lines, electrical and communication conduit with active wiring, cable trays, light fixtures and HVAC equipment located in the project area. The Contractor shall verify location of all equipment and protect it as required.
- O. Project area access for this work will be assisted by and coordinated through the Owner's representative.
- P. Contractor is responsible for air sampling for L&I and other Local, State and Federal compliance.

1.04 ASBESTOS ABATEMENT - SUPERVISION:

General Superintendent: Provide a full-time General Superintendent who is experienced in administration and supervision of asbestos abatement projects including work practices, protective measures for building and personnel, disposal procedures, etc. This person must be a Current Certified Asbestos Supervisor as required by L&I, and is the Contractor's representative responsible for compliance with all applicable Federal, State and Local regulations, particularly those related to asbestos containing materials.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. General:

- 1. Deliver all materials in the original packages, containers or bundles bearing the name of the manufacturer and the brand name (where applicable).
- 2. Store all materials subject to damage off the ground, away from wet or damp surfaces and under cover sufficient to prevent damage or contamination. Replacement materials shall be stored outside the work area until abatement is completed.
- 3. Damaged, deteriorating or previously used materials shall not be used and shall be removed from the worksite and disposed of properly.
- 4. Polyethylene sheeting for walls and stationary objects shall be a minimum of 6-mil thick. For floors and all other uses sheeting of at least 6-mil thickness shall be used in widths selected to minimize the frequency of joints. Polyethylene shall be fire retardant per Building Owner fire regulations.
- 5. Method of attaching polyethylene sheeting shall be agreed upon in advance by the Contractor and the Building Owner and selected to minimize damage to equipment and surfaces. The Contractor will be responsible for any damage to equipment and surfaces created by this attachment of polyethylene sheeting.

6. Polyethylene sheeting utilized for worker decontamination enclosure shall be opaque white or black in color.
 7. Disposal bags shall be 6-mil polyethylene, pre-printed with labels as required by EPA regulation 40 CFR 61.150 (a) (i) (iv) (v) or WISHA Chapter 296-62.
 8. Disposal drums shall be metal or fiberboard with locking ring tops; labeled in accordance with EPA regulation 40 CFR 61.150 (a) (i) (iv) (v).
 9. Warning signs as required by WISHA Chapter 296-62-07721.
 10. Walls separating abatement work area from occupied areas shall be constructed of fire retardant wood or metal framing to support products barriers in all openings larger than 4'x8'. The framing shall be covered by 5/8", type "X" gypsum wall board.
 11. Tape: Tape shall be capable of sealing joints of adjacent sheets of plastic sheet and for attachment of plastic sheet to finished or unfinished surfaces of dissimilar materials and capable of adhering under wet conditions, including use of amended water. Minimum 2" wide tape must be used.
 12. Other materials: The Contractor shall provide all other materials such as lumber, nails and hardware, which may be required to construct and dismantle the decontamination area and the barriers that isolate the work area, and as required to complete the work as specified.
- B. Removal: Surfactant (wetting agent) shall be a 50/50 mixture of Polyethylene ester and polyoxyethylene ester, or equivalent, mixed in a proportion of 1 fluid ounce to 5 gallons of water as specified by manufacturer. (An equivalent surfactant shall be understood to mean a material with surface tension of 29 dynes/cm as tested in its properly mixed concentration, using ASTM method D1331-56- "Surface and Interfacial Tension of Solutions of Surface Active Agents.") Where work area temperature may cause freezing of the amended water solution, the addition of ethylene glycol in amounts sufficient to prevent freezing is permitted.
- C. Encapsulation Products:
1. Encapsulation materials shall be penetrating type and conform with the following characteristics:
 2. Encapsulants should not be solvent-based or utilize a vehicle consisting of hydrocarbons. Tinting of the encapsulant may be required.
 3. Encapsulants shall be non-flammable.
 4. Contractor must provide certification that encapsulant is compatible with specified replacement material.
 5. Additional materials as necessary for removal, as specified in 2.1.

D. Enclosure:

1. Enclosure materials shall be 6 mil polyethylene plastic, plywood, wood framing, or other materials as needed and conform with the following characteristics.
2. The enclosures shall be constructed of materials such that when the enclosure is completed there is limited potential for impact damage to the enclosure and no potential for fiber release.
3. Additional materials as necessary for removal, as specified in 2.01.
4. Wood framing used for enclosure shall be pressure treated with fire retardant subject to approval by engineer.
5. All walls and/or ceilings adjacent to public or tenant areas must be constructed of 5/8" type "X" gypsum wall board, finished, sanded and painted white subject to approval by the Owner.

2.02 EQUIPMENT:

A. General (all abatement projects):

1. A sufficient quantity of negative pressure ventilation units equipped with HEPA filtration and operated in accordance with ANSI 29.2-79 (local exhaust ventilation requirements) and EPA guidance document EPA 560/5-83-002 Guidance for Controlling Friable Asbestos-Containing Materials in Buildings Appendix F: Recommended Specifications and operating procedures for the use of negative pressure systems for asbestos abatement shall be utilized so as to provide one work place air change every 4 hours.

To calculate total air flow requirement:

$$\text{Total ft}^3/\text{min} = \frac{\text{Vol. of work area (in ft}^3\text{)}}{15 \text{ min}}$$

To calculate the number of units needed for the abatement:

$$\text{Number of units needed} = \frac{[\text{Total ft}^3/\text{min}]}{[\text{Capacity of unit in ft}^3/\text{min} \times 70\%]}$$

A sufficient quantity of air shall be exhausted to create a minimum pressure of 0.02 inches of water within the enclosure with respect to outside the enclosure.

2. Contractor shall install and maintain a recording differential pressure meter (manometer).
3. Type "C" air supplied respirators operated in the pressure demand mode with full face pieces and escape cylinders or HEPA filters are required by

L&I for negative pressure containment abatement work until the successful completion of final clearance air monitoring.

4. Compressed air systems shall be designed to provide air volumes and pressures to accommodate respirator manufacturer's specifications. The compressed air systems shall have a receiver of adequate capacity to allow escape of all respirator wearers from contaminated areas in the event of compressor failure. Compressors must meet the requirements of 29 CFR 1910.134(d). Compressors must have an in-line carbon monoxide monitor, and periodic inspection of the carbon monoxide monitor must be evidenced. Documentation of adequacy of compressed air systems/respiratory protection system must be retained on site. This documentation will include a list of compatible components with the maximum number and type of respirators that may be used with systems providing air of sufficient quality (Grade D breathing air as described in Compressed Gas Association Commodity Specifications G-7.1.)

Air lines shall be provided by the Contractor for the Owner's and ASF use upon demand.

5. Full body disposable protective clothing, including head, body and foot coverings (unless using footwear as described in 2.02-A-6) consisting of material impenetrable by asbestos fibers (Tyvek R or equivalent) shall be provided to all workers and authorized visitors in sizes adequate to accommodate movement without tearing.
6. Additional safety equipment (e.g., hard hats meeting the requirements of ANSI Standard Z89.1-1981, eye protection meeting the requirements of ANSI Standard Z87.1-1979, safety shoes meeting the requirements of ANSI Standard Z41.1-1967, disposable PVC gloves) as necessary, shall be provided to all workers and authorized visitors.
7. Non-skid footwear shall be provided to all abatement workers. Disposable clothing shall be adequately sealed to the footwear to prevent body contamination.
8. Only single-use, disposable towels and clothing will be allowed.
9. A sufficient supply of disposable mops, rags and sponges for work area decontamination shall be available.
10. For mini-enclosures and glove bags, a HEPA filtered vacuum system shall be utilized to provide negative air.

B. Removal Equipment:

1. A sufficient supply of scaffolds, ladders, lifts and hand tools (e.g., scrapers, wire cutters, brushes, utility knives, wire saws, etc.) shall be provided by the Contractor.
2. Rubber dustpans and rubber squeegees shall be employed for cleanup.

3. Brushes utilized for removing loose asbestos containing material shall have nylon or fiber bristles, not metal.
4. A sufficient supply of HEPA filtered vacuum systems shall be available during cleanup.

C. Encapsulation Equipment:

1. Encapsulants shall be applied in accordance to manufacturer's specifications.
2. Additional support equipment as needed.
3. The nature of the encapsulant may effect the requirements for respiratory protection. Vapors that may be given off during encapsulant application must be taken into account when selecting respirators, if types other than air supplied are used.

D. Enclosure Equipment:

1. Hand tools equipped with HEPA filtered local exhaust ventilation shall be utilized during the installation of enclosures and supports if there is any need to disturb asbestos containing materials during this process. (As alternative asbestos material may be partially removed following proper removal procedures prior to the installation of supports and enclosures.)

E. Scaffolding:

1. Any scaffolding used must be cleaned, painted white, and completely free of debris.
2. Follow all manufacturer recommendations and all applicable regulations in the set-up, use and tear-down of all scaffolding used.
3. All scaffolding must be in accordance with the Scaffolding Notes section of the drawings.

2.03 FABRICATION:

Equipment or items fabricated to suit this project shall be as selected by the Contractor and agreed upon by the Owner's Engineer. Submit shop drawings and/or other information in sufficient detail for the Building Owner Engineer to review for approval.

PART 3 - EXECUTION

3.01 SECONDARY BARRIER

- A. Secondary Barrier: Over the Primary Barrier, install a clear 6 mil sheet plastic on walls and ceilings in all areas where required, for asbestos removal work.
- B. Post-Abatement: The Contractor and the Building Owner's Representative shall visually inspect all projects for completeness of work and the presence of any visible debris following all abatement per ASTM E1368-90, "Standard Practice for Visual Inspection of Asbestos Abatement Projects". Following clearance by visual inspection, clearance samples, shall be conducted by the Owner's Representative.

Following review and acceptance of the clearance results by the Owner, the containment systems may be removed.

3.02 WORKER PROTECTION

- A. Before beginning work with any material for which Material Safety Data Sheet has been submitted provide workers with the required protective equipment. Require that appropriate equipment be used at all times.

3.03 PREPARATION OF THE WORK AREA:

- A. Post barrier tape and caution signs meeting the specifications of WAC Chapter 296-62-07711 at the locations and approaches to a location where airborne concentrations of asbestos may be expected to exceed the pre-abatement concentration. Signs shall be posted at a distance sufficiently far enough away from the work area to permit an employee to read the sign and take the necessary protective measures to avoid exposure. Additional signs may need to be posted following construction of work place enclosures or barriers.
- B. Contractor shall coordinate with the Building Owner to ensure that Building Owner crews perform any required shut down and lock out of utilities such as electric power, water, or HVAC lines to the project area when possible. When required, Contractor shall provide temporary power and lighting. Ensure safe installation (including ground faulting) of temporary electrical codes and WISHA requirements for temporary electrical systems. Seal all conduits and junction boxes against amended water. Contractor is responsible for electrical safety.
- C. All conduit joints, junction boxes, motor connections, motors, conveyors, control panels and associated equipment in the work areas shall be protected from amended water. All wire in conduit that passes through the work area shall remain energized at all times, however the Contractor is responsible for all electrical safety.
- D. Control panels, gauges, etc., in the project area may require Building Owner access during abatement. Contractor shall coordinate with the Building Owner to identify which area may need access, then provide access for those items without the need for personnel to enter the abatement enclosure.
- E. Pre-clean, remove furnishings and install drop cloths using HEPA filtered vacuums or wet cleaning methods as appropriate. Do not use methods that would raise dust such as dry sweeping or vacuuming with equipment not equipped with HEPA filters. Do not disturb asbestos containing materials during the pre-cleaning phase.
- F. Remove from the work area all objects that are movable to protect them from potential asbestos contamination.

3.04 GENERAL REMOVAL PROCEDURES:

- A. Wet all asbestos containing material with an amended water solution using equipment capable of providing a fine spray mist. Avoid knocking the material loose during the wetting operation. Saturate the material to substrate prior to removal, however, do not allow excessive water to accumulate in the work area. Keep all removed material saturated until it can be containerized for disposal. If

work area temperatures are below 32 d/F and the amended water is subject to freezing, a suitable anti-freeze may be added to the solution to prevent freezing. Maintain a high humidity in the barrier or enclosure throughout the abatement period by misting or spraying to ensure material saturation and reduce the potential for elevated airborne concentrations. Wetting procedures are not equally effective on all types of asbestos containing materials. Nonetheless, they shall be used in all cases.

- B. Saturated asbestos containing material shall be removed in manageable sections. Containerize removed material immediately and prior to moving it to a new location for continuance of work. Adjacent areas shall be periodically sprayed and maintained in a saturated condition until all visible material is sealed and removed from the barrier or enclosure.
- C. Removed material shall not be dropped or thrown. Remove material intact or as components whenever possible and carefully lower to the floor. If this cannot be feasibly accomplished, a dust-tight chute shall be constructed to transport the material to containers on the floor, or the material may be containerized at elevated levels (e.g., on scaffolds) and carefully lowered to the ground by mechanical means.
- D. Double bag all waste material prior to removal from the enclosure system or immediately upon removal of the barrier (glove bag).
- E. Disposal bags shall not be overfilled. Additionally, hand carts or equivalent shall be used to transport waste containers or materials. Waste containers or materials shall be raised and securely transported, and shall not be dropped or slid.
- F. Disposal containers shall be securely sealed to prevent accidental opening and leakage by taping in a goose-neck fashion, then labeled and dated. Do not seal bags with wire or cord. Bags may be placed in drums for staging and transportation to the landfill. Bags shall be decontaminated on exterior surfaces by wet cleaning and HEPA vacuuming.
- G. Large components removed intact may be wrapped in 2 layers of 6-mil polyethylene sheeting secured with tape for transport to the landfill.
- H. The work area shall be cleaned of all suspect ACM prior to the visual inspection by Owner's Representative. If any accumulation of residue is observed, it will be assumed to be asbestos. Re-cleaning may be required, at no additional cost to the Owner, until all suspect material is removed. Re-cleaning and inspection will continue until no visible suspect material remains. Encapsulation of all removal surfaces shall be performed by the Contractor.
- I. Following the satisfactory completion of clearance air monitoring, the negative air ventilation system, remaining barriers and decontamination facilities shall be removed and disposed of as asbestos waste. A final visual inspection by the Owner's Representative shall ensure that no contamination remains in the containment area. Unsatisfactory conditions may require additional cleaning by the Contractor and air monitoring by the Owner's Representative.

3.05 DISPOSAL PROCEDURES:

- A. See Section 2 84 00 for project specific removal requirements.
- B. Sealed and labeled containers of asbestos containing waste shall be removed from the immediate project area and transported to the prearranged disposal location as the work progresses. Allow adequate time for the Building Owner or the Owner's Representative to quantify the number of asbestos containers used when requested by the Building Owner. Remove bags from the site in a cart covered with black plastic sheeting.
- C. Disposal must occur at an authorized site in accordance with regulatory requirements of NESHAP and applicable State and Local guidelines and regulations.
- D. Waste shipment disposal shall be delivered to the Owner's Representative. This information shall document the pickup site and disposal site, the estimated quantity of the asbestos waste and the type of containers used. Waste manifest shall be signed by the Contractor and the Disposal Site Operator. If a separate hauler is employed, their name, address, telephone number and signature shall also appear on the manifest.
- E. Transportation to the Landfill:
 - 1. All transportation of asbestos containing waste material shall adhere to Federal, State and Local regulations, including, but not limited to:
 - a. Hazard material regulation 48 CFR parts 171.180.
 - b. 49 CFR part 107.
 - 2. Once drums, bags and wrapped components have been removed from the work areas, they shall be loaded into an enclosed or covered truck for transportation.
 - 3. Utilize hand trucks or carts when moving containers. Containers shall not be dragged, dropped, or thrown.
 - 4. The enclosed cargo area of the truck shall be free of debris and lined with 6-mil polyethylene sheeting to prevent contamination from leaking or spilling containers. Floor sheeting shall be installed first and extend up the sidewalls. Wall sheeting shall be overlapping and taped into place.
 - 5. Containers shall be placed on level surfaces in the cargo areas and packed tightly together to prevent shifting and tipping. Large structural components shall be secured to prevent shifting and bags placed on top. Do not throw containers into truck cargo area.
 - 6. Personnel transferring or loading asbestos containing waste shall be protected by disposable clothing (including head, body; and foot protection) and, at a minimum, half-face respirators using HEPA filters.

7. Any debris or residue observed on containers or surfaces outside the work area shall be immediately cleaned up using HEPA filtered vacuum equipment, or wet methods.
8. Large metal dumpsters are sometimes used for asbestos waste disposal. These shall have doors or tops that can be closed and locked to prevent vandalism or other disturbances. Containers shall be placed, not thrown, into these containers to avoid rupture.
9. Asbestos-containing or-contaminated wastes shall be segregated and transferred separately from non-asbestos wastes.

F. Disposal at the Landfill:

1. Upon reaching the landfill, trucks are to approach the dump location as closely as possible for unloading of the asbestos containing waste.
2. Personnel off-loading containers at the disposal site shall wear protective equipment consisting of disposable head, body, and foot protection, and at a minimum, half-face piece, air-purifying respirators equipped with high-efficiency filters.
3. Bags, drums and components may be inspected as they are off-loaded at the disposal site. Inform the Building Owner when the asbestos waste will be brought to disposal site. Allow adequate time for the Building Owner or the Owner's APM or AFS to quantify the number of asbestos containers used when requested by the Building Owner. Material in damaged containers shall be repacked in empty drums or bags as necessary.
4. Waste containers shall be placed on the ground at the disposal site, not pushed or thrown out of trucks.
5. Following the removal of all containerized waste, the truck cargo shall be decontaminated using HEPA vacuums or wet methods to meet the no visible residue criteria. Polyethylene sheeting shall be removed and discarded along with contaminated cleaning materials and protective clothing in bags or drums at the disposal site.

3.06 RE-ESTABLISHMENT OF THE WORK AREA AND SYSTEMS:

- A. Re-establishment of the work area shall occur following the completion of cleanup procedures and after clearance air monitoring has been performed and documented per contract documents.
- B. Polyethylene barriers shall be removed from walls and floors at this time, maintaining decontamination enclosure systems and barriers over floors, windows, etc., as required.
- C. The Contractor and Owner's Representative shall visually inspect the work for any remaining visible residue. Evidence of contamination will necessitate additional cleaning requirements in accordance with these specifications.
- D. Additional air monitoring shall be performed if additional cleanup is required.

- E. Following satisfactory clearance of the work area, remaining polyethylene barriers may be removed and disposed of in accordance with these specifications.
- F. Re-secure mounted objects removed from their former positions during area preparation activities.
- G. Relocate objects that were removed to temporary locations back to their original positions.
- H. Re-establish HVAC, mechanical and electrical systems in proper working activities.
- I. Repair all areas of damage that occurred as a result of abatement activities.
- J. After all plastic barriers have been removed, another set of clearance samples may be collected by the Owner's Representative. These samples must indicate that the airborne fiber concentration is equal to or less than the pre-abatement levels or 0.01 f/cc, whichever is lower. If fiber levels are not met, remedial clean-up shall be conducted by the Contractor at no additional cost to Owner.
- K. Comply with safety standards and governing regulations for cleaning operations. Do not burn waste materials at the site. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile or other harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.

3.07 AIRBORNE FIBER COUNTS

- A. General: Use work procedures that results in an 8 hour Time Weighted Average (TWA) airborne fiber count less than 0.1 f/cc. If airborne fiber count exceeds this level, immediately mist the area with amended water to lower fiber counts and revise work procedures to maintain airborne fiber levels within the required limits.
- B. When the Certified Asbestos Supervisor has inspected the work area and determines that the removal and cleaning is complete, he/she will contact the Owners, Onsite Representative for a Visual inspection. The Owners Representative will examine all surfaces inside the work area to confirm that no visible debris remains and that all surfaces are visually clean.
- C. After the Owners Representative has examined the work area and determined that it is visually clean, the Contractor will apply penetrating lock-down encapsulant on all exposed surfaces and allow to dry.
- D. The Owners Onsite Technician will collect and analyze a minimum of three (3) samples from inside each regulated area. Air samples to be analyzed by PCM in accordance with the NIOSH 7400 method. The analytical result of each air sample must be below 0.01 f/cc in order for the removal process to be considered complete. If any one of the air samples exceeds 0.01 f/cc, the Contractor will re-clean all surfaces inside the regulated area and repeat A and B above prior to re-sampling by the Owner's Representative.

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- E. After clearance requirements have been satisfied as outlined above the Contractor will remove the polyethylene coverings installed during set-up on ducting, piping, and mechanical components.
- F. After the application of encapsulant to ducting and pipe insulation in the ceiling area, the Contractor may proceed with removal and proper disposal of the containment walls, floors, and critical barriers.
- G. The Contractor shall conduct a final visual inspection of all floor and wall surfaces after the removal of the containment. Any visible debris found will be immediately removed by HEPA vacuuming and/or wet wiping.

END OF SECTION

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SECTION 02 83 00

LEAD CONTAINING PAINT WORK PLAN

PART 1. GENERAL

1.01 PROVISIONS INCLUDED

- A. The Conditions of the Contract and Division 1, General Requirements, apply to the work under this Section.

1.02. SCOPE OF WORK

- A. This section covers the handling, waste disposal and training requirements of working with materials coated with lead-containing paint.
- B. The scope of work generally includes preparing and repainting existing details or decontaminating existing surfaces that are coated with lead-containing paint.
- C. All work shall be performed in accordance with applicable Local, State and Federal guidelines for impacting lead-containing paint. The contractor performing the work shall provide direction under other specification sections.
- D. DOSH Standard WAC-296-155-176 "Lead in Construction" shall be adhered prior to and following initial exposure assessments. The contractor shall be responsible for all personnel sampling in compliance with the standard.

1.03. RELATED WORK SPECIFIED ELSEWHERE

Refer to Section 02 80 00 – Existing Condition Assessment, Sub-section 1.04 (Lead inspection)

1.04. SUBMITTALS

The selected contractor shall submit the following to the Owner's Consultant (NVL Labs, Inc.)

- A. Evidence that all personnel have been trained in accordance with OSHA Standard 29 CFR 1926.62 and WAC 296-155-176
- B. A copy of the plan that indicates it complies with State, Federal and City of Seattle requirements for removing and disposing lead-containing materials during renovation or demolition activities. The plan shall include engineering controls, personal protective equipment, air-monitoring methods, signage, location of hand washing facilities, work practices, waste handling and disposal, and any other pertinent information.
- C. Copies of WISHA compliance monitoring results or current objective data that indicates such tasks do not cause exposure above the PEL

- D. Copies of Material Safety Data Sheets for products used when lead paint or lead-containing materials are affected
- E. Copies of Toxicity Characteristic Leaching Procedure (TCLP) test results are available in the survey reports with the Owner.
- F. Proof of disposal through copies of waste manifests or other form of receipt

PART 2 - PRODUCTS

Not used.

PART 3 – EXECUTION

3.01. REMOVAL AND DISPOSAL

- A. Procedures
 - 1. Paint Chip Decontamination: Any visible paint chips on the existing surfaces shall be HEPA-vacuumed prior to commencement of other work.
 - 2. Preparation and Repainting of Materials with Lead Containing Paint
 - 3. Pre-clean work area of all visible paint debris using HEPA-vacuum or wet-wiping techniques.
 - 4. Place a sheet of 6-mil polyethylene, 12-foot wide, beneath the work area prior to preparation. Cover and protect ground cover and other immovable objects.
 - 5. Appropriate respiratory protection shall be used until an exposure assessment can be done to ensure that lead exposure for similar tasks are less than the PEL.
 - 6. Other personal protective clothing shall be used to prevent the worker from being contaminated, including disposable, gloves, shoes or shoe coverlets.
 - 7. Hand-washing stations as described in WAC 296-155-176 and 29 CFR 1926.62 shall be provided for the workers who handle lead-containing materials.
 - 8. Surfaces shall be prepared by wet-scraping, wet-sanding, wet-wire brushing or by using an approved chemical stripper.
 - 9. All debris shall be gathered from the job site on a daily basis and placed in a locked dumpster or other secured area for disposal.
 - 10. After the work is finished, decontaminate any surfaces that contain visible debris by using HEPA-filtered vacuum or wet wiping techniques.

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3.02. WASTE DISPOSAL

- A. All waste shall be accumulated and stored on a daily basis in a secured area.
- B. The contractor may dispose off chips and other waste as outlined below.
 - 1. Paint chips generated must be disposed of in a lined mixed municipal solid waste landfill.

END OF SECTION

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SECTION 02 84 00

DISPOSAL OF ASBESTOS CONTAINING MATERIALS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, General Conditions of the contract and other Division 1 Specifications sections apply to the work of this section.

1.02 DESCRIPTION OF REQUIREMENTS

- A. This section sets forth the requirements for disposal of asbestos containing materials, including transport to an EPA-approved landfill.

1.03 DISPOSAL

- A. All asbestos-containing material and debris that is packaged in accordance with the provision of this Specification will be disposed of at a designated EPA-approved landfill when certain precautions are taken.
 - 1. Notice to appropriate Environmental Protection Agency regional office or State equivalent.
 - 2. Notice and permit from appropriate state and/or local agencies.
 - 3. Permission has been obtained from the EPA-approved landfill for disposal of asbestos-containing materials as follows:
 - a. All asbestos contaminated material shall be sprayed with a penetrating encapsulant.
 - b. All asbestos contaminated material shall be labeled with asbestos warning labels in compliance with all Federal, State, and Local regulations.

1.04 SUBMITTALS

- A. Submit copies of all completed manifest and landfill receipts for the disposal process to Owner's Representative within 15 calendar days of the waste leaving the site.

PART 2 – PRODUCTS

Not used

PART 3 – EXECUTION

3.01 GENERAL

- A. Carefully load containerized waste on sealed trucks or other appropriate vehicles for transport. Exercise care before and during transport, to ensure that no unauthorized persons have access to the material. Do not store disposal bagged material outside of the work area. Take bags from the work area directly to a sealed truck or dump site.
- B. Do not transport disposal bagged materials in or on open trucks. Double bagged material may be transported on open trucks if they are first loaded in sealed drums. Label drums with the same warning labels as bags. Uncontaminated drums may be reused. Treat drums that have been contaminated as asbestos-containing waste and dispose of in accordance with this specification.
- C. Advise the sanitary landfill operator, at least twenty-four hours in advance of transport, or the quantity of material to be delivered.
- D. At the burial site, sealed bags must be carefully hand off loaded from the truck or other conveyance. If bags are broken or damaged, leave in the truck and clean entire truck and contents.
- E. Retain receipts from landfill for materials disposed of.

END OF SECTION

SECTION 02 90 00

REMOVAL AND DISPOSAL OF PCB LIGHT BALLASTS AND MERCURY CONTAINING FLUORESCENT LIGHT TUBES

PART 1 – GENERAL

1.01 RELATED WORK DESCRIBED ELSEWHERE:

- A. The provisions and intent of the Contract, including the General Conditions, Special Conditions, and General Requirements apply to this work as if specified herein. Related work is described in:
 - 1. Section 02 80 00 – Existing Conditions Assessments
 - 2. Section 02 82 00 – Removal of Asbestos-Containing Materials
 - 3. Section 02 83 00 – Lead-Containing Paint (LCP) Work Plans
 - 4. Section 02 84 00 – Disposal of Asbestos Containing Materials

1.02 DESCRIPTION OF WORK

- A. The Contractor's employees involved with the removal, handling, transportation, or recycling of fluorescent light tubes and mercury thermostats shall have received hazard communication training for mercury in accordance with WAC 296-62, Part C before beginning of work.
- B. The Contractor shall supply all labor, materials, vehicles, services, insurance, special permits and equipment necessary to remove and recycle PCB light ballasts and fluorescent light tubes. The fluorescent light tubes and PCB light ballasts shall be packaged and transported to an off-site Owner approved recycling facility. The Contractor shall carry out the work in accordance with all the applicable Federal, State, and Local regulations and these specifications.
- C. The work specified herein shall be the removal, transportation, and recycling of all PCB containing light ballasts and mercury containing fluorescent light tubes in light fixtures removed within the Work Area.
- D. The work also includes removing and storing light tubes in manner not to break tubes while other work is being performed in the area.
- E. The work shall be conducted in accordance with all applicable Federal, State, and Local regulations and these specifications.
- F. All required permits, certificates, registrations or licenses shall be kept valid for the duration of the work addressed by the permit.

- G. All shipping/receiving logs shall be legibly filled out IN INK. Forms shall include all information requested and must contain the Owners information.
- H. The Contractor shall remove all fluorescent fixtures, lamps, ballasts, and mercury thermostats as directed by the specifications.

1.03 REFERENCE STANDARDS

A. General Requirements:

- 1. All work under this contract shall be done in strict accordance with all applicable regulations, standards and codes governing mercury and in accordance with best available technology and practice. This includes any other work, including trade work conducted in conjunction with the project.

B. Specific Standards:

- 1. The most recent edition of any relevant regulation, standard, document or code shall be in effect during the work, regardless of the effective date of this specification's governing contract. Where conflict among the requirements or with these specifications exists, the most stringent requirements shall be utilized. All regulatory revision and requirements relating to this project after the contract is signed shall, nonetheless, be incorporated at no additional cost to the Owner.
- 2. United States Environmental Protection Agency (EPA) –
 - a) Title 40 Code of Federal Regulations Part 61, Subparts A and M (Revised Subpart B) National Emission Standard for Asbestos.
 - b) 40 CFR 260 Hazardous Waste Management System: General
 - c) 40 CFR 261 Identification and Listing of Hazardous Waste
 - d) 40 CFR 262 Standards Applicable to Generators of Hazardous Waste
 - e) 40 CFR 263 Standards Applicable to Transporters of Hazardous Waste
 - f) 40 CFR 270 EPA Administered Permit Programs: the Hazardous Waste Permit Program
 - g) 40 CFR 761 Polychlorinated Biphenyls (PCBs), Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.

3. State of Washington Department of Labor and Industries (L & I) –
 - a) Chapter 296-24 Safety Standards
 - b) Chapter 296-62 Occupation Health and Safety Regulations including:
 - 1) Chapter 296-62-054 WAC
Hazard Communication Standard
 - 2) Chapter 296-62-300 WAC
Hazardous Waste Operations and Emergency Response
 - 3) Chapter 296-62-071 WAC
Respiratory Protection
 - 4) Chapter 296-155 WAC
Construction Standards
 - 5) Chapter 296-800 WAC
Safety and Health Core Rules
 - 6) Chapter 296-841 WAC
Respiratory Hazards
4. Washington State Department of Ecology (Ecology) –
 - a) WAC 173-303 Dangerous Waste Regulations
5. Puget Sound Clean Air Agency (PSCAA) –
 - b) PSCAA Article 4
6. Washington State Statutes Revised Code of Washington (RCW)
 - a) RCW 49.17 – Washington Industrial Safety and Health Act
 - b) RCW 70.105 – Hazardous Waste Management Act
7. American National Standards Institute (ANSI)
 - a) Z9.2 Local Exhaust Systems
 - b) Z87.1 Eye and Face Protection
 - c) Z88.2 Practices for Respiratory Protection
8. American Society for Testing and Materials (ASTM)
 - a) D 4397 Polyethylene Sheeting
9. Federal Standards
 - a) 313B Material Safety Data Sheets
10. International Fire Code Institute
 - a) Uniform Fire Code 2003 UFC Standards

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11. National Fire Protection Association (NFPA)
Fire Tests for Flame Resistant Textiles and Films
12. National Institute of Occupational Safety and Health (NIOSH)
1984 Manual of Analytical Methods, 3rd Edition

C. Other guidelines, codes or documents:

1. United States Department of Transportation (DOT) Hazardous
Materials Regulations, Code of Federal Regulations Title 49 –
CFR 100-180 & 182

1.04 DEFINITIONS:

- A. AIHA: American Industrial Hygiene Association
475 Wolf Ledges Parkway
Akron, OH 44311
- B. ASTM: American Society for Testing and Materials
- C. Authorized Visitor – Designated representatives of the Contractor, Tenant
or the Owner, and representatives of a regulatory or other agency having
jurisdiction over the project.
- D. Certified Industrial Hygienist (CIH) – An industrial hygienist certified in the
Comprehensive Practice of Industrial Hygiene by the American Board of
Industrial Hygiene.
- E. Owners Consultant – The designated Regulated Materials contact person
in charge of the project for the Owner.
- F. Contractor – The individual or business with whom the Owner arranges to
perform the regulated materials abatement.
- G. Ecology – Washington State Department of Ecology
- H. EPA – United States Environmental Protection Agency
- I. HEPA Filter – A high efficiency particulate air filter capable of removing
particles greater than 0.3 microns in diameter with 99.97% efficiency.
- J. L & I – Washington State Department of Labor and Industries
805 Plum St. S.E. (HC 412)
Olympia, Washington 98504
- K. NESHAAP – The National Emission Standards of Hazardous Air Pollutants
(40 CFR Part 61).
- L. NIOSH – The National Institute for Occupation Safety and Health,

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- M. OSHA – The Occupational Safety and Health Administration
200 Constitution Ave.
Washington, D.C. 20210
- N. PSCAA – Puget Sound Clean Air Agency
- O. WAC – Washington Administrative Code as enforced by the Washington
State Department of Labor and Industries

1.05 SUBMITTALS AND NOTICES

- A. Contractors shall provide complete submittals for review by the Owner.
- B. Pre-work Submittal Documentation
 - a. Hazardous materials work plan
 - b. Contractor's shop drawings
 - c. Safety plan
 - d. Construction schedule
 - e. Equipment and consumable supplies
 - f. Waste carrier and disposal or recycling site designation
 - g. Permits and Notifications
- C. Work Plan
 - 1. The work plan shall be prepared in the form of checklists and shall
Include specific procedures for:
 - 1. Ballasts and Mercury Thermostat removal procedures, including
identification and separation of "leakers" and "non-leakers".
 - 2. Fluorescent light tube and Mercury Thermostat removal and
packaging for shipment to recycler.
 - 3. Work area preparation and protection procedures, including
reference to work site shop drawings.
 - 4. Worker protection and decontamination procedures, including
normal removal and "spill" response.
 - 5. Waste handling, packaging, labeling, and manifesting procedures.
 - 6. The Work plan shall contain sufficient detail so that a skilled
worker, by following the Plan, can perform acceptable work in a safe
manner to remove PCB- containing electrical equipment, both
"leakers" and "non-leakers", as well as Mercury Thermostats.

D. Shop drawings

1. Make all shop drawings accurately to a scale sufficiently large to show all pertinent features of the work. Shop drawings shall show:
 - a. Boundaries of all hazardous materials removal areas
 - b. Location of decontamination stations
 - c. Location of temporary site storage facilities

E. Safety Plan: The safety plan shall be prepared for this specific job and shall include procedures for:

1. Emergency plan.
 2. Fire protection plan.
 3. Safety equipment.
 4. Electrical equipment lock-out procedures.
 5. Schedule: Submit construction schedule by work area.
 6. Equipment and consumable Supplies: The Contractor shall maintain on-site manufacturer's data for all equipment and supplies proposed to be used for the work. The manufacturer's data shall be clearly marked to: identify pertinent products; show capacities, operating characteristics, and maintenance; and show wiring or piping diagrams and controls.
 7. Equipment records shall include manufacturer's data on:
 - a. Decontamination facilities.
 - b. Specialized hazards handling equipment.
 8. The Contractor shall maintain on-site manufacturer's data for the following expendable supplies:
 - a. Face shield and eye protection
 - b. Coveralls and head gear
 - c. Boots, aprons and gloves
 - d. Disposal containers
 - e. Solvents and degreasers
 9. Material Safety Data Sheets: The Contractor shall maintain on-site Material Safety Data Sheets for each solvent and degreaser proposed to be used.
- F. Solid Waste Disposal Plan: Submit a written Solid and Hazardous Waste Disposal Plan with the following information:

1. The name, address, operators name and phone number of his Proposed Solid Waste Disposal Facility and of his proposed Hazardous Waste Disposal Facility and Mercury Thermostat Recycling Facility.
2. Written evidence that the proposed Waste Disposal Facilities are approved and permitted for solid and/or hazardous waste disposal by the Environmental Protection Agency (EPA), State and Local regulatory agencies.
3. Written procedures to characterize the PCB hazardous waste.
4. The Contractor shall submit the Owner's EPA Hazardous Waste Generator number. If the Owner does not have a generator number, the Contractor shall prepare and submit all documents as required to obtain a number for the Owner.
5. Waste Transporter: Submit the qualifications of each waste transporter to be used.
6. Waste Carrier and Disposal Site Designation: The Contractor shall submit the name, address, and qualifications of his/her proposed waste transporter. The Contractor shall designate the EPA – approved disposal site to which he/she proposes to ship the hazardous materials.
- G. Hazardous Waste Identification Number: The Contractor shall submit the Owner's EPA Hazardous Waste Generator Identification Number for the purpose of accumulating and transporting hazardous waste in accordance with 40 CFR 262. If the Owner does not have an EPA Hazardous Waste Number, the Contractor shall fill out the appropriate applications for the Owner's signature and shall submit the application to the EPA.

1.06 RESPONSIBILITIES:

A. Training:

1. The Contractor shall be responsible for assuring the following training has been completed prior to the commencement of Work:
 - a) Hazard communication for mercury and PCBs in accordance WAC 296-62, Part C.
 - b) Special on-site training on equipment and procedures unique to this job site shall be performed as required.
 - c) Emergency response and evacuation procedures.

1.07 PRODUCT DELIVERY, STORAGE AND HANDLING:

- A. Deliver all materials in good condition in original packages, containers or bundles visible/legibly bearing the name of the manufacturer and the brand name of the product.

- B. Store all materials in a manner that will prevent their damage or contamination. Replacement materials shall be stored outside of the work area until abatement is completed.
- C. Damaged, deteriorating or previously used materials shall not be used and shall be removed from the worksite and disposed of properly.

PART 2 – PRODUCTS

2.01 EQUIPMENT AND SUPPLIES

- A. Personal Protective Equipment:
 - 1. Respiratory Protection: All employees cleaning up broken fluorescent light tubes shall be provided with and be required to use adequate and appropriate respiratory protection in accordance with WAC 296-62, Part E.
 - 2. For workers cleaning up broken fluorescent light tubes, full body disposable protective clothing incorporating head body and feet covering constructed of material such as Tyvek R (or equivalent) shall be provided in sufficient quantities and adequate sizes to accommodate movement without tearing, to all workers and authorized visitors.
 - 3. Additional safety equipment (e.g., hard hats meeting the requirements of ANSI Standard Z89.1-1981, eye protection meeting the requirements of ANSI Standard Z87.1-1979, safety shoes meeting the requirements of ANSI Standard A41.1-1967, and disposable gloves) shall be provided as necessary to all workers and authorized visitors and shall be sized to fit the wearer.
- B. Removal Equipment:
 - 1. A sufficient supply of scaffolds, ladders, lifts and hand tools (e.g. screwdrivers) shall be provided as needed.
 - 2. Additional support equipment as needed.
- C. Packaging equipment and Materials:
 - 1. Fiberglass drums or
 - 2. Fluorescent light tube shipping boxes.

PART 3 – EXECUTION

3.01 SITE SECURITY

- A. The work area is to be restricted only to authorized, trained and protected personnel. These may include the Contractor's Employees; Employees of Subcontractors; and Owners Employees and Owners Consultant; Federal State and Local inspectors and other authorized or designated individuals. A list of authorized personnel shall be established by the Contractor prior to the job start and posted as directed by these specifications. With the exception of emergency response personnel, the Contractor must review and approve unannounced visitors before they enter the Work Area.
- B. Entry into the Work Area by unauthorized individuals shall be reported immediately by the Contractor to the Owner.

3.02 EMERGENCY PLANNING

- A. Emergency contingency plans shall be developed by the Contractor for approval by the Owner prior to initiation of any work. These plans shall be a component of the Contractor's Health and Safety Plan.
- B. Emergency procedures shall be in written form and prominently posted in the equipment storage area or as directed by the Owner's Consultant. Prior to performing any removal activities, all personnel must read and sign these procedures to acknowledge an understanding of work site layout, location of emergency exits and the contents of the Plan.
- C. Employees shall be trained in evacuation procedures in the even of workplace emergencies.
- D. Telephone numbers of all emergency response personnel shall be prominently posted in the Contractor trailer.

3.03 REMOVAL PROCEDURES

- A. Removal and Packaging of Fluorescent Light Tubes:
 - 1. Tubes shall be removed in a manner to prevent breakage. If a tube breaks, the Contractor shall immediately clean up debris and place in a box specified for broken tubes. Broken tubes shall also be recycled but must be separated from unbroken tubes.
 - 2. Tubes shall be placed in boxes or fiberglass drums in a manner to prevent breakage.
 - 3. Tubes shall not be taped together.

Phase 1
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B. Clean-up Procedures for Broken Fluorescent Light Tubes:

1. The Contractor shall have a clean-up kit on site prior to removing/dismantling fluorescent light fixtures.
2. Broken tubes shall be cleaned up immediately.
3. Use calcium polysulfide wetting solution on spilled lamp material to inhibit vaporization.
4. Following removal of broken glass, clean the floor with diluted trisodium phosphate solution according to the manufacturer's recommendations.
5. Identify, seal, and mark all containers with broken tubes for special handling.
6. Mark and seal all drums of collected phosphate powder.

3.04 HANDLING AND TRANSPORTATION OF OFF-SITE FACILITIES:

- A. The fluorescent light tubes and Mercury thermostats shall be packaged and transported to a proper recycling facility. The Contractor shall provide a shipping record to the Owners Consultant at the time of shipment. Following completion of processing, The Contractor shall provide the Owners Consultant with a certificate of recycling from the recycling facility indicating exact number of tubes recycled and date of processing.

END OF SECTION



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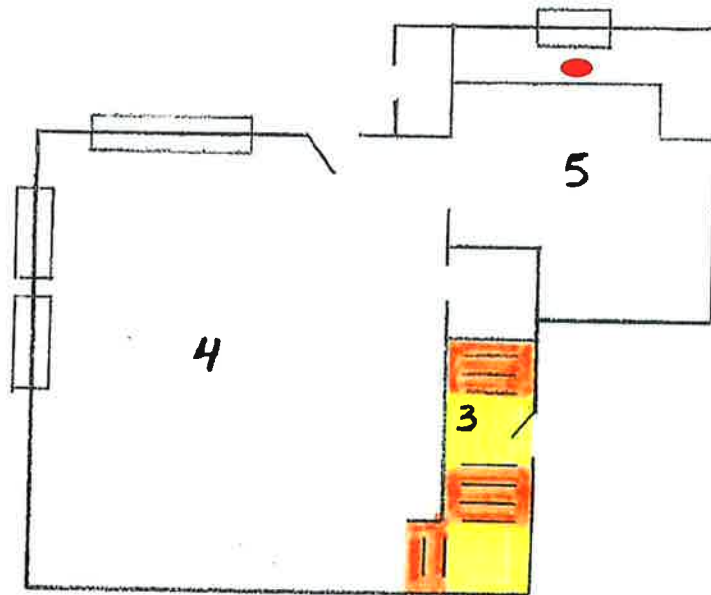
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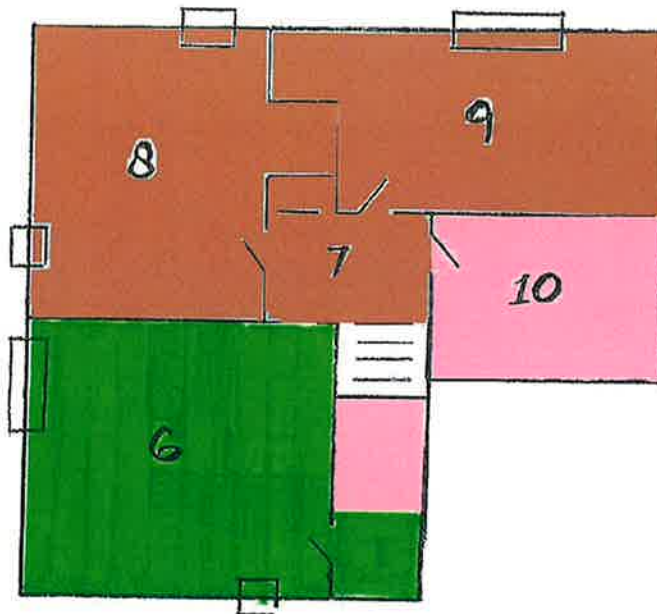
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UNIT 165

MAIN FLOOR



UPPER LEVEL



-  Beige vinyl floor tiles
-  Brown sheet vinyl with black mastic
-  Black sink undercoating
-  Beige vinyl floor tiles with back mastic
-  Cream sheet vinyl with mastic
-  12x12 White vinyl floor tiles

(NOT TO SCALE)



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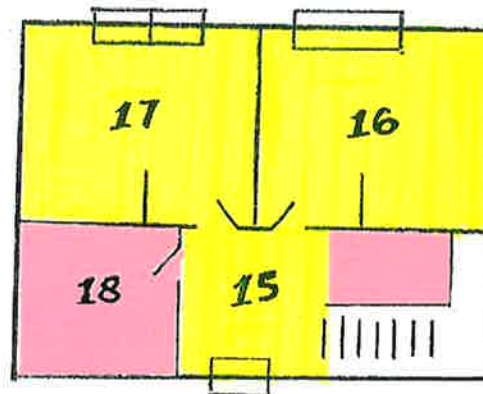
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UNIT 166

MAIN FLOOR



UPPER LEVEL



-  Beige vinyl floor tiles
-  Brown sheet vinyl with black mastic
-  Black sink undercoating
-  Beige vinyl floor tiles with back mastic
-  Cream sheet vinyl with mastic
-  12x12 White vinyl floor tiles

(NOT TO SCALE)

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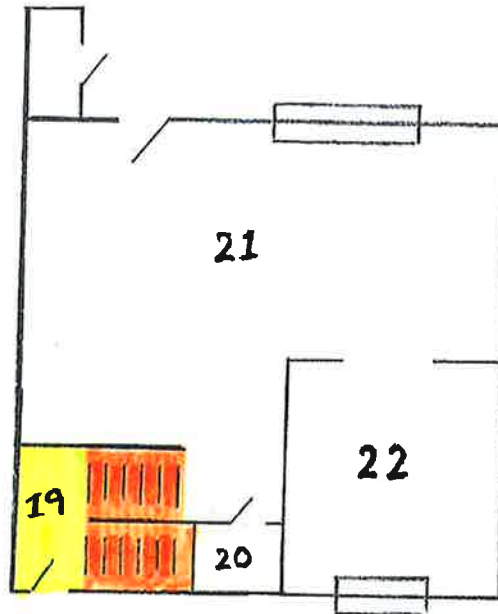
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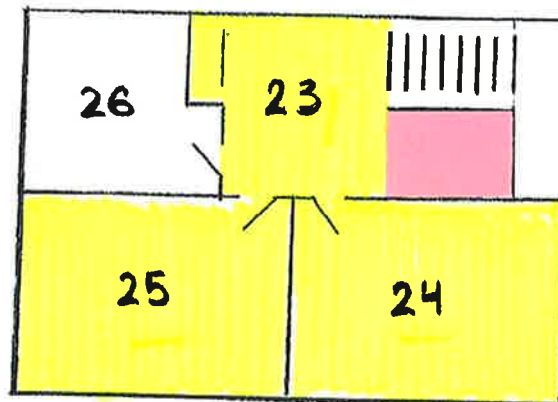
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UNIT 167

MAIN FLOOR



UPPER LEVEL



-  Beige vinyl floor tiles
-  Brown sheet vinyl with black mastic
-  Black sink undercoating
-  Beige vinyl floor tiles with back mastic
-  Cream sheet vinyl with mastic
-  12x12 White vinyl floor tiles

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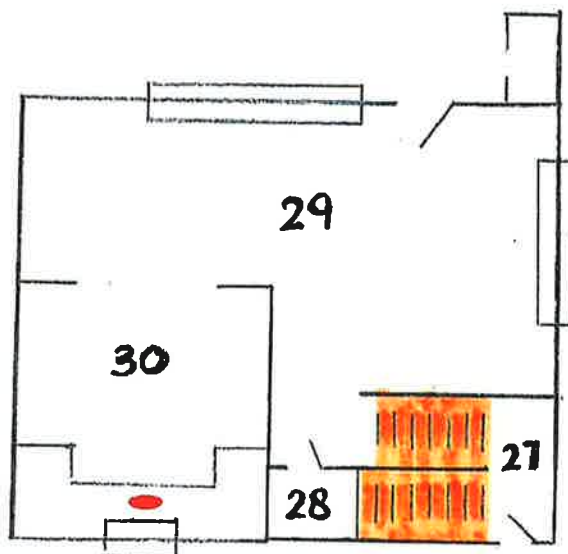
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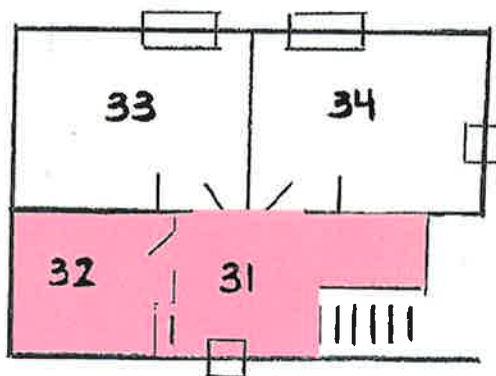
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UNIT 168

MAIN FLOOR



UPPER LEVEL



Beige vinyl floor tiles

Brown sheet vinyl with black mastic

Black sink undercoating

Beige vinyl floor tiles with back mastic

Cream sheet vinyl with mastic

12x12 White vinyl floor tiles

(NOT TO SCALE)



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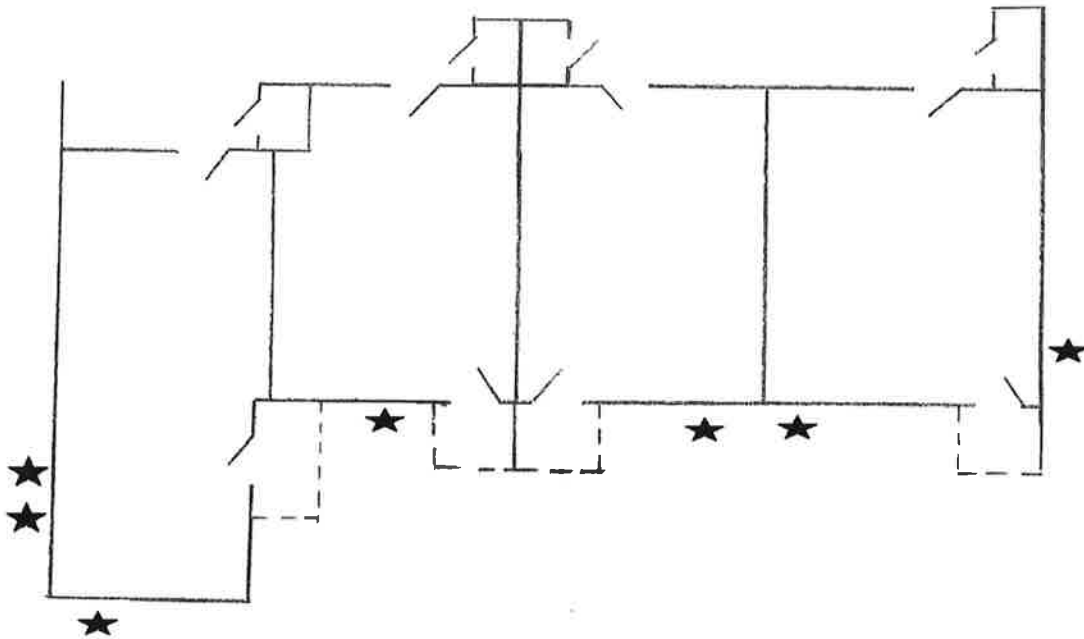
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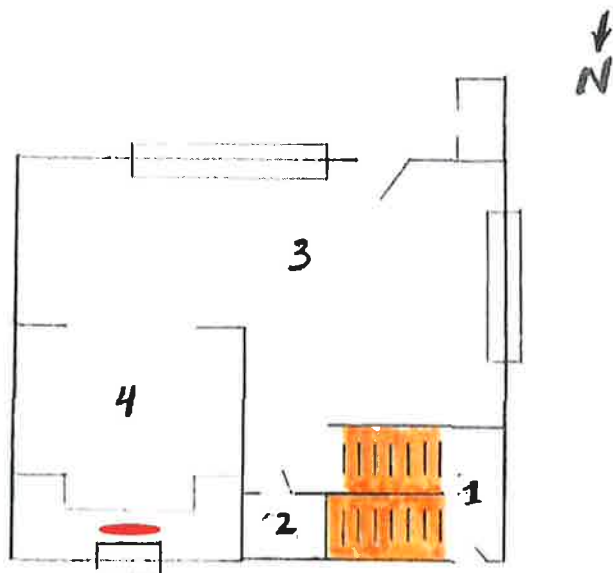
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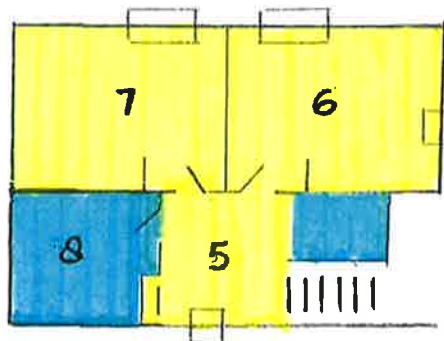
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UNIT 179

MAIN FLOOR



UPPER LEVEL



-  Brown sheet vinyl flooring with black mastic
-  Black sink undercoating
-  Beige vinyl floor tiles
-  Tan sheet vinyl flooring with black mastic

(NOT TO SCALE)

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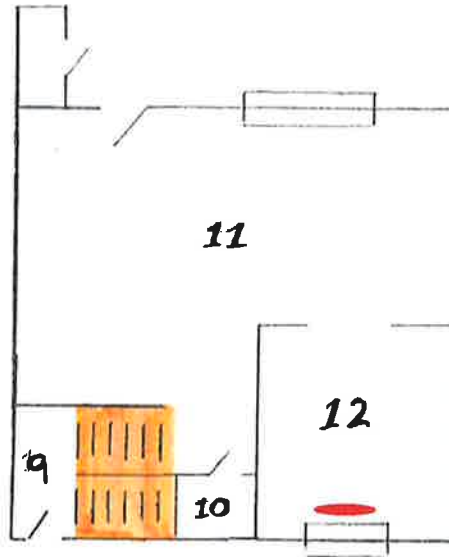
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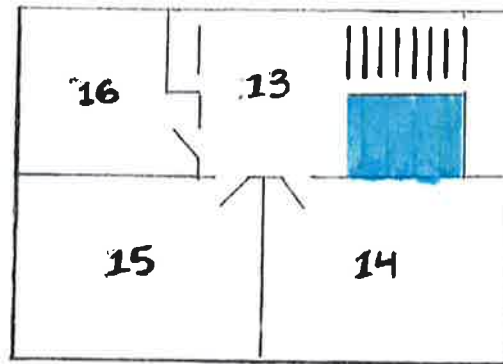
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UNIT 180

MAIN FLOOR



UPPER LEVEL



-  Brown sheet vinyl flooring with black mastic
-  Black sink undercoating
-  Beige vinyl floor tiles
-  Tan sheet vinyl flooring with black mastic

(NOT TO SCALE)



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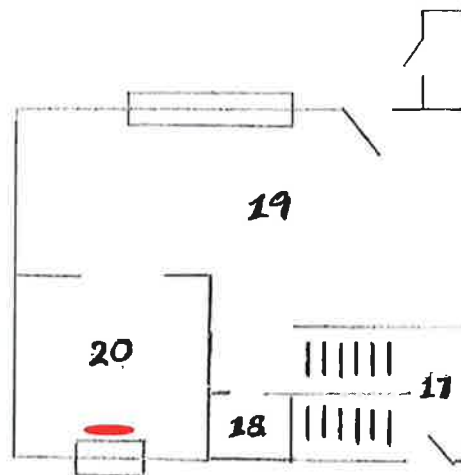
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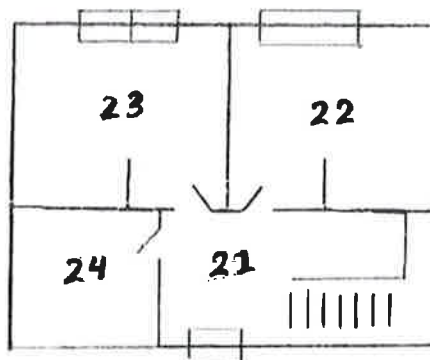
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UNIT 181

MAIN FLOOR



UPPER LEVEL



Brown sheet vinyl flooring with black mastic



Black sink undercoating



Beige vinyl floor tiles



Tan sheet vinyl flooring with black mastic

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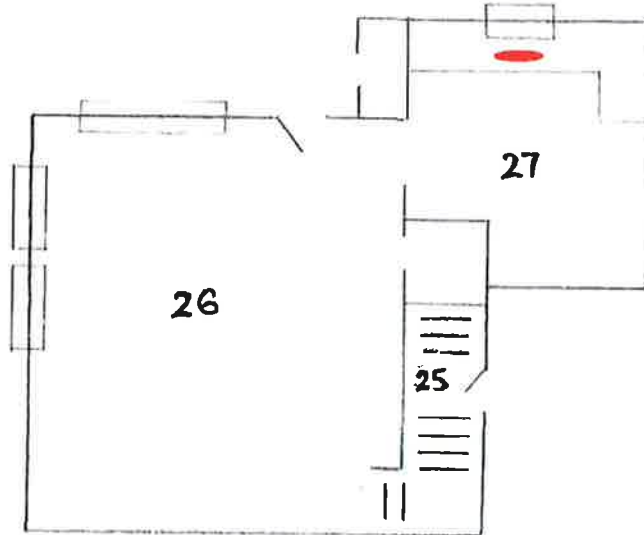
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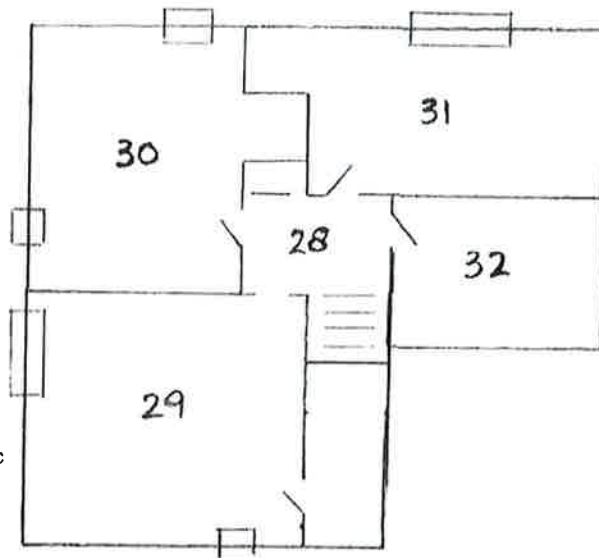
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UNIT 182

MAIN FLOOR



UPPER LEVEL



-  Brown sheet vinyl flooring with black mastic
-  Black sink undercoating
-  Beige vinyl floor tiles
-  Tan sheet vinyl flooring with black mastic

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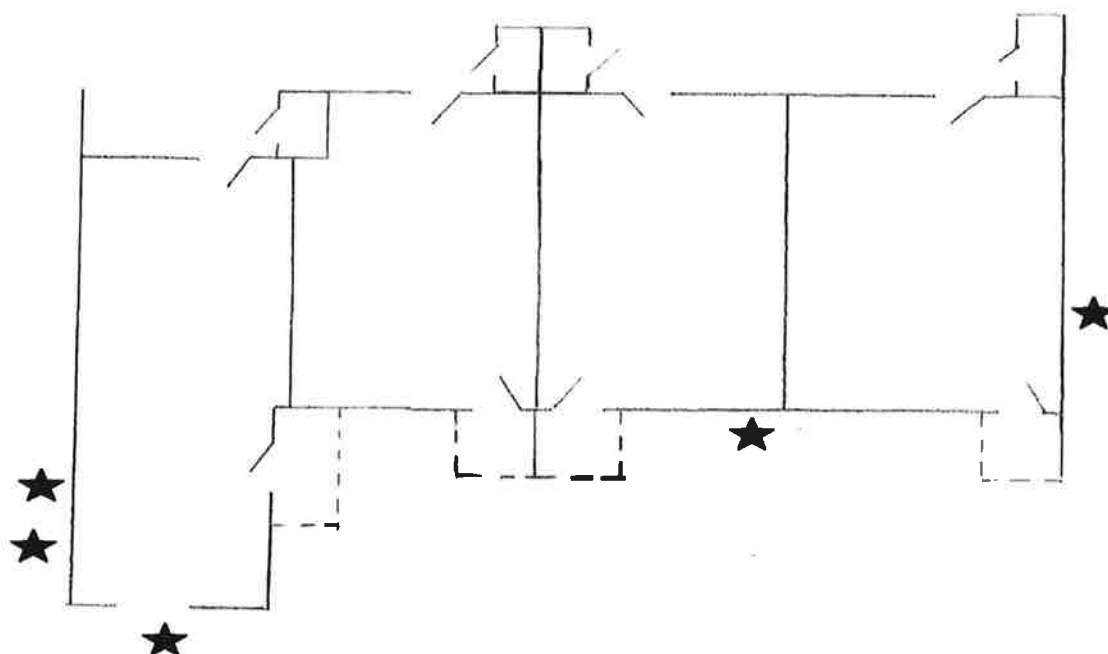
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EXTERIOR

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N



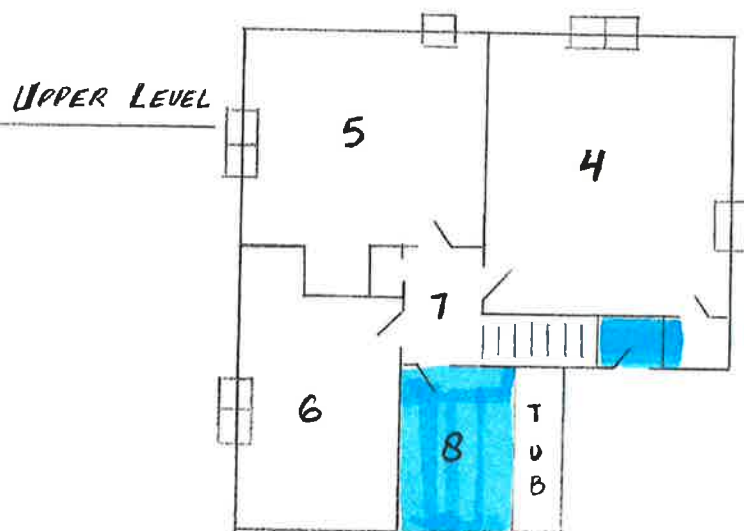
★ Mercury & PCB Devices

(NOT TO SCALE)

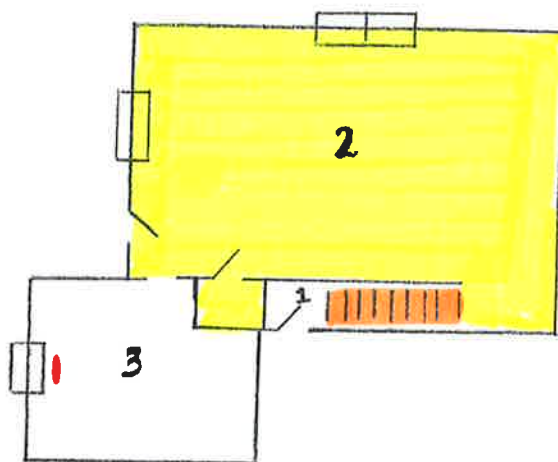
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UNIT 183

N →



MAIN FLOOR



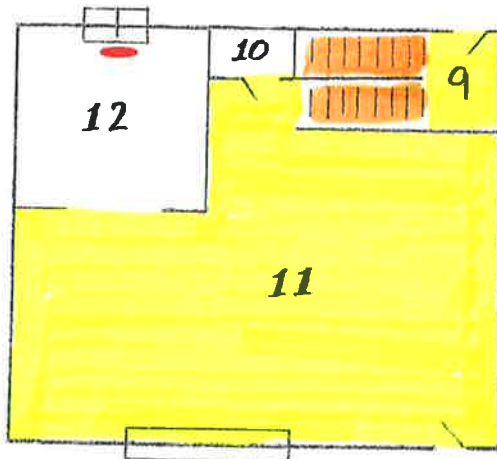
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-  Floor tiles
-  Black sink undercoat
-  Beige sheet vinyl / mastic
-  Floor tiles with black mastic

(NOT TO SCALE)

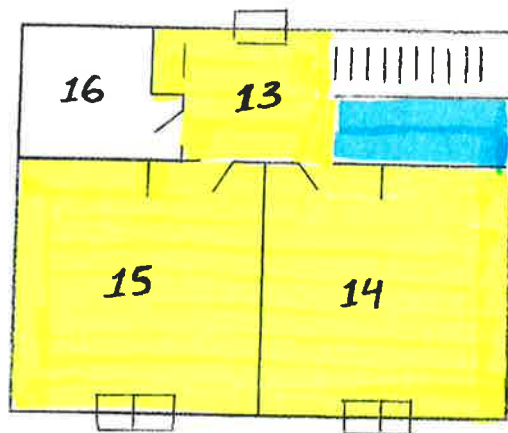
UNIT 184








MAIN FLOOR



UPPER LEVEL



-  Brown sheet vinyl / mastic
-  Floor tiles
-  Black sink undercoat
-  Beige sheet vinyl / mastic
-  Floor tiles with black mastic





(NOT TO SCALE)

UNIT 185

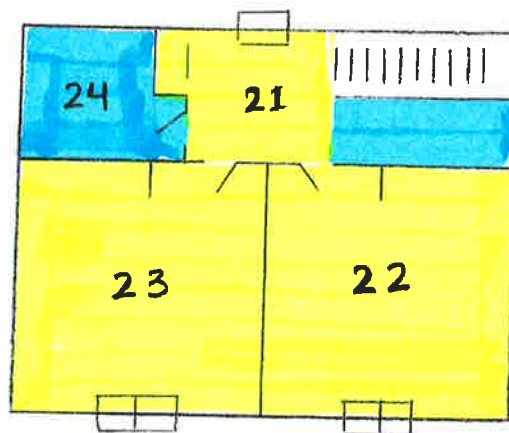


MAIN FLOOR



-  Brown sheet vinyl / mastic
-  Floor tiles
-  Black sink undercoat
-  Beige sheet vinyl / mastic
-  Floor tiles with black mastic

UPPER LEVEL

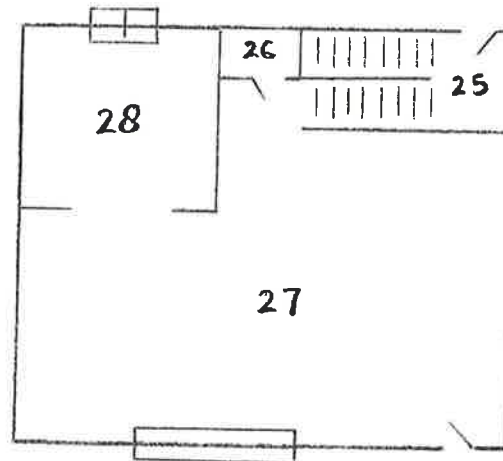


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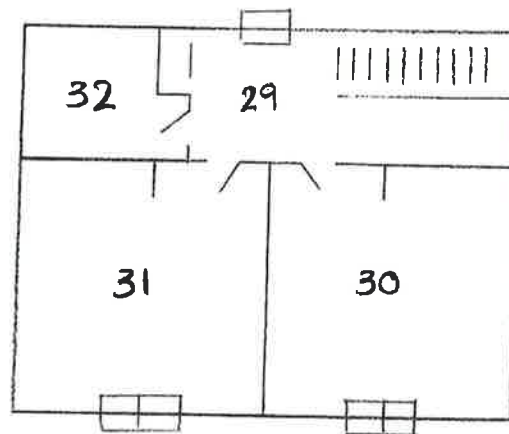
UNIT 186

N →

MAIN FLOOR



UPPER LEVEL



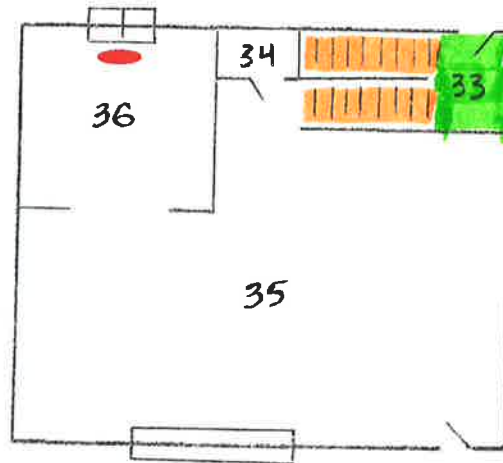
N
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- Brown sheet vinyl / mastic
- Floor tiles
- Black sink undercoat
- Beige sheet vinyl / mastic
- Floor tiles with black mastic

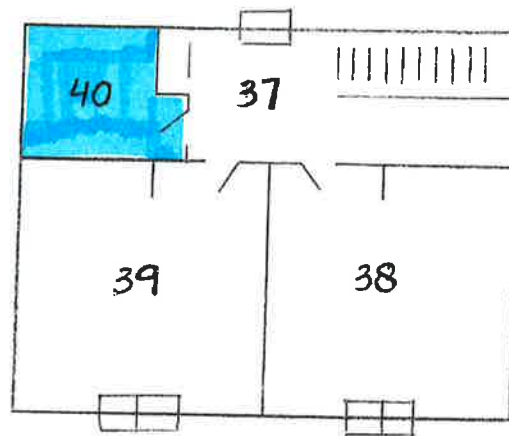
(NOT TO SCALE)

UNIT 187

MAIN FLOOR



UPPER LEVEL



-  Brown sheet vinyl / mastic
-  Floor tiles
-  Black sink undercoat
-  Beige sheet vinyl / mastic
-  Floor tiles with black mastic

(NOT TO SCALE)



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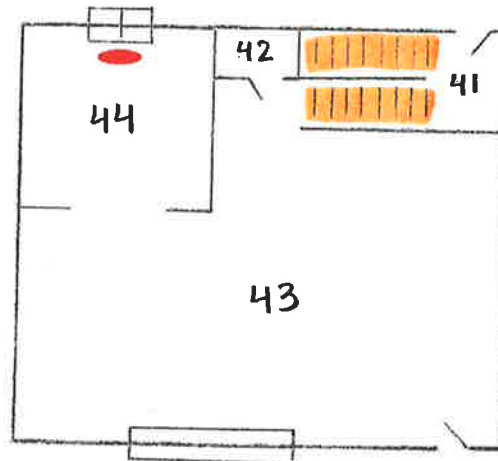
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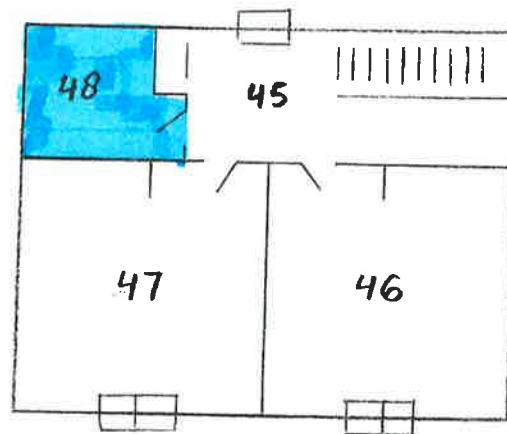
UNIT 188








MAIN FLOOR



UPPER LEVEL



-  Brown sheet vinyl / mastic
-  Floor tiles
-  Black sink undercoat
-  Beige sheet vinyl / mastic
-  Floor tiles with black mastic

(NOT TO SCALE)



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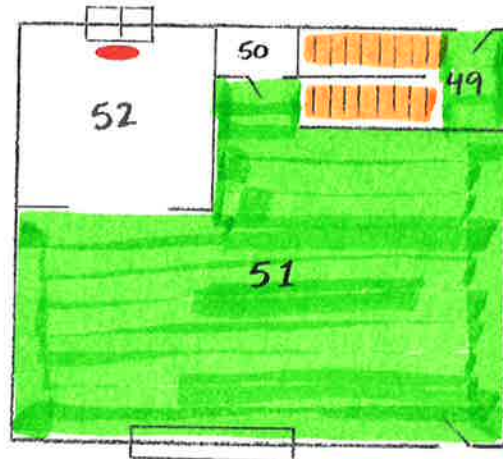
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UNIT 189

MAIN FLOOR



UPPER LEVEL



- Brown sheet vinyl / mastic
- Floor tiles
- Black sink undercoat
- Beige sheet vinyl / mastic
- Floor tiles with black mastic

(NOT TO SCALE)



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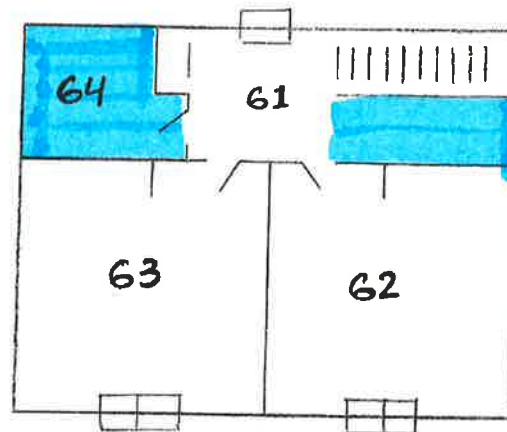
UNIT 190



MAIN FLOOR



UPPER LEVEL



- Brown sheet vinyl / mastic
- Floor tiles
- Black sink undercoat
- Beige sheet vinyl / mastic
- Floor tiles with black mastic

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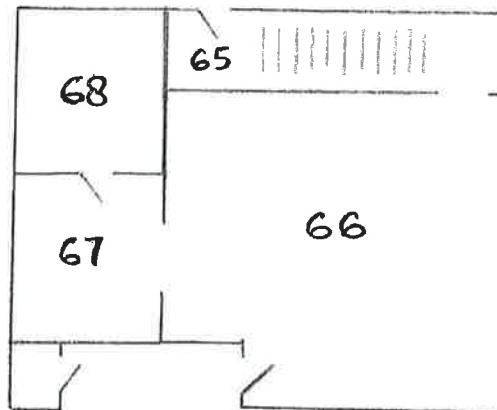
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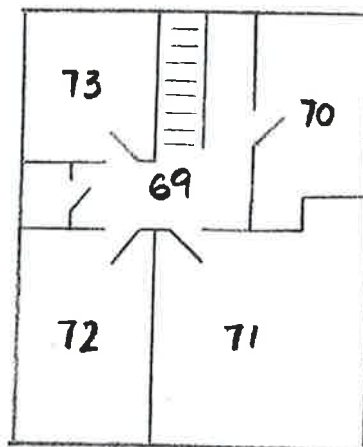
UNIT 191



MAIN FLOOR



UPPER LEVEL



-  Brown sheet vinyl / mastic
-  Floor tiles
-  Black sink undercoat
-  Beige sheet vinyl / mastic
-  Floor tiles with black mastic

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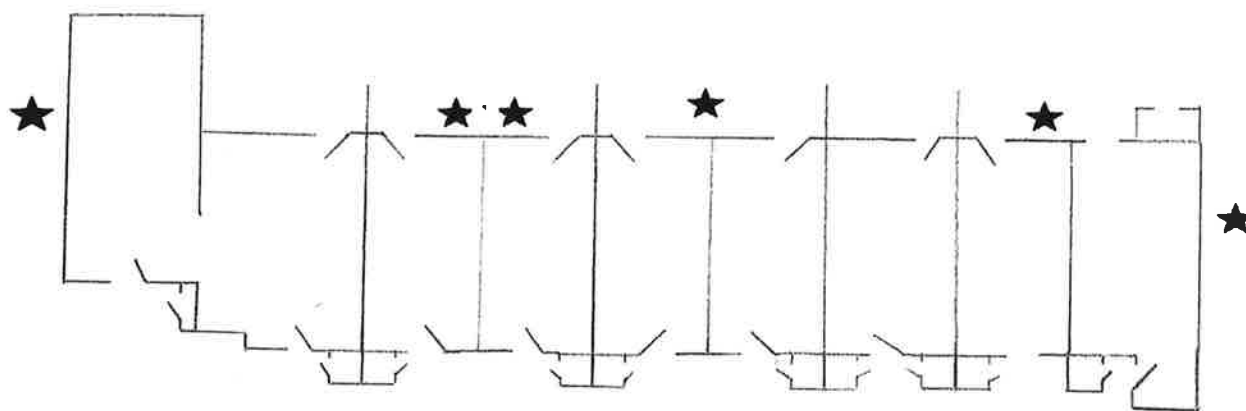
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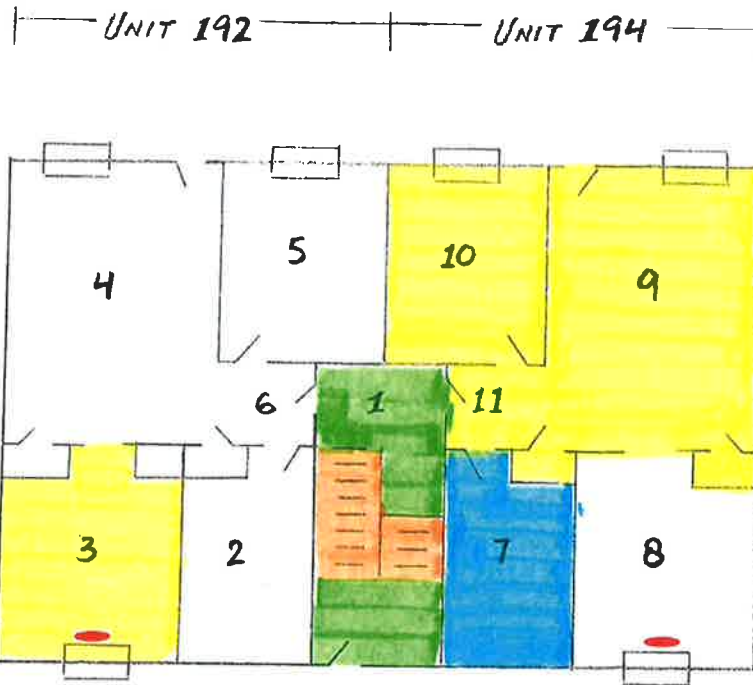








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LOWER LEVEL



-  Floor tiles with black mastic
-  Brown sheet vinyl flooring with mastic
-  Floor tiles
-  Black sink undercoat
-  Tan sheet vinyl flooring with mastic
-  Black floor mastic

(NOT TO SCALE)



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UPPER LEVEL



-  Floor tiles with black mastic
-  Brown sheet vinyl flooring with mastic
-  Floor tiles
-  Black sink undercoat
-  Tan sheet vinyl flooring with mastic
-  Black floor mastic

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LOWER LEVEL

UNIT 196 UNIT 198



- Floor tiles with black mastic
- Brown sheet vinyl flooring with mastic
- Floor tiles
- Black sink undercoat
- Tan sheet vinyl flooring with mastic
- Black floor mastic

(NOT TO SCALE)

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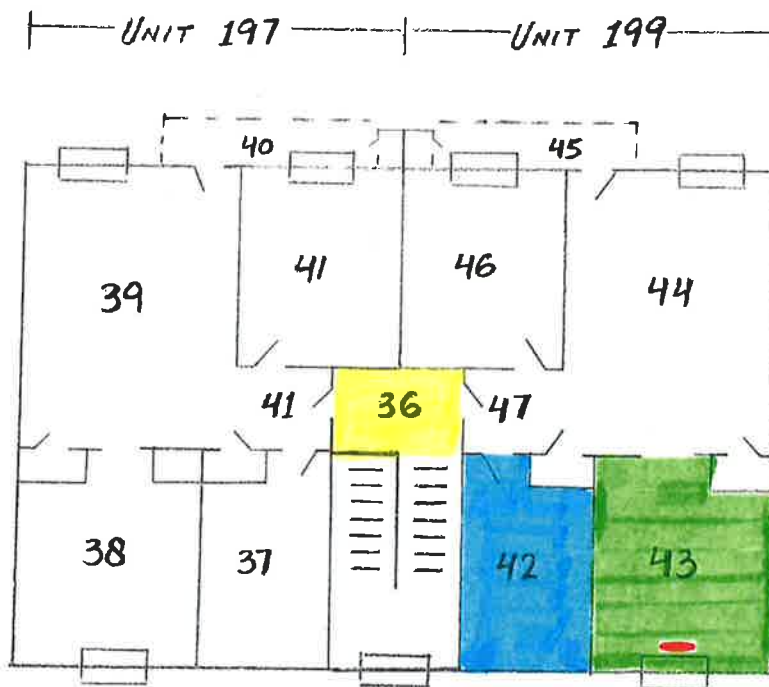
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UPPER LEVEL



-  Floor tiles with black mastic
-  Brown sheet vinyl flooring with mastic
-  Floor tiles
-  Black sink undercoat
-  Tan sheet vinyl flooring with mastic
-  Black floor mastic

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LOWER LEVEL

— UNIT 200 — — UNIT 202 —



-  Floor tiles with black mastic
-  Brown sheet vinyl flooring with mastic
-  Floor tiles
-  Black sink undercoat
-  Tan sheet vinyl flooring with mastic
-  Black floor mastic

(NOT TO SCALE)

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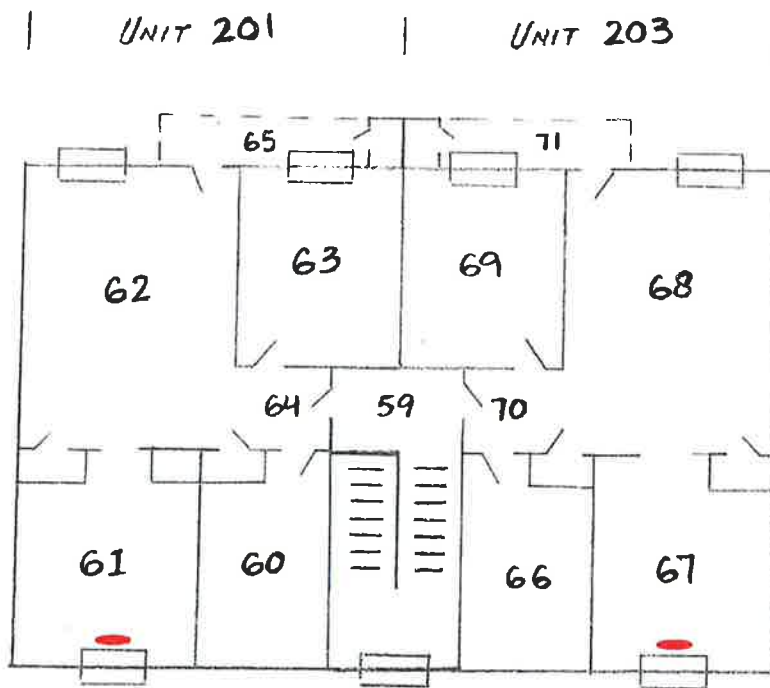
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UPPER LEVEL



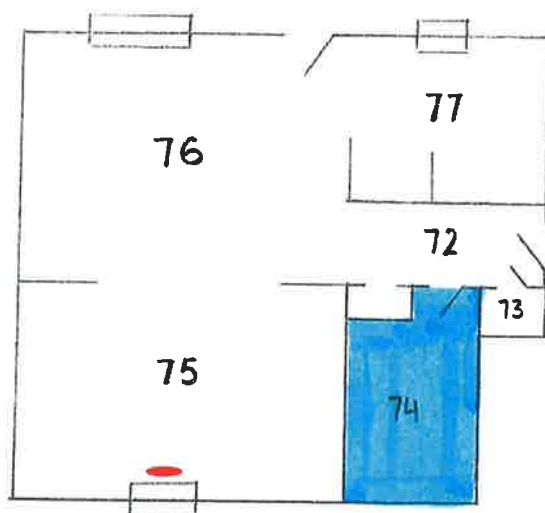
-  Floor tiles with black mastic
-  Brown sheet vinyl flooring with mastic
-  Floor tiles
-  Black sink undercoat
-  Tan sheet vinyl flooring with mastic
-  Black floor mastic

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LOWER LEVEL

UNIT 204



- Floor tiles with black mastic
- Brown sheet vinyl flooring with mastic
- Floor tiles
- Black sink undercoat
- Tan sheet vinyl flooring with mastic
- Black floor mastic

(NOT TO SCALE)



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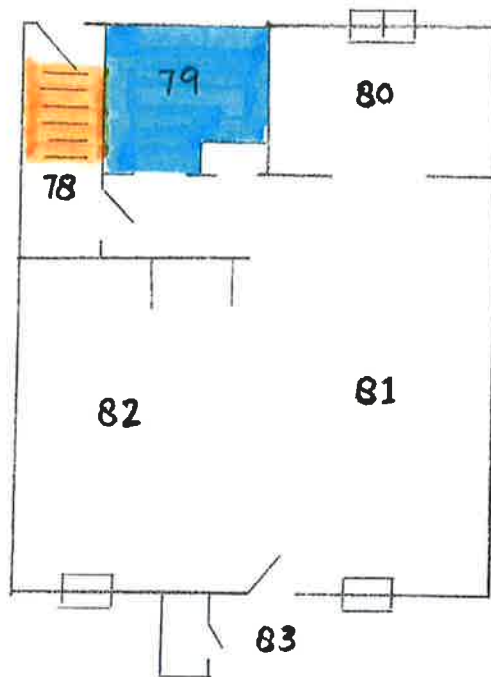
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UPPER LEVEL

UNIT 205



-  Floor tiles with black mastic
-  Brown sheet vinyl flooring with mastic
-  Floor tiles
-  Black sink undercoat
-  Tan sheet vinyl flooring with mastic
-  Black floor mastic

(NOT TO SCALE)



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Client Seattle Housing Authority - George Barlet

Location "Building 21" 101-103 8th Ave

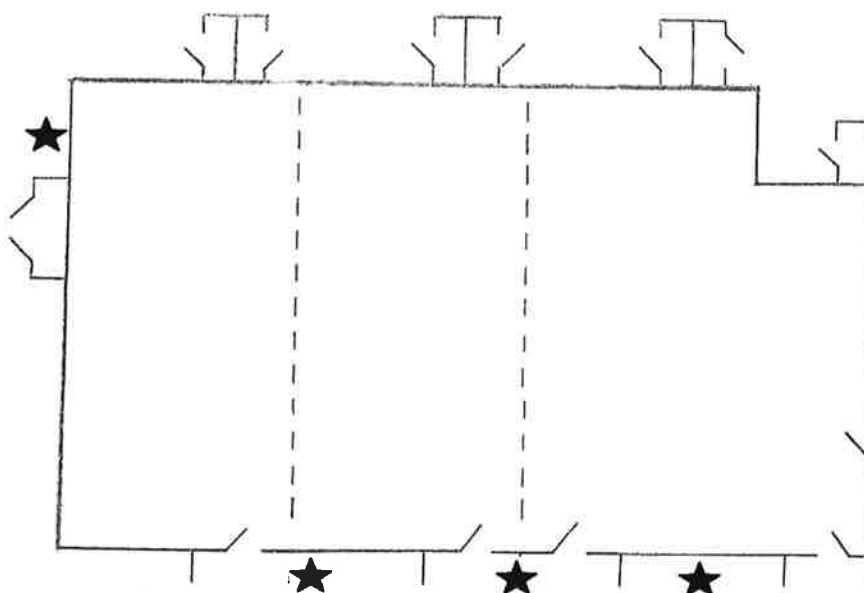
City Seattle

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Date 1/8/2019

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EXTERIOR



★ Mercury & PCB Devices

(NOT TO SCALE)

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L A B S

INDUSTRIAL
HYGIENE
SERVICES

Laboratory | Management | Training

NVL Project # 2018-0917

Client Seattle Housing Authority - George Barlet

Location "Building 22" 718 Yesler Way

City Seattle

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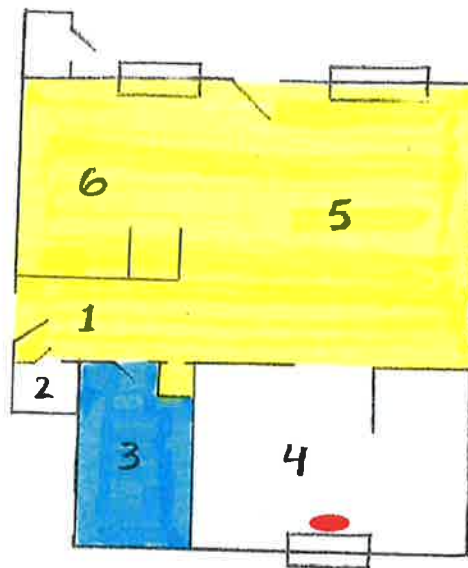
Date 1/10/2019






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LOWER LEVEL

N
↓

UNIT 206



-  Tan sheet vinyl flooring with mastic
-  Black sink undercoat
-  Beige floor tiles
-  Brown sheet vinyl flooring with mastic
-  Black floor mastic

(NOT TO SCALE)

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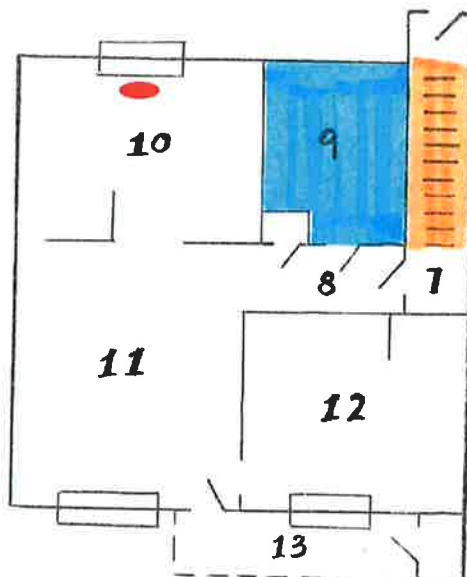
Date 1/10/2019






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UPPER LEVEL

↑
N

UNIT 207



-  Tan sheet vinyl flooring with mastic
-  Black sink undercoat
-  Beige floor tiles
-  Brown sheet vinyl flooring with mastic
-  Black floor mastic

(NOT TO SCALE)



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City Seattle

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LOWER LEVEL

↑
N

UNIT 210 UNIT 208



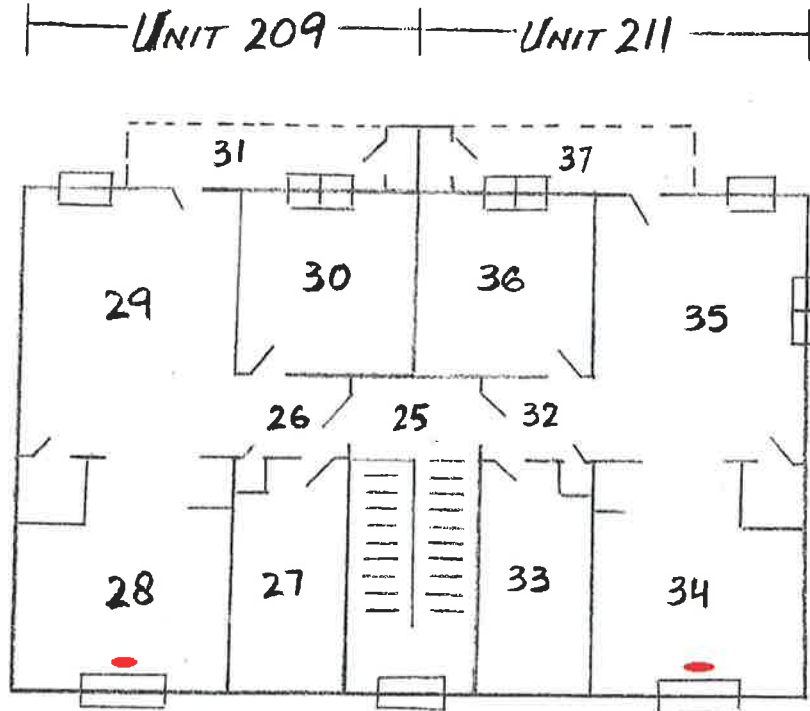
- Tan sheet vinyl flooring with mastic
- Black sink undercoat
- Beige floor tiles
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UPPER LEVEL

N
↓



-  Tan sheet vinyl flooring with mastic
-  Black sink undercoat
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-  Black floor mastic

(NOT TO SCALE)



L A B S

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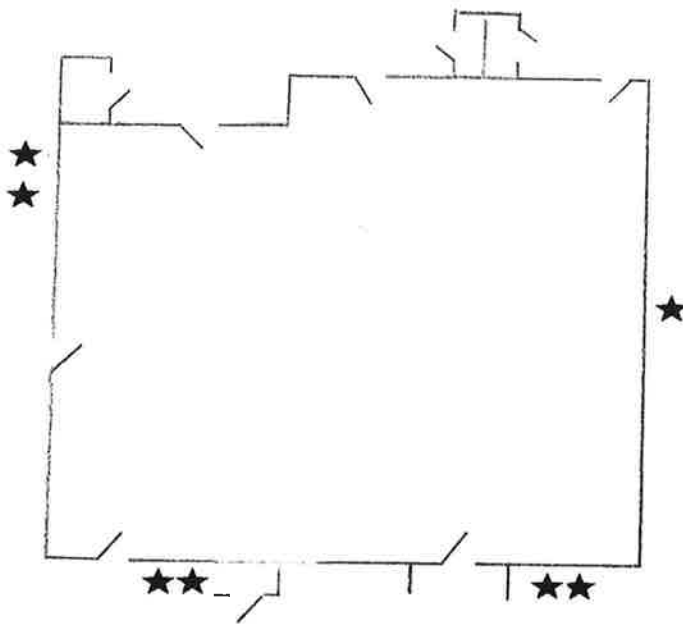
City Seattle

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State of Washington
Department of Labor & Industries
 Prevailing Wage Section - Telephone 360-902-5335
 PO Box 44540, Olympia, WA 98504-4540

Washington State Prevailing Wage

The PREVAILING WAGES listed here include both the hourly wage rate and the hourly rate of fringe benefits. On public works projects, worker's wage and benefit rates must add to not less than this total. A brief description of overtime calculation requirements are provided on the Benefit Code Key.

Journey Level Prevailing Wage Rates for the Effective Date: 02/11/2019

<u>County</u>	<u>Trade</u>	<u>Job Classification</u>	<u>Wage</u>	<u>Holiday</u>	<u>Overtime</u>	<u>Note</u>
King	Asbestos Abatement Workers	Journey Level	\$46.57	<u>5D</u>	<u>1H</u>	
King	Boilermakers	Journey Level	\$66.54	<u>5N</u>	<u>1C</u>	
King	Brick Mason	Journey Level	\$57.32	<u>5A</u>	<u>1M</u>	
King	Brick Mason	Pointer-Caulker-Cleaner	\$57.32	<u>5A</u>	<u>1M</u>	
King	Building Service Employees	Janitor	\$24.63	<u>5S</u>	<u>2F</u>	
King	Building Service Employees	Traveling Waxer/Shampooer	\$25.08	<u>5S</u>	<u>2F</u>	
King	Building Service Employees	Window Cleaner (Non-Scaffold)	\$28.13	<u>5S</u>	<u>2F</u>	
King	Building Service Employees	Window Cleaner (Scaffold)	\$29.03	<u>5S</u>	<u>2F</u>	
King	Cabinet Makers (In Shop)	Journey Level	\$22.74		<u>1</u>	
King	Carpenters	Acoustical Worker	\$60.04	<u>5D</u>	<u>4C</u>	
King	Carpenters	Bridge, Dock And Wharf Carpenters	\$60.04	<u>5D</u>	<u>4C</u>	
King	Carpenters	Carpenter	\$60.04	<u>5D</u>	<u>4C</u>	
King	Carpenters	Carpenters on Stationary Tools	\$60.17	<u>5D</u>	<u>4C</u>	
King	Carpenters	Creosoted Material	\$60.14	<u>5D</u>	<u>4C</u>	
King	Carpenters	Floor Finisher	\$60.04	<u>5D</u>	<u>4C</u>	
King	Carpenters	Floor Layer	\$60.04	<u>5D</u>	<u>4C</u>	
King	Carpenters	Scaffold Erector	\$60.04	<u>5D</u>	<u>4C</u>	
King	Cement Masons	Journey Level	\$60.07	<u>7A</u>	<u>4U</u>	
King	Divers & Tenders	Bell/Vehicle or Submersible Operator (Not Under Pressure)	\$113.60	<u>5D</u>	<u>4C</u>	
King	Divers & Tenders	Dive Supervisor/Master	\$76.33	<u>5D</u>	<u>4C</u>	
King	Divers & Tenders	Diver	\$113.60	<u>5D</u>	<u>4C</u>	<u>8V</u>
King	Divers & Tenders	Diver On Standby	\$71.33	<u>5D</u>	<u>4C</u>	
King	Divers & Tenders	Diver Tender	\$64.71	<u>5D</u>	<u>4C</u>	
King	Divers & Tenders	Manifold Operator	\$64.71	<u>5D</u>	<u>4C</u>	
King	Divers & Tenders	Manifold Operator Mixed Gas	\$69.71	<u>5D</u>	<u>4C</u>	
King	Divers & Tenders	Remote Operated Vehicle Operator/Technician	\$64.71	<u>5D</u>	<u>4C</u>	
King	Divers & Tenders		\$60.29	<u>5A</u>	<u>4C</u>	

		Remote Operated Vehicle Tender				
King	Dredge Workers	Assistant Engineer	\$56.44	<u>5D</u>	<u>3F</u>	
King	Dredge Workers	Assistant Mate (Deckhand)	\$56.00	<u>5D</u>	<u>3F</u>	
King	Dredge Workers	Boatmen	\$56.44	<u>5D</u>	<u>3F</u>	
King	Dredge Workers	Engineer Welder	\$57.51	<u>5D</u>	<u>3F</u>	
King	Dredge Workers	Leverman, Hydraulic	\$58.67	<u>5D</u>	<u>3F</u>	
King	Dredge Workers	Mates	\$56.44	<u>5D</u>	<u>3F</u>	
King	Dredge Workers	Oiler	\$56.00	<u>5D</u>	<u>3F</u>	
King	Drywall Applicator	Journey Level	\$58.48	<u>5D</u>	<u>1H</u>	
King	Drywall Tapers	Journey Level	\$59.32	<u>5P</u>	<u>1E</u>	
King	Electrical Fixture Maintenance Workers	Journey Level	\$28.99	<u>5L</u>	<u>1E</u>	
King	Electricians - Inside	Cable Splicer	\$77.51	<u>7C</u>	<u>4E</u>	
King	Electricians - Inside	Cable Splicer (tunnel)	\$82.84	<u>7C</u>	<u>4E</u>	
King	Electricians - Inside	Certified Welder	\$74.90	<u>7C</u>	<u>4E</u>	
King	Electricians - Inside	Certified Welder (tunnel)	\$80.37	<u>7C</u>	<u>4E</u>	
King	Electricians - Inside	Construction Stock Person	\$39.69	<u>7C</u>	<u>4E</u>	
King	Electricians - Inside	Journey Level	\$72.30	<u>7C</u>	<u>4E</u>	
King	Electricians - Inside	Journey Level (tunnel)	\$77.51	<u>7C</u>	<u>4E</u>	
King	Electricians - Motor Shop	Journey Level	\$45.08	<u>5A</u>	<u>1B</u>	
King	Electricians - Powerline Construction	Cable Splicer	\$79.43	<u>5A</u>	<u>4D</u>	
King	Electricians - Powerline Construction	Certified Line Welder	\$69.75	<u>5A</u>	<u>4D</u>	
King	Electricians - Powerline Construction	Groundperson	\$46.28	<u>5A</u>	<u>4D</u>	
King	Electricians - Powerline Construction	Heavy Line Equipment Operator	\$69.75	<u>5A</u>	<u>4D</u>	
King	Electricians - Powerline Construction	Journey Level Lineperson	\$69.75	<u>5A</u>	<u>4D</u>	
King	Electricians - Powerline Construction	Line Equipment Operator	\$59.01	<u>5A</u>	<u>4D</u>	
King	Electricians - Powerline Construction	Meter Installer	\$46.28	<u>5A</u>	<u>4D</u>	<u>8W</u>
King	Electricians - Powerline Construction	Pole Sprayer	\$69.75	<u>5A</u>	<u>4D</u>	
King	Electricians - Powerline Construction	Powderperson	\$52.20	<u>5A</u>	<u>4D</u>	
King	Electronic Technicians	Journey Level	\$48.06	<u>7E</u>	<u>1E</u>	
King	Elevator Constructors	Mechanic	\$91.24	<u>7D</u>	<u>4A</u>	
King	Elevator Constructors	Mechanic In Charge	\$98.51	<u>7D</u>	<u>4A</u>	
King	Fabricated Precast Concrete Products	All Classifications - In-Factory Work Only	\$17.72	<u>5B</u>	<u>1R</u>	
King	Fence Erectors	Fence Erector	\$41.45	<u>7A</u>	<u>3I</u>	
King	Fence Erectors	Fence Laborer	\$41.45	<u>7A</u>	<u>3I</u>	
King	Flaggers	Journey Level	\$41.45	<u>7A</u>	<u>3I</u>	
King	Glaziers	Journey Level	\$63.06	<u>7L</u>	<u>1Y</u>	

King	Heat & Frost Insulators And Asbestos Workers	Journeyman	\$73.58	<u>5J</u>	<u>4H</u>	
King	Heating Equipment Mechanics	Journey Level	\$82.51	<u>7F</u>	<u>1E</u>	
King	Hod Carriers & Mason Tenders	Journey Level	\$50.42	<u>7A</u>	<u>3I</u>	
King	Industrial Power Vacuum Cleaner	Journey Level	\$12.00		<u>1</u>	
King	Inland Boatmen	Boat Operator	\$61.41	<u>5B</u>	<u>1K</u>	
King	Inland Boatmen	Cook	\$56.48	<u>5B</u>	<u>1K</u>	
King	Inland Boatmen	Deckhand	\$57.48	<u>5B</u>	<u>1K</u>	
King	Inland Boatmen	Deckhand Engineer	\$58.81	<u>5B</u>	<u>1K</u>	
King	Inland Boatmen	Launch Operator	\$58.89	<u>5B</u>	<u>1K</u>	
King	Inland Boatmen	Mate	\$57.31	<u>5B</u>	<u>1K</u>	
King	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Cleaner Operator, Foamer Operator	\$31.49		<u>1</u>	
King	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Grout Truck Operator	\$12.00		<u>1</u>	
King	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Head Operator	\$24.91		<u>1</u>	
King	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Technician	\$19.33		<u>1</u>	
King	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Tv Truck Operator	\$20.45		<u>1</u>	
King	Insulation Applicators	Journey Level	\$60.04	<u>5D</u>	<u>4C</u>	
King	Ironworkers	Journeyman	\$69.28	<u>7N</u>	<u>1O</u>	
King	Laborers	Air, Gas Or Electric Vibrating Screed	\$48.90	<u>7A</u>	<u>3I</u>	
King	Laborers	Airtrac Drill Operator	\$50.42	<u>7A</u>	<u>3I</u>	
King	Laborers	Ballast Regular Machine	\$48.90	<u>7A</u>	<u>3I</u>	
King	Laborers	Batch Weighman	\$41.45	<u>7A</u>	<u>3I</u>	
King	Laborers	Brick Pavers	\$48.90	<u>7A</u>	<u>3I</u>	
King	Laborers	Brush Cutter	\$48.90	<u>7A</u>	<u>3I</u>	
King	Laborers	Brush Hog Feeder	\$48.90	<u>7A</u>	<u>3I</u>	
King	Laborers	Burner	\$48.90	<u>7A</u>	<u>3I</u>	
King	Laborers	Caisson Worker	\$50.42	<u>7A</u>	<u>3I</u>	
King	Laborers	Carpenter Tender	\$48.90	<u>7A</u>	<u>3I</u>	
King	Laborers	Caulker	\$48.90	<u>7A</u>	<u>3I</u>	
King	Laborers	Cement Dumper-paving	\$49.81	<u>7A</u>	<u>3I</u>	
King	Laborers	Cement Finisher Tender	\$48.90	<u>7A</u>	<u>3I</u>	
King	Laborers	Change House Or Dry Shack	\$48.90	<u>7A</u>	<u>3I</u>	
King	Laborers	Chipping Gun (under 30 Lbs.)	\$48.90	<u>7A</u>	<u>3I</u>	
King	Laborers	Chipping Gun(30 Lbs. And Over)	\$49.81	<u>7A</u>	<u>3I</u>	
King	Laborers	Choker Setter	\$48.90	<u>7A</u>	<u>3I</u>	

King	Laborers	Chuck Tender	\$48.90	7A	3I	
King	Laborers	Clary Power Spreader	\$49.81	7A	3I	
King	Laborers	Clean-up Laborer	\$48.90	7A	3I	
King	Laborers	Concrete Dumper/chute Operator	\$49.81	7A	3I	
King	Laborers	Concrete Form Stripper	\$48.90	7A	3I	
King	Laborers	Concrete Placement Crew	\$49.81	7A	3I	
King	Laborers	Concrete Saw Operator/core Driller	\$49.81	7A	3I	
King	Laborers	Crusher Feeder	\$41.45	7A	3I	
King	Laborers	Curing Laborer	\$48.90	7A	3I	
King	Laborers	Demolition: Wrecking & Moving (incl. Charred Material)	\$48.90	7A	3I	
King	Laborers	Ditch Digger	\$48.90	7A	3I	
King	Laborers	Diver	\$50.42	7A	3I	
King	Laborers	Drill Operator (hydraulic, diamond)	\$49.81	7A	3I	
King	Laborers	Dry Stack Walls	\$48.90	7A	3I	
King	Laborers	Dump Person	\$48.90	7A	3I	
King	Laborers	Epoxy Technician	\$48.90	7A	3I	
King	Laborers	Erosion Control Worker	\$48.90	7A	3I	
King	Laborers	Faller & Bucker Chain Saw	\$49.81	7A	3I	
King	Laborers	Fine Graders	\$48.90	7A	3I	
King	Laborers	Firewatch	\$41.45	7A	3I	
King	Laborers	Form Setter	\$48.90	7A	3I	
King	Laborers	Gabian Basket Builders	\$48.90	7A	3I	
King	Laborers	General Laborer	\$48.90	7A	3I	
King	Laborers	Grade Checker & Transit Person	\$50.42	7A	3I	
King	Laborers	Grinders	\$48.90	7A	3I	
King	Laborers	Grout Machine Tender	\$48.90	7A	3I	
King	Laborers	Groutmen (pressure)including Post Tension Beams	\$49.81	7A	3I	
King	Laborers	Guardrail Erector	\$48.90	7A	3I	
King	Laborers	Hazardous Waste Worker (level A)	\$50.42	7A	3I	
King	Laborers	Hazardous Waste Worker (level B)	\$49.81	7A	3I	
King	Laborers	Hazardous Waste Worker (level C)	\$48.90	7A	3I	
King	Laborers	High Scaler	\$50.42	7A	3I	
King	Laborers	Jackhammer	\$49.81	7A	3I	
King	Laborers	Laserbeam Operator	\$49.81	7A	3I	
King	Laborers	Maintenance Person	\$48.90	7A	3I	
King	Laborers	Manhole Builder-mudman	\$49.81	7A	3I	
King	Laborers	Material Yard Person	\$48.90	7A	3I	

King	Laborers	Motorman-dinky Locomotive	\$49.81	7A	3I	
King	Laborers	Nozzleman (concrete Pump, Green Cutter When Using Combination Of High Pressure Air & Water On Concrete & Rock, Sandblast, Guniting, Shotcrete, Water Bla	\$49.81	7A	3I	
King	Laborers	Pavement Breaker	\$49.81	7A	3I	
King	Laborers	Pilot Car	\$41.45	7A	3I	
King	Laborers	Pipe Layer Lead	\$50.42	7A	3I	
King	Laborers	Pipe Layer/tailor	\$49.81	7A	3I	
King	Laborers	Pipe Pot Tender	\$49.81	7A	3I	
King	Laborers	Pipe Reliner	\$49.81	7A	3I	
King	Laborers	Pipe Wrapper	\$49.81	7A	3I	
King	Laborers	Pot Tender	\$48.90	7A	3I	
King	Laborers	Powderman	\$50.42	7A	3I	
King	Laborers	Powderman's Helper	\$48.90	7A	3I	
King	Laborers	Power Jacks	\$49.81	7A	3I	
King	Laborers	Railroad Spike Puller - Power	\$49.81	7A	3I	
King	Laborers	Raker - Asphalt	\$50.42	7A	3I	
King	Laborers	Re-timberman	\$50.42	7A	3I	
King	Laborers	Remote Equipment Operator	\$49.81	7A	3I	
King	Laborers	Rigger/signal Person	\$49.81	7A	3I	
King	Laborers	Rip Rap Person	\$48.90	7A	3I	
King	Laborers	Rivet Buster	\$49.81	7A	3I	
King	Laborers	Rodder	\$49.81	7A	3I	
King	Laborers	Scaffold Erector	\$48.90	7A	3I	
King	Laborers	Scale Person	\$48.90	7A	3I	
King	Laborers	Sloper (over 20")	\$49.81	7A	3I	
King	Laborers	Sloper Sprayer	\$48.90	7A	3I	
King	Laborers	Spreader (concrete)	\$49.81	7A	3I	
King	Laborers	Stake Hopper	\$48.90	7A	3I	
King	Laborers	Stock Piler	\$48.90	7A	3I	
King	Laborers	Tamper & Similar Electric, Air & Gas Operated Tools	\$49.81	7A	3I	
King	Laborers	Tamper (multiple & Self-propelled)	\$49.81	7A	3I	
King	Laborers	Timber Person - Sewer (lagger, Shorer & Cribber)	\$49.81	7A	3I	
King	Laborers	Toolroom Person (at Jobsite)	\$48.90	7A	3I	
King	Laborers	Topper	\$48.90	7A	3I	
King	Laborers	Track Laborer	\$48.90	7A	3I	
King	Laborers	Track Liner (power)	\$49.81	7A	3I	
King	Laborers	Traffic Control Laborer	\$44.33	7A	3I	8R
King	Laborers	Traffic Control Supervisor	\$44.33	7A	3I	8R
King	Laborers	Truck Spotter	\$48.90	7A	3I	
King	Laborers	Tugger Operator	\$49.81	7A	3I	

King	Laborers	Tunnel Work-Compressed Air Worker 0-30 psi	\$107.60	<u>7A</u>	<u>3I</u>	<u>8Q</u>
King	Laborers	Tunnel Work-Compressed Air Worker 30.01-44.00 psi	\$112.63	<u>7A</u>	<u>3I</u>	<u>8Q</u>
King	Laborers	Tunnel Work-Compressed Air Worker 44.01-54.00 psi	\$116.31	<u>7A</u>	<u>3I</u>	<u>8Q</u>
King	Laborers	Tunnel Work-Compressed Air Worker 54.01-60.00 psi	\$122.01	<u>7A</u>	<u>3I</u>	<u>8Q</u>
King	Laborers	Tunnel Work-Compressed Air Worker 60.01-64.00 psi	\$124.13	<u>7A</u>	<u>3I</u>	<u>8Q</u>
King	Laborers	Tunnel Work-Compressed Air Worker 64.01-68.00 psi	\$129.23	<u>7A</u>	<u>3I</u>	<u>8Q</u>
King	Laborers	Tunnel Work-Compressed Air Worker 68.01-70.00 psi	\$131.13	<u>7A</u>	<u>3I</u>	<u>8Q</u>
King	Laborers	Tunnel Work-Compressed Air Worker 70.01-72.00 psi	\$133.13	<u>7A</u>	<u>3I</u>	<u>8Q</u>
King	Laborers	Tunnel Work-Compressed Air Worker 72.01-74.00 psi	\$135.13	<u>7A</u>	<u>3I</u>	<u>8Q</u>
King	Laborers	Tunnel Work-Guage and Lock Tender	\$50.52	<u>7A</u>	<u>3I</u>	<u>8Q</u>
King	Laborers	Tunnel Work-Miner	\$50.52	<u>7A</u>	<u>3I</u>	<u>8Q</u>
King	Laborers	Vibrator	\$49.81	<u>7A</u>	<u>3I</u>	
King	Laborers	Vinyl Seamer	\$48.90	<u>7A</u>	<u>3I</u>	
King	Laborers	Watchman	\$37.67	<u>7A</u>	<u>3I</u>	
King	Laborers	Welder	\$49.81	<u>7A</u>	<u>3I</u>	
King	Laborers	Well Point Laborer	\$49.81	<u>7A</u>	<u>3I</u>	
King	Laborers	Window Washer/cleaner	\$37.67	<u>7A</u>	<u>3I</u>	
King	Laborers - Underground Sewer & Water	General Laborer & Topman	\$48.90	<u>7A</u>	<u>3I</u>	
King	Laborers - Underground Sewer & Water	Pipe Layer	\$49.81	<u>7A</u>	<u>3I</u>	
King	Landscape Construction	Landscape Laborer	\$37.67	<u>7A</u>	<u>3I</u>	
King	Landscape Construction	Landscape Operator	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Lathers	Journey Level	\$58.48	<u>5D</u>	<u>1H</u>	
King	Marble Setters	Journey Level	\$57.32	<u>5A</u>	<u>1M</u>	
King	Metal Fabrication (In Shop)	Fitter	\$15.86		<u>1</u>	
King	Metal Fabrication (In Shop)	Laborer	\$12.00		<u>1</u>	
King	Metal Fabrication (In Shop)	Machine Operator	\$13.04		<u>1</u>	
King	Metal Fabrication (In Shop)	Painter	\$12.00		<u>1</u>	
King	Metal Fabrication (In Shop)	Welder	\$15.48		<u>1</u>	
King	Millwright	Journey Level	\$61.54	<u>5D</u>	<u>4C</u>	
King	Modular Buildings	Cabinet Assembly	\$12.00		<u>1</u>	
King	Modular Buildings	Electrician	\$12.00		<u>1</u>	
King	Modular Buildings	Equipment Maintenance	\$12.00		<u>1</u>	
King	Modular Buildings	Plumber	\$12.00		<u>1</u>	
King	Modular Buildings	Production Worker	\$12.00		<u>1</u>	
King	Modular Buildings	Tool Maintenance	\$12.00		<u>1</u>	
King	Modular Buildings	Utility Person	\$12.00		<u>1</u>	

King	Modular Buildings	Welder	\$12.00		<u>1</u>	
King	Painters	Journey Level	\$42.50	<u>6Z</u>	<u>2B</u>	
King	Pile Driver	Crew Tender	\$54.99	<u>5D</u>	<u>4C</u>	
King	Pile Driver	Hyperbaric Worker - Compressed Air Worker 0-30.00 PSI	\$74.87	<u>5D</u>	<u>4C</u>	
King	Pile Driver	Hyperbaric Worker - Compressed Air Worker 30.01 - 44.00 PSI	\$79.87	<u>5D</u>	<u>4C</u>	
King	Pile Driver	Hyperbaric Worker - Compressed Air Worker 44.01 - 54.00 PSI	\$83.87	<u>5D</u>	<u>4C</u>	
King	Pile Driver	Hyperbaric Worker - Compressed Air Worker 54.01 - 60.00 PSI	\$88.87	<u>5D</u>	<u>4C</u>	
King	Pile Driver	Hyperbaric Worker - Compressed Air Worker 60.01 - 64.00 PSI	\$91.37	<u>5D</u>	<u>4C</u>	
King	Pile Driver	Hyperbaric Worker - Compressed Air Worker 64.01 - 68.00 PSI	\$96.37	<u>5D</u>	<u>4C</u>	
King	Pile Driver	Hyperbaric Worker - Compressed Air Worker 68.01 - 70.00 PSI	\$98.37	<u>5D</u>	<u>4C</u>	
King	Pile Driver	Hyperbaric Worker - Compressed Air Worker 70.01 - 72.00 PSI	\$100.37	<u>5D</u>	<u>4C</u>	
King	Pile Driver	Hyperbaric Worker - Compressed Air Worker 72.01 - 74.00 PSI	\$102.37	<u>5D</u>	<u>4C</u>	
King	Pile Driver	Journey Level	\$60.29	<u>5D</u>	<u>4C</u>	
King	Plasterers	Journey Level	\$56.54	<u>7Q</u>	<u>1R</u>	
King	Playground & Park Equipment Installers	Journey Level	\$12.00		<u>1</u>	
King	Plumbers & Pipefitters	Journey Level	\$83.69	<u>6Z</u>	<u>1G</u>	
King	Power Equipment Operators	Asphalt Plant Operators	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Assistant Engineer	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Barrier Machine (zipper)	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Batch Plant Operator, Concrete	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Bobcat	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Brokk - Remote Demolition Equipment	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Brooms	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Bump Cutter	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Cableways	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Chipper	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Compressor	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators		\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>

		Concrete Pump: Truck Mount With Boom Attachment Over 42 M				
King	Power Equipment Operators	Concrete Finish Machine -laser Screed	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure.	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Conveyors	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Cranes Friction: 200 tons and over	\$62.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Cranes: 20 Tons Through 44 Tons With Attachments	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Cranes: 100 Tons Through 199 Tons, Or 150' Of Boom (Including Jib With Attachments)	\$61.10	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Cranes: 200 tons- 299 tons, or 250' of boom including jib with attachments	\$61.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Cranes: 300 tons and over or 300' of boom including jib with attachments	\$62.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Cranes: 45 Tons Through 99 Tons, Under 150' Of Boom (including Jib With Attachments)	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Cranes: A-frame - 10 Tons And Under	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Cranes: Friction cranes through 199 tons	\$61.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Cranes: Through 19 Tons With Attachments A-frame Over 10 Tons	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Crusher	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Deck Engineer/deck Winches (power)	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Derricks, On Building Work	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Dozers D-9 & Under	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Drill Oilers: Auger Type, Truck Or Crane Mount	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Drilling Machine	\$61.10	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Elevator And Man-lift: Permanent And Shaft Type	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Finishing Machine, Bidwell And Gamaco & Similar Equipment	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Forklift: 3000 Lbs And Over With Attachments	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>

King	Power Equipment Operators	Forklifts: Under 3000 Lbs. With Attachments	\$56.90	7A	3C	8P
King	Power Equipment Operators	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	\$59.96	7A	3C	8P
King	Power Equipment Operators	Gradechecker/stakeman	\$56.90	7A	3C	8P
King	Power Equipment Operators	Guardrail Punch	\$59.96	7A	3C	8P
King	Power Equipment Operators	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	\$60.49	7A	3C	8P
King	Power Equipment Operators	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	\$59.96	7A	3C	8P
King	Power Equipment Operators	Horizontal/directional Drill Locator	\$59.49	7A	3C	8P
King	Power Equipment Operators	Horizontal/directional Drill Operator	\$59.96	7A	3C	8P
King	Power Equipment Operators	Hydralifts/boom Trucks Over 10 Tons	\$59.49	7A	3C	8P
King	Power Equipment Operators	Hydralifts/boom Trucks, 10 Tons And Under	\$56.90	7A	3C	8P
King	Power Equipment Operators	Loader, Overhead 8 Yards. & Over	\$61.10	7A	3C	8P
King	Power Equipment Operators	Loader, Overhead, 6 Yards. But Not Including 8 Yards	\$60.49	7A	3C	8P
King	Power Equipment Operators	Loaders, Overhead Under 6 Yards	\$59.96	7A	3C	8P
King	Power Equipment Operators	Loaders, Plant Feed	\$59.96	7A	3C	8P
King	Power Equipment Operators	Loaders: Elevating Type Belt	\$59.49	7A	3C	8P
King	Power Equipment Operators	Locomotives, All	\$59.96	7A	3C	8P
King	Power Equipment Operators	Material Transfer Device	\$59.96	7A	3C	8P
King	Power Equipment Operators	Mechanics, All (leadmen - \$0.50 Per Hour Over Mechanic)	\$61.10	7A	3C	8P
King	Power Equipment Operators	Motor Patrol Graders	\$60.49	7A	3C	8P
King	Power Equipment Operators	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	\$60.49	7A	3C	8P
King	Power Equipment Operators	Oil Distributors, Blower Distribution & Mulch Seeding Operator	\$56.90	7A	3C	8P
King	Power Equipment Operators	Outside Hoists (elevators And Manlifts), Air Tuggers, strato	\$59.49	7A	3C	8P
King	Power Equipment Operators	Overhead, Bridge Type Crane: 20 Tons Through 44 Tons	\$59.96	7A	3C	8P
King	Power Equipment Operators	Overhead, Bridge Type: 100 Tons And Over	\$61.10	7A	3C	8P
King	Power Equipment Operators	Overhead, Bridge Type: 45 Tons Through 99 Tons	\$60.49	7A	3C	8P
King	Power Equipment Operators	Pavement Breaker	\$56.90	7A	3C	8P
King	Power Equipment Operators	Pile Driver (other Than Crane Mount)	\$59.96	7A	3C	8P

King	Power Equipment Operators	Plant Oiler - Asphalt, Crusher	\$59.49	7A	3C	8P
King	Power Equipment Operators	Posthole Digger, Mechanical	\$56.90	7A	3C	8P
King	Power Equipment Operators	Power Plant	\$56.90	7A	3C	8P
King	Power Equipment Operators	Pumps - Water	\$56.90	7A	3C	8P
King	Power Equipment Operators	Quad 9, Hd 41, D10 And Over	\$60.49	7A	3C	8P
King	Power Equipment Operators	Quick Tower - No Cab, Under 100 Feet In Height Based To Boom	\$56.90	7A	3C	8P
King	Power Equipment Operators	Remote Control Operator On Rubber Tired Earth Moving Equipment	\$60.49	7A	3C	8P
King	Power Equipment Operators	Rigger And Bellman	\$56.90	7A	3C	8P
King	Power Equipment Operators	Rigger/Signal Person, Bellman (Certified)	\$59.49	7A	3C	8P
King	Power Equipment Operators	Rollagon	\$60.49	7A	3C	8P
King	Power Equipment Operators	Roller, Other Than Plant Mix	\$56.90	7A	3C	8P
King	Power Equipment Operators	Roller, Plant Mix Or Multi-lift Materials	\$59.49	7A	3C	8P
King	Power Equipment Operators	Roto-mill, Roto-grinder	\$59.96	7A	3C	8P
King	Power Equipment Operators	Saws - Concrete	\$59.49	7A	3C	8P
King	Power Equipment Operators	Scraper, Self Propelled Under 45 Yards	\$59.96	7A	3C	8P
King	Power Equipment Operators	Scrapers - Concrete & Carry All	\$59.49	7A	3C	8P
King	Power Equipment Operators	Scrapers, Self-propelled: 45 Yards And Over	\$60.49	7A	3C	8P
King	Power Equipment Operators	Service Engineers - Equipment	\$59.49	7A	3C	8P
King	Power Equipment Operators	Shotcrete/gunite Equipment	\$56.90	7A	3C	8P
King	Power Equipment Operators	Shovel , Excavator, Backhoe, Tractors Under 15 Metric Tons.	\$59.49	7A	3C	8P
King	Power Equipment Operators	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	\$60.49	7A	3C	8P
King	Power Equipment Operators	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	\$59.96	7A	3C	8P
King	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	\$61.10	7A	3C	8P
King	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 90 Metric Tons	\$61.72	7A	3C	8P
King	Power Equipment Operators	Slipform Pavers	\$60.49	7A	3C	8P
King	Power Equipment Operators	Spreader, Topsider & Screedman	\$60.49	7A	3C	8P
King	Power Equipment Operators	Subgrader Trimmer	\$59.96	7A	3C	8P
King	Power Equipment Operators	Tower Bucket Elevators	\$59.49	7A	3C	8P
King	Power Equipment Operators	Tower Crane Up To 175' In Height Base To Boom	\$61.10	7A	3C	8P
King	Power Equipment Operators		\$61.72	7A	3C	8P

		Tower Crane: over 175' through 250' in height, base to boom				
King	Power Equipment Operators	Tower Cranes: over 250' in height from base to boom	\$62.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Transporters, All Track Or Truck Type	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Trenching Machines	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Truck Crane Oiler/driver - 100 Tons And Over	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Truck Crane Oiler/driver Under 100 Tons	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Truck Mount Portable Conveyor	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Welder	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Wheel Tractors, Farmall Type	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators	Yo Yo Pay Dozer	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Asphalt Plant Operators	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Assistant Engineer	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Barrier Machine (zipper)	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Batch Plant Operator, Concrete	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Bobcat	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Brokk - Remote Demolition Equipment	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Brooms	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Bump Cutter	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Cableways	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Chipper	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Compressor	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Concrete Finish Machine -laser Screed	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure.	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King		Conveyors	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>

	Power Equipment Operators-Underground Sewer & Water					
King	Power Equipment Operators-Underground Sewer & Water	Cranes Friction: 200 tons and over	\$62.33	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Cranes: 20 Tons Through 44 Tons With Attachments	\$59.96	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Cranes: 100 Tons Through 199 Tons, Or 150' Of Boom (Including Jib With Attachments)	\$61.10	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Cranes: 200 tons- 299 tons, or 250' of boom including jib with attachments	\$61.72	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Cranes: 300 tons and over or 300' of boom including jib with attachments	\$62.33	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Cranes: 45 Tons Through 99 Tons, Under 150' Of Boom (including Jib With Attachments)	\$60.49	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Cranes: A-frame - 10 Tons And Under	\$56.90	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Cranes: Friction cranes through 199 tons	\$61.72	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Cranes: Through 19 Tons With Attachments A-frame Over 10 Tons	\$59.49	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Crusher	\$59.96	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Deck Engineer/deck Winches (power)	\$59.96	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Derricks, On Building Work	\$60.49	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Dozers D-9 & Under	\$59.49	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Drill Oilers: Auger Type, Truck Or Crane Mount	\$59.49	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Drilling Machine	\$61.10	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Elevator And Man-lift: Permanent And Shaft Type	\$56.90	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Finishing Machine, Bidwell And Gamaco & Similar Equipment	\$59.96	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Forklift: 3000 Lbs And Over With Attachments	\$59.49	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Forklifts: Under 3000 Lbs. With Attachments	\$56.90	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	\$59.96	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Gradechecker/stakeman	\$56.90	7A	3C	8P

King	Power Equipment Operators-Underground Sewer & Water	Guardrail Punch	\$59.96	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	\$60.49	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	\$59.96	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Horizontal/directional Drill Locator	\$59.49	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Horizontal/directional Drill Operator	\$59.96	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Hydralifts/boom Trucks Over 10 Tons	\$59.49	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Hydralifts/boom Trucks, 10 Tons And Under	\$56.90	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Loader, Overhead 8 Yards. & Over	\$61.10	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Loader, Overhead, 6 Yards. But Not Including 8 Yards	\$60.49	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Loaders, Overhead Under 6 Yards	\$59.96	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Loaders, Plant Feed	\$59.96	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Loaders: Elevating Type Belt	\$59.49	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Locomotives, All	\$59.96	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Material Transfer Device	\$59.96	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Mechanics, All (leadmen - \$0.50 Per Hour Over Mechanic)	\$61.10	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Motor Patrol Graders	\$60.49	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	\$60.49	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Oil Distributors, Blower Distribution & Mulch Seeding Operator	\$56.90	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Outside Hoists (elevators And Manlifts), Air Tuggers, strato	\$59.49	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Overhead, Bridge Type Crane: 20 Tons Through 44 Tons	\$59.96	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Overhead, Bridge Type: 100 Tons And Over	\$61.10	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Overhead, Bridge Type: 45 Tons Through 99 Tons	\$60.49	7A	3C	8P
King	Power Equipment Operators-Underground Sewer & Water	Pavement Breaker	\$56.90	7A	3C	8P
King			\$59.96	7A	3C	8P

	Power Equipment Operators-Underground Sewer & Water	Pile Driver (other Than Crane Mount)				
King	Power Equipment Operators-Underground Sewer & Water	Plant Oiler - Asphalt, Crusher	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Posthole Digger, Mechanical	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Power Plant	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Pumps - Water	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Quad 9, Hd 41, D10 And Over	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Quick Tower - No Cab, Under 100 Feet In Height Based To Boom	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Remote Control Operator On Rubber Tired Earth Moving Equipment	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Rigger And Bellman	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Rigger/Signal Person, Bellman (Certified)	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Rollagon	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Roller, Other Than Plant Mix	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Roller, Plant Mix Or Multi-lift Materials	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Roto-mill, Roto-grinder	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Saws - Concrete	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Scraper, Self Propelled Under 45 Yards	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Scrapers - Concrete & Carry All	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Scrapers, Self-propelled: 45 Yards And Over	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Service Engineers - Equipment	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Shotcrete/gunite Equipment	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Shovel , Excavator, Backhoe, Tractors Under 15 Metric Tons.	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators-Underground Sewer & Water		\$61.10	<u>7A</u>	<u>3C</u>	<u>8P</u>

		Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons				
King	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 90 Metric Tons	\$61.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators- Underground Sewer & Water	Slipform Pavers	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators- Underground Sewer & Water	Spreader, Topsider & Screedman	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators- Underground Sewer & Water	Subgrader Trimmer	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators- Underground Sewer & Water	Tower Bucket Elevators	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators- Underground Sewer & Water	Tower Crane Up To 175' In Height Base To Boom	\$61.10	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators- Underground Sewer & Water	Tower Crane: over 175' through 250' in height, base to boom	\$61.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators- Underground Sewer & Water	Tower Cranes: over 250' in height from base to boom	\$62.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators- Underground Sewer & Water	Transporters, All Track Or Truck Type	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators- Underground Sewer & Water	Trenching Machines	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators- Underground Sewer & Water	Truck Crane Oiler/driver - 100 Tons And Over	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators- Underground Sewer & Water	Truck Crane Oiler/driver Under 100 Tons	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators- Underground Sewer & Water	Truck Mount Portable Conveyor	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators- Underground Sewer & Water	Welder	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators- Underground Sewer & Water	Wheel Tractors, Farmall Type	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Equipment Operators- Underground Sewer & Water	Yo Yo Pay Dozer	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Power Line Clearance Tree Trimmers	Journey Level In Charge	\$49.96	<u>5A</u>	<u>4A</u>	
King	Power Line Clearance Tree Trimmers	Spray Person	\$47.37	<u>5A</u>	<u>4A</u>	
King	Power Line Clearance Tree Trimmers	Tree Equipment Operator	\$49.96	<u>5A</u>	<u>4A</u>	
King	Power Line Clearance Tree Trimmers	Tree Trimmer	\$44.57	<u>5A</u>	<u>4A</u>	
King	Power Line Clearance Tree Trimmers	Tree Trimmer Groundperson	\$33.60	<u>5A</u>	<u>4A</u>	
King	Refrigeration & Air Conditioning Mechanics	Journey Level	\$79.51	<u>6Z</u>	<u>1G</u>	
King	Residential Brick Mason	Journey Level	\$57.32	<u>5A</u>	<u>1M</u>	
King	Residential Carpenters	Journey Level	\$45.05	<u>5D</u>	<u>4C</u>	
King	Residential Cement Masons	Journey Level	\$60.07	<u>7A</u>	<u>4U</u>	

King	Residential Drywall Applicators	Journey Level	\$45.05	<u>5D</u>	<u>4C</u>	
King	Residential Drywall Tapers	Journey Level	\$45.19	<u>5P</u>	<u>1E</u>	
King	Residential Electricians	Journey Level	\$37.26	<u>5Q</u>	<u>2O</u>	
King	Residential Glaziers	Journey Level	\$42.05	<u>7L</u>	<u>1H</u>	
King	Residential Insulation Applicators	Journey Level	\$45.05	<u>5D</u>	<u>4C</u>	
King	Residential Laborers	Journey Level	\$36.68	<u>7A</u>	<u>1H</u>	
King	Residential Marble Setters	Journey Level	\$57.32	<u>5A</u>	<u>1M</u>	
King	Residential Painters	Journey Level	\$42.50	<u>6Z</u>	<u>2B</u>	
King	Residential Plumbers & Pipefitters	Journey Level	\$51.37	<u>5A</u>	<u>1G</u>	
King	Residential Refrigeration & Air Conditioning Mechanics	Journey Level	\$51.37	<u>5A</u>	<u>1G</u>	
King	Residential Sheet Metal Workers	Journey Level (Field or Shop)	\$50.01	<u>7F</u>	<u>1R</u>	
King	Residential Soft Floor Layers	Journey Level	\$49.43	<u>5A</u>	<u>3J</u>	
King	Residential Sprinkler Fitters (Fire Protection)	Journey Level	\$46.58	<u>5C</u>	<u>2R</u>	
King	Residential Stone Masons	Journey Level	\$57.32	<u>5A</u>	<u>1M</u>	
King	Residential Terrazzo Workers	Journey Level	\$52.61	<u>5A</u>	<u>1M</u>	
King	Residential Terrazzo/Tile Finishers	Journey Level	\$43.44	<u>5A</u>	<u>1B</u>	
King	Residential Tile Setters	Journey Level	\$52.61	<u>5A</u>	<u>1M</u>	
King	Roofers	Journey Level	\$51.52	<u>5A</u>	<u>3H</u>	
King	Roofers	Using Irritable Bituminous Materials	\$54.52	<u>5A</u>	<u>3H</u>	
King	Sheet Metal Workers	Journey Level (Field or Shop)	\$82.51	<u>7F</u>	<u>1E</u>	
King	Shipbuilding & Ship Repair	New Construction Boilermaker	\$36.36	<u>7V</u>	<u>1</u>	
King	Shipbuilding & Ship Repair	New Construction Carpenter	\$36.36	<u>7V</u>	<u>1</u>	
King	Shipbuilding & Ship Repair	New Construction Crane Operator	\$36.36	<u>7V</u>	<u>1</u>	
King	Shipbuilding & Ship Repair	New Construction Electrician	\$36.36	<u>7V</u>	<u>1</u>	
King	Shipbuilding & Ship Repair	New Construction Heat & Frost Insulator	\$73.58	<u>5J</u>	<u>4H</u>	
King	Shipbuilding & Ship Repair	New Construction Laborer	\$36.36	<u>7V</u>	<u>1</u>	
King	Shipbuilding & Ship Repair	New Construction Machinist	\$36.36	<u>7V</u>	<u>1</u>	
King	Shipbuilding & Ship Repair	New Construction Operating Engineer	\$36.36	<u>7V</u>	<u>1</u>	
King	Shipbuilding & Ship Repair	New Construction Painter	\$36.36	<u>7V</u>	<u>1</u>	
King	Shipbuilding & Ship Repair	New Construction Pipefitter	\$36.36	<u>7V</u>	<u>1</u>	
King	Shipbuilding & Ship Repair	New Construction Rigger	\$36.36	<u>7V</u>	<u>1</u>	
King	Shipbuilding & Ship Repair	New Construction Sheet Metal	\$36.36	<u>7V</u>	<u>1</u>	
King	Shipbuilding & Ship Repair	New Construction Shipfitter	\$36.36	<u>7V</u>	<u>1</u>	
King	Shipbuilding & Ship Repair	New Construction Warehouse/Teamster	\$36.36	<u>7V</u>	<u>1</u>	
King	Shipbuilding & Ship Repair	New Construction Welder / Burner	\$36.36	<u>7V</u>	<u>1</u>	

King	Shipbuilding & Ship Repair	Ship Repair Boilermaker	\$44.95	<u>7X</u>	<u>4J</u>	
King	Shipbuilding & Ship Repair	Ship Repair Carpenter	\$44.95	<u>7X</u>	<u>4J</u>	
King	Shipbuilding & Ship Repair	Ship Repair Crane Operator	\$44.06	<u>7Y</u>	<u>4K</u>	
King	Shipbuilding & Ship Repair	Ship Repair Electrician	\$44.95	<u>7X</u>	<u>4J</u>	
King	Shipbuilding & Ship Repair	Ship Repair Heat & Frost Insulator	\$73.58	<u>5J</u>	<u>4H</u>	
King	Shipbuilding & Ship Repair	Ship Repair Laborer	\$44.95	<u>7X</u>	<u>4J</u>	
King	Shipbuilding & Ship Repair	Ship Repair Machinist	\$44.95	<u>7X</u>	<u>4J</u>	
King	Shipbuilding & Ship Repair	Ship Repair Operating Engineer	\$44.06	<u>7Y</u>	<u>4K</u>	
King	Shipbuilding & Ship Repair	Ship Repair Painter	\$44.95	<u>7X</u>	<u>4J</u>	
King	Shipbuilding & Ship Repair	Ship Repair Pipefitter	\$44.95	<u>7X</u>	<u>4J</u>	
King	Shipbuilding & Ship Repair	Ship Repair Rigger	\$44.95	<u>7X</u>	<u>4J</u>	
King	Shipbuilding & Ship Repair	Ship Repair Sheet Metal	\$44.95	<u>7X</u>	<u>4J</u>	
King	Shipbuilding & Ship Repair	Ship Repair Shipwright	\$44.95	<u>7X</u>	<u>4J</u>	
King	Shipbuilding & Ship Repair	Ship Repair Warehouse / Teamster	\$44.06	<u>7Y</u>	<u>4K</u>	
King	Sign Makers & Installers (Electrical)	Journey Level	\$49.70	<u>0</u>	<u>1</u>	
King	Sign Makers & Installers (Non-Electrical)	Journey Level	\$31.52	<u>0</u>	<u>1</u>	
King	Soft Floor Layers	Journey Level	\$49.43	<u>5A</u>	<u>3J</u>	
King	Solar Controls For Windows	Journey Level	\$12.44		<u>1</u>	
King	Sprinkler Fitters (Fire Protection)	Journey Level	\$77.39	<u>5C</u>	<u>1X</u>	
King	Stage Rigging Mechanics (Non Structural)	Journey Level	\$13.23		<u>1</u>	
King	Stone Masons	Journey Level	\$57.32	<u>5A</u>	<u>1M</u>	
King	Street And Parking Lot Sweeper Workers	Journey Level	\$19.09		<u>1</u>	
King	Surveyors	Assistant Construction Site Surveyor	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Surveyors	Chainman	\$58.93	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Surveyors	Construction Site Surveyor	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
King	Telecommunication Technicians	Journey Level	\$48.06	<u>7E</u>	<u>1E</u>	
King	Telephone Line Construction - Outside	Cable Splicer	\$41.22	<u>5A</u>	<u>2B</u>	
King	Telephone Line Construction - Outside	Hole Digger/Ground Person	\$23.12	<u>5A</u>	<u>2B</u>	
King	Telephone Line Construction - Outside	Installer (Repairer)	\$39.53	<u>5A</u>	<u>2B</u>	
King	Telephone Line Construction - Outside	Special Aparatus Installer I	\$41.22	<u>5A</u>	<u>2B</u>	
King	Telephone Line Construction - Outside	Special Apparatus Installer II	\$40.41	<u>5A</u>	<u>2B</u>	
King	Telephone Line Construction - Outside	Telephone Equipment Operator (Heavy)	\$41.22	<u>5A</u>	<u>2B</u>	
King			\$38.36	<u>5A</u>	<u>2B</u>	

	Telephone Line Construction - Outside	Telephone Equipment Operator (Light)				
King	Telephone Line Construction - Outside	Telephone Lineperson	\$38.36	<u>5A</u>	<u>2B</u>	
King	Telephone Line Construction - Outside	Television Groundperson	\$21.92	<u>5A</u>	<u>2B</u>	
King	Telephone Line Construction - Outside	Television Lineperson/Installer	\$29.13	<u>5A</u>	<u>2B</u>	
King	Telephone Line Construction - Outside	Television System Technician	\$34.68	<u>5A</u>	<u>2B</u>	
King	Telephone Line Construction - Outside	Television Technician	\$31.18	<u>5A</u>	<u>2B</u>	
King	Telephone Line Construction - Outside	Tree Trimmer	\$38.36	<u>5A</u>	<u>2B</u>	
King	Terrazzo Workers	Journey Level	\$52.61	<u>5A</u>	<u>1M</u>	
King	Tile Setters	Journey Level	\$52.61	<u>5A</u>	<u>1M</u>	
King	Tile, Marble & Terrazzo Finishers	Finisher	\$43.44	<u>5A</u>	<u>1B</u>	
King	Traffic Control Stripers	Journey Level	\$45.53	<u>7A</u>	<u>1K</u>	
King	Truck Drivers	Asphalt Mix Over 16 Yards	\$54.30	<u>5D</u>	<u>3A</u>	<u>8L</u>
King	Truck Drivers	Asphalt Mix To 16 Yards	\$53.46	<u>5D</u>	<u>3A</u>	<u>8L</u>
King	Truck Drivers	Dump Truck	\$53.46	<u>5D</u>	<u>3A</u>	<u>8L</u>
King	Truck Drivers	Dump Truck & Trailer	\$54.30	<u>5D</u>	<u>3A</u>	<u>8L</u>
King	Truck Drivers	Other Trucks	\$54.30	<u>5D</u>	<u>3A</u>	<u>8L</u>
King	Truck Drivers - Ready Mix	Booster 9 Yards and Over	\$52.78	<u>5A</u>	<u>4T</u>	
King	Truck Drivers - Ready Mix	Non-Booster Loads Under 9 Cubic Yards	\$52.53	<u>5A</u>	<u>4T</u>	
King	Well Drillers & Irrigation Pump Installers	Irrigation Pump Installer	\$17.71		<u>1</u>	
King	Well Drillers & Irrigation Pump Installers	Oiler	\$12.97		<u>1</u>	
King	Well Drillers & Irrigation Pump Installers	Well Driller	\$18.00		<u>1</u>	