Hazardous Materials Survey Report

Pierce College, Olympic South Post Abatement 9401 Farwest Drive SW Lakewood, Washington 98498

Prepared for: State of Washington Department of Enterprise Services PO Box 41012 Olympia, Washington 98504

July 2022 PBS Project 40535.488



Table of Contents

1		RODUCTION	
	1.1	Project Background	1
	1.2	Building Description	1
	1.3	Project Background Building Description Survey Process	1
2		DINGS	
		Asbestos-Containing Materials (ACMs)	
	2.2	LCP	4
	2.3	Mercury-Containing Components	4
	2.4	PCB-Containing Components	4
	2.5	Fungal Contaminated Materials	4
3	REC	OMMENDATIONS	4
		ACMs	
	3.2	LCP	5
	3.3	PCB-Containing Components	5
	3.4	Fungal Contaminated Materials	5

Supporting Data

Appendix A: Pre-Abatement Hazmat Report

Pierce College Olympic South Abatement and Repairs (July 2021)

Appendix B: Construction Phase PLM Bulk Sampling Information

PLM Bulk Sample Inventory PLM Bulk Sample Laboratory Data Sheets and Chain of Custody Documentation

Appendix C: Lab/Cor PLM vs. TEM Letter

Lab/Cor Inc. Polarized Light Microscopy vs Transmission Electron Microscopy for Bulk Building Materials

Appendix D: Construction Phase TEM Bulk Sampling Information

TEM Bulk Sample Inventory TEM Bulk Sample Laboratory Data Sheets and Chain of Custody Documentation

Appendix E: Asbestos Survey Drawing

Post Abatement Asbestos Survey Plan

Appendix F: Construction Phase CARB 435 Bulk Sampling Information

CARB Soil Sample Inventory CARB Soil Laboratory Data Sheets and Chain of Custody Documentation

Appendix G: Construction Phase Bulk PCB Sampling Information

Bulk PCB Sample Inventory Bulk PCB Laboratory Data Sheets and Chain of Custody Documentation

Appendix H: Certifications

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1 INTRODUCTION

1.1 Project Background

In March 2021 asbestos contamination was discovered in the surface dust throughout the Olympic South Building, located at Pierce College, 9401 Farwest Drive SW in Lakewood, Washington. From August 2021 through June 2022 a professional abatement firm performed demolition, abatement of some hazardous materials, and cleaning throughout the building. Interior finishes were removed. Remaining building components (i.e. structural, plumbing, and the building envelope) were thoroughly cleaned in place.

Due to the fact that not all of the asbestos-containing materials (ACMs) were removed, Pierce College requested that PBS document the remaining ACMs, lead-containing paint (LCP), mercury-containing components, and polychlorinated biphenyl (PCB) containing components.

One intent of this investigation is to ensure that Washington State Department of Enterprise Services (DES) and Pierce College are in compliance with applicable regulatory requirements that a "good faith inspection" for ACMs be performed prior to renovation/demolition activities.

1.2 Building Description

The Olympic South Building is a three-story, slab-on-grade structure. The existing exterior is finished with stucco, Marble Crete, exterior insulation and finish system (EIFS) and metal cladding. The existing interior systems and components that remain include the following; concrete floor slabs, concrete ceiling waffle slabs on first and second floors, corrugated steel ceiling underdeck on the third floor, uninsulated hot and cold water piping, electrical conduit, breaker boxes, steel structural framing, fire sprinkler system, perimeter metal wall framing and exterior gypsum wallboard, in-place perimeter doors and windows, and CMU blocks on the second floor. The roofing is a membrane type material. The building does not include the skybridge to Cascade.

1.3 Survey Process

Accessible areas included in the project scope were inspected from August 2021 through June 2022, as concealed materials became accessible from demolition activities, by Asbestos Hazard Emergency Response Act (AHERA) Certified Building Inspectors Claire Tsai (Cert. No. IR-21-7316B Exp. 12/10/2022), Peter Stensland (Cert. No. IN-21-9342B Exp. 6/16/2022), and Ferman Fletcher (Cert. No. 184489 Exp. 4/5/2023). PBS endeavored to inspect all accessible areas of the scope of work. Inaccessible areas consist of those requiring selective demolition, fall protection, or confined space entry protocols in order to gain access. Previous survey data utilized is included in this report. Many of the materials identified in previous reports have been abated and therefore are no longer present in the building. See Appendix A for pre abatement good faith survey report.

When observed, suspect materials were sampled, or presumed to contain asbestos. Samples were assigned a unique identification number and transmitted for analysis to Seattle Asbestos Test (NVLAP #201057-0), NVL Labs (NVLAP #102063-0), or ALS Environmental (NVLAP #101917-0) under chain-of-custody protocols. Samples were analyzed according to EPA Method 600R-93/116 using Polarized Light Microscopy (PLM), which has a reliable limit of quantification of 1% asbestos by volume. Information regarding the type and location of sampled materials can be found on the attached PLM sample inventory located in Appendix B.

PBS discovered during the abatement work that some of the asbestos fibers in masonry products were too thin to be optically observed by the PLM Method. A letter providing further information regarding the differences between PLM and TEM analysis was provided by Lab/Cor Inc. and can be found in Appendix C.



As such, these products were also analyzed by the transmission electron microscopy (TEM) methodology. Additional samples were collected and assigned unique identification numbers and transmitted for analysis to Lab/Cor in in Seattle, Washington or ALS Environmental in Cincinnati, Ohio under chain-of-custody protocols. Samples were analyzed according to ELAP Item 198.4 TEM Bulk Semi-Quantitative (modified). Information regarding the type and location of sampled materials can be found on the attached TEM sample inventory located in Appendix D.

Suspect ACMs may exist in inaccessible areas or areas outside of the scope of work. PBS endeavored to determine the presence of suspect materials in all accessible areas included in the scope of work. While PBS has endeavored to identify the ACMs that may be found in concealed locations, additional unidentified ACMs may exist.

2 FINDINGS

2.1 Asbestos-Containing Materials (ACMs)

Regulated asbestos-containing building materials are defined by EPA as containing greater than 1% asbestos by weight. Previous reports list ACMs that have been abated. All known materials containing asbestos, and locations impacted by asbestos contaminated dust remaining in the building are listed below.

The following materials were determined to contain greater than 1% asbestos:

- **Marble Crete** exposed and concealed under plaster and EIFS in various locations– Building exterior north elevation on first and second floors, east elevation on first and second floors, west elevation north area on first and second floors, and south elevation on level 1 (Approximately 6,850 SF);
- CMU South area of level 2 (Approximately 2,270 SF);
- Plaster The underside of level 2 skybridge from Olympic South to Cascade (Approximately 750 SF);
- **Black mastic** Located below the sill plate of the perimeter metal wall studs throughout the second floor (Approximately 575 LF);
- **Residual grey sealant and white caulking** beneath non-asbestos dark grey sealant –Level 1 south and east store front windows, Level 1 and 2 north elevation windows, Northwest stairwell/ storefront windows Level 1 and 2, south elevation of the northeast quadrant windows (Approximately 870 LF);
- Concealed brown/grey adhesive –Window rough openings on Level 1 south store front windows, Level 1 and 2 north elevation windows, south elevation of the northeast quadrant windows, west elevation three southern windows (Approximately 850 LF).

The following materials remaining in the building were determined to contain **less than 1% asbestos:**

- Plaster Exterior of east stairwell level 1, 2 and 3 (Approximately 2,450 SF);
- Concrete All concrete throughout building and stairwell;
- Site soils All non-hardscaped areas surrounding the building.



The following materials remaining in the building were determined <u>not</u> to contain detectable concentrations

of asbestos:

- EIFS paneling North, east, and south elevation;
- Joint compound associated with gypsum wallboard systems Third floor above north windows and student lounge north and west walls;
- Residual tan, brown, cream, and clear cove base mastics Throughout all floors on columns (current and previous data);
- Residual carpet mastic in cracks and crevices Throughout all floors and stairwell (current and previous data);
- Residual white leveling compound in cracks and crevices Levels 1 and 2;
- Soft gray window sealant between glass and frame Previous location of room 168 interior;
- Soft black window sealant between glass and frame Previous location of room 181 interior;
- Residual red firestop in cracks and crevices In various areas throughout all floors and stairwell;
- Dark grey transition sealant Surrounding substrates on the south and west elevation of the first floor (first floor exterior and roof, previous data);
- Membrane roofing and associated insulation (first floor exterior and roof, previous data).

Note: No access for sampling third floor exterior window components.

Accumulated Dust Sampling

Certain areas were inaccessible for cleaning for reasons such as electrical hazards or inaccessibility. Asbestoscontaminated dust is presumed to exist in the following locations:

- Sealed conduit embedded in concrete ceiling and floor slabs Throughout the building;
- Sealed Conduit buried beneath slab;
- Sealed structural brace framing interiors All floors and stairwell;
- Sealed exterior column cavities South and east elevations;
- Sealed cavity below skybridge to Cascade.
- Transformer West elevation between Olympic South and Olympic North;
- Exterior power shut off panel and conduit West elevation;
- Sub grade electrical vaults East and west elevations;
- Conduit associated with emergency power Level 1 north area overhead conduit runs from Cascade to Olympic North;
- Emergency power disconnect Near northeast entrance.

Conduit penetrations and structural brace framing have been sealed in place with fire stop or spray foam where accessible. All asbestos contaminated dust locations should be presumed to contain greater than 1% asbestos until sampled and proven otherwise.

For approximate quantities and specific locations of all ACMs remaining in the building refer to the Hazardous Materials Sample Diagram in Appendix E. For a complete listing of representative bulk sampling and associated laboratory analysis refer to the attached Appendix B for PLM data, Appendix D for TEM data, and Appendix F for CARB 435 data. Not all materials listed in previous reports remain in building.



2.2 LCP

Representative painted coatings were sampled for lead content. Previous materials survey data was also reviewed as part of this investigation. The samples were assigned unique identification numbers and transmitted to NVL Laboratories (AIHA IH #101861) in Seattle, Washington, under chain-of-custody protocols for analysis using Flame Atomic Absorption. Current sampling and previous sample results are indicated below. LCP is paint that contains any detectable amount of lead.

The following samples were found to **contain lead above** detectable limits. All similar surfaces should be presumed to contain similar amounts of lead and handled in accordance with Washington Administrative Code 296-155 Lead.

- Tan painted concrete column column by room O264, 0.0003% lead (previous data)
- Tan painted wood door south elevation, 0.020% lead (previous data, labeled west elevation in previous reports)

Refer to Appendix A for specific sample locations from previous survey data.

2.3 Mercury-Containing Components

No mercury containing components remain in the building.

2.4 PCB-Containing Components

In school structures of this age caulks, sealants and putties have been known to contain PCBs. PBS tested representative suspect materials for the presence of PCBs throughout the project site. The samples were assigned unique identification numbers and transmitted to NVL Laboratories, Inc. (AIHA IH # 102063-0) in Seattle, Washington under chain-of-custody protocols for analysis. The samples were analyzed by EPA Method 8082.

The following materials were sampled and found **not to contain PCBs**:

- Grey interior window caulk Level 1 north window
- Dark grey storefront sealant West elevation (previous data)

See Appendix G for PCB inventories and laboratory reports. See Appendix A for previous data.

2.5 Fungal Contaminated Materials

Water damage and fungal growth was observed on the original building envelope. Original building envelope remains on the entire north elevation Levels 1 and 2, the two north column sections on the east elevation and Level 2 west. column south of skybridge to Olympic North. Trained personnel using proper engineering controls are required to remediate fungal contamination throughout the space.

3 **RECOMMENDATIONS**

3.1 ACMs

PBS recommends that all exposed and concealed ACMs to be impacted by future work be removed prior to construction activities. A qualified Washington State licensed asbestos abatement contractor should be employed to remove all such ACMs according to applicable local, state, and federal regulations.

WAC 296-62-07 identifies a regulated "asbestos-containing material" as "containing more than 1% asbestos" content by weight. The referenced code also contains rules regarding materials that contain less than 1% asbestos. These materials are not regulated by EPA or local Clean Air Agencies. It is not considered a Class I, II, III or IV work. Requirements for handling <1% asbestos are found in WAC 296-62-07712 (2,4 and 5), WAC



296-62-07722(5) and WAC 296-62-07728. A Competent person must conduct a negative exposure assessment and periodic monitoring. When working with these materials' wet methods, HEPA vacuums and prompt cleanup must be performed. 2-hr Awareness training is required for all workers disturbing this material. Items/activities that are not required for materials that contain less than 1% asbestos include; labeled disposal bags, asbestos worker certification, supervisor or contractor certifications, pre-demolition removal of the materials, and pre-removal notifications to regulatory agencies.

The possibility exist that suspect ACMs may be present in equipment, wall and ceiling cavities, beneath concrete slabs, and buried in site soils included in the scope of the work. These may include, but are not limited to waterproofing membranes and coatings, internal gaskets, pipe insulation, piping materials, caulking and sealants, construction adhesives, and wall mastics. If suspect ACMs is uncovered during construction, contractors should stop work immediately and inform the owner promptly for confirmation testing. All untested materials should be presumed asbestos-containing or tested for asbestos content prior to impact.

Additional suspect-ACMs may be present in concealed spaces. Caution should always be exercised during selective demolition to prevent impact of suspect-ACMs. All suspect ACMs should be presumed asbestos-containing until properly sampled and analyzed.

3.2 LCP

Painted coatings may exist in inaccessible areas of the work area or in secondary coatings. Any previously unidentified painted coatings should be considered lead containing until sampled and proven otherwise. All waste shall be handled in accordance with WAC 173-303. Dust control and housekeeping is crucial in preventing worker and occupant exposures.

Impact of painted surfaces with detectable concentrations of lead requires construction activities to be performed according to Washington State Department of Labor and Industries (L&I) regulations for Lead in Construction (WAC 296-155-176 and 296-62). Workers impacting LCP should be provided the proper personal protective equipment and use proper work methods to limit occupational and environmental exposure to lead until an initial exposure assessment has been conducted.

3.3 PCB-Containing Components

PCBs were not found during this investigation.

If additional suspect PCB-containing components are uncovered during construction, contractors should stop work immediately and inform the owner promptly for confirmation testing.

3.4 Fungal Contaminated Materials

All known fungal growth and water impacted materials should be removed. Trained personnel using proper engineering controls are required to remediate fungal contaminants in all locations throughout the space in accordance with the EPA document "*Mold Remediation in Schools and Commercial Buildings*".

Workers opening up EIFS wall cavities or performing demolition of the exterior cladding should anticipate potential exposure to fungal contaminants. Workers should be provided proper training, personal protective equipment and use proper work methods to limit occupational and environmental exposure to fungal contaminants. Engineering controls should be used to prevent fungal contaminants from entering the building.



Please do not hesitate to contact us if you have any questions regarding this report or require additional information.

Report prepared by: PBS Engineering and Environmental Inc.

Claire Tsai AHERA Building Inspector Cert. # IR-21-7316B, expiration 12/10/2022

Report reviewed by: Gregg Middaugh Senior Project Manager



APPENDIX A

Pre-Abatement Hazmat Report

Pierce College Olympic South Abatement and Repairs (July 2021)

Hazardous Materials Survey Report

Pierce College, Olympic South Abatement and Repairs 9401 Farwest Drive SW Lakewood, Washington 98498

Prepared for: State of Washington Department of Enterprise Services PO Box 41012 Olympia, Washington 98504

July 9, 2021 PBS Project 40535.488



Table of Contents

1	INT	RODUCTION	.1
	1.1	Project Background	. 1
	1.2	Building Description	. 1
	1.3	Building Description Survey Process	. 1
2		DINGS	
	2.1	Asbestos-Containing Materials (ACMs)	. 2
	2.2	Lead-Containing Paint (LCP) and Components	. 3
	2.3	Mercury-Containing Components	.4
	2.4	Mercury-Containing Components PCB-Containing Components	.4
3		OMMENDATIONS	
		ACMs	
	3.2	LCP and Components	. 5
	3.3	Mercury-Containing Components	
	3.4	PCB-Containing Components	

Supporting Data

APPENDICES Sampling

Appendix A: PLM Bulk Sampling Information

PLM Bulk Sample Inventory PLM Bulk Sample Laboratory Data Sheets and Chain of Custody Documentation

Appendix B: TEM Bulk Sampling Information

TEM Bulk Sample Inventory TEM Bulk Sample Laboratory Data Sheets and Chain of Custody Documentation

Appendix C: AA Lead Paint Chip Sampling Information

AA Lead Paint Chip Sample Inventory AA Lead Paint Chip Laboratory Data Sheets and Chain of Custody Documentation

Appendix D: Previous Survey Reports

Olympic South Building Minor Music Improvements Project (May 2016) Olympic Building Early Childhood Education Center Renovations (March 2020) Olympic Building Partial Reclad and Roof Replacement (March 2020)

Appendix E: Certifications

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1 INTRODUCTION

1.1 Project Background

PBS Engineering and Environmental Inc. (PBS) performed a limited hazardous materials survey of the Olympic South Building, located at Pierce College, 9401 Farwest Drive SW in Lakewood, Washington, in conjunction with the Abatement and Repairs project. The intent of this investigation is to ensure that Washington State Department of Enterprise Services (DES) and Pierce College are in compliance with applicable regulatory requirements that a "good faith inspection" for asbestos-containing materials (ACMs) be performed prior to renovation/demolition activities.

At the request of DES and Pierce College, all accessible areas were inspected for the presence of ACMs, leadcontaining paint (LCP) and associated components, mercury-containing components, and polychlorinated biphenyl (PCB) containing light fixture ballasts.

1.2 Building Description

The Olympic South Building is a three-story, slab-on-grade structure. The exterior is finished with stucco, marble crete, and exterior finish and insulation (EIFS). Interior ceiling finishes include both suspended tile systems and hard lid gypsum wallboard. Walls are constructed of concrete or gypsum wallboard with fiberglass insulation. Floors are concrete covered with glued down carpet, and sheet vinyl or vinyl floor tile (VFT).

1.3 Survey Process

Accessible areas included in the project scope were inspected in March and April of 2021 by Asbestos Hazard Emergency Response Act (AHERA) Certified Building Inspectors Claire Tsai (Cert. No. IRO-21-7316B Exp. 1/18/2022), Ferman Fletcher (Cert. No. IR-20-8539B Exp. 4/1/2021 and Cert. No. IR-21-8539B Exp. 4/1/2022), Stefan Rankin (Cert. No. IRO-20-5564B Exp. 9/3/2021), and Nick Parr (Cert. No. IRO-20-4749B Exp. 9/3/2021). PBS endeavored to inspect all accessible areas of the scope of work. Inaccessible areas consist of those requiring selective demolition, fall protection, or confined space entry protocols in order to gain access. Asbuilt drawings were provided by the project team for review to help develop inspection strategies. PBS also utilized previous survey reporting and sample data for developing inspection sampling strategies. Previous survey data utilized is included in this report.

When observed, suspect materials were sampled, or presumed to contain asbestos. All samples were assigned a unique identification number and transmitted for analysis to Seattle Asbestos Test (NVLAP #201057-0) under chain-of-custody protocols. Samples were analyzed according to EPA Method 600R-93/116 using Polarized Light Microscopy (PLM), which has a reliable limit of quantification of 1% asbestos by volume. Information regarding the type and location of sampled materials can be found on the attached PLM Sample Inventory located in Appendix A.

Suspect ACMs may exist in inaccessible areas or areas outside of the scope of work. PBS endeavored to determine the presence and estimate the condition of suspect materials in all accessible areas included in the scope of work. While PBS has endeavored to identify the ACMs that may be found in concealed locations, additional unidentified ACMs may exist.



2 FINDINGS

2.1 Asbestos-Containing Materials (ACMs)

The following materials were determined to contain greater than 1% asbestos:

- White vibration cloth on ducting in mechanical spaces throughout the building
- Black sink undercoat Room 164 (2 EA)
- Soft grey column caulk Room 283 (approximately 30 LF)
- Pink undercoating on sink Room O285A and O166A (previous data)
- White mastic on the HVAC duct systems throughout the building above suspended ceilings (previous data)
- Glue dots underneath 12-inch by 12-inch (non-ACM) acoustical ceiling tiles in Rooms 276 and 272 (approximately 300 SF, previous data)
- Residual grey sealant beneath non-asbestos dark grey sealant first floor west elevation on northwest corner column, sealant between concrete deck and metal storefront (approximately 70 LF, previous data)
- Felt backing associated with gray pebble pattern sheet vinyl flooring Room O161 sink area (approximately 400 SF, previous data)
- Felt backing associated with brown pebble pattern sheet vinyl flooring Room O161 kitchen (approximately 230 SF, previous data)
- White sink undercoat Room O161 kitchen (double sink, previous data)
- Joint compound associated with gypsum wallboard systems

The following materials were determined to contain less than 1% asbestos:

- Spray-applied fireproofing on metal corrugated deck and building structure and associated debris on mechanical, electrical, plumbing equipment, and suspended ceiling surfaces – Rooms 281, 282, 283, 283A, 284, 284A, south end of associated corridor, south end of Room 278, and the Mechanical Mezzanine (approximately 4,500 SF)
- Joint compound associated with gypsum wallboard systems first floor columns and various walls in the Early Childhood Education (ECE) playroom 161

The following materials were sampled and found *not* to contain detectable concentrations of asbestos:

- Joint compound associated with gypsum wallboard systems throughout the second and third floor
- 2-feet by 4-feet Lay-in-ceiling-tile, various patterns throughout all floors (current and previous data)
- 2-feet by 2-feet Lay-in-ceiling-tile, various patterns throughout all floors (current and previous data)
- Tan, brown, cream, and clear covebase mastic throughout all floors (current and previous data)
- Carpet mastic throughout all floors (current and previous data)
- Gray sheet vinyl flooring, mastic, white leveling compound Room 168
- White, woven wallpaper Room O161 column
- White caulking on backsplash Room 164 east side
- Fire door core Room 181A
- Soft gray window sealant between glass and frame Room 168 interior
- Soft beige window sealant between frame and floor North Hall, west interior
- Soft black window sealant between glass and frame Room 181 interior
- Gray duct seam sealant Mechanical Room 173, southwest ducting
- Concrete floor/ceiling throughout first floor locations
- Red fire-stop Room 160 at columns
- 1-inch tan ceramic tile and associated gray grout Room 165
- 3-inch white ceramic covebase tile, gray grout, and clear mastic Room 165
- Fiberboard debris above suspended ceiling ECE portion of building



- Hard mudded fittings throughout all floors (current and previous data)
- White 12-inch by 12-inch VFT and associated black mastic (Level 2, Arts and Music Wing, previous data)
- Brown vinyl threshold (Level 2, Arts and Music Wing, previous data)
- Gray and red mastics on HVAC systems in ceiling (Level 2, Arts and Music Wing, previous data)
- Brown fabric on accordion door (Level 2, Arts and Music Wing, previous data)
- Window putty (between frame and glass) interior windows Rooms O160, O161, O162, O166, and O166A (previous data)
- Marblecrete paneling south and west elevation (first floor exterior and roof, previous sampling)
- Dark grey transition sealant surrounding substrates on the south and west elevation of the first floor (first floor exterior and roof, previous data)
- EIFS paneling north, east, and south elevation (first floor exterior and roof, previous data)
- Membrane roofing and associated insulation (first floor exterior and roof, previous data)

Refer to Appendix A and B for specific sample locations and associated laboratory reports. Refer to Appendix D for specific sample locations from previous survey data.

Accumulated Dust Sampling

PBS collected surface dust samples throughout the building. Surface dust samples were collected from HVAC system components, building contents, and surfaces above and below the suspended ceilings. Surface dust sampling is used as a screening tool to identify asbestos structures in accumulated dust. Surface dust sampling does not indicate when the asbestos contamination occurred, however, provides information on the quantity and type of asbestos in the dust. Laboratory analysis reports of the accumulated surface dust revealed the following:

- Asbestos forms found by laboratory analysis included chrysotile, anthophyllite, actinolite, tremolite, winchite and richterite.
- Significant asbestos contamination was found in the surface dust throughout the building. It was determined that a historical release of asbestos fibers contaminated the building.
- Building contents on Levels 1 and 2 were found to be contaminated. However, contents on Level 3 were found not to be contaminated. All HVAC systems components on Levels 1, 2 and 3 were found to be contaminated.

2.2 Lead-Containing Paint (LCP) and Components

Eight (8) representative painted coatings were sampled for lead content. Previous materials survey data was also reviewed as part of this investigation. The samples were assigned unique identification numbers and transmitted to NVL Laboratories (AIHA IH #101861) in Seattle, Washington, under chain-of-custody protocols for analysis using Flame Atomic Absorption. Current sampling and previous sample results are indicated below. LCP is paint that contains any detectable amount of lead.

The following samples were found to **contain lead above** detectable limits. All similar surfaces should be presumed to contain similar amounts of lead and handled the same.

- Blue painted metal door frame outside of room O180, 0.28% lead
- Dark brown painted metal door frame Room O284, 0.0976% lead (previous data)
- Tan metal door frame Room O276, 0.0057% lead (previous data)
- Tan painted concrete column column by room O264, 0.0003% lead (previous data)
- Tan painted interior metal interior window frame south wall of Room O161, 0.0160% lead (previous data)



- Tan painted gypsum wallboard column south elevation, 0.010% lead (previous data)
- Tan painted wood door west elevation, 0.020% lead (previous data)

The following painted coatings were sampled and determined **not** to contain detectable lead.

- Tan painted gypsum wallboard wall north entrance by Room O183 and west wall of Room O328
- Tan painted concrete column hall by Room O168
- Blue painted gypsum wallboard wall northeast corner of Room O161
- Gray painted concrete column southwest corner of Room O265
- Tan painted metal door entrance to Room O284
- White painted gypsum wallboard wall north wall of Room O285
- Tan painted concrete decking Room O161 (previous data)
- Blue painted gypsum wallboard wall south wall of Room O160 (previous data)
- Tan painted gypsum wallboard wall west wall of Room O161 and east wall of Room O166 (previous data)

Refer to Appendix C for specific sample locations and associated laboratory reports. Refer to Appendix D for specific sample locations from previous survey data.

2.3 Mercury-Containing Components

All fluorescent light tubes are presumed to contain mercury. PBS counted the number of fluorescent tubes in the Olympic South Building for the purposes of mercury vapor recovery prior to renovation activities. PBS observed approximately 1,105 – 4-foot mercury-containing light bulbs and 86 – 2-foot mercury-containing light bulbs throughout the project area. Caution should be exercised during demolition to not break these bulbs.

2.4 PCB-Containing Components

Magnetic fluorescent light ballasts should be presumed to contain PCBs and properly removed, stored, transported, and disposed of in accordance with Washington Administrative Code (WAC) 173-303 Dangerous Waste Regulations and 40 CFR Part 761 Subpart D. Electronic ballasts do not contain suspect PCB-containing oil.

PBS used a ballast checker to inspect representative fluorescent light fixture ballasts throughout the work areas. PBS observed some magnetic ballasts at various locations throughout the building. All magnetic ballasts should be removed and properly disposed.

3 RECOMMENDATIONS

3.1 ACMs

PBS recommends that all exposed and concealed ACMs to be impacted by the work be removed prior to construction activities. All contaminated surface dust should be removed. A qualified Washington State licensed asbestos abatement contractor should be employed to remove all such ACMs according to applicable local, state, and federal regulations.

Asbestos-containing spray-applied fireproofing and joint compound associated with non-asbestos gypsum wallboard (GWB) assemblies were found less than 1%. The presence of asbestos in the spray-applied fireproofing and joint compound requires personnel impacting the material to adhere to regulatory requirements outlined in WAC 296-62-17712(2) and training as outlined in WAC 296-62-07722(5) and WAC 296-62-0728. Refer to Washington Industrial Safety and Health Act (WISHA) Regional Directive 23.30 for additional information.



The possibility exist that suspect ACMs may be present in equipment, wall and ceiling cavities, beneath concrete slabs, and buried in site soils included in the scope of the work. These may include, but are not limited to waterproofing membranes and coatings, internal gaskets, pipe insulation, piping materials, caulking and sealants of HVAC equipment, construction adhesives, and wall mastics. If suspect ACMs is uncovered during construction, contractors should stop work immediately and inform the owner promptly for confirmation testing. All untested materials should be presumed asbestos-containing or tested for asbestos content prior to impact.

Additional suspect-ACMs may be present in concealed spaces. Caution should always be exercised during selective demolition to prevent impact of suspect-ACMs. All suspect ACMs should be presumed asbestos-containing until properly sampled and analyzed.

3.2 LCP and Components

Painted coatings may exist in inaccessible areas of the work area or in secondary coatings. Any previously unidentified painted coatings should be considered lead containing until sampled and proven otherwise. All waste shall be handled in accordance with WAC 173-303. Dust control and housekeeping is crucial in preventing worker and occupant exposures.

Impact of painted surfaces with detectable concentrations of lead requires construction activities to be performed according to Washington State Department of Labor and Industries (L&I) regulations for Lead in Construction (WAC 296-155-176 and 296-62). Workers impacting LCP should be provided the proper personal protective equipment and use proper work methods to limit occupational and environmental exposure to lead until an initial exposure assessment has been conducted.

3.3 Mercury-Containing Components

Fluorescent lamps (tubes and bulbs) are known to contain mercury and mercury vapors. All fluorescent lamps at this site are presumed to be mercury-containing. PBS recommends that all fluorescent lamps be carefully handled and recycled/disposed of in accordance with the contract documents and applicable regulations during renovation/demolition activities. Breakage of lamps should be avoided to prevent potential exposures to mercury. L&I requires specific training, handling, engineering controls, and disposal practices when performing this work. All waste shall be handled in accordance with WAC 173-303.

3.4 PCB-Containing Components

PBS recommends all light ballasts be inspected prior to disposal. Magnetic ballasts should be presumed to contain PCBs and properly managed, handled, removed, stored, transported, and disposed of in accordance with WAC 173-303 and Dangerous Waste Regulations and 40 CFR Part 761 Subpart D. Electronic ballasts do not contain PCBs and can be recycled or disposed of as general debris in compliance with applicable codes and endpoint facility requirements.

Please do not hesitate to contact us if you have any questions regarding this report or require additional information.

Report prepared by: PBS Engineering and Environmental Inc.

Gregg Middaugh Senior Project Manager Industrial Hygiene Group



APPENDIX A

PLM Bulk Sampling Information PLM Bulk Sample Inventory PLM Bulk Sample Laboratory Data Sheets PLM Bulk Sample Chain of Custody Documentation

PLM ASBESTOS SAMPLE INVENTORY

PBS Sample #	<u>Material Type</u>	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488 -1001	2'x4' Lay-in ceiling tile fissure pinhole pattern	Restroom 165	Layer 1: Gray fibrous material with paint	NAD	SAT
40535.488 -1002	2'x4' Lay-in ceiling tile rough fissure pinhole pattern	Hallway near 164, North door	Layer 1: Gray fibrous material with paint	NAD	SAT
40535.488 -1003	2'x4' Lay-in ceiling tile rough pattern	Hallway near 168	Layer 1: Gray fibrous material with paint	NAD	SAT
40535.488 -1004	Hard mudded fitting	Restroom 165, above ceiling	Layer 1: Off-white woven fibrous material Layer 2: Off-white powdery material with fibrous material	NAD NAD	SAT
40535.488 -1005	Hard Mudded Fitting	Above kitchen ceiling	Layer 1: Off-white woven fibrous material Layer 2: Off-white powdery material with fibrous material	NAD NAD	SAT
40535.488 -1006	Duct insulation	Above kitchen ceiling	Layer 1: Silver foil Layer 2: Off-white paper with mastic and woven fibrous material Layer 3: Yellow fibrous material	NAD NAD NAD	SAT
					64 -
40535.488 -1007	Joint compound Gypsum wallboard	Above kitchen ceiling	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -1008	Joint compound	Hallway to ECE near column	Layer 1: White powdery material with paint and paper	NAD	SAT
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
40535.488 -1009	Pipe debris	From Hallway to ECE column	Layer 1: Off-white woven fibrous material Layer 2: Off-white powdery material with fibrous material	NAD NAD	SAT
40535.488 -1010	Fibrous board debris	From Hallway to ECE column	Layer 1: Brown fibrous material	NAD	SAT

Floor 1

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PBS Sample #	Material Type	Sample Location	Lab Description	<u>Lab Result</u>	<u>Lab</u>
40535.488 -1011	Debris	Column in 168 South wall	Layer 1: Off-white powdery material with fibrous material	NAD	SAT
			Layer 2: Yellow fibrous material	NAD	
40535.488 -1012	Fiberboard debris	166 above ceiling	Layer 1: Brown fibrous material with paint	NAD	SAT
40535.488 -1013	Hard mudded fitting	166A above ceiling	Layer 1: Off-white woven fibrous material Layer 2: Off-white powdery material with fibrous material	NAD NAD	SAT
40535.488 -1014	Cementitious material on metal	169 above ceiling	Layer 1: Gray sandy/brittle material with paint	NAD	SAT
40535.488 -1015	Lay-in ceiling tile debris	171 above ceiling	Layer 1: Gray fibrous material with paint	NAD	SAT
40535.488 -1016	Lay-in ceiling tile fissure pinhole	Hallway near 164 north door	Layer 1: Gray fibrous material with paint	NAD	SAT
40535.488 -1017	Lay-in ceiling tile rough fissure pinhole	Hallway near 163	Layer 1: Gray fibrous material with paint	NAD	SAT
40535.488 -1018	Lay-in ceiling tile rough texture	Hallway near 168	Layer 1: Gray fibrous material with paint	NAD	SAT
40535.488 -1019	Fiberboard debris	166 above ceiling	Layer 1: Brown fibrous material with paint	NAD	SAT
40535.488 -1020	Gypsum wallboard debris	From Hallway to ECE column	Layer 1: White chalky material with paper	NAD	SAT
40535.488 -1021	Black asphaltic material	From Hallway to ECE column	Layer 1: Black asphaltic material with debris	NAD	SAT
40535.488 -1022	Pipe debris	From Hallway to ECE column	Layer 1: Off-white powdery material with fibrous material	NAD	SAT
40535.488 -1023	White vibration cloth	Mechanical Room 173 MZ1	Layer 1: Off-white fibrous material	50% Chrysotile	SAT
40535.488 -1024	Joint compound	Room 163 southeast corner	Layer 1: White powdery material with paint and paper	NAD	SAT
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	

Floor 1

washington Depa	artment of Enterprise Services	6	Pi	SS Project #405	5.488
PBS Sample #	<u>Material Type</u>	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488 -1025	Joint compound	Room 166 south stairs	Layer 1: White powdery material with paint and paper	NAD	SAT
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
40535.488 -1026	Joint compound	Room 172 northwest corner	Layer 1: White powdery material with paint	NAD	SAT
40535.488 -1027	Joint compound	Room 183 northwest corner	Layer 1: White powdery material with paint and paper	NAD	SAT
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
40535.488 -1028	Joint compound	Room 185 southeast corner	Layer 1: White powdery material with paint and paper	NAD	SAT
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
40535.488 -1029	Joint compound	Room 161 East column face	Layer 1: White powdery material with paper	2% Chrysotile Composite resu	
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
40535.488 -1030	Joint compound	Room 181B Southwest corner	Layer 1: White powdery material with paint and paper	NAD	SAT
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
40535.488 -1031	Cove base 4" brown vinyl Brown mastic	Room 166A West wall	Layer 1: Brown rubbery material Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -1032	Cove base 4" tan vinyl	Room 171 Northeast corner	Layer 1: Tan rubbery material	NAD	SAT
	Cream mastic		Layer 2: Cream mastic	NAD	0, 11
			Layer 3: Trace white powdery material with paint	NAD	
40535.488 -1033	Cove base 4" tan vinyl	Room 183 North wall	Layer 1: Tan rubbery material	NAD	SAT
	Clear mastic		Layer 2: Cream mastic	NAD	
			Layer 3: Brown woven fibrous material	NAD	
40535.488 -1034	Tan carpet Mastic	Room 166 East doorway	Layer 1: Tan mastic	NAD	SAT
			Layer 2: Trace gray brittle material	NAD	
			Layer 3: White brittle material	NAD	

Floor 1

PBS Sample #	Material Type	Sample Location	Lab Description	<u>Lab Result</u>	<u>Lab</u>
40535.488 -1035	Tan carpet Mastic	Room 168 near West entry	Layer 1: Trace clear woven fibrous material	NAD	SAT
			Layer 2: Tan mastic	NAD	
	White leveling compound		Layer 3: Trace white brittle material	NAD	
40535.488 -1036	Green and tan carpet Mastic	Hall outside room 184	Layer 1: Green/tan mastic	NAD	SAT
40535.488 -1037	Tan carpet mastic	LV1 North hall near center	Layer 1: Tan mastic	NAD	SAT
	Concrete	South pillar	Layer 2: Trace gray brittle material	NAD	
40535.488 -1038	Vinyl woven wallpaper	Room 161South column face	Layer 1: Tan vinyl with paint	NAD	SAT
			Layer 2: White woven fibrous material	NAD	
			Layer 3: White mastic	NAD	
40535.488 -1039	Gray sheet vinyl flooring	Room 168 West entry way	Layer 1: Gray sheet vinyl	NAD	SAT
	Tan mastic		Layer 2: Tan mastic	NAD	
	Jute backing		Layer 3: Tan woven fibrous material	NAD	
			Layer 4: Clear mastic	NAD	
	White leveling compound		Layer 5: Trace gray/white brittle material	NAD	
40535.488 -1040	Fiberglass foil cover	Room 165 straight run above	Layer 1: Silver foil	NAD	SAT
		LICT	Layer 2: White paper with mastic and woven fibrous material	NAD	
			Layer 3: Yellow fibrous material	NAD	
40535.488 -1041	Fiberglass woven wrap	Northwest hall outside RM 168 above LCT	Layer 1: White brittle material with woven fibrous material	NAD	SAT
			Layer 2: Silver foil	NAD	
			Layer 3: White paper with mastic and woven fibrous material	NAD	
			Layer 4: Yellow fibrous material	NAD	
40535.488 -1042	Fiberglass duct foil cover	West hall outside RM 170	Layer 1: Silver foil	NAD	SAT
	-	above LCT	Layer 2: Tan paper with mastic and woven fibrous material	NAD	
			Layer 3: Yellow fibrous material	NAD	

Washington Depa	rtment of Enterprise Services		PB	S Project #4053	5.488
PBS Sample #	<u>Material Type</u>	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488 -1043	Fiberglass foil cover duct wrap	Room 181 South wall	Layer 1: White brittle material with woven fibrous material	NAD	SAT
			Layer 2: Silver foil	NAD	
			Layer 3: Tan paper with mastic and woven fibrous material	NAD	
			Layer 4: Yellow fibrous material	NAD	
40535.488 -1044	Fiberglass duct wrap	Room 185 East wall large duct	Layer 1: Tan brittle material with woven fibrous material	NAD	SAT
			Layer 2: Silver foil	NAD	
			Layer 3: Tan paper with mastic and woven fibrous material	NAD	
			Layer 4: Yellow fibrous material	NAD	
40535.488 -1045	Vibration Cloth- lower cloth	Mech room 173 lower duct Southwest ducting	Layer 1: White/gray fibrous material	61% Chrysotile	SAT
40535.488 -1046	Soft grey duct sealant	Northwest hall outside RM 168 above drop ceiling	Layer 1: Soft gray soft/elastic material	NAD	SAT
40535.488 -1047	Soft white duct seam sealant	West hall outside RM 184 above drop ceiling	Layer 1: Soft white soft/elastic material	NAD	SAT
40535.488 -1048	Hard white Duct sealant	Room 185 into East wall duct penetration	Layer 1: Hard white brittle material with paint Layer 2: White paper	NAD NAD	SAT
40535.488 -1049	Grey duct seam sealant	Mech room 173 Southwest ducting	Layer 1: Gray soft material	NAD	SAT
40535.488 -1050	Clear subgrade conduit penetration	Mech room 173 West wall	Layer 1: Clear soft/elastic material	NAD	SAT
40535.488 -1051	Soft beige window Sealant	North hall West interior window between frame and floor	Layer 1: Soft beige soft/elastic material	NAD	SAT
40535.488 -1052	Soft grey window Sealant	Room 168 interior between window and frame	Layer 1: Soft gray soft/elastic material	NAD	SAT

Floor 1

PBS Sample #	<u>Material Type</u>	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488 -1053	Soft black window Sealant	Room 181 Interior window between window and frame	Layer 1: Soft black soft/elastic material	NAD	SAT
40535.488 -1054	White caulk	Room 164 East wall backsplash	Layer 1: White soft/elastic material	NAD	SAT
40535.488 -1055	Red fire stop	Room 160 Northeast column	Layer 1: Red soft/elastic material	NAD	SAT
40535.488 -1056	Red fire stop	Room 160 Northeast column	Layer 1: Red soft/elastic material Layer 2: Trace white brittle material Layer 3: Trace gray fibrous material	NAD NAD NAD	SAT
40535.488 -1057	1″ Tan ceramic floor tile Gray grout	Room 165 Northeast floor	Layer 1: Tan ceramic Layer 2: Gray brittle/sandy material Layer 3: Clear mastic	NAD NAD NAD	SAT
40535.488 -1058	3" White ceramic covebase tile Gray grout	Room 165 East cove base	Layer 1: White ceramic Layer 2: Gray brittle/sandy material Layer 3: Clear mastic	NAD NAD NAD	SAT
40535.488 -1059	Sound dampening panel	Room 181 East end on ceiling	Layer 1: White woven fibrous material	NAD	SAT
40535.488 -1060	Hard mudded fitting	Room 165 T-connection above ceiling	Layer 1: White powdery material with woven fibrous material	NAD	SAT
40535.488 -1061	Hard mudded fitting	Northwest hall outside RM 168 above ceiling	Layer 2: Gray foamy material Layer 1: White powdery material with woven fibrous material and paint Layer 2: Gray foamy material	NAD NAD NAD	SAT
40535.488 -1062	Floor concrete	Room 001 Southeast near column	Layer 1: Gray sandy/brittle material	NAD	SAT
40535.488 -1063	Floor concrete	Room 166A East area	Layer 1: Gray sandy/brittle material	NAD	SAT
40535.488 -1064	Floor concrete	North hall outside RM 180	Layer 1: Gray sandy/brittle material	NAD	SAT
40535.488 -1065	Waffle ceiling concrete	Room 172 between column and ceiling	Layer 1: Gray/tan sandy/brittle material	NAD	SAT

Floor 1

washington bepa	runent of Enterprise Services			1 05 1 10 ject # 40555.40	
PBS Sample #	<u>Material Type</u>	Sample Location	Lab Description	<u>Lab Result</u>	<u>Lab</u>
40535.488 -1066	Waffle ceiling concrete	Room 181 West ceiling	Layer 1: Gray/tan sandy/brittle material	NAD	SAT
40535.488 -1067	Waffle ceiling concrete	Room 185 Southwest ceiling	Layer 1: Gray/tan sandy/brittle material	NAD	SAT
40535.488 -1068	Black sink undercoat	Room 164 East wall	Layer 1: Black soft/loose material	3% Chrysotile	SAT
40535.488 -1069	Vinyl woven wallpaper	Room 161South column face	Layer 1: Tan vinyl with paint Layer 2: White woven fibrous material Layer 3: White mastic	NAD NAD NAD	SAT
40535.488 -1070	Gray sheet vinyl flooring Tan Mastic Jute backing White leveling compound	Room 168 West entry way	Layer 1: Gray sheet vinyl Layer 2: Tan mastic Layer 3: Tan woven fibrous material Layer 4: Clear mastic Layer 5: Trace gray/white brittle material	NAD NAD NAD NAD NAD	SAT
40535.488 -1071	Door core	Room 181A-2, 5 foot wood door	Layer 1: Brown wood debris	NAD	SAT
40535.488 -1072	Joint compound Gypsum wallboard	Room 161, South central column	Layer 1: White powdery material Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -1073	Joint compound Gypsum wallboard	Room 163, North wall	Layer 1: Trace white powdery material Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -1074	Joint compound Gypsum wallboard	Room 164, Southeast column	Layer 1: Trace white powdery material Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -1075	Joint compound Gypsum wallboard	Room 166A, West wall, North column	Layer 1: White powdery material with trace paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -1076	Joint compound Gypsum wallboard	Room 168, South central column	Layer 1: Trace white powdery material Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -1077	Joint compound Gypsum wallboard	Room 169, West wall	Layer 1: Trace white powdery material Layer 2: White chalky material with paper	NAD NAD	SAT

washington Depa	artment of Enterprise Service	ces		PBS Project #405	55.400
PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488 -1078	Joint compound	Room 169, South column	Layer 1: Trace white powdery material	NAD	SAT
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
40535.488 -1079	Joint compound	Room 170, South wall	Layer 1: Trace white powdery material	NAD	SAT
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
40535.488 -1080	Joint compound	Room 170, North column	Layer 1: White powdery material	NAD	SAT
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
40535.488 -1081	Joint compound	Room 171, West wall	Layer 1: Trace white powdery material	NAD	SAT
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
40535.488 -1082	Joint compound	Room 172, West wall	Layer 1: Trace white powdery material	NAD	SAT
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
40535.488 -1083	Joint compound	Room 172, West column	Layer 1: White powdery material with paper	NAD	SAT
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
40535.488 -1084	Joint compound	East entrance	Layer 1: White powdery material with paint and	2% Chrysotile	SAT
			paper	Point Count (0.25%
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
			Layer 3: Gray foamy material	NAD	
40535.488 -1085	Joint compound	West entrance	Layer 1: White powdery material with paint and	2% Chrysotile	
			paper	Point Count (0.25%
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
			Layer 3: Gray foamy material	NAD	
40535.488 -1086	Joint compound	Room 160 Southeast corner	Layer 1: White powdery material with paint and	2% Chrysotile	
			paper	Point Count	0.5%
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
			Layer 3: Gray foamy material	NAD	
40535.488 -1087	Joint compound	Room 161 East entrance	Layer 1: White powdery material with paint and paper	NAD	SAT
	Gypsum wallboard		Layer 2: Gray foamy material	NAD	

Floor 1

PBS Sample #	<u>Material Type</u>	Sample Location	Lab Description	Lab Result Lal
40535.488 -1088	Joint compound	Room 161A East	Layer 1: White powdery material with paint and paper	2% Chrysotile SA Point Count 0.5%
	Gypsum wallboard		Layer 2: White chalky material with paper Layer 3: Gray foamy material	NAD NAD
40535.488 -1089	Joint compound	Room 161 Southwest corner	Layer 1: White powdery material with paint and paper	2% Chrysotile SA Point Count 0.5%
	Gypsum wallboard		Layer 2: White chalky material with paper Layer 3: Gray foamy material	NAD NAD
40535.488 -1090	Joint compound	Room 161B West	Layer 1: White powdery material with paint and paper	2% Chrysotile SA Point Count 0.5%
	Gypsum wallboard		Layer 2: White chalky material with paper Layer 3: Gray foamy material	NAD NAD
40535.488 -1091	Joint compound	Room 168 Southeast	Layer 1: White powdery material with paint and paper	2% Chrysotile SA Point Count 0.259
	Gypsum wallboard		Layer 2: White chalky material with paper Layer 3: Gray foamy material	NAD NAD
40535.488 -1092	Joint compound	Room 173 West entrance	Layer 1: White powdery material with paint and paper	2% Chrysotile SA Point Count 0.259
	Gypsum wallboard		Layer 2: White chalky material with paper Layer 3: Gray foamy material	NAD NAD
40535.488 -1093	Joint compound	Column by room 180	Layer 1: White powdery material with paint and paper	2% Chrysotile SA Point Count 0.5%
	Gypsum wallboard		Layer 2: White chalky material with paper Layer 3: Gray foamy material	NAD NAD
40535.488 -1094	Joint compound	Column across from room 181	Layer 1: White powdery material with paint and paper	2% Chrysotile SA Point Count 0.5%
	Gypsum wallboard		Layer 2: White chalky material with paper Layer 3: Gray foamy material	NAD NAD

Floor 1

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488 -1095	Joint compound Gypsum wallboard	Room 181 North central	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper Layer 3: Gray foamy material	2% Chrysotile Point Count 0 NAD NAD	
40535.488 -1096	Joint compound Gypsum wallboard	Room 181A Northeast corner	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper Layer 3: Gray foamy material	2% Chrysotile Point Count 0 NAD NAD	
40535.488 -1097	Joint compound Gypsum wallboard	Room 181A-2 Northwest	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper Layer 3: Gray foamy material	2% Chrysotile Point Count (NAD NAD	
40535.488 -1098	Joint compound Gypsum wallboard	Room 0161, West wall, North end	Layer 1: White powdery material Layer 2: White chalky material with paper	2% Chrysotile Composite < NAD	
40535.488 -1099	Joint compound Gypsum wallboard	Room 0161, East wall, South end	Layer 1: White powdery material with trace paint Layer 2: White chalky material with paper	2% Chrysotile Composite < NAD	
40535.488 -1100	Joint compound / Gypsum wallboard	Room 0161A, North wall, West end	Layer 1: White chalky material with paint and paper	NAD	SAT
40535.488 -1101	Joint compound Gypsum wallboard	Room 0164, West wall, North end	Layer 1: White powdery material with paint Layer 2: Trace white chalky material with paper	NAD NAD	SAT
40535.488 -1102	Joint compound / Gypsum wallboard	Room 0166, North wall, center	Layer 1: White chalky material with paper	NAD	SAT
40535.488 -1103	Joint compound Gypsum wallboard	Room 0166, West wall, North of door	Layer 1: White powdery material Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -1104	Joint compound Gypsum wallboard	Room 0166, Northeast column	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT

PBS Sample #	<u>Material Type</u>	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488 -1105	Joint compound Gypsum wallboard	Room 0166A, South wall, West end	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -1106	Joint compound Gypsum wallboard	Room 0166A, East wall, North of door	Layer 1: White chalky material with paint and paper	NAD	SAT
40535.488 -1107	Joint compound Gypsum wallboard	Room 0169, North wall, West of door	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -1108	Joint compound Gypsum wallboard	Room 0169, South wall, West end	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -1109	Joint compound Gypsum wallboard	Room 0170, West wall, South end	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -1110	Joint compound Gypsum wallboard	Room 0170, North wall, west of column	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -1111	Joint compound Gypsum wallboard	Room 0171, North wall, West end	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -1112	Joint compound Gypsum wallboard	Room 0171, South wall, East end	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -1113	Joint compound Gypsum wallboard	Corridor outside Room 0172, North wall	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -1114	Joint compound Gypsum wallboard	Room 0180, East wall, North end	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -1115	Joint compound Gypsum wallboard	Room 0181, South wall, West end	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -1116	Joint compound Gypsum wallboard	Room 0183, East wall, South end	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -1117	Joint compound Gypsum wallboard	Room 0184, South wall, West end	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT

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PBS Sample #	<u>Material Type</u>	Sample Location	Lab Description	<u>Lab Result</u>	<u>Lab</u>
40535.488 -1118	Joint compound Gypsum wallboard	Kitchen South wall, South side	Layer 1: White powdery material with paint Layer 2: Yellow woven fibrous material Layer 3: White chalky material with paper	NAD NAD NAD	SAT
40535.488 -1119	Joint compound Gypsum wallboard	161 North wall, West area, East of half wall	Layer 1: Off-white powdery material with paint Layer 2: White chalky material with paper	2% Chrysotile NAD	SAT
40535.488 -1120	Joint compound Gypsum wallboard	South door to 164 East side from hall	Layer 1: Off-white powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT

Pierce College Olympic South Abatement and Repairs Washington Department of Enterprise Services PLM ASBESTOS SAMPLE INVENTORY PBS Engineering + Environmental PBS Project #40535.488

PBS Sample #	<u>Material Type</u>	Sample Location	Lab Description	<u>Lab Result</u>	<u>Lab</u>
40535.488 -2001	Duct lining insulation	N/S hall main return duct near 285	Layer 1: Black fibrous material	NAD	SAT
40535.488 -2002	2' x 2' lay-in-ceiling-tile dust/debris	Room 284 northwest high ceiling	Layer 1: Off-white powdery material with fibrous material	NAD	SAT
40535.488 -2003	Fireproofing debris	Level 2 N/S hall south end near 283	Layer 1: Off-white powdery material with fibrous material	NAD	SAT
40535.488 -2004	Fireproofing debris	Level 2 N/S hall south end near 283	Layer 1: Off-white powdery material with fibrous material	NAD	SAT
40535.488 -2005	Fireproofing debris	Level 2 N/S hall south end near 283	Layer 1: Off-white powdery material with fibrous material	NAD	SAT
40535.488 -2006	Fireproofing debris	Level 2 N/S hall south end near 283	Layer 1: Off-white powdery material with fibrous material	NAD	SAT
40535.488 -2007	Fireproofing debris	Level 2 N/S hall south end near 283	Layer 1: Off-white powdery material with fibrous material	NAD	SAT
40535.488 -2008	Fireproofing debris	Level 2 N/S hall south end near 283	Layer 1: Off-white powdery material with fibrous material	NAD	SAT
40535.488 -2009	Fireproofing debris	Level 2 hall outside 284A	Layer 1: Off-white powdery material with fibrous material	NAD	SAT
40535.488 -2010	Debris on floor	Room 284 northwest area	Layer 1: Off-white powdery material with fibrous material	NAD	SAT
40535.488 -2011	Joint compound Gypsum wallboard	Room 260 northeast corner	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2012	Joint compound	Room 264 northeast corner	Layer 1: White powdery material with paint and paper	NAD	SAT

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PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
40535.488 -2013	Joint compound Gypsum wallboard	Room 270/271 corridor Southeast corner near 269	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2014	Joint compound Gypsum wallboard	Room 280 northeast corner	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2015	Joint compound Gypsum wallboard	Room 288 southwest corner	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2016	2' x 4' Lay-in-ceiling-tile	Level 2 north E/W hall near art gallery	Layer 1: Gray fibrous material with paint	NAD	SAT
40535.488 -2017	2' x 4' Lay-in ceiling tile	Room 267 Men's restroom	Layer 1: Gray fibrous material with paint	NAD	SAT
40535.488 -2018	2' x 4' Lay-in ceiling tile	Level 2 N/S hall near 270	Layer 1: Gray fibrous material with paint	NAD	SAT
40535.488 -2019	2' x 4' Lay-in ceiling tile	Level 2 N/S hall near 279	Layer 1: Gray fibrous material with paint	NAD	SAT
40535.488 -2020	2' x 4' Lay-in ceiling tile	Level 2 south E/W hall near 291	Layer 1: Gray fibrous material with paint	NAD	SAT
40535.488 -2021	Joint compound Gypsum wallboard	Room 266 Northeast corner	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2022	Joint compound Gypsum wallboard	Room 292 North wall	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2023	4" Black vinyl cove base Brown mastic	Room 260 Northwest corner	Layer 1: Black/dark brown rubbery material Layer 2: Trace brown mastic	NAD NAD	SAT
40535.488 -2024	4" Tan vinyl cove base Cream and brown mastic	Room 262 Northwest corner	Layer 1: Beige rubbery material Layer 2: Off-white mastic Layer 3: Brown mastic	NAD NAD NAD	SAT
40535.488 -2025	4" Tan vinyl cove base Cream mastic	Room 271 Southwest corner	Layer 1: Beige rubbery material Layer 2: Off-white mastic Layer 3: Trace white powdery material with paint	NAD NAD NAD	SAT

Floor 2

PBS Sample #	<u>Material Type</u>	Sample Location	Lab Description	<u>Lab Result</u>	<u>Lab</u>
10525 100 0000					6 A T
40535.488 -2026	4" Gray vinyl cove base	Room 275 Northeast corner	Layer 1: Gray rubbery material	NAD	SAT
	Creamy mastic		Layer 2: Off-white mastic	NAD	
40535.488 -2027	4" Black vinyl cove base	Central hall outside Room 275	Layer 1: Black rubbery material	NAD	SAT
	Cream mastic		Layer 2: Off-white mastic	NAD	
			Layer 3: Trace brown wood debris	NAD	
40535.488 -2028	4" Black vinyl cove base	West hall Northwest corner	Layer 1: Black rubbery material	NAD	SAT
	Cream mastic	outside RM 292	Layer 2: Off-white mastic	NAD	
			Layer 3: Trace white powdery material with paint	NAD	
			and paper		
40535.488 -2029	Tan carpet mastic	Room 275 West side near door	Layer 1: Tan/yellow mastic	NAD	SAT
40535.488 -2030	Tan carpet mastic	Room 278 West side near door	Layer 1: Tan/yellow mastic	NAD	SAT
40535.488 -2031	Tan carpet mastic	Room 288 at doorway	Layer 1: Tan/dark yellow mastic	NAD	SAT
	White Leveling compound		Layer 2: Off-white brittle material	NAD	
40535.488 -2032	Yellow carpet mastic	West hall outside room 291	Layer 1: Yellow mastic	NAD	SAT
40535.488 -2033	Yellow carpet mastic	North hall West of stair case	Layer 1: Yellow mastic	NAD	SAT
40535.488 -2034	12" Off-whiteish vinyl tile	Room 283 Northeast corner	Layer 1: Off-white tile	NAD	SAT
	Black mastic		Layer 2: Black mastic	NAD	
			Layer 3: Off-white brittle material	NAD	
40535.488 -2035	12" Off-whiteish vinyl tile	Room 283 South area	Layer 1: Off-white tile	NAD	SAT
	Black mastic		Layer 2: Black mastic	NAD	
			Layer 3: Off-white brittle material	NAD	
40535.488 -2036	12" Off-whiteish vinyl tile	Room 283 Southeast area	Layer 1: Off-white tile	NAD	SAT
	Black mastic		Layer 2: Black mastic	NAD	

PBS Engineering + Environmental PBS Project #40535.488

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488 -2037	Gray sheet flooring Brown mastic	Room 284 South elevated platform	Layer 1: Gray sheet vinyl Layer 2: Brown mastic Layer 3: Yellow mastic Layer 4: Brown wood debris	NAD NAD NAD NAD	SAT
40535.488 -2038	Gray sheet flooring Brown mastic	Room 284 South elevated platform	Layer 1: Gray sheet vinyl Layer 2: Yellow mastic	NAD NAD	SAT
40535.488 -2039	Black residual mastic	Room 270 entry way	Layer 1: Black mastic	NAD	SAT
40535.488 -2040	Tan tack board mastic	Room 271 North wall	Layer 1: Brown fibrous material Layer 2: Off-white mastic	NAD NAD	SAT
40535.488 -2041	1' Acoustic ceiling tile Brown glue dot	Room 276 Northwest corner	Layer 1: Gray fibrous material with paint Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -2042	1' Acoustic ceiling tile Brown glue dot	Room 291 East ceiling	Layer 1: Gray fibrous material with paint Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -2043	Soft gray duct sealant	Room 266 North wall vertical duct	Layer 1: Gray soft/elastic material	NAD	SAT
40535.488 -2044	Fiberglass and cover Tan sealant	East hall outside room 263 duct above ceiling	Layer 1: Yellow fibrous material Layer 2: Silver foil Layer 3: Woven off-white fibrous material Layer 4: Tan soft/elastic material	NAD NAD NAD NAD	SAT
40535.488 -2045	Fiberglass duct seam cover	East hall outside room 263 duct above ceiling	Layer 1: Yellow fibrous material Layer 2: Silver foil Layer 3: Off-white fibrous material	NAD NAD NAD	SAT
	Gray sealant		Layer 4: Gray soft/elastic material with fibrous material	NAD	
40535.488 -2046	Fiberglass straight run with paper	Room 267 East area above ceiling	Layer 1: Yellow fibrous material Layer 2: Silver foil Layer 3: Off-white paper with mastic and woven fibrous material	NAD NAD NAD	SAT

PBS Sample #	<u>Material Type</u>	Sample Location	Lab Description	Lab Result	<u>Lab</u>
					C 4 T
40535.488 -2047	Fiberglass	Room 267 center of room above	Layer 1: Yellow fibrous material Layer 2: Silver foil		SAT
	Gray duct seam sealant	ceiling	Layer 2: Sliver foll Layer 3: Gray soft/elastic material with woven	NAD NAD	
	Gray duct seam sealant		fibrous material	NAD	
40535.488 -2048	Fiberglass	Main hall outside room 279	Layer 1: Yellow fibrous material	NAD	SAT
		above ceiling	Layer 2: Off-white fibrous material	NAD	
			Layer 3: Silver foil	NAD	
	Gray duct sealant		Layer 4: Gray soft/elastic material with woven	NAD	
			fibrous material		
40535.488 -2049	Red fiberglass black coating supply	Room 283 Southeast elevation	Layer 1: Red/pink fibrous material	NAD	SAT
	duct lining		Layer 2: Black coating	NAD	
40535.488 -2050	White sealant on water pipe straight	LV2 West skybridge East end	Layer 1: Silver foil	NAD	SAT
	run		Layer 2: Off-white paper with mastic and woven	NAD	
			fibrous material		
40535.488 -2051	Acoustic paneling	Room 283 West wall	Layer 1: Off-white woven fibrous material	NAD	SAT
			Layer 2: Yellow fibrous material	NAD	
40535.488 -2052	Acoustic paneling	Room 283 West wall	Layer 1: Off-white woven fibrous material	NAD	SAT
			Layer 2: Yellow fibrous material	NAD	
40535.488 -2053	Gray duct tape	Room 267 East wall above ceiling	Layer 1: Silver soft/elastic material with woven	NAD	SAT
			fibrous material		
			Layer 2: Gray mastic	NAD	
40535.488 -2054	White conduit wall penetration	Room 292 Northeast corner	Layer 1: White brittle material	NAD	SAT
	sealant	above ceiling			
40535.488 -2055	Fiberglass/ red fire stop	Room 262 East closet on duct	Layer 1: Yellow fibrous material	NAD	SAT
		above ceiling	Layer 2: Off-white woven fibrous material	NAD	
			Layer 3: Silver foil	NAD	
			Layer 4: Red soft/elastic material with fibrous	NAD	
			material		

Floor 2

washington Dep	washington Department of Enterprise Services			FD3 FT0ject #4033	J.400
PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488 -2056	Fiberglass/ red fire stop	Hall outside room 270 on duct above ceiling	Layer 1: Yellow fibrous material Layer 2: Red soft/elastic material with fibrous material	NAD NAD	SAT
40535.488 -2057	Red fire stop	Room 292 near door above ceiling	Layer 1: Red soft/elastic material	NAD	SAT
40535.488 -2058	Red fire stop	Room 292 near door above ceiling	Layer 1: Red soft/elastic material	NAD	SAT
40535.488 -2059	Soft gray interior window sealant	Room 271 between frame and sill	Layer 1: Gray soft/elastic material	NAD	SAT
40535.488 -2060	Soft black interior window sealant	Main hall room 274 between glass and frame	Layer 1: Black soft material with paint	NAD	SAT
40535.488 -2061	Soft black interior window sealant	West hall room 286 between glass and frame	Layer 1: Black soft material with paint	NAD	SAT
40535.488 -2062	Soft gray and soft beige interior window sealant	North hall near stairs between frame and floor	Layer 1: Gray/beige soft/elastic material	NAD	SAT
40535.488 -2063	White sealant	Room 292 between wall and concrete ceiling	Layer 1: Off-white soft material	NAD	SAT
40535.488 -2064	1" Off-white ceramic floor tile Gray grout	Room 268 Northeast area	Layer 1: Off-white ceramic Layer 2: Gray sandy/brittle material Layer 3: Brown fibrous material	NAD NAD NAD	SAT
40535.488 -2065	3" Off-white ceramic cove base tile Gray grout	Room 268 Northeast area	Layer 1: Off-white/yellow ceramic Layer 2: Trace gray sandy/brittle material	NAD NAD	SAT
40535.488 -2066	Column caulk	Room 283 Northeast corner	Layer 1: Gray soft material with paint	3% Chrysotile	SAT
40535.488 -2067	Column caulk	Room 283 Northeast corner	Layer 1: Gray soft material with paint	3% Chrysotile	SAT
40535.488 -2068	White sink undercoating	Room 285A South wall	Layer 1: Pink soft/loose material	NAD	SAT
40535.488 -2069	Lay-in ceiling tile 2'x4' fissure pinhole pattern	Room 262 East closet	Layer 1: Gray fibrous material with paint	NAD	SAT

Floor 2

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488 -2070	Lay-in ceiling tile 2'x4' white face fiberglass	Room 292 center of room	Layer 1: Off-white soft/elastic material Layer 2: Yellow fibrous material	NAD NAD	SAT
40535.488 -2071	Floor concrete	Room 263 Southwest corner	Layer 1: Gray sandy/brittle material Layer 2: Trace black mastic	NAD NAD	SAT
40535.488 -2072	Floor concrete	Room 266 Northwest at floor penetration	Layer 1: Gray sandy/brittle material	NAD	SAT
40535.488 -2073	Floor concrete	Room 283 Northeast ramp area	Layer 1: Gray sandy/brittle material	NAD	SAT
40535.488 -2074	Ceiling concrete	Room 262 East closet	Layer 1: Gray sandy/brittle material	NAD	SAT
40535.488 -2075	Ceiling concrete	Room 271 East wall	Layer 1: Gray sandy/brittle material	NAD	SAT
40535.488 -2076	Ceiling concrete	Main hall outside room 279	Layer 1: Gray sandy/brittle material	NAD	SAT
40535.488 -2077	12" Acoustical ceiling tile Brown mastic	Room 272 South area	Layer 1: Gray fibrous material with paint Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -2078	12" Acoustical ceiling tile Brown mastic	Room 272 Northeast area	Layer 1: Gray fibrous material with paint Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -2079	12" Acoustical ceiling tile Brown mastic	Room 273 South area	Layer 1: Gray fibrous material with paint Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -2080	12" Acoustical ceiling tile Brown mastic	Room 273 North area	Layer 1: Gray fibrous material Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -2081	12" Acoustical ceiling tile Brown mastic	Room 274 South area	Layer 1: Gray fibrous material with trace paint Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -2082	12" Acoustical ceiling tile Brown mastic	Room 274 North area	Layer 1: Gray fibrous material with paint Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -2083	12" Acoustical ceiling tile Brown mastic	Room 276 North area	Layer 1: Gray fibrous material with paint Layer 2: Brown mastic	NAD NAD	SAT

Floor 2

washington Depa	intilient of Enterprise Services			5 i i oject #405.	JJ.400
PBS Sample #	<u>Material Type</u>	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488 -2084	12" Acoustical ceiling tile Brown mastic (lighter)	Room 276 South area	Layer 1: Gray fibrous material with paint Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -2085	12" Acoustical ceiling tile Brown mastic	Room 277 North area	Layer 1: Gray fibrous material with paint Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -2086	12" Acoustical ceiling tile Brown mastic	Room 277 South area	Layer 1: Gray fibrous material with paint Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -2087	12" Acoustical ceiling tile, light fissures Brown mastic	Room 278 East area	Layer 1: Gray fibrous material with paint Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -2088	12" Acoustical ceiling tile patch of heavy fissure Brown mastic (lighter)	Room 278 West area	Layer 1: Gray fibrous material with trace paint Layer 2: Brown mastic	NAD	SAT
	-				
40535.488 -2089	12" Acoustical ceiling tile Brown mastic	Room 279 North area	Layer 1: Gray fibrous material with paint Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -2090	12" Acoustical ceiling tile Brown mastic	Room 279 South area	Layer 1: Gray fibrous material with paint Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -2091	12" Acoustical ceiling tile Brown mastic	Room 280 South area	Layer 1: Gray fibrous material with paint Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -2092	12" Acoustical ceiling tile Brown mastic	Room 280 North area	Layer 1: Gray fibrous material with paint Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -2093	12" Acoustical ceiling tile, light fissures Brown mastic	Room 281 East area	Layer 1: Gray fibrous material with paint Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -2094	12" Acoustical ceiling tile patch of heavy fissure	Room 281 West area	Layer 1: Gray fibrous material with paint	NAD	SAT
	Brown mastic		Layer 2: Brown mastic	NAD	
40535.488 -2095	12" Acoustical ceiling tile Brown mastic	Room 282 South area	Layer 1: Gray fibrous material with paint Layer 2: Brown mastic	NAD NAD	SAT

Floor 2

PBS Sample #	<u>Material Type</u>	Sample Location	Lab Description	<u>Lab Result</u>	<u>Lab</u>
40535.488 -2096	12" Acoustical ceiling tile	Room 282 North area	Layer 1: Gray fibrous material with paint	NAD	SAT
	Brown mastic		Layer 2: Brown mastic	NAD	
40535.488 -2097	12" Acoustical ceiling tile	Room 286 South area	Layer 1: Gray fibrous material with paint	NAD	SAT
	Brown mastic		Layer 2: Brown mastic	NAD	
40535.488 -2098	12" Acoustical ceiling tile	Room 286 North area	Layer 1: Gray fibrous material with paint	NAD	SAT
	Brown mastic		Layer 2: Brown mastic	NAD	
40535.488 -2099	12" Acoustical ceiling tile	Room 290 East area	Layer 1: Gray fibrous material with paint	NAD	SAT
	Brown mastic		Layer 2: Brown mastic	NAD	
40535.488 -2100	12" Acoustical ceiling tile	Room 287 South area	Layer 1: Gray fibrous material with paint	NAD	SAT
	Brown mastic		Layer 2: Brown mastic	NAD	
40535.488 -2101	12" Acoustical ceiling tile	Room 287 North area	Layer 1: Gray fibrous material with paint	NAD	SAT
	Brown mastic		Layer 2: Brown mastic	NAD	
40535.488 -2102	12" Acoustical ceiling tile	Room 288 North area	Layer 1: Gray fibrous material with paint	NAD	SAT
	Brown mastic		Layer 2: Brown mastic	NAD	
40535.488 -2103	12" Acoustical ceiling tile	Room 288 South area	Layer 1: Gray fibrous material with paint	NAD	SAT
	Brown mastic		Layer 2: Brown mastic	NAD	
40535.488 -2104	12" Acoustical ceiling tile	Room 289 South area	Layer 1: Gray fibrous material with paint	NAD	SAT
	Brown mastic		Layer 2: Off-white/yellow mastic	NAD	
			Layer 3: Off-white fibrous material	NAD	
40535.488 -2105	12" Acoustical ceiling tile	Room 289 North area	Layer 1: Gray fibrous material with paint	NAD	SAT
	Brown mastic		Layer 2: Off-white/yellow mastic	NAD	
			Layer 3: Off-white fibrous material	NAD	
40535.488 -2106	12" Acoustical ceiling tile	Room 290 West area	Layer 1: Gray fibrous material with paint	NAD	SAT
	Brown mastic		Layer 2: Brown mastic	NAD	
40535.488 -2107	12" Acoustical ceiling tile	Room 291 East area	Layer 1: Gray fibrous material with paint	NAD	SAT
	Brown mastic		Layer 2: Brown mastic	NAD	

Floor 2

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488 -2108	12" Acoustical ceiling tile Brown mastic	Room 291 West area	Layer 1: Gray fibrous material with paint Layer 2: Brown mastic	NAD NAD	SAT
40535.488 -2109	Concrete	Room 284 East area	Layer 1: Gray sandy/brittle material	NAD	SAT
40535.488 -2110	Concrete	Room 284 Northwest area	Layer 1: Gray sandy/brittle material	NAD	SAT
40535.488 -2111	Concrete masonry unit with paint	Hall near room 283 above drop ceiling	Layer 1: Gray hard sandy/brittle material with paint	NAD	SAT
40535.488 -2112	Concrete masonry unit with concrete fill	Hall near room 283 above drop ceiling	Layer 1: Gray hard sandy/brittle material	NAD	SAT
40535.488 -2113	Concrete fill	Hall near room 283 above drop ceiling	Layer 1: Gray sandy/brittle material	NAD	SAT
40535.488 -2114	Joint compound Gypsum wallboard	Column south side of skybridge to Olympic North, north face	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2115	Joint compound Gypsum wallboard	Column across Rm 266, north face	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2116	Joint compound Gypsum wallboard	Rm 265 northeast column, south face	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2117	Joint compound Gypsum wallboard	Column north of Rm 264 door, east face in hall	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2118	Joint compound Gypsum wallboard	Rm 264 southeast column, north face	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2119	Joint compound Gypsum wallboard	Column south of Rm 264 door, west face	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2120	Joint compound Gypsum wallboard	Column at Rm 270 entry, south face	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2121	Joint compound	Rm 270 northwest column,	Layer 1: White powdery material with paint and paper	NAD	SAT

Floor 2

Washington Department of Enterprise Services			110ject #405.	JJ. 4 00	
PBS Sample #	Material Type	Sample Location	Lab Description	<u>Lab Result</u>	<u>Lab</u>
	Gypsum wallboard	east face	Layer 2: White chalky material with paper	NAD	
40535.488 -2122	Joint compound Gypsum wallboard	Rm 275 southeast column, north face	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2123	Joint compound Gypsum wallboard	Column south of Rm 275 door, north face	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2124	Joint compound Gypsum wallboard	Column near Rm 289, south face	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2125	Gypsum wallboard, joint compound	Rm 278 south column, west face	Layer 1: White powdery material with paint and paper	NAD	SAT
40535.488 -2126	Joint compound Gypsum wallboard	Column near Rm 280, north face	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2127	Joint compound Gypsum wallboard	Column in Rm 285A, north face	Layer 1: White powdery material with paint Layer 2: Pink chalky material with paper	NAD NAD	SAT
40535.488 -2128	Joint compound Gypsum wallboard	Rm 284A west column, east face	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2129	Joint compound Gypsum wallboard	Rm 284 west column, east face	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2130	Joint compound Gypsum wallboard	Rm 284 south column, north face	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2131	Joint compound Gypsum wallboard	Rm 283 south column, north face	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2132	Joint compound Gypsum wallboard	Rm 283 east column, west face	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2133	Joint compound Gypsum wallboard	Rm 283, north wall, center area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2134	Joint compound	Rm 283, south wall, west area	Layer 1: White powdery material with paint and paper	NAD	SAT

Floor 2

PBS Sample #	<u>Material Type</u>	Sample Location	Lab Description		<u>Lab</u>
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
40535.488 -2135	Joint compound Gypsum wallboard	Rm 284, north wall, east of main door	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2136	Joint compound Gypsum wallboard	Rm 284, wall south of exit stairs	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2137	Joint compound Gypsum wallboard	Rm 284A, south wall, west area	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2138	Joint compound Gypsum wallboard	Rm 284A, east wall, north of door	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2139	Joint compound Gypsum wallboard	Rm 282, west wall, north of door	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2140	Joint compound Gypsum wallboard	Rm281, north wall, east area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2141	Joint compound Gypsum wallboard	Rm 285, south wall, west area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2142	Joint compound Gypsum wallboard	Rm 285A, west wall, north area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2143	Joint compound Gypsum wallboard	Rm 279, north wall, west area	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2144	Joint compound Gypsum wallboard	Rm 278, south wall, west area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2145	Joint compound Gypsum wallboard	Rm 278, north wall, east area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2146	Joint compound Gypsum wallboard	Rm 277, south wall, west area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT

Floor 2

Washington Department of Enterprise Services			Project #405	55.488	
PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488 -214	7 Joint compound Gypsum wallboard	Rm 276, east wall, south area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -214	3 Joint compound Gypsum wallboard	Rm 288, west wall, north area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -214	Joint compoundGypsum wallboard	Rm 290, south wall, west area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -215	D Joint compound Gypsum wallboard	Rm 290, north wall, west of window	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -215	1 Joint compound Gypsum wallboard	Rm 291, west wall, north area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -215	2 Joint compound Gypsum wallboard	Rm 291, south wall, east area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -215	3 Joint compound Gypsum wallboard	Rm 292, south wall, east area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -215	4 Joint compound Gypsum wallboard	Rm 289, west wall, north area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -215	5 Gypsum wallboard, joint compound	Rm 287, south wall, east of door	Layer 1: White chalky material with paint and paper	NAD	SAT
40535.488 -215	5 Joint compound Gypsum wallboard	Rm 286, north wall, west area	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -215	7 Gypsum wallboard, joint compound	Rm 275, west wall, north of door	Layer 1: White chalky material with paint and paper	NAD	SAT
40535.488 -215	3 Joint compound Gypsum wallboard	Rm 275, north wall, east area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -215	Joint compoundGypsum wallboard	Rm 274, south wall, west area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -216) Joint compound	Rm 273, east wall, north area	Layer 1: White powdery material with paint	NAD	SAT

Floor 2

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PBS Sample #	<u>Material Type</u>	Sample Location	Lab Description	Lab Result	<u>Lab</u>
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
40535.488 -2161	Joint compound Gypsum wallboard	Rm 272, west wall, north area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2162	Joint compound Gypsum wallboard	Corridor to 270/271, north wall, east area	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2163	Joint compound Gypsum wallboard	Rm 269, west wall, south area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2164	Joint compound Gypsum wallboard	Rm 270, south wall, west area	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2165	Joint compound Gypsum wallboard	Rm 270, east wall, north area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2166	Joint compound Gypsum wallboard	Rm 271, north wall, east area	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2167	Joint compound Gypsum wallboard	Rm 271, east wall, center area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2168	Joint compound Gypsum wallboard	Rm 268, south wall, west area	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2169	Joint compound Gypsum wallboard	Rm 268, north wall, east area	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2170	Joint compound Gypsum wallboard	Rm 267, west wall, north area	Layer 1: White powdery material with paint and paper Layer 2: Brown chalky material with paper	NAD NAD	SAT
40535.488 -2171	Joint compound Gypsum wallboard	Rm 267, east wall, south area	Layer 1: White powdery material with paint Layer 2: Brown chalky material with paper	NAD NAD	SAT
40535.488 -2172	Gypsum wallboard, joint compound	Rm 264, west wall, south of door	Layer 1: White chalky material with paint and paper	NAD	SAT
40535.488 -2173	Joint compound	Rm 263, west wall, north area	Layer 1: White powdery material with paint and paper	NAD	SAT

Floor 2

PBS Sample #	Material Type	Sample Location Lab Description		Lab Result	<u>Lab</u>
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	
40535.488 -2174	Joint compound Gypsum wallboard	Rm 263, south wall, east area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2175	Joint compound Gypsum wallboard	Rm 262, east wall, south area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2176	Joint compound Gypsum wallboard	Rm 262 closet, north wall	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2177	Joint compound Gypsum wallboard	Rm 261, west wall, north of door	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2178	Joint compound Gypsum wallboard	Rm 261 closet, north wall	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2179	Gypsum wallboard, joint compound	Rm 260, west wall, north of door	Layer 1: White chalky material with paint and paper	NAD	SAT
40535.488 -2180	Joint compound Gypsum wallboard	Rm 265, west wall, south area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -2181	Joint compound Gypsum wallboard	Rm 266, south wall, east of door	Layer 1: White powdery material with paint Layer 2: Brown chalky material with paper	NAD NAD	SAT

Pierce College Olympic South Abatement and Repairs Washington Department of Enterprise Services PLM ASBESTOS SAMPLE INVENTORY Floor 3

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488 -3001	Wall texture	Level 3 Mechanical Room	Layer 1: White powdery material with paint and paper	NAD	SAT
40535.488 -3002	Wall texture, joint compound, tape	Level 3 Mechanical Room	Layer 1: White powdery material with paint and paper	NAD	SAT
40535.488 -3003	Joint compound, tape	Level 3 Mechanical Room	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -3004	Duct insulation	Level 3 Mechanical Room MZ-2	Layer 1: Yellow fibrous material Layer 2: Trace black asphaltic material	NAD NAD	SAT
40535.488 -3005	Duct insulation	Level 3 Mechanical Room MZ-3	Layer 1: Yellow fibrous material Layer 2: Yellow mastic	NAD NAD	SAT
40535.488 -3006	Woven insulation	Level 3 Mechanical Room	Layer 1: Off-white woven fibrous material and paint	NAD	SAT
40535.488 -3007	Fireproofing	Level 3 Mechanical Room	Layer 1: Tan powdery material with fibrous material	NAD	SAT
40535.488 -3008	Fireproofing	Level 3 Mechanical Room	Layer 1: Tan powdery material with fibrous material	NAD	SAT
40535.488 -3009	Fireproofing	Level 3 Mechanical Room	Layer 1: Tan powdery material with fibrous material	NAD	SAT
40535.488 -3010	Joint compound Gypsum wallboard	Room 321 West wall, South area	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -3011	Joint compound Gypsum wallboard	Room 323A Southeast corner	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -3012	Joint compound Gypsum wallboard	Room 326A, North wall	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -3013	Joint compound Gypsum wallboard	Room 327A, Southeast corner	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40535.488 -3014	Joint compound Gypsum wallboard	Room 337, Northeast corner	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT

Pierce College Olympic South Abatement and Repairs Floor 3 **PBS Engineering + Environmental** Washington Department of Enterprise Services **PBS Project #40535.488** PBS Sample # Material Type Lab Description Lab Result Sample Location Lab 40535.488 -3015 Room 322 Southwest area Layer 1: Trace white powdery material with paint and NAD SAT Wall texture orange peel paper Layer 2: White chalky material with paper NAD Layer 1: Trace white chalky material with paint and paper SAT 40535.488 -3016 Wall texture orange peel Room 326A, North wall NAD 40535.488 -3017 Wall texture orange peel Room 327A, East wall Layer 1: Trace white powdery material with paint and NAD SAT paper 40535.488 -3018 Yellow carpet mastic LV 3 Student lounge Northeast Layer 1: Trace gray fibrous material NAD SAT Layer 2: Yellow mastic NAD area 40535.488 -3019 Yellow carpet mastic Room 337, East area Layer 1: Trace gray/green fibrous material NAD SAT Layer 2: Yellow mastic NAD 40535.488 -3020 Tan carpet mastic Room 323, Southwest area Layer 1: Tan/dark yellow mastic NAD SAT SAT 40535.488 -3021 4" Tan vinyl cove base LV 3 Student lounge Northeast Layer 1: Tan/beige rubbery material NAD Cream mastic Layer 2: Off-white mastic NAD area Layer 3: White powdery material with paint NAD 40535.488 -3022 4" Tan vinyl cove base Room 326A, North wall Layer 1: Tan/beige rubbery material NAD SAT Cream mastic Layer 2: Off-white mastic NAD Layer 3: Trace white powdery material with paint NAD SAT 4" Tan vinyl cove base Hall near room 335 Layer 1: Tan/beige rubbery material NAD 40535.488 -3023 Cream mastic Layer 2: Off-white mastic NAD Layer 3: Trace white chalky material with paint and paper NAD 40535.488 -3024 6" Beige ceramic floor tile Room 338A women's restroom Layer 1: White/beige ceramic NAD SAT Layer 2: White sandy/brittle material NAD Gray grout Layer 3: Dark gray sandy/brittle material NAD 40535.488 -3025 4" White ceramic wall tile Room 338B men's restroom Layer 1: Off-white ceramic NAD SAT

Pierce College Olympic South Abatement and Repairs Washington Department of Enterprise Services					ngineering + Environmental PBS Project #40535.488		
PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>		
40535.488 -3026	2'x2' Lay-in ceiling tile rough white	LV 3 Student lounge center area	Layer 1: Gray fibrous material with paint	NAD	SAT		
40535.488 -3027	2'x2' Lay-in ceiling tile rough white	Hall near room 320	Layer 1: Gray fibrous material with paint	NAD	SAT		
40535.488 -3028	2'x2' Lay-in ceiling tile rough white	Hall near room 331	Layer 1: Gray fibrous material with paint	NAD	SAT		
40535.488 -3029	Pipe insulation and cover	Room 320, East wall	Layer 1: Silver foil Layer 2: Off-white paper with mastic and woven fibrous material	NAD NAD	SAT		
40535.488 -3030	Pipe insulation and cover	Room 327, Northwest corner below floor	Layer 3: Yellow fibrous material Layer 1: Silver foil Layer 2: Off-white paper with mastic and woven fibrous material Layer 3: Yellow fibrous material	NAD NAD NAD NAD	SAT		
40535.488 -3031	Interior duct lining	Hall near 335 return duct, above ceiling	Layer 1: Gray fibrous material	NAD	SAT		
40535.488 -3032	Black vibration cloth	Room 329, East area supply fan below floor	Layer 1: Black soft/elastic material with fibrous material	NAD	SAT		
40535.488 -3033	Black vibration cloth	LV 3 student lounge West area above ceiling	Layer 1: Black soft/elastic material with fibrous material	NAD	SAT		
40535.488 -3034	Soft gray duct sealant	Hall near room 327 above ceiling	Layer 1: Gray soft/elastic material	NAD	SAT		
40535.488 -3035	Soft gray duct sealant	Room 327, Northwest area below floor	Layer 1: Gray soft/elastic material	NAD	SAT		
40535.488 -3036	Soft gray duct sealant	Room 329, East area below floor	Layer 1: Gray soft/elastic material	NAD	SAT		
40535.488 -3037	Gray duct tape	Room 329, East area below floor	Layer 1: Silver soft/elastic material with woven fibrous material	NAD	SAT		
			Layer 2: Gray mastic	NAD			
			Layer 3: Black plastic	NAD			
40535.488 -3038	Gray duct tape	Room 329, East area below floor	Layer 1: Silver soft/elastic material with woven fibrous	NAD	SAT		

Pierce College Olympic South Abatement and Repa Washington Department of Enterprise Services		airs Floor 3	-	PBS Engineering + Environmental PBS Project #40535.488	
PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
			material		
			Layer 2: Gray mastic	NAD	
			Layer 3: Black plastic	NAD	
40535.488 -3039	Soft gray duct sealant	Room 338A above hard lid	Layer 1: Gray soft/elastic material	NAD	SAT
40535.488 -3040	Soft black window sealant	Room 325 West wall window to frame	Layer 1: Black soft/elastic material	NAD	SAT
40535.488 -3041	Soft black window sealant	LV 3 North window near East stairs window to frame	Layer 1: Black soft/elastic material with paint	NAD	SAT
40535.488 -3042	White vapor barrier	Room 323 Southeast area above	Layer 1: White plastic	NAD	SAT
		ceiling	Layer 2: Tan paper with mastic and woven fibrous material	NAD	
40535.488 -3043	Silver vapor barrier	Hall near 335 above ceiling at	Layer 1: Silver foil	NAD	SAT
		roof penetration	Layer 2: Tan paper with mastic and woven fibrous material	NAD	
40535.488 -3044	Black asphaltic material	Room 329 East exterior wall below floor	Layer 1: Black asphaltic material	NAD	SAT
40535.488 -3045	Concrete	Room 321 floor	Layer 1: Gray sandy/brittle material	NAD	SAT
40535.488 -3046	Lightweight concrete	Room 327 Northwest hatch raised floor	Layer 1: Gray sandy/brittle material	NAD	SAT
40535.488 -3047	Lightweight concrete	Room 329, East hatch raised	Layer 1: Gray sandy/brittle material	NAD	SAT

floor

PLM ASBESTOS SAMPLE INVENTORY

PBS Sample #	<u>Material Type</u>	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488 -4001	Sandy soil	Northwest elevation near shrubs approximately 20 ft from building from double doors	Layer 1: Soil	NAD	SAT
40535.488 -4002	Soil	West elevation approximately 5 feet from building outside Room 172 window	Layer 1: Soil	NAD	SAT
40535.488 -4003	Sandy soil	West elevation pile of dirt approximately 20 ft from building	Layer 1: Soil	NAD	SAT
40535.488 -4004	Soil	Southwest elevation approximately 8 ft from building in landscape	Layer 1: Soil	NAD	SAT
40535.488 -4005	Sandy soil	South elevation approximately 35 ft from building under playground rubber chunks	Layer 1: Soil	NAD	SAT
40535.488 -4006	Sandy soil	Southeast elevation approximately 25 ft from building near column base	Layer 1: Soil	NAD	SAT
40535.488 -4007	Sandy soil	East elevation approximately 25 ft from ECE drive thru double doors	Layer 1: Soil	NAD	SAT
40535.488 -4008	Soil	East elevation approximately 3 ft from building ECE drive thru soil under rocks south of Room 168 exterior door	Layer 1: Soil	NAD	SAT
40535.488 -4009	Soil	East elevation north area approximately 2 ft from building south of skybridge to Cascade	Layer 1: Soil	NAD	SAT
40535.488 -4010	Soil	North elevation at building base in landscape dirt	Layer 1: Soil	NAD	SAT
40535.488 -4011	Soil	North elevation approximately 50 ft from building under tree	Layer 1: Soil	NAD	SAT
40535.488 -4012	Sand	West elevation approximately 58 ft from building under orange and red play equipment	Layer 1: Soil	NAD	SAT
40535.488 -4013	Soil	Cascade north west elevation base of building 45 feet from southeast corner	Layer 1: Soil	NAD	SAT

SEATTLE ASBESTOS TEST, LLC

Seattle Laboratory 4500 5th Ave, NE, Subs 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

www.seattleasbestostest.com, admin@seattleasbestostest.com

Project Manager: Mr. Gregg Middaugh, Ms. Claire Tsai Cliant: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 205,233,9639 Date Analyzed: 3/9/2021 Client Job#: 40535.438 Project Location: Pierce College Early Childhood Education Laboratory batchtt: 202109546 Samples Received: 4

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Theate

Steve (Fanyao) Zhang President



Project: ____Pierce College Early Childhood Education Project #: 40535.438 Analysis requested: ____ PLM Date: 3/8/2021 Reling'd by/Signature: Date/Time: Received by/Signature: Carrolyn Yee a Mee Date/Time: 319171 15-53 Email ALL INVOICES to: seattleap@pbsusa.com E-mail results to: Prudy Stoudt-McRae

- Brian Stanford Willem Mager
- Sregg Middaugh
- Mark Hiley
- Tim Ogden
- TURN AROUND TIME:
- □ 1 Hour
- □ 2 Hours
- □ 4 Hours

- X 24 Hours
- 48 Hours

D Mike Smith Ferman Fletcher D Ryan Hunter Michelle Dodson 3-5 Days □ Other

SAMPLE DATA FORM								
Sample #	Material	Location	Lab					
40535.488-1001	2' x 4' LICT fissure pinhole pattern	Restroom 165	SAT					
40535.488-1002	2' x 4' LICT rough fissure pinhole pattern	Hallway near 164 north door						
40535.488-1003	2' x 4' LICT rough pattern	Hallway near 168						
40535.488-1004	Hard Mudded Fitting	Restroom 165 above ceiling						
-4								
			-					
			-					
			1.1					

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Janet Murphy Kaitlin Soukup Claire Tsai

Holly Tuttle

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LABORATORY CHAIN OF CUSTODY

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

			PLM by Method		and the first of a second seco			
Atta.:	Mr. Gregg Middaugh, Ms. Claire Tsai	Client:	PBS Engineering and Environmental, Seattle		Address:	214 E Galer Street, Suite	300, 5	Seattle, WA 98102
Job#:	40535.438	Batch#:	202109546		Date Received:	3/8/2021		
Samples Rec'd:	4	Date Analyzed:	3/9/2021		Samples Analyzed:	4	Rev.	Code: AS54H-1
Project Loc.:	Pierce College Early C Education	hildhood		G	Ve			Thung
			Analyzod by:	Caro	iyn Yea	Reviewed by:	Steve ((Fanyao) Zhang, President
Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
1	40535.488-1001	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	65	Cellulose
2	40535,488-1002	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	62	Cellulose
3	40535.488-1003	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	68	Cellulose
		1	Off-white woven fibrous material		None detected	Filler	89	Synthetic fibers
4	40535.488-1004	2	Off-white powdery material with fibrous material		None detected	Filler, Fine particles	14	Cellulose

ANALYTICAL LABORATORY REPORT

SEATTLE ASBESTOS TEST, LLC

Seattle Laboratory: 1500 9th Ave, NE, Suite 300, Seattle, WA 98105, Tel: 206,653,1111, Fax: 206,653,4747, NVLAP Lab Code: 201057-0

www.seattleosbestostest.com, admin@seattleasbestostest.com

Project Manager: Mr. Gregg Middaugh, Ms. Claire Tsai Cliant: PBS Engineering and Environmental, Soattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 206.233.9639 Date Analyzed: 3/18/2021 Client Job#: 40535,438 Project Location: Plerce College Early Childhood Education Laboratory batch#: 202109642 Samples Received: 18

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

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This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Te lame

Steve (Fanyao) Zhang President

202109642-MM



Project: ______Pierce College Early Childhood Education Project #: _____40535.438 Analysis requested: ______PLM Date: ______3/16/2021 Relinq'd by/Signature: Claire Tsai Date/Time: 3/16/2021 Received by/Signature: Caroly-fee Caroly-fee Email ALL INVOICES to: seattleap@pbsusa.com E-mail results to: _______Prudy Stoudt-McRae ________ Mike Smith B Brian Stanford ________Prudy Stoudt-McRae __________ Mike Smith

-	brian Stanioru		Prudy Stoudt-Mickae	 Mike Smith
	Willem Mager		Janet Murphy	Ferman Fletcher
\boxtimes	Gregg Middaugh		Kaitlin Soukup	Ryan Hunter
	Mark Hiley		Claire Tsai	Michelle Dodson
	Tim Ogden		Holly Tuttle	
TU	RN AROUND TIME:			
	1 Hour	\boxtimes	24 Hours	3-5 Days
	2 Hours		48 Hours	Other
	4 Hours			

SAMPLE DATA		FORM	
Sample #	Material	Location	Lab
40535.488-1005	Hard Mudded Fitting	Above kitchen ceiling	SAT
40535.488-1006	Duct insulation	Above kitchen ceiling	
40535.488-1007	Gypsum wallboard/joint compound***	Above kitchen ceiling	
40535.488-1008	Gypsum wallboard/joint compound***	Hallway to ECE near column	
40535.488-1009	Pipe debris	From Hallway to ECE column	
40535.488-1010	Fibrous board debris	From Hallway to ECE column	
40535.488-1011	Debris	Column in 168 South wall	
40535.488-1012	Fiberboard debris	166 above ceiling	
40535.488-1013	Hard mudded fitting	166A above ceiling	
40535.488-1014	Cementitious material on metal	169 above ceiling	
40535.488-1015	Lay-in-ceiling-tile debris	171 above ceiling	
40535.488-1016	Lay-in-ceiling-tile fissure pinhole	Hallway near 164 north door	
40535.488-1017	Lay-in-ceiling-tile rough fissure pinhole	Hallway near 163	
40535.488-1018	Lay-in-ceiling-tile rough texture	Hallway near 168	
40535.488-1019	Fiberboard debris	166 above ceiling	
40535.488-1020	Gypsum wallboard debris	From Hallway to ECE column	
40535.488-1021	Black asphaltic material	From Hallway to ECE column	
40535.488-1022	Pipe debris	From Hallway to ECE column	

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***Composite if positive

LABORATORY CHAIN OF CUSTODY

11

12

13

40535.488-1015

40535.488-1016

40535.488-1017

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Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

			ANALYTICAL LAB			r		
Atin.: Job#: Samples Rec'd: Project Loc.:	Ms. Claire Tsai 40535.438	Date Analyzed:	PBS Engineering and Environmental, Seattle 202109642	G	Addross: Date Received: Samples Analyzed:	18	Rev.	Code: AH43,1-1 SZhanny
Lab ID	Client Sample ID	Layer	Description	1 %	Asbestos Fibers			(Fanyao) Zhang, President Non-asbestos Fiber
	Chern Sample is	1	Off-white woven fibrous material	3/8	None detected	Non-fibrous Components	% 81	Synthetic fibers
1	40535.488-1005	2	Off-white powdery material with fibrous material		None detected	Filler, Fine particles	15	Cellulose
		1	Silver foil		None detected	Foil/binder		None detected
2	40535.488-1006	2	Off-white paper with mastic and woven fibrous material		None detected	Filler, Mastic/binder	68	Cellulose, Glas fibers
		3	Yellow fibrous material		None detected	Filler	90	Glass fibers
3	40535,488-1007	1	White powdery material with paint	1.1	None detected	Binder, Filler, Paint	3	Cellulose
	40000.400-1007	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
4	40535.488-1008	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	21	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	26	Cellulose
1.11		1	Off-white woven fibrous material		None detected	Filler	86	Synthetic fibers
5	40535,488-1009	2	Off-white powdery material with fibrous material		None detected	Filler, Fine particles	19	Cellulose
6	40535.488-1010	1	Brown fibrous material		None detected	Filler	89	Cellulose
7	40535.488-1011	1	Off-white powdery material with fibrous material		None detected	Filler, Fine particles	17	Cellulose
		2	Yellow fibrous material		None detected	Filler	86	Glass fibers
8	40535.488-1012	1	Brown fibrous material with paint		None detected	Filler, Paint	91	Cellulose
		1	Off-white woven fibrous material		None detected	Filler	88	Synthetic fibers
9	40535.488-1013	2	Off-white powdery material with fibrous material		None detected	Filler, Fine particles	20	Cellulose
10	40535.488-1014	1	Gray sandy/brittle material with paint	1.1	None detected	Sand, Filler, Binder, Paint	3	Cellulose

material with paint

material with paint

material with paint

Gray fibrous

Gray fibrous

Gray fibrous

1

1

1

detected

detected

detected

None

None

None

Paint, Filler, Perlite

Paint, Filler, Perlite

Paint, Filler, Perlite

68

67

62

Cellulose

Cellulose

Cellulose

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 205.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

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			ANALYTICAL LABO PLM by Method B			г		
Atles:	Mr. Gregg Middaugh, Ms. Claire Tsai	Client;	PBS Engineering and Environmental, Seattle		Address:	214 E Galer Street, Suite	300,	Seattle, WA 98102
Jopg:	40535.438	Batch#:	202109642		Date Received:	3/17/2021		
Samples Rec'd:	18	Date Analyzed:	3/18/2021		Samples Analyzed:	18	Rev.	Code: AN43J-1
Project Loc.:	Pierce College Early C Education	hildhood		C	the			Schang
			Analyzed by	Carc	olyn Yeo.	Reviewed by	Slave	(Fanyao) Zhang, President
Lah ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	96	Non-asbestos Fibers
14	40535.488-1018	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	64	Cellulose
15	40535.488-1019	1	Brown fibrous material with paint		None detected	Filler, Paint	86	Cellulose
16	40535.488-1020	1	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	21	Cellulose
17	40535.488-1021	1	Black asphaltic material with debris		None detected	Asphalt/binder, Debris	4	Cellulose
18	40535.488-1022	r	Off-white powdery material with fibrous material		None detected	Filler, Fine particles	20	Cellulose, Glass fibers

ANALYTICAL LABORATORY DEBORT

SEATTLE ASBESTOS TEST, LLC

Seattle Laboratory: 4500 Bith Ave. NE, Sude 300. Seattle, WA 98105, Tel: 206,633,1111, Fax: 206,633,4747, NVLAP Lab Code: 201057-0

www.seattleasbestosicsl.com, tidmin@seattleasbestostest.com

Project Manager.	Mr. Gregg Middaugh, Ms. Claire Tsai, Ms Michelle Dodson	Dale Analyzed:	4/1/2021
	PBS Engineering and Environmental, Seattle	Client Job#:	40535,438
Address;	214 E Galer Street, Suite 300, Scattle, WA 98102	Project Location:	Pierce College Early Childhood Education
Tel:	206.233.9639	Laboratory batch#:	202109783
Date Report Issued:	4/1/2021	Samples Received:	11.

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are dono by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

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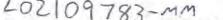
This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

200

Steve (Fanyao) Zhang Approved Signatory





202109783-MM LABORATORY CHAIN OF CUSTODY

Project:	Pierce	College	Early	Childhood	Education
----------	--------	---------	-------	-----------	-----------

Analysis requested: ____ PLM

Relinq'd by/Signature:

Received by/Signature: Corroly Yeo

Ce yes

X

Project #:___40535.438

Date: 3/30/2021

Date/Time:

Date/Time: 313/121 10:15

Mike Smith

Ryan Hunter

Ferman Fletcher

Michelle Dodson

Email ALL INVOICES to: seattleap@pbsusa.com

Prudy Stoudt-McRae

Janet Murphy

C Kaitlin Soukup

Claire Tsai

Holly Tuttle

E-mail results to:

- Brian Stanford Willem Mager
- I Gregg Middaugh
- Mark Hiley
- Tim Ogden

TURN AROUND TIME:

□ 1 Hour

- 2 Hours
- 4 Hours

 \boxtimes 24 Hours 48 Hours

3-5 Days

Other

SAMPLE DATA FORM								
Sample #	Material	Location	Lab					
40535.488-1023	White vibration cloth	Mechanical Room 173 MZ1	SAT					
40535.488-2001	Duct lining insulation	N/S hall main return duct near 285						
40535.488-2002	2' x 2' lay-in-ceiling-tile dust/debris	Room 284 northwest high ceiling						
40535.488-2003	Fireproofing debris	Level 2 N/S hall south end near 283						
40535.488-2004	Fireproofing debris	Level 2 N/S hall south end near 283						
40535.488-2005	Fireproofing debris	Level 2 N/S hall south end near 283	1					
40535.488-2006	Fireproofing debris	Level 2 N/S hall south end near 283						
40535.488-2007	Fireproofing debris	Level 2 N/S hall south end near 283						
40535.488-2008	Fireproofing debris	Level 2 N/S hall south end near 283						
40535.488-2009	Fireproofing debris	Level 2 hall outside 284A	1					
40535.488-2010	Debris on floor	Room 284 northwest area						

Seattle Laboratory: 4500 9th Ave: NE, Suite 300, Seattle, WA 98106, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057.0

Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

rederal governm			ANALYTICAL LAB	DRA	TORY REPORT			
PLMI EPA - 40	CFR Appendix E to Subpa	art E of Part 763 600/R-93/116:	, Interim Method of the Det Method for the Determinati	ermina	ation of Asbestos in I	Bulk Insulation Samples;		[PLM] EP
Attn.:	Mr. Gregg Middaugh, Ms. Claire Tsai, Ms. Michelle Dodson	Client:	PBS Engineering and Environmental, Seattle			214 E Galer Street, Suite	300, 5	Seattle, WA 98102
Job#:	40535.438	Batch#:	202109783		Date Received:	3/31/2021		
Samples Roc'd:	11	Date Analyzed:	4/1/2021		Samples Analyzed:	11	Rev.	Code: JF32Z-1
Project Loc.:	Pierce College Early Ch Education	ildhood		G	Un-			SZhang
	BC19201		Analyzed by	Caro	lyn Yeo	Approved Signatory:	Steve	(Fanyao) Zhang, Presiden
Lab ID	Client Sample ID	Layer	Description	1%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibe
đ	40535.488-1023	1	Off-white fibrous material	50	Chrysotile	Filler	34	Synthetic fiber
2	40535.488-2001	1	Black fibrous material		None detected	Filler	89	Glass fibers
3	40535.488-2002	ī	Off-white powdery material with fibrous material		None detected	Filler, Fine particles	15	Cellulose
4	40535.488-2003	1	Off-white powdery material with fibrous material		None detected	Filler, Fine particles	21	Cellulose
5	40535.488-2004	1	Off-white powdery material with fibrous material	ľ.	None detected	Filler, Fine particles	25	Cellulose
6	40535.488-2005	4	Off-white powdery material with fibrous material		None detected	Filler, Fine particles	18	Cellulose
7	40535.488-2006	- t	Off-white powdery material with fibrous material		None detected	Filler, Fine particles	20	Cellulose
8	40535,488-2007	1	Off-white powdery material with fibrous material		None detected	Filler, Fine particles	16	Cellulose
9	40535.488-2008	1	Off-white powdery material with fibrous material		None detected	Filler, Fine particles	23	Cellulose
10	40535.488-2009	ĩ	Off-white powdery material with fibrous material		None detected	Filler, Fine particles	21	Cellulose
11	40535.488-20010	1	Off-white powdery material with fibrous material		None detected	Filler, Fine particles	19	Cellulose

SEATTLE ASBESTOS TEST, LLC

Seattle Laboratory: 4500 9th Ave, NE, Suite 300; Seattle, WA 98105; Vel: 206.633,1111, Pax: 206.633,4747, NVLAP Lab Code: 201057-0

www.seatleasbestosicst.com, admini@seattleasbestosiusi.com

Project Manager: Mr. Gregg Middaugh, Ms. Ctaire Tsai, Ms. Michelle Dotson Client: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Scattle, WA 98102 Tel: 206.233,9639 Date Report Issued: 4/1/2021

Date Analyzed: 4/1/2021 Client Job#: 40535,438 Project Location: Pierce College Early Learning Education Laboratory batch#: 202109795 Samples Received: 15

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 4D CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples, represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Snicerely

Steve (Fanyao) Znang Approved Signatory

202109795-MM



LABORATORY CHAIN OF CUSTODY

Project: ____Pierce College Early Childhood Education

Analysis requested: ____ PLM

Reling'd by/Signature:

Received by/Signature: Carolyn Yes Co Wes

Project #: 40535.438

Date:___3/31/2021__

X

Date/Time:

Date/Time: 4/1/21 9:41

Email ALL INVOICES to: seattleap@pbsusa.com

Prudy Stoudt-McRae

- E-mail results to:
- Brian Stanford Willem Mager
- I Gregg Middaugh
- □ Mark Hiley
- Tim Ogden

TURN AROUND TIME:

- 1 Hour
- D 2 Hours
- □ 4 Hours

X	24 Hours	ours
	48 Hours	ours

Π

Janet Murphy

Kaitlin Soukup

I Claire Tsai

Holly Tuttle

Mike Smith

Ryan Hunter

Ferman Fletcher

Michelle Dodson

□ 3-5 Days

□ Other

SAMPLE DATA FORM								
Sample #	Material	Location	Lab					
40535.488-1024	Gypsum wallboard/ joint compound***	Room 163 southeast corner	SAT					
40535.488-1025	Gypsum wallboard/ joint compound***	Room 166 south stairs						
40535.488-1026	Gypsum wallboard/ joint compound***	Room 172 northwest corner	1					
40535.488-1027	Gypsum wallboard/ joint compound***	Room 183 north west corner						
40535.488-1028	Gypsum wallboard/ joint compound***	Room 185 southeast corner						
40535.488-2011	Gypsum wallboard/ joint compound***	Room 260 northeast corner						
40535.488-2012	Gypsum wallboard/ joint compound***	Room 264 northeast corner						
40535.488-2013	Gypsum wallboard/ joint compound***	Room 270/271 corridor southeast corner near 269						
40535.488-2014	Gypsum wallboard/ joint compound***	Room 280 northeast corner						
40535.488-2015	Gypsum wallboard/ joint compound***	Room 288 southwest corner						
40535.488-2016	2' x 4' Lay-in-ceiling-tile	Level 2 north E/W hall near art gallery						
40535.488-2017	2' x 4' Lay-in-ceiling-tile	Room 267 Men's restroom	-					
40535.488-2018	2' x 4' Lay-in-ceiling-tile	Level 2 N/S hall near 270	-					
40535.488-2019	2' x 4' Lay-in-ceiling-tile	Level 2 N/S hall near 279						
40535.488-2020	2' x 4' Lay-in-ceiling-tile	Level 2 south E/W hall near 291						

***Composite if positive

14 EAST GALER STREET SUITE 300, SEATTLE, WA 98:02 - 206 233 9639 MAIN - ABC 727,0M0 FAX - 494144 MAIN

Seattle Laboratory: 4500 8th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633,1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

Laij CPA - 40		600/R-93/116;	, Interim Method of the Dete Method for the Determinatio	on of	Asbestos in Bulk Bui	Iding Materials		[PLM] EP
Attn.:	Mr. Gregg Middaugh, Ms. Claire Tsai, Ms. Michelle Dodson	Client:	PBS Engineering and Environmental, Seattle		Address:	214 E Galer Street, Suite	300, S	Seattle, WA 98102
Job#: Samples Rec'd:	40535.438	Batch#: Date Analyzed:	202109795		Date Received: Samples Analyzed:	and the second se	Rev	Code: G565J-1
	Pierce College Early L		4/1/2021	~	a star second	15	1101.	
Project Loc.:	Education	ourning		a	ye			Thing.
			Analyzed by	Caro	lyn Yec	Approved Signalory:	Steve (Fanyao) Zhang, Presiden
Lab ID	Client Sample ID	Layer	Description	1%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibe
Ť	40535.488-1024	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	23	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	27	Cellulose
2	40535.488-1025	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	21	Cellulose
1		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
3	40535.488-1026	1	White powdery material with paint	1	None detected	Binder, Filler, Paint	3	Cellulose
4	40535.488-1027	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	22	Cellulose
	10000.100 1021	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
5	40535.488-1028	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	21	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	28	Cellulose
6	40535.488-2011	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	24	Cellulose
	· · · · · · · · · · · · · · · · · · ·	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	22	Cellulose
7	40535.488-2012	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	23	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
8	40535.488-2013	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	20	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
9	40535.488-2014	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	23	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	26	Cellulose
10	40535.488-2015	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	21	Cellulose
-22		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	23	Cellulose
11	40535.488-2016	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	65	Cellulose

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Foderal government.

[PLM] EPA 40	CFR Appendix E to Subp		ANALYTICAL LAB , Interim Method of the Det Method for the Determination	ermin	ation of Asbestos in I	Bulk Insulation Samples;		[PLM] EPA
Attn.:	Mr. Gregg Middaugh, Ms. Claire Tsai, Ms. Michelle Dodson	Client	PBS Engineering and Environmental, Seattle		Address:	214 E Galer Street, Suite	300, 5	Seattle, WA 98102
Job#:	40535.438	Batch#;	202109795		Date Received:	4/1/2021		
Samples Rec'd:	15	Date Analyzed:	4/1/2021		Samples Analyzed:	15	Rev.	Code: GS65J-)
Project Loc.:	Pierce College Early Le Education	earning		C	she			SZhang
			Analyzed by	Gard	lyn Yeo	Approved Signalory:	Steve (Fanyao) Zhang, President
Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
12	40535.488-2017	1	Gray fibrous material with paint	1	None detected	Paint, Filler, Perlite	66	Cellulose
13	40535.488-2018	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	62	Cellulose
14	40535.488-2019	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	69	Cellulose
15	40535.488-2020	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	64	Cellulose

SEATTLE ASBESTOS TEST, LLC

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

www.seattleasbestostest.com, admin@seattleasbestostest.com

	Gregg Middaugh, Claire Tsai PBS Engineering and Environmental, Seattle	Date Analyzed: Client Job#:	40535,488
Chent.	PBS Engineering and Environmental, Seattle 214 E Galer Street, Suite 300, Seattle, WA 98102	Project Location:	Pierce College Olympic South Emergency Clean Up Floor 1
Address.	98102 206.233.9639	Laboratory batch#:	202110046
Date Report Issued:		Samples Received:	42

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Schang

Steve (Fanyao) Zhang

Approved Signatory





Analysis requested:	PLM	Date: 4/27/2021	
Reling'd by/Signature:		Date/Time:	
Received by/Signature:	Carahgo yea	Date/Time:/>7	12 16
E-mail results to:	Email ALL INVOICES to: sea	ttleap@pbsusa.com	
 Brian Stanford Willem Mager Gregg Middaugh Mark Hiley Tim Ogden Prudy Stoudt-McRae Janet Murphy Kaitlin Soukup Claire Tsai Holly Tuttle Mike Smith Ferman Fletcher Ryan Hunter Michelle Dodson 			
TURN AROUND TIME:	24 Hours 48 Hours	□ 3-5 Days □ Other	
	SAMPLE DATA	FORM	
Sample #	Material	Location	Lab
40535.488-1029	Gypsum wallboard/joint compound	Room 161 East column face	SAT

40535.488-1030	Gypsum wallboard/joint compound	Room 181B Southwest corner
40535.488-1031	Cove base 4" brown vinyl/ brown mastic	Room 166A West wall
40535.488-1032	Cove base 4" tan vinyl/ cream mastic	Room 171 Northeast corner
40535.488-1033	Cove base 4" tan vinyl/ clear mastic	Room 183 North wall
40535.488-1034	Tan carpet Mastic	Room 166 East doorway
40535.488-1035 Tan carpet Mastic/ white leveling compound		Room 168 near West entry
40535.488-1036	Green and tan carpet Mastic	Hall outside room 184
40535.488-1037	Tan Carpet mastic/ concrete	LV1 North hall near center South pillar
40535.488-1038	Vinyl woven wallpaper	Room 161South column face

214 EAST GALER STREET, SUITE 300, SEATTLE, WA 98102 * 206.233.9639 MAIN * 865.727.0140 FAX * PBSUSA.COM

20211046-an



LABORATORY CHAIN OF CUSTODY

40535.488-1039	Grey sheet vinyl flooring jute backing/ tan Mastic/ white leveling compound	Room 168 West entry way
40535.488-1040	Fiberglass foil cover	Room 165 straight run above LICT
40535.488-1041	Fiberglass woven wrap	Northwest hall outside RM 168 above LCT
40535.488-1042	Fiberglass duct foil cover	West hall outside RM 170 above LCT
40535.488-1043	Fiberglass foil cover duct wrap	Room 181 South wall
40535.488-1044	Fiberglass duct wrap	Room 185 East wall large duct
40535.488-1045	Vibration Cloth- lower cloth	Mech room 173 lower duct Southwest ducting
40535.488-1046	Soft grey duct sealant	Northwest hall outside RM 168 above drop ceiling
40535.488-1047	Soft white duct seam sealant	West hall outside RM 184 above drop ceiling
40535.488-1048	Hard white Duct sealant	Room 185 into East wall duct penetration
40535.488-1049	Grey duct seam sealant	Mech room 173 Southwest ducting
40535.488-1050	Clear subgrade conduit penetration	Mech room 173 West wall
40535.488-1051	Soft beige window Sealant	North hall West interior window between frame and floor
40535.488-1052	Soft grey window Sealant	Room 168 interior between window and frame
40535.488-1053	Soft black window Sealant	Room 181 Interior window between window and frame
40535.488-1054	White caulk	Room 164 East wall backsplash
40535.488-1055	Red fire stop	Room 160 Northeast column
40535.488-1056	Red fire stop	Room 160 Northeast column
40535.488-1057	1" tan ceramic floor tile/ grey grout	Room 165 Northeast floor
40535.488-1058	3" white ceramic covebase tile/ grey grout	
40535.488-1059	Sound dampening panel	Room 181 East end on ceiling
40535.488-1060	Hard mudded fitting	Room 165 T-connection above ceiling
40535.488-1061	Hard mudded fitting	Northwest hall outside RM 168 above ceiling
40535.488-1062	Floor concrete	Room 001 Southeast near column
40535.488-1063	Floor concrete	Room 166A East area
40535.488-1064	Floor concrete	North hall outside RM 180
40535.488-1065	Waffle ceiling concrete	Room 172 between column and ceiling
40535.488-1066	Waffle ceiling concrete	Room 181 West ceiling
40535.488-1067	Waffle ceiling concrete	Room 185 Southwest ceiling
40535.488-1068	Black sink undercoat	Room 164 East wall
40535.488-1069	Vinyl woven wallpaper	Room 161South column face
40535.488-1070	Grey sheet vinyl flooring jute backing/ tan Mastic/ white leveling compound	Room 168 West entry way

214 EAST GALER STREET, SUITE 300, SEATTLE, WA 98102 * 206.233.9639 MAIN * 866.727.0140 FAX * PESUSA.COM

Scattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

ANALYTICAL LABORATORY REPORT

[PLM] EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Address: 214 E Galer Street, Suite 300, Seattle, WA 98102

Date Roceived: 4/27/2021

Samples Analyzed: 42

Attn.:	Gregg Middaugh, Claire Tsai	Client:	PBS Engineering and Environmental, Seattle
	40535.488	Batch#:	202110046
Samples Rec'd:	42	Date Analyzed:	4/28/2021
	and a second		

Project Loc.: Pierce College Olympic South Emergency Clean Up Floor 1

Analyzed by: Xingping Lin

	The second se	-	
Approved Signatory:	Steve (Fanyao) Zhang,	President

Rev.code:AJ340

SZhang

[PLM]

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
	40535.488 -1029	1	White powdery material with paper	2	Chrysotile	Binder/filler, Paint	35	Cellulose
1	Composite result <1%	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose, Glass fibers
2	40535.488	1	White powdery material with paint and paper		None detected	Binder/filler, Paint	35	Cellulose
2	-1030	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose, Glass fibers
	40535.488	1	Brown rubbery material		None detected	Rubber/binder	2	Cellulose
3	-1031	2	Brown mastic		None detected	Mastic/binder	2	Cellulose
		1	Tan rubbery material		None detected	Rubber/binder	2	Cellulose
4	40535.488	2	Cream mastic		None detected	Mastic/binder	3	Cellulose
4 -1032	3	Trace white powdery material with paint		None detected	Binder/filler, Paint	4	Cellulose	
5 40535.488	1	Tan rubbery material		None detected	Rubber/binder	2	Cellulose	
	40535.488 -1033	2	Cream mastic		None detected	Mastic/binder	3	Cellulose
		3	Brown woven fibrous material		None detected	Filler, Binder	85	Synthetic fiber
	102.22	1	Tan mastic		None detected	Mastic/binder	3	Cellulose
6	40535.488 -1034	2	Trace gray brittle material		None detected	Filler, Binder	2	Cellulose
		3	White brittle material		None detected	Filler, Binder	2	Cellulose
		1	Trace clear woven fibrous material		None detected	Filler, Binder	83	Synthetic fiber
7	40535.488 -1035	2	Tan mastic		None detected	Mastic/binder	3	Cellulose
		3	Trace white brittle material		None detected	Filler, Binder	2	Cellulose
8	40535.488 -1036	1	Green/tan mastic		None detected	Mastic/binder	3	Cellulose
~	40535.488	1	Tan mastic		None detected	Mastic/binder	2	Cellulose
9	-1037	2	Trace gray brittle material		None detected	Filler, Binder	3	Cellulose
10	40535.488	1	Tan vinly with paint		None detected	Vinyl/binder, Paint	2	Cellulose
10	-1038	2	White woven fibrous material		None detected	Filler, Binder	79	Cellulose

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

Disclaimer. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

ANALYTICAL LABORATORY REPORT

[PLM] EPA - 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Address: 214 E Galer Street, Suite 300, Seattle, WA 98102

Date Received: 4/27/2021

Samples Analyzed: 42

Attn.:	Gregg Middaugh, Claire Tsai	Client:	PBS Engineering and Environmental, Seattle
Job#:	40535.488	Batch#:	202110046
Samples Rec'd:	42	Date Analyzed:	4/28/2021
	Pierce College Olyn	npic South	

Project Loo.: Emergency Clean Up Floor 1

Analyzed by: Xingping Lin

Schang

Rev.code:AJ340

[PLM]

Approved Signatory: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers	
10	40535.488 -1038	3	White mastic		None detected	Mastic/binder	3	Cellulose	
		1	Gray sheet vinyl		None detected	Vinyl/binder		None detected	
		2	Tan mastic		None detected	Mastic/binder	2	Cellulose	
11	40535.488 -1039	3	Tan woven fibrous material		None detected	Filler, Binder	83	Synthetic fibers	
		4	Clear mastic		None detected	Mastic/binder	2	Cellulose	
		5	Trace gray/white brittle material		None detected	Filler, Binder	3	Cellulose	
		1	Silver foil		None detected	Foil/binder		None detected	
12	40535.488 -1040	2	White paper with mastic and woven fibrous material		None detected	Filler, Mastic/binder	68	Cellulose, Glass fibers	
		3	Yellow fibrous material		None detected	Filler	90	Glass fibers	
13 40535.48 -1041			1	White brittle material with woven fibrous material		None detected	Filler, Binder	19	Synthetic fibers
	40535.488 -1041	2	Silver foil		None detected	Foil/binder		None detected	
		3	White paper with mastic and woven fibrous material		None detected	Filler, Mastic/binder	67	Cellulose, Glass fibers	
		4	Yellow fibrous material		None detected	Filler	88	Glass fibers	
		1	Silver foil		None detected	Foil/binder		None detected	
14	40535.488 -1042	2	Tan paper with mastic and woven fibrous material		None detected	Filler, Mastic/binder	69	Cellulose, Glas fibers	
		3	Yellow fibrous material		None detected	Filler	89	Glass fibers	
		1	White brittle material with woven fibrous material		None detected	Filler, Binder	21	Cellulose, Glas fibers	
15	40535.488	2	Silver foil		None detected	Foil/binder		None detected	
12	-1043	3	Tan paper with mastic and woven fibrous material		None detected	Filler, Mastic/binder	67	Cellulose, Glas fibers	
		4	Yellow fibrous material		None detected	Filler	91	Glass fibers	

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

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ANALYTICAL LABORATORY REPORT

[PLM] EPA - 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

----Suite 300, Seattle, WA 98102

		El n uvunt our			
Attn.:	Gregg Middaugh, Claire Tsal	Client:	PBS Engineering and Environmental, Seattle	Address:	214 E Galer Street, Suit
Job#:	40535.488	Batch#:	202110046	Date Received:	4/27/2021
Samples Rec'd:		Date Analyzed:	4/28/2021	Samples Analyzed:	42
Project Loc.:	Pierce College Olyn Emergency Clean U	npic South Ip Floor 1	Analyzed by:	- Kingping Lin	Approved Signation

Schang atory: Steve (Fanyao) Zhang, President

Rev.code:AJ340

[PLM]

Analyzed by: Kingping Lin

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers	
16		1	Tan brittle material with woven fibrous material		None detected	Filler, Binder	18	Cellulose, Glass fibers	
	40535.488	2	Silver foil		None detected	Foil/binder	11	None detected	
	-1044	3	Tan paper with mastic and woven fibrous material		None detected	Filler, Mastic/binder	69	Cellulose, Glass fibers	
		4	Yellow fibrous material		None detected	Filler	89	Glass fibers	
17	40535.488 -1045	1	White/gray fibrous material	61	Chrysotile	Binder/filler	26	Cellulose	
18	40535,488 -1046	1	Soft gray soft/elastic material		None detected	Binder, Filler	4	Cellulose	
19	40535.488 -1047	1	Soft white soft/elastic material		None detected	Binder, Filler	3	Cellulose	
1.2.1	40535.488	1	Hard white brittle material with paint		None detected	Filler, Binder, Paint	2	Cellulose	
20	-1048	2	White paper		None detected	Filler	75	Cellulose	
21	40535.488	1	Gray soft material		None detected	Filler, Binder	3	Cellulose	
22	40535.488 -1050	1	Clear soft/elastic material		None detected	Binder, Filler	2	Cellulose	
23	40535.488 -1051	1	Soft beige soft/elastic material		None detected	Binder, Filler	4	Cellulose	
24	40535.488	1	Soft gray soft/elastic material	1	None detected	Binder, Filler	3	Cellulose	
25	40535.488 -1053	1	Soft black soft/elastic material		None detected	Binder, Filler	3	Cellulose	
26	40535,488	1	White soft/elastic material		None detected	Binder, Filler	2	Cellulose	
27	40535.488 -1055	1	Red soft/elastic material		None detected	Binder, Filler	5	Cellulose	
	-1000		1	Red soft/elastic material		None detected	Binder, Filler	4	Cellulose
28	40535.488	2 Tr	Trace white brittle material		None detected	Filler, Binder	2	Cellulose	
	-1000		3	Trace gray fibrous material		None detected	Binder/filler	65	Cellulose
29	40535.488 -1057		1	Tan ceramic		None detected	Ceramic/binder		None detected
		2	Gray brittle/sandy material		None detected	Binder, Sand	2	Cellulose	
		3	Clear mastic		None detected	Mastic/binder	2	Cellulose	
30	40535.488 -1058	1	White ceramic		None detected	Ceramic/binder		None detected	

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

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ANALYTICAL LABORATORY REPORT

[PLM] EPA - 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Address: 214 E Galer Street, Suite 300, Seattle, WA 98102

Attn.:	Gregg Middaugh, Claire Tsai	Client	PBS Engineering and Environmental, Seattle
Job#:	40535.488	Batch#:	202110046
Samples Rec'd:	42	Date Analyzed:	4/28/2021

Date Received: 4/27/2021 Samples Analyzed: 42

Rev.code:AJ340 Schang

Approved Signatory: Steve (Fanyeo) Zhang, Prosident

[PLM]

Pierce College Olympic South Project Loc.: Emergency Clean Up Floor 1

Analyzed by: Xingping Lin

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
30 40535.488 -1058	2	Gray brittle/sandy material		None detected	Binder, Sand	2	Cellulose	
	3	Clear mastic		None detected	Mastic/binder	3	Cellulose	
31	40535.488 -1059	1	White woven fibrous material		None detected	Filler, Binder	85	Synthetic fibers
32 40535.488 -1060	1	White powdery material with woven fibrous material		None detected	Binder/filler	35	Cellulose, Glas fibers	
		2	Gray foamy material		None detected	Synthetic foam		None detected
33	40535.488 -1061	1	White powdery material with woven fibrous material and paint		None detected	Binder/filler, Paint	36	Cellulose, Glas fibers
		2	Gray foamy material		None detected	Synthetic foam		None detected
34	40535.488 -1062	1	Gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
35	40535.488 -1063	1	Gray sandy/brittle material	1	None detected	Sand, Filler, Binder	2	Cellulose
36	40535.488 -1064	1	Gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
37	40535.488 -1065	1	Gray/tan sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
38	40535.488 -1066	1	Gray/tan sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
39	40535.488 -1067	1	Gray/tan sandy/brittle material		None detected	Sand, Filler, Binder	2	Cellulose
40	40535.488 -1068	1	Black soft/loose material	3		Filler, Fine particles	5	Cellulose
					None	the second second	10	Ortholese

10	-1068		material			-		
41		1	Tan vinly with paint	None detected	Vinyl/binder, Paint	2	Cellulose	
	40535.488	-1069 2	White woven fibrous material	None detected	Filler, Binder	78	Cellulose	
	1000		White mastic	None detected	Mastic/binder	3	Cellulose	
			1	Gray sheet vinyl	None detected	Vinyl/binder		None detected
42	40535.488 -1070	2	Tan mastic	None Mastic/binder	2	Cellulose		
		3	Tan woven fibrous material	None detected	Filler, Binder	84	Synthetic fibers	

4 of 5

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ANALYTICAL LABORATORY REPORT

[PLM] EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

[PLM]

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Attn.:	Gregg Middaugh, Claire Tsai	Client:	PBS Engineering and Environmental, Seattle	Address:	214 E Galer Street, Suite	300, Seattle, WA 98102	
Job#:	40535.488	Batch#:	202110046	Date Received:	4/27/2021		
Samples Rec'd:	42	Date Analyzed:	4/28/2021	Samples Analyzed:	42	Rev.code:AJ340	
Project Loc.:	Pierce College Olyr Emergency Clean L	npic South		M		SZhang	
			Analyzed by: X	ingpingkin	Approved Signatory:	Steve (Fanyao) Zhang, President	
		1	1 .	A A A A A A A A A A A A A A A A A A A	No. Shawa Componente	V Non asherine Eihors	

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-aspestos Fibers
42	40535.488	4	Clear mactic	None detected	Mastic/binder	3	Cellulose	
	-1070	5	Trace gray/white brittle material		None detected	Filler, Binder	2	Cellulose

5 of 5

SEATTLE ASBESTOS TEST, LLC

Seallie Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

www.seattlivesbestostest.com, admin@seattleasbestostest.com

Project Manager: Mr. Grogg Middaugh, Ms. Claire Tsai Client: PBS Engineering and Environmental Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 206.233.9639 Date Report issued: 5/12/2021 Date Analyzed: 5/12/2021 Client Jobii: 40535,488 Project Location: Pierce College Olympic South Emergency Clean up Floor 1 Laboratory batch#: 202110170 Samples Received: 13

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

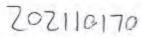
The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincernly

Steve (Fanyao) Zhang Approved Signatory



PBS

LABORATORY CHAIN OF CUSTODY

Project: Pierce College Olym	pic South Emergency Clean Up Floor 1	_Project #:40535.488
Analysis requested:	PLM	Date: 5/11/2021
Relinq'd by/Signature:	untsai	Date/Time: 5/11/2021
Received by/Signature: Car	ory yeo Gyle	Date/Time: 5/11/2/ 16:20
	Email ALL INVOICES to: seattleap@	pbsusa.com
E-mail results to:		
Brian Stanford	Prudy Stoudt-McRae	Mike Smith
Willem Mager	Janet Murphy	Ferman Fletcher
Gregg Middaugh	Kaitlin Soukup	Ryan Hunter
Mark Hiley	🔀 Claire Tsai	Michelle Dodson
Tim Ogden	Holly Tuttle	ā
TURN AROUND TIME:		
1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours	Ame 12, 12, 18,	

SAMPLE DATA FORM									
Sample #	Material	Location	Lab						
40535.488-1071	Door core	Room 181A-2 5 foot wood door							
40535.488-1072	Gypsum wallboard, joint compound	Room 161 south central column							
40535.488-1073	Gypsum wallboard, joint compound	Room 163 north wall							
40535.488-1074	Gypsum wallboard, joint compound	Room 164 southeast column							
40535.488-1075	Gypsum wallboard, joint compound	Room 166A west wall north column							
40535.488-1076	Gypsum wallboard, joint compound	Room 168 south central column							
40535.488-1077	Gypsum wallboard, joint compound	Room 169 west wall	1						
40535.488-1078	Gypsum wallboard, joint compound	Room 169 south column							
40535.488-1079	Gypsum wallboard, joint compound	Room 170 south wall							
40535.488-1080	Gypsum wallboard, joint compound	Room 170 north column							
40535.488-1081	Gypsum wallboard, joint compound	Room 171 west wall							
40535.488-1082	Gypsum wallboard, joint compound	Room 172 west wall							
40535.488-1083	Gypsum wallboard, joint compound	Room 172 west column	-						

214 EAST GALER STREET, SUITE 300, SEATTLE, WA 98102 + 205 223,9639 MAIN + 866.727.0140 FAX + P85USA.COM

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 96105, Tel: 205.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

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ANALYTICAL LABORATORY REPORT [PLM] EPA - 48 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; (PLM) EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials Client: PBS Engineering and Mr. Gregg Middaugh. Attn. Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Ms. Claire Tsai. Environmental, Seattle Jeb# 40535,488 Batch#: 202110170 Date Received: 5/11/2021 Date Analyzed: 5/12/2021 Samples Rec'd: 13 Samples Analyzed: 13 Pierce College Olympic South Project Loc. 22 hours Emergency Clean up Floor 1 Approved Segunary Steve (Faryes) Zhann President Analyzed by LAb ID Clienti Sample (D Labyer Description Asbestos Fibers Non-asbestos Fibers Non-fibrous Components 14 46 None 1 40535.488-1071 1 Brown wood debris Wood debris 6 Cellulose detected White powdery None 1 Binder, Filler Cellulose 2 material detected 2 40535.488-1072 White chalky None Binder/filler. 2 24 Cellulose material with paper detected Gvpsum/binder Trace white None 1 Binder, Filler 2 Cellulose powdery material detected 3 40535.488-1073 White chalky None Binder/filler, Cellulose, Glass 2 27 material with paper detected Gypsum/binder fibers Trace white None 1 Binder, Filler 3 Cellulose powdery material detected 4 40535.488-1074 White chalky None Binder/filler, Cellulose, Glass 2 25 material with paper detected Gypsum/binder fibers White powdery None 1 material with trace 20 Binder, Filler, Paint Cellulose detected 5 40535.488-1075 paint and paper White chalky None Binder/filler. Cellulose, Glass 2 28 material with paper detected Gypsum/binder fibers Trace white None 1 Binder, Filler 3 Cellulose powdery material detected 6 40535.488-1076 White chalky None Binder/filler. Cellulose, Glass 2 21 material with paper detected Gypsum/binder fibers Trace white None 1 Binder, Filler 2 Cellulose powdery material detected 7 40535.488-1077 White chalky None Binder/filler, Cellulose, Glass 2 26 material with paper Gypsum/binder detected fibers Trace white None 1 Binder, Filler 2 Cellulose powdery material detected 8 40535.488-1078 White chalky None Binder/filler, Cellulose, Glass 2 24 detected Gypsum/binder material with paper fibers Trace white None 1 Binder, Filler 3 Cellulose detected powdery material 9 40535,488-1079 White chalky None Binder/filler, Cellulose, Glass 2 27 detected Gypsum/binder material with paper fibers White powdery None 1 Binder, Filler 3 Cellulose material detected 10 40535.488-1080 White chalky None Binder/filler, Cellulose, Glass 2 21 material with paper detected Gypsum/binder fibers Trace white None 1 Binder, Filler Cellulose 2 powdery material detected 40535,488-1081 11 White chalky None Binder/filler. Cellulose, Glass 2 20 material with paper detected Gypsum/binder fibers Trace white None 1 Binder, Filler 2 Cellulose powdery material detected 12 40535.488-1082 White chalky None Binder/filler. Cellulose, Glass 2 22 material with paper detected Gypsum/binder fibers White powdery None 13 40535.488-1083 1 Cellulose Binder, Filler 21

material with paper

detected

Snallie Laboratory: 4500 9th Ave. NE, Suile 300, Seattle, WA 98105, Tel: 206.633,1111, Fax: 206.633,4747, NVLAP Lab Code: 201057-0

material with paper

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ANALYTICAL LABORATORY REPORT

[PLM] EPA - 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Deter nination of Asbestos in Bulk Insulation Sa IPLMI EPA

and the second second		600/R-93/116:	Method for the Determination of	f Asbestos in Bulk Bui	Iding Materials	freaters.
Atta:	Mr. Gregg Middaugh, Ms. Claire Tsai	Cliset:	PBS Engineering and Environmental, Seattle	Address:	214 E Galer Street, Suite 300, Seattle, V	WA 98102
Autor	40535.488	Batchil;	202110170	Date Received:	5/11/2021	
Samples Rec'd:	13	Date Analyzed;	5/12/2021	Samples Analyzed:	13	

Date Analyzed: 5/12/2021 Samples Reck: 13

Pierce College Olympic South Emergency Clean up Floor 1 Project Los

Lab (D

13

a she

detected

Gypsum/binder

Chang

fibers

	Analyzed by:	Analyzed by: Carolyn Yea			Approved Signalary: Sileve (Famula) Zhang, Prinskanit		
Client Sample ID	Layer	Description	5	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
40535.488-1083	2	White chalky		None	Binder/filler,	25	Cellulose, Glass

SEATTLE ASBESTOS TEST, LLC

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

www.seattleasbestostest.com, admin@seattleasbestostest.com

Project Manager	Gregg Middaugh, Claire Tsai, Mike Smith,	Date Analyzed:	6/21/2021
	Femian Fletoner, Michelie Douson	Client Job#:	
Address:	PBS Engineering and Environmental, Seattle 214 E Galer Street, Suite 300, Seattle, WA 98102	Project Location:	Pierce College olympic South Abatement and Repairs
Tel·	206.233.9639	Laboratory batch#:	202110486
Date Report Issued:		Samples Received:	14

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

SZhang

Steve (Fanyao) Zhang

Approved Signatory



LABORATORY CHAIN OF CUSTODY

Project: Pierce College Olympic South	Abatement and Repairs	Project #: 40535.488
Analysis requested:PLM	Jai	Date: 06/18/2021 Date/Time: 6/18/21
Relinq'd by/Signature: Convoly, Yes	G Yeo	Date/Time: 6/21/21 10:30
	LL INVOICES to: seattleap@p	
E-mail results to: Willem Mager Gregg Middaugh Mark Hiley Tim Ogden Ryan Hunter Prudy Stoudt-McRae	 Janet Murphy Kaitlin Soukup Allison Welch Toan Nguyen Peter Stensland Claire Tsai 	 Holly Tuttle Mike Smith Ferman Fletcher Cameron Budnick Michelle Dodson
TURN AROUND TIME: 1 Hour 2 Hours 4 Hours	24 Hours 48 Hours	3-5 Days Other

SAMPLE DATA FORM								
Sample #	Material	Location	Lab					
40535.488-1084	Gypsum wallboard, joint compound	East Entrance						
40535.488-1085	Gypsum wallboard, joint compound	West Entrance						
40535.488-1086	Gypsum wallboard, joint compound	Room 160 southeast corner						
40535.488-1087	Gypsum wallboard, joint compound	Room 161 east entrance						
40535.488-1088	Gypsum wallboard, joint compound	Room 161A East						
40535.488-1089	Gypsum wallboard, joint compound	Room 161 SW corner						
40535.488-1090	Gypsum wallboard, joint compound	Room 161B West						
40535.488-1091	Gypsum wallboard, joint compound	Room 168 SE						
40535.488-1092	Gypsum wallboard, joint compound	Room 173 West entrance						
40535.488-1093	Gypsum wallboard, joint compound	Column by room 180						
40535.488-1094	Gypsum wallboard, joint compound	Column across from room 181						
40535.488-1095	Gypsum wallboard, joint compound	Room 181 North Central						
40535.488-1096	Gypsum wallboard, joint compound	Room 181A NE corner						
40535.488-1097	Gypsum wallboard, joint compound	Room 181A-2 NW						

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ANALYTICAL LABORATORY REPORT

[PLM] EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

	Gregg Middaugh, Claire Tsai, Mike Smith, Ferman Fletcher, Michelle	Client:	PBS Engineering and Environmental, Seattle	Address:	214 E Galer Street, Suite	300, Seattle, WA 98102
Job#; Samples Rec'd:	Dodson 40535.488	Batch#: Date Analyzed:	202110486 6/21/2021	Date Received: Samples Analyzed:		
	Pierce College olymn	bic South airs	Analyzed by:		Approved Signatory:	SZhang Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
		1	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	34	Cellulose
1	40535.488 -1084	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	27	Cellulose, Glass fibers
		3	Gray foamy material		None detected	Synthetic foam		None detected
		1	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	35	Cellulose
2	40535.488 -1085	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
		3	Gray foamy material		None detected	Synthetic foam		None detected
		1	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	35	Cellulose
3	40535.488 -1086	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
		3	Gray foamy material		None detected	Synthetic foam		None detected
4	40535.488	1	White powdery material with paint and paper		None detected	Binder/filler, Paint	36	Cellulose
	-1087	2	Gray foamy material		None detected	Synthetic foam		None detected
		1	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	36	Cellulose
5	40535.488 -1088	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
		3	Gray foamy material		None detected	Synthetic foam		None detected
		1	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	34	Cellulose
6	40535.488 -1089	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
		3	Gray foamy material		None detected	Synthetic foam		None detected
7	40535.488	1	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	34	Cellulose
	-1090	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	26	Cellulose

1 of 3

[PLM]

Seattle Laboratory: 4500 9th Ave. NE, Sulte 300, Seattle, WA 98105, Tel: 206.633,1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

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ANALYTICAL LABORATORY REPORT

[PLM] EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Attn.:	Gregg Middaugh, Claire Tsai, Mike Smith, Ferman Fletcher, Michelle Dodson	Client:	Environmental, Seattle		Address:		300, S	eattle, WA 98102
Job#:	40535.488	Batch#:	202110486		Date Received:	Distance of the second		
Samples Rec'd:	14	Date Analyzed:	6/21/2021		Samples Analyzed:	14		. A LEVIL
Project Loc.:	Pierce College olym	pic South			N-			Thang
Project Book	Abatement and Rep	airs	Analyzed by:	Xing	bing List	Approved Signatory:	Steve (Fanyao) Zhang, President
Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
7	40535.488	3	Gray foamy material		None detected	Synthetic foam		None detected
		1	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	33	Cellulose
В	40535.488 -1091	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	26	Cellulose
		3	Gray foamy material		None detected	Synthetic foam		None detected
		1	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	36	Cellulose
9	40535.488 -1092	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	26	Cellulose
		3	Gray foamy material	1	None detected	Synthetic foam		None detected
		1	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	34	Cellulose
10	40535.488 -1093	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	23	Cellulose
		3	Gray foamy material	1	None detected	Synthetic foam	-	None detected
	1000001000	1	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	33	Cellulose
11	40535.488 -1094	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
1 == 2		3	Gray foamy material		None detected	Synthetic foam		None detected

			and paper	1	1.	1	-	
12	40535.488 -1095	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
		3	Gray foamy material		None detected	Synthetic foam		None detected
		1	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	35	Cellulose
13	40535.488 -1096	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
		3	Gray foamy material		None detected	Synthetic foam		None detected

2 Chrysotile

White powdery

1

material with paint

Cellulose

36

Binder/filler, Paint

[PLM]

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

3

material

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ANALYTICAL LABORATORY REPORT

[PLM]

fibers

[PLM] EPA - 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Attn.:	Gregg Middaugh, Claire Tsai, Mike Smith, Ferman Fletcher, Michelle	Client:	PBS Engineering and Environmental, Seattle		Address:	214 E Galer Street, Suite	300, S	eattle, WA 98102
Job#: Samples Rec'd:	Dodson 40535.488 14	Batch#: Date Analyzed:			Date Received: Samples Analyzed:			
Project Loc.:	Pierce College olym Abatement and Rep	pic South pairs	Analyzed by:	Xing	ping Lin	Approved Signatory:	Steve (SZhang Fanyao) Zhang, President
Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
		1	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	37	Cellulose
14	40535.488 -1097	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
		3	Gray foamy		None	Synthetic foam		Cellulose, Glass

detected

. 3 of 3

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PLM by Point Count (400 points)

		Client Job #:	40535.488	
Attention.	Gregg Middaugh, Claire Tsai, Mike Smith, Ferman Fletcher, Michelle Dor	Laboratory Batch #:	202110498	
	PBS Engineering and Environmental, Seattle	Date Received:	6/22/2021	
	214 E Galer Street, Suite 300, Seattle, WA 98102	Samples Received:	13	
Addiess.		Date Analyzed:	6/22/2021	

Project: Pierce College olympic South Abatement and Repairs

Sample Requested for Point Count 40535.488 -1084

Previous Analytical Information

Previously Analyzed by: Xingping Lin Previous Batch #: 202110486 Previous Lab ID: 1 Previous Description: White powdery material with paint and paper Layer to be Point Counted: 1 Asbestos Type Found: Chrysotile Asbestos Percentage Found: 2

Point Count Analytical Procedures

New Lab ID: 1

	Asbestos Points	Non-Asbestos Points	Total Points Counted
Slide 1	0	50	50
Slide 2	0	50	50
Slide 3	1	49	50
Slide 4	0	50	50
Slide 5	0	50	50
Slide 6	0	50	50
Slide 7	0	50	50
Slide 8	0	50	50
Total	1	399	400

Point Count Summary Results

Type of Asbestos: Chrysotile Percentage of Asbestos: 0.25%

Analyzed By: Xingping Lin

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PLM by Point Count (400 points)

		Client Job #:	40535,488	
Attention:	Gregg Middaugh, Claire Tsai, Mike Smith, Ferman Fletcher, Michelle Doc	Laboratory Batch #:	202110498	
	PBS Engineering and Environmental, Seattle	Date Received:	6/22/2021	
	214 E Galer Street, Suite 300, Seattle, WA 98102	Samples Received:	13	
Address.		Date Analyzed:	6/22/2021	

Project: Pierce College olympic South Abatement and Repairs

Sample Requested for Point Count 40535.488 -1085

Previous Analytical Information

Previously Analyzed by: Xingping Lin Previous Batch #: 202110486 Previous Lab ID: 2 Previous Description: White powdery material with paint and paper Layer to be Point Counted: 1 Asbestos Type Found: Chrysotile Asbestos Percentage Found: 2

Point Count Analytical Procedures

New Lab ID: 2

	Asbestos Points	Non-Asbestos Points	Total Points Counted
Slide 1	0	50	50
Slide 2	1	49	50
Slide 3	0	50	50
Slide 4	0	50	50
Slide 5	0	50	50
Slide 6	0	50	50
Slide 7	0	50	50
Slide 8	0	50	50
Total	1	399	400

Point Count Summary Results

Type of Asbestos: Chrysotile Percentage of Asbestos: 0.25%

Analyzed By: Xingping Lin

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PLM by Point Count (400 points)

		Client Job #:	40535.488	
Attention:	Gregg Middaugh, Claire Tsai, Mike Smith, Ferman Fletcher, Michelle Dor	Laboratory Batch #:	202110498	
	PBS Engineering and Environmental, Seattle	Date Received:	6/22/2021	
	214 E Galer Street, Suite 300, Seattle, WA 98102	Samples Received:	13	
1001000.		Date Analyzed:	6/22/2021	

Project: Pierce College olympic South Abatement and Repairs

Sample Requested for Point Count 40535.488 -1086

Previous Analytical Information

Previously Analyzed by: Xingping Lin Previous Batch #: 202110486 Previous Lab ID: 3 Previous Description: White powdery material with paint and paper Layer to be Point Counted: 1 Asbestos Type Found: Chrysotile Asbestos Percentage Found: 2

Point Count Analytical Procedures

New Lab ID: 3

	Asbestos Points	Non-Asbestos Points	Total Points Counted
Slide 1	1	49	50
Slide 2	0	50	50
Slide 3	0	50	50
Slide 4	1	49	50
Slide 5	0	50	50
Slide 6	0	50	50
Slide 7	0	50	50
Slide 8	0	50	50
Total	2	398	400

Point Count Summary Results

Type of Asbestos: Chrysotile Percentage of Asbestos: 0.5%

Analyzed By: Xingping Lin

NVLAP Accreditation Lab Codes: 200768 and 201057

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PLM by Point Count (400 points)

		Client Job #:	40535.488	
Attention:	Gregg Middaugh, Claire Tsai, Mike Smith, Ferman Fletcher, Michelle Dor	Laboratory Batch #:	202110498	
	PBS Engineering and Environmental, Seattle	Date Received:	6/22/2021	
	214 E Galer Street, Suite 300, Seattle, WA 98102	Samples Received:	13	
Address.		Date Analyzed:	6/22/2021	

Project: Pierce College olympic South Abatement and Repairs

Sample Requested for Point Count 40535.488 -1088

Previous Analytical Information

Previously Analyzed by: Xingping Lin Previous Batch #: 202110486 Previous Lab ID: 5 Previous Description: White powdery material with paint and paper Layer to be Point Counted: 1 Asbestos Type Found: Chrysotile Asbestos Percentage Found: 2

Point Count Analytical Procedures

New Lab ID: 4

	Asbestos Points	Non-Asbestos Points	Total Points Counted
Slide 1	0	50	50
Slide 2	0	50	50
Slide 3	1	49	50
Slide 4	0	50	50
Slide 5	0	50	50
Slide 6	1	49	50
Slide 7	0	50	50
Slide 8	0	50	50
Total	2	398	400

Point Count Summary Results

Type of Asbestos: Chrysotile Percentage of Asbestos: 0.5%

Analyzed By: Xingping Lin

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PLM by Point Count (400 points)

		Client Job #:	40535.488	
Attention:	Gregg Middaugh, Claire Tsai, Mike Smith, Ferman Fletcher, Michelle Doc	Laboratory Batch #:	202110498	
	PBS Engineering and Environmental, Seattle	Date Received:	6/22/2021	
	214 E Galer Street, Suite 300, Seattle, WA 98102	Samples Received:	13	
Audicos.		Date Analyzed:	6/22/2021	

Project: Pierce College olympic South Abatement and Repairs

Sample Requested for Point Count 40535.488 -1089

Previous Analytical Information

Previously Analyzed by: Xingping Lin Previous Batch #: 202110486 Previous Lab ID: 6 Previous Description: White powdery material with paint and paper Layer to be Point Counted: 1 Asbestos Type Found: Chrysotile Asbestos Percentage Found: 2

Point Count Analytical Procedures

New Lab ID: 5

	Asbestos Points	Non-Asbestos Points	Total Points Counted
Slide 1	1	49	50
Slide 2	0	50	50
Slide 3	0	50	50
Slide 4	0	50	50
Slide 5	0	50	50
Slide 6	0	50	50
Slide 7	1	49	50
Slide 8	0	50	50
Total	2	398	400

Point Count Summary Results

Type of Asbestos: Chrysotile Percentage of Asbestos: 0.5%

Analyzed By: Xingping Lin

Reviewed by: Steve Zhang, President

5 of 13

1.1

NVLAP Accreditation Lab Codes: 200768 and 201057

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PLM by Point Count (400 points)

		Client Job #:	40535.488
Attention:	Gregg Middaugh, Claire Tsai, Mike Smith, Ferman Fletcher, Michelle Doc	Laboratory Batch #:	202110498
	PBS Engineering and Environmental, Seattle	Date Received:	6/22/2021
	214 E Galer Street, Suite 300, Seattle, WA 98102	Samples Received:	13
11001000		Date Analyzed:	6/22/2021

Project: Pierce College olympic South Abatement and Repairs

Sample Requested for Point Count 40535.488 -1090

Previous Analytical Information

Previously Analyzed by: Xingping Lin Previous Batch #: 202110486 Previous Lab ID: 7 Previous Description: White powdery material with paint and paper Layer to be Point Counted: 1 Asbestos Type Found: Chrysotile Asbestos Percentage Found: 2

Point Count Analytical Procedures

New Lab ID: 6

	Asbestos Points	Non-Asbestos Points	Total Points Counted
Slide 1	0	50	50
Slide 2	0	50	50
Slide 3	1	49	50
Slide 4	0	50	50
Slide 5	0	50	50
Slide 6	1	49	50
Slide 7	0	50	50
Slide 8	0	50	50
Total	2	398	400

Point Count Summary Results

Type of Asbestos: Chrysotile Percentage of Asbestos: 0.5%

Analyzed By: Xingping Lin

NVLAP Accreditation Lab Codes: 200768 and 201057

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PLM by Point Count (400 points)

		Client Job #:	40535.488	
Attention:	Gregg Middaugh, Claire Tsai, Mike Smith, Ferman Fletcher, Michelle Dor	Laboratory Batch #:	202110498	
	PBS Engineering and Environmental, Seattle	Date Received:	6/22/2021	
	214 E Galer Street, Suite 300, Seattle, WA 98102	Samples Received:	13	
Audi 033.		Date Analyzed:	6/22/2021	

Project: Pierce College olympic South Abatement and Repairs

Sample Requested for Point Count 40535.488 -1091

Previous Analytical Information

Previously Analyzed by: Xingping Lin Previous Batch #: 202110486 Previous Lab ID: 8 Previous Description: White powdery material with paint and paper Layer to be Point Counted: 1 Asbestos Type Found: Chrysotile Asbestos Percentage Found: 2

Point Count Analytical Procedures

New Lab ID: 7

	Asbestos Points	Non-Asbestos Points	Total Points Counted
Slide 1	0	50	50
Slide 2	0	50	50
Slide 3	0	50	50
Slide 4	1	49	50
Slide 5	0	50	50
Slide 6	0	50	50
Slide 7	0	50	50
Slide 8	0	50	50
Total	1	399	400

Point Count Summary Results

Type of Asbestos: Chrysotile Percentage of Asbestos: 0.25%

Analyzed By: Xingping Lin

Reviewed by: Steve Zhang, President

7 of 13

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PLM by Point Count (400 points)

		Client Job #:	40535.488	
Attention:	Gregg Middaugh, Claire Tsai, Mike Smith, Ferman Fletcher, Michelle Doc	Laboratory Batch #:	202110498	
	PBS Engineering and Environmental, Seattle	Date Received:	6/22/2021	
	214 E Galer Street, Suite 300, Seattle, WA 98102	Samples Received:	13	
Address.		Date Analyzed:	6/22/2021	

Project: Pierce College olympic South Abatement and Repairs

Sample Requested for Point Count 40535.488 -1092

Previous Analytical Information

Previously Analyzed by: Xingping Lin Previous Batch #: 202110486 Previous Lab ID: 9 Previous Description: White powdery material with paint and paper Layer to be Point Counted: 1 Asbestos Type Found: Chrysotile Asbestos Percentage Found: 2

Point Count Analytical Procedures

New Lab ID: 8

	Asbestos Points	Non-Asbestos Points	Total Points Counted
Slide 1	0	50	50
Slide 2	0	50	50
Slide 3	0	50	50
Slide 4	0	50	50
Slide 5	0	50	50
Slide 6	0	50	50
Slide 7	0	50	50
Slide 8	1	49	50
Total	1	399	400

Point Count Summary Results

Type of Asbestos: Chrysotile Percentage of Asbestos: 0.25%

Analyzed By: Xingping Lin

Reviewed by: Steve Zhang, President

8 of 13

NVLAP Accreditation Lab Codes: 200768 and 201057

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PLM by Point Count (400 points)

		Client Job #:	40535.488	
Attention:	Gregg Middaugh, Claire Tsai, Mike Smith, Ferman Fletcher, Michelle Doc	Laboratory Batch #:	202110498	
	PBS Engineering and Environmental, Seattle	Date Received:	6/22/2021	
	214 E Galer Street, Suite 300, Seattle, WA 98102	Samples Received:	13	
Audress.		Date Analyzed:	6/22/2021	

Project: Pierce College olympic South Abatement and Repairs

Sample Requested for Point Count 40535.488 -1093

Previous Analytical Information

Previously Analyzed by: Xingping Lin Previous Batch #: 202110486 Previous Lab ID: 10 Previous Description: White powdery material with paint and paper Layer to be Point Counted: 1 Asbestos Type Found: Chrysotile Asbestos Percentage Found: 2

Point Count Analytical Procedures

New Lab ID: 9

	Asbestos Points	Non-Asbestos Points	Total Points Counted
Slide 1	0	50	50
Slide 2	1	49	50
Slide 3	0	50	50
Slide 4	0	50	50
Slide 5	0	50	50
Slide 6	0	50	50
Slide 7	1	49	50
Slide 8	0	50	50
Total	2	398	400

Point Count Summary Results

Type of Asbestos: Chrysotile Percentage of Asbestos: 0.5%

Analyzed By: Xingping Lin

NVLAP Accreditation Lab Codes: 200768 and 201057

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PLM by Point Count (400 points)

		Client Job #:	40535.488	
Attention:	Gregg Middaugh, Claire Tsai, Mike Smith, Ferman Fletcher, Michelle Dot	Laboratory Batch #:	202110498	
	PBS Engineering and Environmental, Seattle	Date Received:	6/22/2021	
	214 E Galer Street, Suite 300, Seattle, WA 98102	Samples Received:	13	
nuuroos.		Date Analyzed:	6/22/2021	

Project: Pierce College olympic South Abatement and Repairs

Sample Requested for Point Count 40535.488 -1094

Previous Analytical Information

Previously Analyzed by: Xingping Lin Previous Batch #: 202110486 Previous Lab ID: 11 Previous Description: White powdery material with paint and paper Layer to be Point Counted: 1 Asbestos Type Found: Chrysotile Asbestos Percentage Found: 2

Point Count Analytical Procedures

New Lab ID: 10

	Asbestos Points	Non-Asbestos Points	Total Points Counted
Slide 1	1	49	50
Slide 2	0	50	50
Slide 3	0	50	50
Slide 4	0	50	50
Slide 5	0	50	50
Slide 6	0	50	50
Slide 7	0	50	50
Slide 8	1	49	50
Total	2	398	400

Point Count Summary Results

Type of Asbestos: Chrysotile Percentage of Asbestos: 0.5%

Analyzed By: Xingping Lin

NVLAP Accreditation Lab Codes: 200768 and 201057

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PLM by Point Count (400 points)

		Client Job #:	40535.488
Attention	Gregg Middaugh, Claire Tsai, Mike Smith, Ferman Fletcher, Michelle Dor	Laboratory Batch #:	202110498
	PBS Engineering and Environmental, Seattle	Date Received:	6/22/2021
the second se	214 E Galer Street, Suite 300, Seattle, WA 98102	Samples Received:	13
,		Date Analyzed:	6/22/2021

Project: Pierce College olympic South Abatement and Repairs

Sample Requested for Point Count 40535.488 -1095

Previous Analytical Information

Previously Analyzed by: Xingping Lin Previous Batch #: 202110486 Previous Lab ID: 12 Previous Description: White powdery material with paint and paper Layer to be Point Counted: 1 Asbestos Type Found: Chrysotile Asbestos Percentage Found: 2

Point Count Analytical Procedures

New Lab ID: 11

	Asbestos Points	Non-Asbestos Points	Total Points Counted
Slide 1	0	50	50
Slide 2	1	49	50
Slide 3	0	50	50
Slide 4	1	49	50
Slide 5	1	49	50
Slide 6	0	50	50
Slide 7	0	50	50
Slide 8	0	50	50
Total	3	397	400

Point Count Summary Results

Type of Asbestos: Chrysotile Percentage of Asbestos: 0.75%

Analyzed By: Xingping Lin

Reviewed by: Steve Zhang, President

11 of 13

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PLM by Point Count (400 points)

		Client Job #:	40535.488	
Attention:	Gregg Middaugh, Claire Tsai, Mike Smith, Ferman Fletcher, Michelle Doc	Laboratory Batch #:	202110498	
	PBS Engineering and Environmental, Seattle	Date Received:	6/22/2021	
	214 E Galer Street, Suite 300, Seattle, WA 98102	Samples Received:	13	
Tiddi boo.		Date Analyzed:	6/22/2021	

Project: Pierce College olympic South Abatement and Repairs

Sample Requested for Point Count 40535.488 -1096

Previous Analytical Information

Previously Analyzed by: Xingping Lin Previous Batch #: 202110486 Previous Lab ID: 13 Previous Description: White powdery material with paint and paper Layer to be Point Counted: 1 Asbestos Type Found: Chrysotile Asbestos Percentage Found: 2

Point Count Analytical Procedures

New Lab ID: 12

	Asbestos Points	Non-Asbestos Points	Total Points Counted
Slide 1	0	50	50
Slide 2	0	50	50
Slide 3	1	49	50
Slide 4	0	50	50
Slide 5	0	50	50
Slide 6	1	49	50
Slide 7	0	50	50
Slide 8	1	49	50
Total	3	397	400

Point Count Summary Results

Type of Asbestos: Chrysotile Percentage of Asbestos: 0.75%

Analyzed By: Xingping Lin

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PLM by Point Count (400 points)

		Client Job #:	40535.488	
Attention:	Gregg Middaugh, Claire Tsai, Mike Smith, Ferman Fletcher, Michelle Dot	Laboratory Batch #:	202110498	
	PBS Engineering and Environmental, Seattle	Date Received:	6/22/2021	
	214 E Galer Street, Suite 300, Seattle, WA 98102	Samples Received:	13	
Address.		Date Analyzed:	6/22/2021	

Project: Pierce College olympic South Abatement and Repairs

Sample Requested for Point Count 40535.488 -1097

Previous Analytical Information

Previously Analyzed by: Xingping Lin Previous Batch #: 202110486 Previous Lab ID: 14 Previous Description: White powdery material with paint and paper Layer to be Point Counted: 1 Asbestos Type Found: Chrysotile Asbestos Percentage Found: 2

Point Count Analytical Procedures

New Lab ID: 13

	Asbestos Points	Non-Asbestos Points	Total Points Counted
Slide 1	1	49	50
Slide 2	0	50	50
Slide 3	1	49	50
Slide 4	0	50	50
Slide 5	0	50	50
Slide 6	0	50	50
Slide 7	0	50	50
Slide 8	0	50	50
Total	2	398	400

Point Count Summary Results

Type of Asbestos: Chrysotile Percentage of Asbestos: 0.5%

Analyzed By: Xingping Lin

SEATTLE ASBESTOS TEST, LLC

Lymmood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 38030, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

www.seattleasbestostest.com, admini@seattleasbestostest.com

Project Manager:	Mr. Gregg Middaugh, Ms. Claire Tsai, Mr. Mike Smith, Mr. Ferman Fletcher	Date Analyzed:	6/25/2021
Client:	PBS Engineering and Environmental, Seattle	Client Job#:	40535.488
Address	214 E Galer Street, Suite 300, Seattle, WA 98102	Project Location:	Oly. South Emergency Clean Up.
Tel:	206.233,9639	Laboratory batch#:	202110521
Date Report Issued:	6/25/2021	Samples Received:	20

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Thum

Steve (Fanyao) Zhang Approved Signatory

2021	0521
Laci	000

PBS	LABORA	ATORY CHAIN OF CUSTODY
Project: Oly. Sout Analysis requested: PLN Relinq'd by/Signature: 7 Received by/Signature: Corol	h EmergencyClean	Date: 6/23/21 Date: 6/23/21 Date/Time: 6/23/21 Date/Time: 6/24/21 91:49
	Email ALL INVOICES to: seattleap@	pbsusa.com
E-mail results to: Brian Stanford Willem Mager Gregg Middaugh Mark Hiley Tim Ogden Prudy Stoudt-McRae	Janet Murphy Kaitlin Soukup Martin Estira Justin Day Claire Tsai Holly Tuttlo	Mike Smith Ferman Fletchen Ryan Hunter Michelle Dodson
TURN AROUND TIME:	24 Hours 48 Hours	☐ 3-5 Days ☐ Other

	SAMPLE DATA FORM				
Sample #	Material	Location Lab			
40535.488-10	198 JC/GWB	Rmololy W. wall New 547			
-1099	-1	Rmollel, F. wall, S. end			
-1100	- 18	Rm01614, Swall, Wend			
-1101	25	Rm O164, W. Wall, N. end			
-1102	~	Rm 0166, N. Wall Center			
-1103	~~	Rm 0166, W. Wall, Nos does			
-1104	51	RM OIGE, NE COLUMN			
- 1105		RMOILEA, Swall, W.end			
-1106	~(Run O166A, Ewcell, N. Ofdoor			
-1107	14	RMO169, NWall, Wordow			
- 1108	14	Rmoleg, S. wall, wend			
-1109	, u	RMOITOW. Wall-Send			
-1110	15	Rm 0170, N. Wall W. of course			
-1111	17	Rmo171, S. Wall, w-end			
-1112	14	Rm 0171, S. Wall, E. end			
- 1113	XX	Convidor outside Rmoitz N. Wall			
- 1114	~	RMOBO, E Wall, Vend			
- 1115	~	Rm 0181, 5. Wall, W. end			

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202	110521	
PBS	LABORA	TORY CHAIN OF CUSTODY
Project: Oly South Em Analysis requested: PLM Reling'd by/Signature: 7 Received by/Signature: Countyry	777	Project #: 40535.488 Date: $6/23/21$ Date/Time: $6/25/21$ Date/Time: $6/25/21$
Ema	ail ALL INVOICES to: seattleap@	pbsusa.com
E-mail results to: Brian Stanford Willem Mager Gregg Middaugh Mark Hiley Tim Ogden Prudy Stoudt-McRae	 Janet Murphy Kaitlin Soukup Martin Estira Justin Day Claire Tsai Holly Tuttle 	Mike Smith Ferman Fletcher Ryan Hunter Michelle Dodson
TURN AROUND TIME: 1 Hour 2 Haurs 4 Hours	24 Hours 48 Hours	Other

SAMPLE DATA FORM				
Sample #	Material	Location	Lab	
40535458-1116	JC/GWB	Rm0183, Ewall, s.end	SAT	
-1117	JC/GWB JC/GWB	Rm 0.183, Ewall, s. end Rm 0.184, S. Wall, Wend		
			15	
	3			
	-			

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Lynnwood Laboratory: 19701 Scriber Lake Road, Sulle 103, Lynnwood, WA 98036, Tel: 425,673,9850, Pax: 425,673,9810, NVLAP Lab Code: 200768-0.

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ANALYTICAL LABORATORY REPORT [PLM] EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials (PLM) Mr. Greag Middaugh, Ms. Client: PBS Engineering and Ams. Claire Tsai, Mr. Mike Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Environmental, Seattle Smith, Mr. Ferman Fletcher Jub#: 40535.488 Batch#: 202110521 Date Received: 6/24/2021 Samples Rec'd: 20 Date Analyzed: 6/25/2021 Samples Analyzed: 20 Project Loc.: Oly. South Emergency Clean Up. Chang 1. Ve Analyzed by Approved Signalory: Steve (Fampaia) Zhang, President Lab ID Client Sample ID Layer Description Asbestos Fibers Non-fibrous Components 14 Non-asbestos Fibers * White powdery 40535,488-1098 1 2 Chrysotile Binder, Filler 2 Cellulose material 1 Composite result White chalky None Binder/filler. 2 24 Cellulose <1% material with paper detected Gypsum/binder White powdery 40535.488-1099 1 material with trace Chrysotile Binder, Filler, Paint 2 3 Cellulose 2 paint Composite result White chalky Binder/filler, None 2 27 Cellulose Gypsum/binder <1% material with paper detected White chalky Binder/filler, None з 40535,488-1100 1 material with paint Gypsum/binder, 29 Cellulose detected and paper Paint White powdery None 1 Binder, Filler, Paint 3 Cellulose material with paint detected 4 40535.488-1101 Trace white chalky None Binder/filler, 2 22 Cellulose material with paper detected Gypsum/binder Binder/filler. White chalky None 5 40535.488-1102 1 20 Celluiose material with paper Gypsum/binder detected White powdery None 1 Binder, Filler, Paint 2 Cellulose detected material 6 40535.488-1103 None White chalky Binder/filler, 2 25 Cellulose material with paper detected Gypsum/binder White powdery None material with paint 1 Binder, Filler, Paint 21 Cellulose detected 7 40535.488-1104 and paper White chalky None Binder/filler, 2 23 Cellulose material with paper detected Gypsum/binder White powdery None 1 Binder, Filler, Paint 2 Cellulose material with paint detected В 40535.488-1105 White chalky None Binder/filler, 2 21 Cellulose material with paper detected Gypsum/binder White chalky Binder/filler, None 9 40535,488-1106 1 material with paint Gypsum/binder, Cellulose 28 detected and paper Paint White powdery None 1 material with paint Binder, Filler, Paint 22 Cellulose detected 10 40535.488-1107 and paper White chalky None Binder/filler, 2 25 Cellulose material with paper Gypsum/binder detected White powdery None material with paint Binder, Filler, Paint 1 24 Cellulose detected 11 40535.488-1108 and paper White chalky None Binder/filler, 2 27 Cellulose material with paper detected Gypsum/binder

White powdery

and paper

material with paint

1

12

40535.488-1109

None

detected

Binder, Filler, Paint

Cellulose

21

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(PLM) EPA-		EPA 600/R-93/1	763, Interim Method of the D 16: Method for the Determin	ation	of Asbestos in Bulk	in Bulk Insulation Samples; Building Materials		[PLM]
Alla.	Mr. Gregg Middaugh, Ms. Claire Tsai, Mr. Mike Smith, Mr. Ferman Fletcher	Client:	PBS Engineering and Environmental, Seattle		Address:	214 E Galer Street, Suite	300, 1	Seattle, WA 98102
Job#:	40535.488	Batch#:	202110521		Date Received.	6/24/2021		
Samples Rec'd:	20	Date Analyzed:	6/25/2021		Samples Analyzed:	20		
Project Loc.	Oly. South Emergency	Clean Up		1	N.			Thomas
			Analyzed by:	Can	sijn Yao	Approved Signalary	Steve	(Fariyan) Zhang, Presiden
Lab ID	Client Sample ID	Layer	Description	15	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fiber
12	40535.488-1109	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	26	Cellulose
13	40535.488-1110	1	White powdery material with paint		None detected	Binder, Filler, Paint	3	Cellulose
15	40555,400-1110	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
14	40535.488-1111	1	White powdery material with paint		None detected	Binder, Filler, Paint	2	Cellulose
	10000.100 1111	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	23	Cellulose
15	15 40535,488-1112	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	20	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	21	Cellulose
16	40535.488-1113	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	22	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	29	Cellulose
17	40535.488-1114	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	23	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	27	Cellulose
18	40535.488-1115	1	White powdery material with paint		None detected	Binder, Filler, Paint	3	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	26	Cellulose
19	40535.488-1116	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	21	Cellulose
1		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
20	40535.488-1117	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	20	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose

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www.seattleasbestostest.com, admin@suattleasbestostest.com

Project Manager:	Mr. Gregg Middaugh, Ms. Michelle Dodson	Date Analyzed:	7/8/2021
Client:	PBS Engineering and Environmental, Seattle	Chent Job#:	40535,488
Address:	214 E Galer Street, Suite 300, Seattle, WA 98102	Project Location:	Pierce College Olympic South Abatoment and Repairs
Tel:	206.233.9639	Laboratory batch#:	
Date Report Issued:	7/8/2021	Samples Received:	3

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the aculty of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirely consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

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in Grower

Steve (Fanyao) Zhang Approved Signatory



LABORATORY CHAIN OF CUSTODY

Analysis requested:PL	M	Date:7/8/21
Relinq'd by/Signature:	uic for	Date/Time: 7/8/21
Received by/Signature: Convolution	yea a pre	Date/Time: 7/8/21 / 5:30
E-mail results to:		
Brian Stanford	Cel Alvarez	Mike Smith
Willem Mager	Janet Murphy	Ferman Fletcher
Gregg Middaugh	Kaitlin Soukup	Holly Tuttle
Mark Hiley	Martin Estira	Ryan Hunter
Tim Ogden	Justin Day	Eman Jabali
Prudy Stoudt-McRae	Claire Tsai	—
TURN AROUND TIME:	Diplichelle Dedson	
1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other

SAMPLE DATA FORM				
Sample #	Material		Location	Lab
40535.488-1118	Crypson	Wallboard / Joint Compa	and kitchen S. Wall	SAT
-1119	, u	1)	161 N Wall Warea E. of 1	
1120	U.	11	161 N Wall Warea E. of 1 S. door to 164 E. side fre	mhall
				-
				-
				-

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Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425,673,9850, Fax: 425,673,9810, NVLAP Lab Code: 200768-0

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	Mr. Gregg		16: Method for the Determin	auton	or Asbestos in Bulk	isunding materials			
Attn.:	Middaugh, Ms. Michelle Dodson	Client:	PBS Engineering and Environmental, Seattle	Address:		214 E Galer Street, Suite 300, Seattle, WA 98102			
Job#:	40535.488	Batch#:	202110640	Date Received:		7/8/2021			
Samples Rec'd:	3	Date Analyzed:	7/8/2021		Samples Analyzed:				
Project Loc.!	Pierce College Olymp Abatement and Repai	ic South rs		6	yle			Thong	
			Analyzed by:	Care	shin Yeo	Approved Signatory;	Steve	(Fanyao) Zhang, President	
Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	56	Non-asbestos Fiber	
-	40535.488-1118	1	White powdery material with paint		None detected	Binder, Filler, Paint	3	Cellulose	
1		2	Yellow woven fibrous material		None detected	Filler	85	Glass fibers	
		3	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	27	Cellulose	
2	40535.488-1119	1	Off-white powdery material with paint	2	Chrysotile	Binder, Filler, Paint	2	Cellulose	
2	40000.400-1119	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose	
3	10535 488 1120	1	Off-white powdery material with paint		None detected	Binder, Filler, Paint	3	Cellulose	
0	40535.488-1120	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose	

SEATTLE ASBESTOS TEST, LLC

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel; 206 633, 1111, Fax; 206 633, 4747, NVLAP Lab Code; 201057-0

www.seattleasbestostest.com, admin@seattleasbestostest.com

Project Manager: Mr. Gregg Middaugh, Ms. Claire Tsai Client: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 206.233.9639 Date Report Issued: 4/28/2021 Date Analyzed: 4/28/2021 Client Job# 40535.488 Project Location: Pierce College Olympic South Emergency Clean Up Floor 2 Laboratory batch# 202110045 Samples Received: 56

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Thong

Steve (Fanyao) Zhang Approved Signatory



LABORATORY CHAIN OF CUSTODY

Project: <u>Pierce College Olympic</u>	Project #: 40535.488			
Analysis requested: PLM	Date: 4/27/2021			
Relinq'd by/Signature:	urda:	Date/Time: 4127121		
Received by/Signature: Caroly	Yeo Gyler	Date/Time: 4/27/21 16:06		
E	mail ALL INVOICES to: seattleap@pbs	susa.com		
E-mail results to:				
Brian Stanford	Prudy Stoudt-McRae	Mike Smith		
Willem Mager	Janet Murphy	E Ferman Fletcher		
Gregg Middaugh	Kaitlin Soukup	Ryan Hunter		
Mark Hiley	Claire Tsai	Michelle Dodson		
Tim Ogden	Holly Tuttle			
TURN AROUND TIME:				
1 Hour	24 Hours	3-5 Days		
2 Hours	48 Hours	Other		
4 Hours	Contraction of the Contraction o			

SAMPLE DATA FORM							
Sample #	Material	Location	Lab				
40535.488-2021	Gypsum wallboard/ joint compound	Room 266 Northeast corner	SAT				
40535.488-2022	Gypsum wallboard/ joint compound	Room 292 North wall					
40535.488-2023	4" black vinyl Cove base/ brown mastic	Room 260 Northwest corner					
40535.488-2024	4" tan vinyl Cove base/ cream and brown mastic	Room 262 Northwest corner					
40535.488-2025	4" tan vinyl Cove base/ cream mastic	Room 271 Southwest corner					
40535.488-2026	4" grey vinyl Cove base/ creamy mastic	Room 275 Northeast corner					
40535.488-2027	4" black vinyl Cove base/ cream mastic	Central hall outside Room 275					
40535.488-2028	4" black vinyl Cove base/ cream mastic	West hall Northwest corner outside RM 292					
40535.488-2029	Tan carpet mastic	Room 275 West side near door					
40535.488-2030	Tan carpet mastic	Room 278 West side near door					
40535.488-2031	Tan carpet mastic/ white Leveling compound	Room 288 at doorway					
40535.488-2032	Yellow carpet mastic	West hall outside room 291	-				
40535.488-2033	Yellow carpet mastic	North hall West of stair case					
40535.488-2034	12" off-whiteish Vinyl tile / black mastic	Room 283 Northeast corner					
40535.488-2035	12" off-white Vinyl tile / black mastic	Room 283 South area					
40535.488-2036	12" off-white Vinyl tile / black mastic	Room 283 Southeast area					
40535.488-2037	Grey Sheet flooring/ brown mastic	Room 284 South elevated platform					
40535.488-2038	Grey Sheet flooring/ brown mastic	Room 284 South elevated platform					
40535.488-2039	Black Residual mastic	Room 270 entry way					

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PBS 202110045

LABORATORY CHAIN OF CUSTODY

40535.488-2040	Tan tack board mastic	Room 271 North wall
40535.488-2041	1' acoustic ceiling tile / brown glue dot	Room 276 Northwest corner
40535.488-2042	1' acoustic ceiling tile / brown glue dot	Room 291 East ceiling
40535.488-2043	Soft grey duct sealant	Room 266 North wall vertical duct
40535.488-2044	Fiberglass and cover / tan sealant	East hall outside room 263 duct above ceiling
40535.488-2045	Fiberglass duct seam cover/ grey sealant	East hall outside room 263 duct above ceiling
40535.488-2046	Fiberglass straight run with paper	Room 267 East area above ceiling
	Fiberglass/ grey duct seam sealant	Room 267 center of room above ceiling
40535.488-2048	Fiberglass/ grey duct sealant	Main hall outside room 279 above ceiling
40535.488-2049	Red fiberglass black coating supply duct lining	Room 283 Southeast elevation
40535.488-2050	White sealant on water pipe straight run	LV2 West skybridge East end
40535.488-2051	Acoustic paneling	Room 283 West wall
40535.488-2052	Acoustic paneling	Room 283 West wall
40535.488-2053	Grey duct tape	Room 267 East wall above ceiling
40535.488-2054	White conduit wall penetration sealant	Room 292 Northeast corner above ceiling
40535.488-2055	Fiberglass/ red fire stop	Room 262 East closet on duct above ceiling
	Fiberglass/ red fire stop	Hall outside room 270 on duct above ceiling
40535.488-2057	Red fire stop	Room 292 near door above ceiling
40535.488-2058	Red fire stop	Room 292 near door above ceiling
40535.488-2059	Soft grey interior window sealant	Room 271 between frame and sill
40535.488-2060	Soft black interior window sealant	Main hall room 274 between glass and frame
40535.488-2061	Soft black interior window sealant	West hall room 286 between glass and frame
	Soft grey and soft beige interior window sealant	North hall near stairs between frame and floor
40535.488-2063	White sealant	Room 292 between wall and concrete ceiling
40535.488-2064	1" off-white ceramic floor tile grey grout	Room 268 Northeast area
40535.488-2065	3" off-white ceramic cove base tile grey grout	Room 268 Northeast area
40535.488-2066	Column caulk	Room 283 Northeast corner
40535.488-2067	Column caulk	Room 283 Northeast corner
40535.488-2068	White sink undercoating	Room 285A South wall
40535,488-2069	Lay-in ceiling tile 2'x4' fissure pinhole pattern	Room 262 East closet
40535.488-2070	Lay-in ceiling tile 2'x4' white face fiberglass	Room 292 center of room
40535.488-2071	Floor concrete	Room 263 Southwest corner





LABORATORY CHAIN OF CUSTODY

40535.488-2072 Floor concrete		Room 266 Northwest at floor penetration			
40535.488-2073	Floor concrete	Room 283 Northeast ramp area			
40535.488-2074 Ceiling concrete		Room 262 East closet			
40535.488-2075	Ceiling concrete	Room 271 East wall			
40535.488-2076 Ceiling concrete		Main hall outside room 279			

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Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

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[PLM] EPA 4		bpart E of Part 7 EPA 600/R-93/11	763, Interim Method of the D 16: Method for the Determin	ation	nination of Asbestos of Asbestos in Bulk	in Bulk Insulation Samples; Building Materials		[PLM]
Attn.:	Mr. Gregg Middaugh, Ms. Claire Tsai	Client:	PBS Engineering and Environmental, Seattle		Address:	214 E Galer Street, Suite	300, 5	Seattle, WA 98102
Job#: iamples Rec'd;	40535.488 56	Batch#: Date Analyzed:	202110045 4/28/2021		Date Received: Samples Analyzed:	a service and a		
Project Loc.:	Pierce College Olymp Emergency Clean Up			4	The			Schang.
			Analyzed by:	Caro	ilyn Yeo	Approved Signatory:	Slova	(Fanyaa) Zhang, President
Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibe
1	40535.488-2021	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	21	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	26	Cellulose
2	40535.488-2022	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	20	Cellulose
22.9		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	23	Cellulose
3	40535.488-2023	1	Black/dark brown rubbery material		None detected	Rubber/binder	2	Cellulose
	40535,400-2023	2	Trace brown mastic		None detected	Mastic/binder	3	Cellulose
	40535.488-2024	ă.	Beige rubbery material		None detected	Rubber/binder	2	Cellulose
4		2	Off-white mastic		None detected	Mastic/binder	2	Cellulose
	· · · · · · · · ·	3	Brown mastic		None detected	Mastic/binder	3	Cellulose
		1	Beige rubbery material		None detected	Rubber/binder	2	Cellulose
5	40535.488-2025	2	Off-white mastic		None detected	Mastic/binder	3	Cellulose
		3	Trace white powdery material with paint		None detected	Binder, Filler, Paint	2	Cellulose
6	40535.488-2026	1	Gray rubbery material	11,	None detected	Rubber/binder	2	Cellulose
7		2	Off-white mastic		None detected	Mastic/binder	3	Cellulose
		1	Black rubbery material		None detected	Rubber/binder	2	Cellulose
7	40535.488-2027	2	Off-white mastic		None detected	Mastic/binder	2	Cellulose
		3	Trace brown wood debris	_	None detected None	Wood debris	4	Cellulose
	1 - 2 - 1	1	Black rubbery material	_	detected None	Rubber/binder	3	Cellulose
8	40535.488-2028	2	Off-white mastic		detected	Mastic/binder	2	Cellulose
		3	powdery material with paint and paper		None detected	Binder, Filler, Paint	22	Cellulose
9	40535.488-2029	1	Tan/yellow mastic		None detected	Mastic/binder	3	Cellulose

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[PLM] EPA - 4		EPA 600/R-93/1	763, Interim Method of the De 16: Method for the Determina	termination of Asbesto tion of Asbestos in Bul	s in Bulk Insulation Samples; k Building Materials		[PLM]
Attn.:	Mr. Gregg Middaugh, Ms. Claire Tsai	Client:	PBS Engineering and Environmental, Seattle	Addres	214 E Galer Street, Suite	300, 3	Seattle, WA 98102
Job#:	40535.488	Batch#:	202110045	Date Receive	d: 4/27/2021		
Samples Rec'd:	56	Date Analyzed:	4/28/2021	Samples Analyze	d: 56		
Project Loc.:	Pierce College Olymp Emergency Clean Up			C. Ye			Thung
			Analyzed by	Carolyn Yeo	Approved Signatory:	Steve	(Fanyao) Zhang, Presiden
Lab ID	Client Sample ID	Layer	Description	% Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibe
10	40535.488-2030	1	Tan/yellow mastic	None detected	Mastic/binder	3	Cellulose
11	40535,488-2031	1	Tan/dark yellow mastic	None detected	Mastic/binder	2	Cellulose
44	10000,100-2001	2	Off-white brittle material	None detected	Binder, Filler	2	Cellulose
12	40535.488-2032	1	Yellow mastic	None detected	Mastic/binder	2	Cellulose
13	40535.488-2033	1	Yellow mastic	None detected	Mastic/binder	5	Cellulose, Synthetic fiber
		1	Off-white tile	None detected	Vinyl/binder, Mineral grains	3	Cellulose
14	40535.488-2034	2	Black mastic	None detected	Mastic/binder	3	Cellulose, Polyethylene
_		3	Off-white brittle material	None detected	Binder, Filler	2	Cellulose
15	40535.488-2035	1	Off-white tile	None detected	Vinyl/binder, Mineral grains	2	Cellulose
		2	Black mastic Off-white brittle	None detected	Mastic/binder	3	Cellulose
		3	material	None detected None	Binder, Filler Vinyl/binder,	2	Cellulose
16 40535.488-2036	1	Off-white tile	detected	Mineral grains	3	Cellulose	
		2	Black mastic	detected	Mastic/binder	3	Cellulose
- 1		1	Gray sheet vinyl	detected	Vinyl/binder		None detected
17	40535.488-2037	2	Brown mastic	detected None	Mastic/binder	2	Cellulose
		3	Yellow mastic Brown wood debris	detected None	Mastic/binder Wood debris	2	Cellulose
		1	Gray sheet vinyl	detected None	Vinyl/binder	5	None detected
18	40535,488-2038	2	Yellow mastic	detected None	Mastic/binder	2	Cellulose
19	40535.488-2039	1	Black mastic	detected None	Mastic/binder	3	Cellulose
		1	Brown fibrous	detected None	Filler	80	Cellulose
20	40535.488-2040	2	material Off-white mastic	detected None detected	Mastic/binder	3	Cellulose
	the state of the state of the	1	Gray fibrous material with paint	None detected	Paint, Filler, Perlite	65	Cellulose
21	40535.488-2041	2	Brown mastic	None detected	Mastic/binder	2	Cellulose

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[PLM] EPA - 4	40 CFR Appendix E to Sub E	part E of Part 7 PA 600/R-93/11	ANALYTICAL LAB 63, Interim Method of the E 16: Method for the Determin	etern	nination of Asbestos	in Bulk Insulation Samples;		[PLM]
Attn.:	Mr. Gregg Middaugh, Ms. Claire Tsai	Client:	PBS Engineering and Environmental, Seattle			214 E Galer Street, Suite	300, 3	Seattle, WA 98102
Job#:	40535.488	Batch#:	202110045		Date Received:	4/27/2021		
Samples Rec'd:	56	Date Analyzed:	4/28/2021		Samples Analyzed:	56		
Project Loc.:	Pierce College Olympic Emergency Clean Up F		Analyzed by		yes	Annound Simulator	Stewart	Jahonno (Fenyao) Zhang, President
Lab ID	Client Sample ID	Layer	Description	1 %	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibera
		1	Gray fibrous material with paint	1	None detected	Paint, Filler, Perlite	54	Cellulose
22	40535.488-2042 -	2	Brown mastic		None detected	Mastic/binder	2	Cellulose
23	40535.488-2043	1	Gray soft/elastic material		None detected	Binder, Filler	2	Cellulose
		1	Yellow fibrous material		None detected	Filler	87	Glass fibers
24	40535.488-2044 -	2	Silver foil		None detected	Foil/binder		None detected
24	40333.400-2044	3	Woven off-white fibrous material		None detected	Filler	91	Glass fibers
_		4	Tan soft/elastic material		None detected	Binder, Filler	2 88	Cellulose
	40535.488-2045	1	Yellow fibrous material		None detected	Filler	88	Glass fibers
		2	Silver foil		None detected	Foil/binder	12	None detected
25		3	Off-white fibrous material		None detected	Filler	86	Glass fibers
		4	Gray soft/elastic material with fibrous material		None detected	Binder, Filler	20	Cellulose, Glas fibers
		1	Yellow fibrous material		None detected	Filler	84	Glass fibers
26	40535.488-2046	2	Silver foil		None detected	Foil/binder	-	None detected
		3	Off-white paper with mastic and woven fibrous material		None detected	Filler, Mastic/binder	68	Cellulose, Glas fibers
		1	Yellow fibrous material		None detected	Filler	85	Glass fibers
27	40535.488-2047	2	Silver foil		None detected	Foil/binder		None detected
21		3	Gray soft/elastic material with woven fibrous material		None detected	Binder, Filler	21	Cellulose
		1	Yellow fibrous material		None detected	Filler	85	Glass fibers
28	40535.488-2048	2	Off-white fibrous material		None detected	Filler	86	Glass fibers
		3	Silver foil		None detected	Foil/binder		None detected

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[PLM] EPA	40 CFR Appondix E to Su	bpart E of Part EPA 600/R-93/1	ANALYTICAL LAB 763, Interim Method of the D 16: Method for the Determin	Determ	ination of Asbestos	in Bulk Insulation Samples:		[PLM]	
Attn.:	Mr. Gregg Middaugh, Ms. Claire Tsai	Client	OPC Engineering and			214 E Galer Street, Suite	300, 3	Seattle, WA 98102	
Job#: Samples Rec'd:	40535.488	Batch#: Date Analyzed:	202110045		Data Received: Samples Analyzed:	The fire energy			
Project Loc.:	Pierce College Olume		+/20/2021	1		50		mi	
Project Loc.:	Emergency Clean Up			_	She	Concernation of the		Theng	
	1		Analyzed by	-			Stevra	(Ferwao) Zhang, President	
Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fiber	
28	40535.488-2048	4	Gray soft/elastic material with woven fibrous material		None detected	Binder, Filler	21	Cellulose	
29	40535,488-2049	1	Red/pink fibrous material		None detected	Filler	92	Glass fibers	
20	40000.400-2040	2	Black coating		None detected	Binder, Filler	2	Cellulose	
		1	Silver foil		None detected	Foil/binder		None detected	
30	40535.488-2050	2	Off-white paper with mastic and woven fibrous material		None detected	Filler, Mastic/binder	61	Cellulose, Glas fibers	
21	31 40535.488-2051	1	Off-white woven fibrous material		None detected	Filler	87	Glass fibers	
51		2	Yellow fibrous material		None detected	Filler	84	Glass fibers	
32	40535,488-2052	1	Off-white woven fibrous material		None detected	Filler	90	Glass fibers	
52	40000.400-2002	2	Yellow fibrous material		None detected	Filler	89	Glass fibers	
33	40535.488-2053	1	Silver soft/elastic material with woven fibrous material		None detected	Binder, Filler	23	Cellulose	
		2	Gray mastic		None detected	Mastic/binder	2	Cellulose	
34	40535.488-2054	1	White brittle material		None detected	Binder, Filler	3	Cellulose	
		1	Yellow fibrous material		None detected	Filler	84	Glass fibers	
-	10525 400 0055	2	Off-white woven fibrous material		None detected	Filler	87	Glass fibers	
35	40535.488-2055	3	Silver foil		None detected	Foil/binder		None detected	
		4	Red sofVelastic material with fibrous material		None detected	Binder, Filler	30	Cellulose, Glas fibers	
	the second	1	Yellow fibrous material		None detected	Filler	84	Glass fibers	
36	36	40535.488-2056	2	Red soft/elastic material with fibrous material		None detected	Binder, Filler	26	Cellulose, Glas fibers
37	40535.488-2057	1	Red soft/elastic material		None detected	Binder, Filler	2	Cellulose	
38	40535.488-2058	1	Red soft/elastic material		None detected	Binder, Filler	2	Cellulose	

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	10 CFR Appendix E to Su Mr. Gregg	EPA 600/R-93/1	15: Method for the Determin	ation	of Asbestos in Bulk I	Building Materials		[PLM]
Attn.:	Middaugh, Ms. Claire Tsai	Client	PBS Engineering and Environmental, Seattle		Address:	214 E Galer Street, Suite	300, 3	Seattle, WA 98102
Job#: Samples Rec'd:	40535.488	Batch#: Date Analyzed:	202110045		Date Received: Samples Analyzed:			
Project Loc.:	Pierce College Olymp		HEULOZ I	1		50		me
Project coc.	Emergency Clean Up	Floor 2			- Ye	a shine instruct		Thung.
TO DIE			Analyzed by	100				(Fanyso) Zhang, Presiden
Lab (D	Client Sample ID	Layer	Description	56	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibe
39	40535.488-2059	1	Gray soft/elastic material		None detected	Binder, Filler	3	Cellulose
40	40535.488-2060	1	Black soft material with paint		None detected	Binder, Filler, Paint	2	Cellulose
41	40535.488-2061	1	Black soft material with paint		None detected	Binder, Filler, Paint	2	Cellulose
42	40535.488-2062	1	Gray/beige soft/elastic material		None detected	Binder, Filler	3	Cellulose
43	40535.488-2063	1	Off-white soft material		None detected	Binder, Filler	2	Cellulose
1.0		1	Off-white ceramic		None detected	Ceramic/binder		None detected
44	40535.488-2064	2	Gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
		3	Brown fibrous material		None detected	Filler	87	Cellulose
		1	Off-white/yellow ceramic		None detected	Ceramic/binder		None detected
45	40535.488-2065	2	Trace gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
46	40535.488-2066	1	Gray soft material with paint	3	Chrysotile	Binder, Filler, Paint	2	Cellulose
47	40535.488-2067	1	Gray soft material with paint	3	Chrysotile	Binder, Filler, Paint	2	Cellulose
48	40535.488-2068	1	Pink soft/loose material		None detected	Filler, Fine particles	3	Cellulose
49	40535.488-2069	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	62	Cellulose
50	40535.488-2070	1	Off-white soft/elastic material		None detected	Binder, Filler	2	Cellulose
50	40535.466-2070	2	Yellow fibrous material		None detected	Filler	88	Glass fibers
64	40525 480 2074	1	Gray sandy/brittle material		None detected	Sand, Filler, Binder	2	Cellulose
51	40535.488-2071	2	Trace black mastic		None detected	Mastic/binder	3	Cellulose
52	40535.488-2072	1	Gray sandy/brittle material		None detected	Sand, Filler, Binder	2	Cellulose
53	40535.488-2073	1	Gray sandy/brittle material		None detected	Sand, Filler, Binder	2	Cellulose
54	40535.488-2074	1	Gray sandy/brittle material		None detected	Sand, Filler, Binder	2	Cellulose
55	40535.488-2075	1	Gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
56	40535.488-2076	1	Gray sandy/brittle material		None detected	Sand, Filler, Binder	2	Cellulose

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Semillo Laboratory. 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel. 201 833.1111, Fax. 200.833.4747, NVLAP Lab Code: 201057-0

www.seatteastentostest.com, admin@jseattleastestest.com

Project Manager;	Mr. Gregg Middaugh, Ms. Claire Tsai, Mr. Mike Smith, Mr. Ferman Fletcher, Ms. Michelle Dodson	Date Analyzed:	6/22/2021
Client;	PBS Engineering and Environmental, Sealthe	Client Job#:	40535,488
Address'	214 E Galor Street, Suite 300, Seattle, WA 98102	Project Location	Plerce College Olympic South Abatement and Repairs
Tel	206.233.9639	Laboratory batch#:	202110487
Date Report Issued:	6/22/2021	Samples Received:	37

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items aubmitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product cartification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP. NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

T

22 horas

Stevn (Fanyao) Zhang Approved Signatory



LABORATORY CHAIN OF CUSTODY

Project:Pierce College Olym	pic South Abatement and Repairs	Project #: 40535.488
Analysis requested: PLM		Date: 06/18/2021
Relinq'd by/Signature:	ille Tsai	Date/Time: 6/18/21
Received by/Signature: Corre		Date/Time: 6/21/21 10:30
	Email ALL INVOICES to: seattleap@p	bsusa.com
E-mail results to:		
Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	Claire Tsai	
TURN AROUND TIME:		
1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		

202110487

SAMPLE DATA FORM							
Sample #	Material	Location	Lab				
40535.488-2077	12" acoustical ceiling tile, brown mastic	Room 272 south area	SAT				
40535.488-2078	12" acoustical ceiling tile, brown mastic	Room 272 northeast area					
40535.488-2079	12" acoustical ceiling tile, brown mastic	Room 273 south area	1				
40535.488-2080	12" acoustical ceiling tile, brown mastic	Room 273 north area					
40535.488-2081	12" acoustical ceiling tile, brown mastic	Room 274 south area	-				
40535.488-2082	12" acoustical ceiling tile, brown mastic	Room 274 north area					
40535.488-2083	12" acoustical ceiling tile, brown mastic	Room 276 north area					
40535.488-2084	12" acoustical ceiling tile, brown mastic (lighter)	Room 276 south area	-				
40535.488-2085	12" acoustical ceiling tile, brown mastic	Room 277 north area	-				
40535.488-2086	12" acoustical ceiling tile, brown mastic	Room 277 south area					
40535.488-2087	12" acoustical ceiling tile light fissures, brown mastic	Room 278 east area					
40535.488-2088	12" acoustical ceiling tile patch of heavy fissure, brown mastic (lighter)	Room 278 west area					
40535.488-2089	12" acoustical ceiling tile, brown mastic	Room 279 north area					
40535.488-2090	12" acoustical ceiling tile, brown mastic	Room 279 south area					
40535.488-2091	12" acoustical ceiling tile, brown mastic	Room 280 south area					
40535.488-2092	12" acoustical ceiling tile, brown mastic	Room 280 north area					
40535.488-2093	12" acoustical ceiling tile light fissures, brown mastic	Room 281 east area					
40535.488-2094	12" acoustical ceiling tile patch of heavy fissure, brown mastic	Room 281 west area	-				

214 EAST GALER STREET, SUITE 300, SEATTLE, WA 98102 * 206 233,9639 MAIN * 866.727 0140 FAX * PB5USA.COM

PBS

LABORATORY CHAIN OF CUSTODY

1000.100 2110		Hall near Rm. 283 above drop ceiling
40535.488-2112	CMU with concrete fill	Hall near Rm. 283 above drop ceiling
	CMU with paint	Hall near Rm. 283 above drop ceiling
40535.488-2110	E COURSES	Room 284 northwest area
40535.488-2109	1. S. N. S. S.	Room 284 east area
	12" acoustical ceiling tile, brown mastic	Room 291 west area
	12" acoustical ceiling tile, brown mastic	Room 291 east area
40535.488-2106	and a coming and, promit maste	Room 290 west area
40535.488-2105	and a second sec	Room 289 north area
40535.488-2104	and a senting the arean made	Room 289 south area
10535.488-2103	and a stand sound and, showin maste	Room 288 south area
the second se	12" acoustical ceiling tile, brown mastic	Room 288 north area
40535.488-2101	and of the sound and of the sound the	Room 287 north area
40535.488-2100	and some some grade and an	Room 287 south area
40535.488-2099	the sector of the sector of the sector	Room 290 east area
	sectored contrig die, brown masue	Room 286 north area
40535.488-2097	and, brown maste	Room 286 south area
40535.488-2097	12" acoustical ceiling tile, brown mastic	Room 282 north area
		Room 282 south area
40535,488-2095	12" acoustical ceiling tile, brown mastic	100 0.000

202110487

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LM] EPA - 40	CFR Appendix E to Subp		3, interim Method of the De Method for the Determinat					(PLM) EF
Atta	Mr. Gregg Middaugh, Ms. Claire Tsai, Mr. Mike Smith, Mr. Ferman Fletcher, Ms. Michelle Dodson	Cilent:	PBS Engineering and Environmental, Seattle			214 E Galer Street, Suite	300, 1	Seattle, WA 98102
	40535,488		202110487		Date Received:			
Samples Rec'd:	-	Date Analyzed:	6/22/2021		Samples Analyzed:	37		
Project Loc.	Pierce College Olympi Abatement and Repair			10	42			Thering
		(Analyzed by			Approved Signatory:	Steve	(Fanysia) Zhong, President
Lap (D	Client Sample ID	Layer	Description	74	Asbestos Fibers	Non-fibrous Components	5	Non-asbestos Fiber
1	40535.488-2077	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	74	Cellulose
- ⁰ - 1		2	Brown mastic		None detected	Mastic/binder	2	Cellulose
2	40535.488-2078	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	69	Cellulose
		2	Brown mastic		None detected	Mastic/binder	3	Cellulose
3	40535.488-2079	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	63	Cellulose
		2	Brown mastic		None detected	Mastic/binder	2	Cellulose
4	40535.488-2080	1	Gray fibrous material		None detected	Filler, Perlite	68	Cellulose
		2	Brown mastic		None detected	Mastic/binder	3	Cellulose
5	40535.488-2081	1	Gray fibrous material with trace paint		None detected	Paint, Filler, Perlite	73	Cellulose
		2	Brown mastic		None detected	Mastic/binder	2	Cellulose
6	40535.488-2082	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	65	Cellulose
	10000.100 2002	2	Brown mastic		None detected	Mastic/binder	2	Cellulose
7	40535.488-2083	1	Gray fibrous material with paint.		None detected	Paint, Filler, Perlite	64	Cellulose
		2	Brown mastic		None detected	Mastic/binder	3	Cellulose
8	40535.488-2084	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	64	Cellulose
		2	Brown mastic		None detected	Mastic/binder	2	Cellulose
9	40535.488-2085	1	Gray fibrous material with paint		None detected None	Paint, Filler, Perlite	71	Cellulose
1.1		2	Brown mastic		detected	Mastic/binder	2	Cellulose
10	40535.488-2086	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	74	Cellulose
-		2	Brown mastic	-	None detected	Mastic/binder	2	Cellulose
11	40535.488-2087	1	Gray fibrous material with paint.	-	None detected	Paint, Filler, Perlite	60	Cellulose
		2	Brown mastic		None detected	Mastic/binder	2	Cellulose

Seattle Laboratory: 4500 98 Ave. NE, Suite 200, Beattle, WA 98105, Tel: 205.833,1111, Fax: 205.633,4747, NVLAP Lab Code: 201007-0

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ANALYTICAL LABORATORY REPORT [PLM] EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; (PLM) EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials Mr. Gregg Middaugh, Ms. Claire Tsai, Mr. Client: PBS Engineering and Attn :: Mike Smith, Mr. Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Environmental, Seattle Ferman Fletcher, Ms. Michelle Dodson Joh#: 40535.488 Batch#: 202110487 Date Received: 6/21/2021 Date Analyzed: 6/22/2021 Samples Rec'd: 37 Samples Analyzed: 37 Pierce College Olympic South Project Loc.: Thanes a 4 Abatement and Repairs Approved Signatory: Sileve (Fanyal) Zhang, Plastident Liib ID Client Sample ID Layer Description Asbestos Fibers 11 Non-fibrous Components 16 Non-asbestos Fibers. Gray fibrous None material with trace 1 Paint, Filler, Perlite 74 Cellulose detected 12 40535,488-2088 paint None 2 Brown mastic Mastic/binder 3 Cellulose detected Gray fibrous None 1 Paint, Filler, Perlite 65 Cellulose material with paint detected 13 40535.488-2089 None 2 Brown mastic 2 Mastic/binder Cellulose detected Gray fibrous None 1 Paint, Filler, Perlite 70 Cellulose material with paint detected 14 40535.488-2090 None 2 Brown mastic Mastic/binder 2 Cellulose detected Gray fibrous None 1 Paint, Filler, Perlite 68 Cellulose material with paint detected 15 40535.488-2091 None 2 Brown mastic З Mastic/binder Cellulose detected Gray fibrous None 1 Paint, Filler, Perlite 69 Cellulose material with paint detected 16 40535.488-2092 None 2 Brown mastic Mastic/binder 3 Cellulose detected Gray fibrous None 1 Paint, Filler, Perlite 62 Cellulose material with paint detected 17 40535.488-2093 None 2 Brown mastic Mastic/binder 3 Cellulose detected Gray fibrous None Paint, Filler, Perlite 1 63 Cellulose material with paint detected 18 40535.488-2094 None 2 Brown mastic Mastic/binder 2 Cellulose detected Gray fibrous None 1 Paint, Filler, Perlite 73 Cellulose material with paint detected 19 40535,488-2095 None 2 Brown mastic Mastic/binder 2 Cellulose detected Gray fibrous None 1 Paint, Filler, Perlite 67 Cellulose material with paint detected 20 40535.488-2096 None 2 Brown mastic 2 Cellulose Mastic/binder detected Gray fibrous None 1 Paint, Filler, Perlite 71 Cellulose material with paint detected 21 40535.488-2097 None 2 Brown mastic Mastic/binder 2 Cellulose detected Gray fibrous None 1 Paint, Filler, Perlite 62 Cellulose material with paint detected 22 40535.488-2098 None 2 Brown mastic Mastic/binder 2 Cellulose

detected

Sentlie Laboratory: 4500 9th Ave. NE, Suite 300. Seattle, WA 98105, Tel: 206.633,1111. Fax: 206.633,4747. NVLAP Lab Code: 201057-0

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	Mr. Gregg Middaugh,	600/R-93/116	3, Interim Method of the De Method for the Determinat	tion of	Asbestos in Bulk Bu	ilding Materials		(PLM) E
Altr.	Ms. Claire Tsai, Mr. Mike Smith, Mr. Ferman Fletcher, Ms. Michelle Dodson	Client:	PBS Engineering and Environmental, Seattle		Aridress;	214 E Galer Street, Suite	300,	Seattle, WA 98102
.Nob#-	40535.488	Batche:	202110487		Date Received:	6/21/2021		
lumples Rec'd		Date Analyzed:	6/22/2021		Samples Analyzed:	37		
Project Loc.	Pierce College Olympic Abatement and Repair	c South	Analyzed by		4	Another Reputer	Elton	There Prest
Lab ID	Client Sample ID	Louise	Description	-	Asbestos Fibers		-	
140 10	Citerit Sample ID	Layer		1%	Aspestos Fibers	Non-fibrous Components	%	Non-auberstos Filo
23	40535.488-2099	1	Gray fibrous material with paint		detected	Paint, Filler, Perlite	73	Cellulose
		2	Brown mastic		None detected	Mastic/binder	2	Cellulose
24	40535.488-2100	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	64	Cellulose
-	10000.100 2100	2	Brown mastic		None detected	Mastic/binder	3	Cellulose
25	40535,488-2101	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	68	Cellulose
20	40000.400-2 (0)	2	Brown mastic		None detected	Mastic/binder	2	Cellulose
76	40535.488-2102	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	75	Cellulose
26	40333.400-2102	2	Brown mastic		None detected	Mastic/binder	3	Cellulose
27	10525 408 2402	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	65	Cellulose
21	40535.488-2103	2	Brown mastic		None detected	Mastic/binder	2	Cellulose
		1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	69	Cellulose
28	40535.488-2104	2	Off-white/yellow mastic		None detected	Mastic/binder	2	Cellulose
		3	Off-white fibrous material		None detected	Filler	81	Cellulose
		1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	64	Cellulose
29	40535.488-2105	2	Off-white/Yellow mastic		None detected	Mastic/binder	2	Cellulose
		3	Off-white fibrous material		None detected	Filler	85	Cellulose
30	40535,488-2106	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	70	Cellulose
		2	Brown mastic		None detected	Mastic/binder	2	Cellulose
31	40535.488-2107	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	64	Cellulose
	10000.100.2107	2	Brown mastic		None detected	Mastic/binder	2	Cellulose
32	40535.488-2108	1	Gray fibrous material with paint		None detected	Paint, Filler, Perlite	63	Cellulose
UL.	1000.100 2100	2	Brown mastic		None detected	Mastic/binder	2	Cellulose
33	40535.488-2109	1	Gray sandy/brittle		None	Sand, Filler, Binder	3	Cellulose

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			ANALYTICAL LAB	OR/	ATORY REPOR	г		
PLMJ EPA - 40	CFR Appendix E to Subp	art E of Part 76 600/R-93/116	3, Interim Method of the De Method for the Determinal	termit tion of	ation of Asbestos in Asbestos in Bulk Bu	Bulk Insulation Samples; Ilding Materials		[PLM] EPA
Am.:	Mr. Gregg Middaugh, Ms. Claire Tsai, Mr. Mike Smith, Mr. Ferman Fletcher, Ms. Michelle Dodson	Client	PBS Engineering and Environmental, Seattle		Address	214 E Galor Street, Suile	300,	Seattle, WA 98102
Jobil:	40535.488	Batch#:	202110487		Date Received:	6/21/2021		
Samples Rec'd:	37	Date Analyzed:	6/22/2021		Samples Amilyzed:	37		
Project Loc.:	Pierce College Olympi Abatement and Repair			G	ye.			Thong
			Analyzed by	Care	зул Уес	Approved Septembry:	Stove	(Fanyazı) Zhang President
Lab ID	Client Sample ID	Layer	Description	%	Anbestos Fibers	Non-fibrous Components	16	Non-astresitos Fibers
34	40535.488-2110	1	Gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
35	40535.488-2111	1	Gray hard sandy/brittle material with paint		None detected	Sand, Filler, Cement/binder, Paint	3	Cellulose
36	40535.488-2112	1	Gray hard sandy/brittle material		None detected	Sand, Filler, Cement/binder	2	Cellulose
37	40535.488-2113	1	Gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose

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Lynnwood Laberalory: 19701 Senber Lake Read, Suite 103, Lynnwood, WA 96036, Tet. 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

www.seatleasbestostest.com, adminigseattleasbestostest.com

Project Manager: Mr. Gregg Middaugh, Ms. Claire Tsai Client: PBS Engineering and Environmental, Seattle Address: 214 E Calor Stroet, Suite 300, Seattle, WA 98102 Tel: 206.233,9639 Date Report Issued: 7/1/2021

Date Analyzed: 7/1/2021 Client Job#: 40535,488 Project Location: Pierce College Olympic South Abatement and Repairs Laboratory batch#: 202110580 Samples Received: 68

Enclosed please find the test results for the bulk samples submitted to our taboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuty of the person who look the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Tast, LLC, NVLAP, NIST, or any agency of the Federal government. The test room or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waster thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Chies

Steve (Fanyao) Zhang Approved Signatory 202110580-M



LABORATORY CHAIN OF CUSTODY

Project: __Pierce College Olympic South Abatement and Repairs

Analysis requested: ____PLM

Relinq'd by/Signature:

Received by/Signature: COLIDIAN YES Gyla

E-mail results to:

- Willem Mager 0
- X Gregg Middaugh
- Mark Hiley
- Tim Ogden
- Ryan Hunter
- Prudy Stoudt-McRae

TURN AROUND TIME:

- □ 1 Hour
- 2 Hours
- □ 4 Hours

Email ALL INVOICES to: seattleap@pbsusa.com

- CI. Janet Murphy Kaitlin Soukup □ Allison Welch Toan Nguyen Peter Stensland 図 Claire Tsai
- X 24 Hours 48 Hours

Project #: 40535.488

Date:_06/18/2021

Date/Time:

Date/Time: 7/1/2/ 9:21

Holly Tuttle Mike Smith Ferman Fletcher Ľ1 -Cameron Budnick Michelle Dodson 3-5 Days

D Other

	SAMPLE	DATA FORM	
Sample #	Material	Location	Lab
40535.488-2114	Gypsum wallboard, joint compound	Column south side of skybridge to Olympic North, north face	SAT
40535.488-2115	Gypsum wallboard, joint compound	Column across Rm 266, north face	-
40535.488-2116	Gypsum wallboard, joint compound	Rm 265 northeast column, south face	-
40535.488-2117	Gypsum wallboard, joint compound	Column north of Rm 264 door, east face in hall	
40535.488-2118	Gypsum wallboard, joint compound	Rm 264 southeast column, north face	
40535.488-2119	Gypsum wallboard, joint compound	Column south of Rm 264 door, west face	
40535.488-2120	Gypsum wallboard, joint compound	Column at Rm 270 entry, south face	1
40535.488-2121	Gypsum wallboard, joint compound	Rm 270 northwest column, east face	-
40535.488-2122	Gypsum wallboard, joint compound	Rm 275 southeast column, north face	
40535.488-2123	Gypsum wallboard, joint compound	Column south of Rm 275 door, north face	
40535.488-2124	Gypsum wallboard, joint compound	Column near Rm 289, south face	1
40535.488-2125	Gypsum wallboard, joint compound	Rm 278 south column, west face	
40535.488-2126	Gypsum wallboard, joint compound	Column near Rm 280, north face	1
40535.488-2127	Gypsum wallboard, joint compound	Column in Rm 285A, north face	
40535.488-2128	Gypsum wallboard, joint compound	Rm 284A west column, east face	-
40535.488-2129	Gypsum wallboard, joint compound	Rm 284 west column, east face	
10535.488-2130	Gypsum wallboard, joint compound	Rm 284 south column, north face	-
10535.488-2131	Gypsum wallboard, joint compound	Rm 283 south column, north face	-
10535.488-2132	Gypsum wallboard, joint compound	Rm 283 east column, west face	-

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40535.488-2133	Gypsum wallboard, joint compound	Rm 283, north wall, center area	
40535.488-2134	Gypsum wallboard, joint compound	Rm 283, south wall, west area	
40535.488-2135	Gypsum wallboard, joint compound	Rm 284, north wall, east of main door	-
40535.488-2136	Gypsum wallboard, joint compound	Rm 284, wall south of exit stairs	-
40535.488-2137	Gypsum wallboard, joint compound	Rm 284A, south wall, west area	
40535.488-2138	Gypsum wallboard, joint compound	Rm 284A, east wall, north of door	-
40535.488-2139	Gypsum wallboard, joint compound	Rm 282, west wall, north of door	-
40535.488-2140	Gypsum wallboard, joint compound	Rm281, north wall, east area	
40535.488-2141	Gypsum wallboard, joint compound	Rm 285, south wall, west area	-
40535.488-2142	Gypsum wallboard, joint compound	Rm 285A, west wall, north area	-
40535.488-2143	Gypsum wallboard, joint compound	Rm 279, north wall, west area	-
40535.488-2144	Gypsum wallboard, joint compound	Rm 278, south wall, west area	
40535.488-2145	Gypsum wallboard, joint compound	Rm 278, north wall, east area	-
40535.488-2146	Gypsum wallboard, joint compound	Rm 277, south wall, west area	_
40535.488-2147	Gypsum wallboard, joint compound	Rm 276, east wall, south area	-
40535.488-2148	Gypsum wallboard, joint compound	Rm 288, west wall, north area	-
40535.488-2149	Gypsum wallboard, joint compound	Rm 290, south wall, west area	-
40535.488-2150	Gypsum wallboard, joint compound	Rm 290, north wall, west of window	-
40535.488-2151	Gypsum wallboard, joint compound	Rm 291, west wall, north area	-
40535.488-2152	Gypsum wallboard, joint compound	Rm 291, south wall, east area	-
40535.488-2153	Gypsum wallboard, joint compound	Rm 292, south wall, east area	-
40535.488-2154	Gypsum wallboard, joint compound	Rm 289, west wall, north area	-
40535.488-2155	Gypsum wallboard, joint compound	Rm 287, south wall, east of door	-
0535.488-2156	Gypsum wallboard, joint compound	Rm 286, north wall, west area	-
40535.488-2157	Gypsum wallboard, joint compound	Rm 275, west wall, north of door	-
0535.488-2158	Gypsum wallboard, joint compound	Rm 275, north wall, east area	-
10535.488-2159	Gypsum wallboard, joint compound	Rm 274, south wall, west area	
0535.488-2160	Gypsum wallboard, joint compound	Rm 273, east wall, north area	-
0535.488-2161	Gypsum wallboard, joint compound	Rm 272, west wall, north area	-
0535.488-2162	Gypsum wallboard, joint compound	Corridor to 270/271, north wall, east area	-
0535.488-2163	Gypsum wallboard, joint compound	Rm 269, west wall, south area	-
0535.488-2164	Gypsum wallboard, joint compound	Rm 270, south wall, west area	-
0535.488-2165	Gypsum wallboard, joint compound	Rm 270, east wall, north area	-
0535.488-2166	Gypsum wallboard, joint compound	Rm 271, north wall, east area	-
0535.488-2167	Gypsum wallboard, joint compound	Rm 271, east wall, center area	-
0535.488-2168	Gypsum wallboard, joint compound	Rm 268, south wall, west area	-

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40535.488-2169	Gypsum wallboard, joint compound	Rm 268, north wall, east area	1
40535.488-2170	Gypsum wallboard, joint compound	Rm 267, west wall, north area	-
40535.488-2171	Gypsum wallboard, joint compound	Rm 267, east wall, south area	-
40535.488-2172	Gypsum wallboard, joint compound	Rm 264, west wall, south of door	
40535.488-2173	Gypsum wallboard, joint compound	Rm 263, west wall, north area	
40535.488-2174	Gypsum wallboard, joint compound	Rm 263, south wall, east area	
40535.488-2175	Gypsum wallboard, joint compound	Rm 262, east wall, south area	-
40535.488-2176	Gypsum wallboard, joint compound	Rm 262 closet, north wall	
40535.488-2177	Gypsum wallboard, joint compound	Rm 261, west wall, north of door	
40535.488-2178	Gypsum wallboard, joint compound	Rm 261 closet, north wall	
40535.488-2179	Gypsum wallboard, joint compound	Rm 260, west wall, north of door	
40535.488-2180	Gypsum wallboard, joint compound	Rm 265, west wall, south area	-
40535.488-2181	Gypsum wallboard, joint compound	Rm 266, south wall, east of door	-

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673,9860, Fax: 425.673,9610, NVLAP Lab Code: 200768-0 Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

Atto.: Job#:	Mr. Gregg Middaugh, Ms. Claire Tsai 40535.488	Gliont: Batchilt:	, Interim Method of the Determinate Method for the Determinate PBS Engineering and Environmental, Scattle 202110580	on of	Asbestos in Bulk Bu	Ilding Materials 214 E Galer Street, Suite	ə 300,	[PLM] EP Seattle, WA 98102
Samples Rec'd:		Date Analyzed:	7/1/2021		Samples Analyzed:	68	Rev.	Code: HN34D
Project Loc.	Pierce College Olympic Abatement and Repairs			1	11.			Thung
	Construction designs		Analyzed by:	Can	alyn Yeo	Approved Signatory	Steve	(Farryao) Zhang, President
Lab ID	Client Sample ID	Layer	Description	1%	Asbestos Fibers	Non-fibrous Components	-	and a second second second
		-32	White powdery	10	Asocatos Pipers	Mon-Horbus Components	%	Non-tisbestos Fiber
1 40535.488-2114	40535.488-2114	1	material with paint and paper		None detected	Binder, Filler, Paint	27	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
2	40535.488-2115	1 -	White powdery material with paint		None detected	Binder, Filler, Paint	3	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	21	Cellulose
3	40535,488-2116	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	23	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	22	Cellulose
4	40535.488-2117	1	White powdery material with paint	17	None detected	Binder, Filler, Paint	3	Cellulose
			White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
5	40535.488-2118	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	20	Cellulose
_	1.1.1	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
6	40535.488-2119		White powdery material with paint		None detected	Binder, Filler, Paint	2	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	28	Cellulose
7	40535.488-2120	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	25	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	26	Cellulose
8	40535.488-2121	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	23	Cellulose
	1.00	4	White chalky material with paper			Binder/filler, Gypsum/binder	24	Cellulose
9	40535.488-2122	1 1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	21	Cellulose
		2	White chalky material with paper			Binder/filler, Gypsum/binder	25	Cellulose
10	40535.488-2123		White powdery material with paint		None detected	Binder, Filler, Paint	2	Celiulose
	LITTLE LITTLE	2	White chalky material with paper		detected	Binder/filler, Gypsum/binder	20	Cellulose
11	40535.488-2124		White powdery material with paint		None detected	Binder, Filler, Paint	3	Cellulose

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ANALYTICAL LABORATORY REPORT (PLM) EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; [PLM] EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials Client: PBS Engineering and Mr. Gregg Middaugh, Attn.; Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Ms. Claire Tsai Environmental, Seattle Job#: 40535.488 Batchil: 202110580 Date Received: 7/1/2021 Samples Rec'd: 68 Date Analyzed: 7/1/2021 Samples Analyzed: 68 Rev. Code: HN34D Pierce College Olympic South Project Loc.: Schana Abatement and Repairs Approved Signatory: Stave (Fanyao) Zhang, President Analyzed by, Client Sample ID Lab ID Layer Description % Asbestos Fibers Non-fibrous Components Non-asbestos Fibers 25 White chalky None Binder/filler. 11 2 40535.488-2124 26 Cellulose material with paper detected Gypsum/binder White powdery None 12 40535.488-2125 1 material with paint Binder, Filler, Paint 22 Cellulose detected and paper White powdery None 1 Binder, Filler, Paint 3 Cellulose detected material with paint 40535.488-2126 13 White chalky None Binder/filler. 2 27 Cellulose detected material with paper Gypsum/binder White powdery None ĩ Binder, Filler, Paint 2 Cellulose material with paint detected 40535.488-2127 14 Pink chalky None Binder/filler. 2 21 Cellulose material with paper detected Gvpsum/binder White powdery None 1 material with paint Binder, Filler, Paint 24 Cellulose detected 15 40535.488-2128 and paper White chalky None Binder/filler. 2 28 Cellulose material with paper detected Gypsum/binder White powdery None 1 material with paint Binder, Filler, Paint 20 Cellulose detected 16 40535.488-2129 and paper White chalky None Binder/filler 2 25 Cellulose material with paper detected Gypsum/binder White powdery None 1 material with paint Binder, Filler, Paint 22 Cellulose detected 17 40535.488-2130 and paper White chalky None Binder/filler. 2 23 Cellulose material with paper detected Gypsum/binder White powdery None 1 Binder, Filler, Paint 2 Cellulose material with paint detected 18 40535 488-2131 White chalky None Binder/filler. 2 21 Cellulose detected material with paper Gypsum/binder White powdery None 1 Binder, Filler, Paint 2 Cellulose material with paint detected 19 40535,488-2132 White chalky None Binder/filler. 2 24 Cellulose material with paper detected Gypsum/binder White powdery None 1 material with paint Binder, Filler, Paint 25 Cellulose detected 20 40535,488-2133 and paper White chalky None Binder/filler, 2 26 Cellulose material with paper detected Gypsum/binder White powdery None 1 material with paint Binder, Filler, Paint 22 Cellulose detected 21 40535,488-2134 and paper White chalky None Binder/filler, 2 29 Cellulose material with paper detected Gypsum/binder White powdery None 22 40535.488-2135 1 material with paint Binder, Filler, Paint Cellulose 21 detected

and paper

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0 Disclaimer: This report must not be used by the client to claim product cartification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

ANALYTICAL LABORATORY REPORT [PLM] EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; [PLM] EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials Mr. Gregg Middaugh, PBS Engineering and Attn.: Client: Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Ms. Claire Tsai Environmental, Seattle Job#: 40535.488 Batch#: 202110580 Date Received: 7/1/2021 Samples Rec'd: 68 Date Analyzed: 7/1/2021 Samples Analyzed: 68 Rev. Code: HN34D Project Loc.: Pierce College Olympic South a she SELAND Abatement and Repairs Approved Signatory: Steve (Fanyso) Zhang, President Lab ID Client Sample ID Layer Description Asbestos Fibers % Non-fibrous Components 26 Non-asbestos Fibers White chalky None Binder/filler, 22 40535.488-2135 2 27 Cellulose material with paper detected Gypsum/binder White powdery None 1 Binder, Filler, Paint 2 Cellulose material with paint detected 23 40535.488-2136 White chalky None Binder/filler. 2 23 Cellulose material with paper detected Gypsum/binder White powdery None 1 Binder, Filler, Paint 3 Cellulose material with paint detected 24 40535.488-2137 White chalky None Binder/filler. 2 20 Cellulose material with paper detected Gypsum/binder White powdery None 1 Binder, Filler, Paint 2 Cellulose material with paint detected 25 40535.488-2138 White chalky None Binder/filler. 2 25 Cellulose material with paper detected Gypsum/binder White powdery None 1 Binder, Filler, Paint 2 Cellulose material with paint detected 26 40535.488-2139 White chalky None Binder/filler. 2 24 Cellulose material with paper detected Gypsum/binder White powdery None 1 material with paint Binder, Filler, Paint 26 Cellulose detected 27 40535.488-2140 and paper White chalky None Binder/filler, 2 27 Cellulose material with paper detected Gypsum/binder White powdery None 1 material with paint Binder, Filler, Paint 25 Cellulose detected 28 40535.488-2141 and paper White chalky None Binder/filler. 2 21 Cellulose material with paper detected Gypsum/binder White powdery None 1 material with paint Binder, Filler, Paint 22 Cellulose detected 29 40535.488-2142 and paper White chalky None Binder/filler. 2 28 Cellulose material with paper detected Gypsum/binder White powdery None 1 Binder, Filler, Paint 2 Cellulose material with paint detected 30 40535.488-2143 White chalky None Binder/filler, 2 29 Cellulose material with paper detected Gypsum/binder White powdery None 1 material with paint Binder, Filler, Paint 20 Cellulose detected 31 40535.488-2144 and paper White chalky None Binder/filler, 2 23 Cellulose material with paper detected Gypsum/binder White powdery None 32 40535.488-2145 material with paint 1 Binder, Filler, Paint 23 Cellulose detected and paper White chalky None Binder/filler, 32 40535.488-2145 2 21 Cellulose material with paper detected Gypsum/binder

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ANALYTICAL LABORATORY REPORT

[PLM] EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; 500/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials [PLM] EPA

Attn.: Mr. Gregg Middaugh,

- Ms. Claire Tsai
- Job#: 40535.488

- Samples Rec'd: 68
 - Date Analyzed: 7/1/2021

ctlent: PBS Engineering and Environmental, Seattle Batch#: 202110580

Date Received: 7/1/2021 Samples Analyzed: 68

Rev. Gode: HN34D

Project Loc.: Pierce Callege Olympic South Abatement and Repairs

	G to
Acalyzed by	Garolyn Yeo

Thang

Approved Signalory:	Steve (Fanyao) Zhang.	Presiden

Address: 214 E Galer Street, Suite 300, Seattle, WA 98102

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fiber
33	40535.488-2146	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	25	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
34	40535.488-2147	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	24	Cellulose
	2	White chalky material with paper	1	None detected	Binder/filler, Gypsum/binder	29	Cellulose	
35	40535.488-2148	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	21	Cellulose
-		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
36	40535.488-2149	1	White powdery material with paint and paper	1	None detected	Binder, Filler, Paint	23	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	20	Cellulose
37	40535.488-2150	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	22	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	28	Cellulose
38	40535.488-2151	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	26	Cellulose
-		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	21	Cellulose
39	40535.488-2152	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	25	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	20	Cellulose
40	40535.488-2153	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	23	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
41	40535.488-2154	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	22	Cellulose
-		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
42	40535.488-2155	t	White chalky material with paint and paper		None detected	Binder/filler, Gypsum/binder	30	Cellulose

Lynnwood Laboratory. 19701 Scriber Lake Road, Suile 103, Lynnwood, WA 98036, Tel: 425,673,9850, Fax: 425,673,9810, NVLAP Lab Code: 200768-0

Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

ANALYTICAL LABORATORY REPORT [PLM] EPA ~ 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; TPI MI EPA 500/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials client: PBS Engineering and Mr. Gregg Middaugh, Attn.: Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Ms. Claire Tsai Environmental, Seattle Job#: 40535.488 Batch#: 202110580 Date Received: 7/1/2021 Samples Rec'd: 68 Date Analyzod: 7/1/2021 Samples Analyzad: 68 Rev. Code: HN34D Pierce College Olympic South Project Loc.: 32 hand he Abatement and Repairs Analyzed by Steve (Fanyao) Zhang, President Approved Signatory. Lab ID Client Sample ID Layer Description % Asbestos Fibers Non-fibrous Components % Non-aspestos Fibers White powdery None 1 Binder, Filler, Paint 3 Cellulose material with paint detected 43 40535.488-2156 White chalky None Binder/filler, 2 22 Cellulose material with paper detected Gypsum/binder White chalky None Binder/filler, 44 40535.488-2157 đ material with paint 29 Cellulose detected Gypsum/binder and paper White powdery None 1 material with paint Binder, Filler, Paint 28 Cellulose detected 45 40535.488-2158 and paper White chalky None Binder/filler 2 25 Cellulose material with paper detected Gvpsum/binder White powdery None 1 material with paint Binder, Filler, Paint 21 Cellulose detected 46 40535.488-2159 and paper White chalky None Binder/filler. 2 24 Cellulose material with paper detected Gypsum/binder White powdery None 1 Binder, Filler, Paint 3 Cellulose material with paint detected 47 40535.488-2160 White chalky None Binder/filler. 2 21 Cellulose material with paper detected Gypsum/binder White powdery None 1 material with paint Binder, Filler, Paint 25 Cellulose detected 48 40535.488-2161 and paper White chalky None Binder/filler. 2 26 Cellulose material with paper detected Gypsum/binder White powdery None 1 Binder, Filler, Paint 3 Cellulose material with paint detected 49 40535.488-2162 White chalky None Binder/filler. 2 27 Cellulose material with paper detected Gypsum/binder White powdery None 1 material with paint Binder, Filler, Paint 20 Cellulose detected 50 40535.488-2163 and paper White chalky None Binder/filler. 2 22 Cellulose material with paper detected Gypsum/binder White powdery None 1 Binder, Filler, Paint 3 Cellulose material with paint detected 51 40535.488-2164 White chalky None Binder/filler, 2 24 Cellulose material with paper detected Gypsum/binder White powdery None 1 material with paint Binder, Filler, Paint 21 Cellulose detected 52 40535,488-2165 and paper White chalky None Binder/filler. 2 23 Cellulose material with paper detected Gypsum/binder White powdery None 1 Binder, Filler, Paint 2 Cellulose material with paint detected 53 40535.488-2166 White chalky None Binder/filler, 2 24 Cellulose material with paper detected Gypsum/binder

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ANALYTICAL LABORATORY REPORT [PLM] EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials. [PLM] EPA Mr. Gregg Middaugh, PBS Engineering and Attn.: Client Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Ms. Claire Tsai Environmental, Seattle Job#: 40535,488 Batch#: 202110580 Date Received: 7/1/2021 Samples Rec'd: 68 Date Analyzed: 7/1/2021 Samples Analyzod: 68 Rev. Code: HN34D Pierce College Olympic South Project Loc.: Thomas Abatement and Repairs 2 you Analyzed by Approved Signatory Steve (Fanyao) Zhang, President Lab ID Client Sample ID Laver Description % Asbestos Fibers Non-fibrous Components 54 Non-asbestos Fibers White powdery None 1 material with paint Binder, Filler, Paint 28 Cellulose detected 54 40535.488-2167 and paper White chalky None Binder/filler. 2 29 Cellulose material with paper detected Gypsum/binder White powdery None 1 Binder, Filler, Paint 3 Cellulose material with paint detected 55 40535.488-2168 White chalky None Binder/filler, 2 22 Cellulose material with paper detected Gypsum/binder White powdery None 1 Binder, Filler, Paint 3 Cellulose material with paint detected 56 40535.488-2169 White chalky None Binder/filler. 2 25 Cellulose material with paper detected Gypsum/binder White powdery None 1 material with paint Binder, Filler, Paint 20 Cellulose detected 57 40535,488-2170 and paper Binder/filler, Brown chalky None 2 24 Cellulose material with paper detected Gypsum/binder White powdery None 1 Binder, Filler, Paint 3 Cellulose material with paint detected 58 40535.488-2171 Brown chalky None Binder/filler. 2 29 Cellulose material with paper detected Gypsum/binder White chalky None Binder/filler, 59 40535.488-2172 1 material with paint 32 Cellulose detected Gypsum/binder and paper White powdery None 1 material with paint Binder, Filler, Paint 20 Cellulose detected 60 40535.488-2173 and paper White chalky None Binder/filler, 2 27 Cellulose material with paper detected Gypsum/binder White powdery None 1 material with paint. Binder, Filler, Paint 23 Cellulose detected 40535.488-2174 61 and paper White chalky None Binder/filler. 2 25 Cellulose material with paper detected Gypsum/binder White powdery None 1 material with paint Binder, Filler, Paint 22 Cellulose detected 62 40535,488-2175 and paper White chalky None Binder/filler. 2 28 Cellulose material with paper detected Gypsum/binder White powdery None 63 40535,488-2176 1 material with paint Binder, Filler, Paint 20 Cellulose detected and paper White chalky None Binder/filler. 63 40535.488-2176 2 26 Cellulose material with paper detected Gypsum/binder White powdery None 64 40535.488-2177 1 material with paint Binder, Filler, Paint 21 Cellulose detected and paper

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425,673,9850, Fax: 425,673,9810, NVLAP Lab Code: 200768-0 Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

ANALYTICAL LABORATORY REPORT [PLM] EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials (PLMI EPA Mr. Gregg Middaugh, Client: PBS Engineering and Attn.: Ms. Claire Tsai Address: 214 E Galer Street, Suite 300, Seattle, WA 98102. Environmental, Seattle Job#: 40535,488 Batch#: 202110580 Date Received: 7/1/2021 Samples Roc'd: 68 Date Analyzed: 7/1/2021 Samples Analyzed: 68 Rev. Code: HN34D Project Los. Pierce College Olympic South Chang Abatement and Repairs No Analyzed by: Approved Signatory: Carecher Steve (Fanyao) Zhang, President Lab ID Client Sample ID Layer Description % Asbestos Fibers Non-fibrous Components % Non-asbestos Fibers White chalky None 64 Binder/filler, 40535.488-2177 2 23 Cellulose material with paper detected Gypsum/binder White powdery None 1 material with paint Binder, Filler, Paint 25 Cellulose detected 65 40535.488-2178 and paper White chalky None Binder/filler. 2 29 Cellulose material with paper detected Gypsum/binder White chalky None Binder/filler. 66 40535.488-2179 1 material with paint 31 Cellulose detected Gypsum/binder and paper White powdery None 1 material with paint Binder, Filler, Paint 22 Cellulose detected 67 40535.488-2180 and paper White chalky None 2 Binder/filler. Cellulose 27 material with paper detected Gypsum/binder White powdery None 1 Binder, Filler, Paint 2 Cellulose material with paint detected 68 40535.488-2181 White chalky None Binder/filler. 2 23 Cellulose material with paper detected Gypsum/binder

SEATTLE ASBESTOS TEST, LLC

Suattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 200,633,1111, Fax: 206,653,4747, NVLAP Lab Code: 201057-0

www.seattleasbestostest.com, admin@seattleasbestoslast.com

	Mr. Gregg Middaugh, Ms. Claire Tsai, Ms. Michelle Dodson	Date Analyzed:	4/9/2021
Client	PBS Engineering and Environmental. Seattle	Cilent Job#:	
Address:	214 E Galor Street, Suite 300, Scattle, WA 98102	Project Location:	Pierce College Early Childhood Education
Tel:	206.233.9639	Laboratory batch#:	202109869
Date Report Issued:	4/9/2021	Samples Received:	9

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part. 763. Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Steve (Fanyao) Zhang Approved Signatory

102	0986	7-MM
C~ C	0100	



Project: ____Pierce College Early Childhood Education

Analysis requested: ____ PLM

Relinq'd by/Signature:

Received by/Signature: Convol yn yes Confe

Email ALL INVOICES to: seattleap@pbsusa.com

Prudy Stoudt-McRae

Janet Murphy

Kaitlin Soukup

Claire Tsai

Holly Tuttle

E-mail results to:

- D Brian Stanford
- U Willem Mager
- S Gregg Middaugh
- Mark Hiley
- Tim Ogden

TURN AROUND TIME:

- D 1 Hour
- □ 2 Hours
- □ 4 Hours

24 Hours

D 48 Hours

 \otimes

Project #: 40535.438

Date: 4/6/2021

Date/Time:

Date/Time: 1/8/2/ 10:20

	SAMPLE DATA FORM						
Sample #	Material	Location	Lab				
40535.488-3001	Wall texture	Level 3 Mechanical Room	SAT				
40535.488-3002	Wall texture, joint compound, tape	Level 3 Mechanical Room	1				
40535.488-3003	Joint compound, tape	Level 3 Mechanical Room					
40535.488-3004	Duct insulation	Level 3 Mechanical Room MZ-2					
40535.488-3005	Duct insulation	Level 3 Mechanical Room MZ-3					
40535.488-3006	Woven insulation	Level 3 Mechanical Room					
40535.488-3007	Fireproofing	Level 3 Mechanical Room					
40535.488-3008	Fireproofing	Level 3 Mechanical Room	-				
40535.488-3009	Fireproofing	Level 3 Mechanical Room					

LABORATORY CHAIN OF CUSTODY

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 96105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

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(PLM] EPA - 40	CFR Appendix E to Subp		ANALYTICAL LAB 3. Interim Method of the Det	ermin	ation of Asbestos in	Bulk Insulation Samples;		[PLM] EP
1000			Method for the Determinat					
Attn.:	Mr. Gregg Middaugh, Ms. Claire Tsai, Ms. Michelle Dodson	Client:	PBS Engineering and Environmental, Seattle		Address:	214 E Galer Street, Suite	300, \$	Seattle, WA 98102
Job#:	40535.438	Batch#:	202109869		Date Received:	4/8/2021		
Samples Rec'd:	9	Date Analyzed:	4/9/2021		Samples Analyzed:	9	Rev.	Code: JY53A-1
Project Loc.	Pierce College Early C Education	hildhood		6	yes			SZhang
			Analyzed by	Card	alyn Yeo	Approved Signalory	Sleve	(Fanyao) Zhang, President
Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fiber
1	40535.488-3001	1	White powdery material with paint and paper	1	None detected	Binder, Filler, Paint	23	Celluiose
2	40535.488-3002	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	24	Cellulose
3	40535.488-3003	1	White powdery material with paint		None detected	Binder, Filler, Paint	3	Cellulose
3	40535.488-3003	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	21	Cellulose
	40525 400 2004	1	Yellow fibrous material		None detected	Filler	90	Glass fibers
4	40535.488-3004	2	Trace black asphaltic material		None detected	Asphalt/binder	2	Cellulose
5	40535,488-3005	1	Yellow fibrous material		None detected	Filler	87	Glass fibers
2	40000,400-0000	2	Yellow mastic		None detected	Mastic/binder	3	Cellulose
6	40535.488-3006	t	Off-white woven fibrous material and paint		None detected	Filler, Paint	88	Glass fibers
7	40535.488-3007	Ţ.	Tan powdery material with fibrous material		None detected	Filler, Fine particles	15	Cellulose
8	40535.488-3008	1	Tan powdery material with fibrous material		None detected	Filler, Fine particles	20	Cellulose
9	40535.488-3009	ť	Tan powdery material with fibrous material	1	None detected	Filler, Fine particles	19	Cellulose

SEATTLE ASBESTOS TEST, LLC

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

www.seattleasbestostest.com. admin@seattleasbestostest.com

Project Manager: Mr. Gregg Middaugh, Ms. Claire Tsai Client: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 206.233.9639 Date Report Issued: 4/29/2021 Date Analyzed: 4/29/2021 Client Job#: 40535,488 Project Location: Prece College Olympic South Emergency Cleanup - Floor 3 Laboratory batch#: 202110061 Samples Received: 38

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Chant

Steve (Fanyao) Zhang Approved Signatory



LABORATORY CHAIN OF CUSTODY

Project: Pierce College Olyn	mpic South Emergency Cleanup - Floor 3	Project #: 40535.488
Analysis requested:PLM	2	Date: 4/28/2021
Relinq'd by/Signature:	laun Joer.	Date/Time: 4/29/2021
Received by/Signature: Co.	rolyayos Cispe	Date/Time: 4/29/21 10:01
	Email ALL INVOICES to: seattleap@pbs	usa.com
E-mail results to:		
Brian Stanford	Prudy Stoudt-McRae	Mike Smith
Willem Mager	Janet Murphy	Ferman Fletcher
Gregg Middaugh	Kaitlin Soukup	Ryan Hunter
Mark Hiley	Claire Tsai	Michelle Dodson
Tim Ogden	Holly Tuttle	
TURN AROUND TIME:		
1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		

	SAMPLE DA	TA FORM	
Sample #	Material	Location	Lab
40535.488-3010	Gypsum wallboard/ joint compound	Room 321 west wall south area	SAT
40535.488-3011	Gypsum wallboard/ joint compound	Room 323A southeast corner	
40535.488-3012	Gypsum wallboard/ joint compound	Room 326A north wall	
40535.488-3013	Gypsum wallboard/ joint compound	Room 327A southeast corner	
40535.488-3014	Gypsum wallboard/ joint compound	Room 337 northeast corner	
40535.488-3015	Wall texture orange peel	Room 322 southwest area	
40535.488-3016	Wall texture orange peel	Room 326A north wall	
40535.488-3017	Wall texture orange peel	Room 327A east wall	1
40535.488-3018	Yellow carpet mastic	LV 3 Student lounge northeast area	
40535.488-3019	Yellow carpet mastic	Room 337 east area	-
40535.488-3020	Tan carpet mastic	Room 323 southwest area	
40535.488-3021	4" tan vinyl cove base, cream mastic	LV 3 Student lounge northeast area	-
40535.488-3022	4" tan vinyl cove base, cream mastic	Room 326A north wall	
40535.488-3023	4" tan vinyl cove base, cream mastic	Hall near Room 335	
40535.488-3024	6" beige ceramic floor tile, grey grout	Room 338A Women's restroom	
40535.488-3025	4" white ceramic wall tile	Room 338B Men's restroom	1
40535.488-3026	2' x 2' lay-in-ceiling-tile rough white	LV 3 Student lounge center area	
40535.488-3027	2' x 2' lay-in-ceiling-tile rough white	Hall near Room 320	
40535.488-3028	2' x 2' lay-in-ceiling-tile rough white	Hall near Room 331	

214 EAST GALER STREET, SUITE 300. SEATTLE, WA 98102 . 206.233.9639 MAIN . 866.727.0140 FAX . PESUSA.COM



LABORATORY CHAIN OF CUSTODY

40535.488-3029	Pipe insulation and cover	Room 320 east wall		
40535.488-3030	Pipe insulation and cover	Room 327 northwest corner below floor		
40535.488-3031	Interior duct lining	Hall near 335 return duct above ceiling		
40535.488-3032 Black vibration cloth		Room 329 east area supply fan below floor		
40535.488-3033	Black vibration cloth	LV 3 Student lounge west area above ceiling		
40535.488-3034	Soft grey duct sealant	Hall near room 327 above ceiling		
40535.488-3035	Soft grey duct sealant	Room 327 northwest area below floor		
40535.488-3036	Soft grey duct sealant	Room 329 east area below floor		
40535.488-3037	Grey duct tape	Room 329 east area below floor		
40535.488-3038	Grey duct tape	Room 329 east area below floor		
40535.488-3039	Soft grey duct sealant	Room 338A above hard lid		
40535.488-3040	Soft black window sealant	Room 325 west wall window to frame		
40535.488-3041	Soft black window sealant	LV 3 north window near east stairs window to frame		
40535.488-3042	White vapor barrier	Room 323 southeast area above ceiling		
40535.488-3043	Silver vapor barrier	Hall near 335 above ceiling at roof penetration		
40535.488-3044	Black asphaltic material	Room 329 east exterior wall below floor		
40535.488-3045	Concrete	Room 321 floor		
40535.488-3046	Lightweight concrete	Room 327 northwest hatch raised floor		
40535.488-3047	Lightweight concrete	Room 329 east hatch raised floor		

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel. 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

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PLMJ EPA - 40			Interim Method of the Determination					[PLM] EP
Attn.:	Mr. Gregg Middaugh, Ms. Claire Tsai	Client	Environmental, Seattle			214 E Galer Street, Suite	300, 5	Seattle, WA 98102
Samples Rec'd	40535.488 38	Date Analyzed:	202110061		Date Received: Samples Analyzed:			
Project Loc.:	Pierce College Olympic Emergency Cleanup - I	south	WEDELET	1.	A			SZhang
	Emergency Cleanup - I	FIDOF 3	Analyzed by:	Caro	lyn Yeu	Approved Signatory.	Steve	(Fanyao) Zhang, Presiden
Lab ID	Client Sample ID	Layer	Description	1%	Asbestos Fibers	Non-fibrous Components	154	Non-asbestos Fiber
	1	ł	White powdery material with paint		None detected	Binder, Filler, Paint	24	Cellulose
1	40535.488-3010	2	and paper White chalky material with paper	-	None detected	Binder/filler, Gypsum/binder	27	Cellulose
2	40535.488-3011	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	21	Cellulose
2	40535.468-3011	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	23	Cellulose
3	40535,488-3012	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	20	Cellulose
9		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	22	Cellulose
4	40535,488-3013	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	23	Cellulose
		2	White chalky material with paper	1	None detected	Binder/filler, Gypsum/binder	25	Cellulose
5	40535.488-3014	1	White powdery material with paint and paper		None detected	Binder, Filler, Paint	21	Cellulose
	40000.400 0011	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	28	Cellulose
6	40535.488-3015	1	Trace white powdery material with paint and paper		None detected	Binder, Filler, Paint	20	Cellulose
	1	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	23	Cellulose
7	40535.488-3016	t	Trace white chalky material with paint and paper		None detected	Binder/filler, Gypsum/binder, Paint	25	Cellulose
8	40535.488-3017	1	Trace white powdery material with paint and paper		None detected	Binder, Filler, Paint	21	Cellulose
9	40535.488-3018	1	Trace gray fibrous material		None detected	Filler	80	Synthetic fiber
	4000.400-0010	2	Yellow mastic		None detected	Mastic/binder	3	Cellulose
10	40535.488-3019	1	Trace gray/green fibrous material		None detected	Filler	83	Synthetic fiber
		2	Yellow mastic Tan/dark yellow	1	None detected None	Mastic/binder	2	Cellulose
11	40535,488-3020	1	mastic		detected	Mastic/binder	2	Cellulose
12	40535.488-3021	1	Tan/beige rubbery material		None detected	Rubber/binder	3	Cellulose

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105. Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

Disclaimer: This report must not be used by the client to claim product cartification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

ANALYTICAL LABORATORY REPORT (PLM) EPA - 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples: [PLM] EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials Client: PBS Engineering and Attn.: Mr. Gregg Middaugh, Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Environmental, Seattle Ms. Claire Tsai Job#: 40535,488 Batch#: 202110061 Date Received: 4/29/2021 Date Analyzod: 4/29/2021 Samples Analyzed: 38 Samples Rec'd: 38 Pierce College Olympic South SZhang Project Loc.: Ca the Emergency Cleanup - Floor 3 Approved Signatory: Steve (Fanyad) Zhang, President Anchored Inv Non-asbestos Fibers Lab ID Client Sample ID Layer Description % Asbestos Fibers Non-fibrous Components % None Mastic/binder 2 Cellulose 2 Off-white mastic detected 40535.488-3021 12 None White powdery Binder, Filler, Paint 2 Cellulose 3 detected material with paint Tan/beige rubbery None Rubber/binder 2 Cellulose 1 material detected None 2 Off-white mastic Mastic/binder 3 Cellulose detected 13 40535.488-3022 Trace white None 3 powdery material Binder, Filler, Paint 3 Cellulose detected with paint Tan/beige rubbery None Rubber/binder 2 Cellulose 1 detected material None Mastic/binder Cellulose 2 Off-white mastic 3 detected 14 40535.488-3023 Trace white chalky Binder/filler, None 3 material with paint Gypsum/binder, 28 Cellulose detected and paper Paint White/beige None Ceramic/binder None detected 1 detected ceramic White sandy/brittle None Cellulose Sand, Filler, Binder 2 2 detected 40535.488-3024 material 15 Dark gray None Sand, Filler, Binder Cellulose 3 sandy/brittle 3 detected material None None detected Off-white ceramic Ceramic/binder 16 40535,488-3025 1 detected Grav fibrous None 68 Cellulose 17 40535.488-3026 1 Paint, Filler, Perlite detected material with paint Grav fibrous None 67 Cellulose Paint, Filler, Perlite 18 40535.488-3027 1 detected material with paint Grav fibrous None 63 Cellulose Paint, Filler, Perlite 19 40535.488-3028 1 material with paint detected None None detected đ Silver foil Foil/binder detected Off-white paper Cellulose, Glass with mastic and None 66 Filler, Mastic/binder 40535,488-3029 2 20 detected fibers woven fibrous material Yellow fibrous None 3 Filler 89 Glass fibers material detected None Foil/binder None detected 1 Silver foil detected Off-white paper Cellulose, Glass with mastic and None 70 21 40535,488-3030 2 Filler, Mastic/binder woven fibrous detected fibers material Yellow fibrous None 88 Glass fibers 3 Filler material detected

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 205.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

Client: PBS Engineering and Environmental, Seattle

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ANALYTICAL LABORATORY REPORT

[PLM] EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Analyzed by:

Atts.: Mr. Gregg Middaugh, Ms. Claire Tsai

Samples Rec'd: 38

Project Loc.:

Job#: 40535.488

Pierce College Olympic South Emergency Cleanup - Floor 3

- - Date Analyzed: 4/29/2021

Batch#: 202110061

Date Received: 4/29/2021

201

Samples Analyzed: 38

S2hang

Approved Signatory. Steve (Fanyao) Zhang, President

Address: 214 E Galer Street, Suite 300, Seattle, WA 98102

[PLM] EPA

Lab ID	Client Sample ID	Layer	Description	36	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers	
22	40535.488-3031	1	Gray fibrous material	1	None detected	Filler	91	Cellulose, Synthetic fibers	
23	40535.488-3032	1	Black soft/elastic material with fibrous material		None detected	Binder, Filler	35	Cellulose, Glass fibers	
24	40535.488-3033	1	Black soft/elastic material with fibrous material		None detected	Binder, Filler	32	Cellulose, Glass fibers	
25	40535.488-3034	1	Gray soft/elastic material		None detected	Binder, Filler	2	Cellulose	
26	40535.488-3035	1	Gray soft/elastic material		None detected	Binder, Filler	3	Cellulose	
27	40535.488-3036	1	Gray soft/elastic material		None detected	Binder, Filler	3	Cellulose	
		1	Silver soft/elastic material with woven fibrous material		None detected	Binder, Filler	20	Cellulose	
28	40535.488-3037 -	2	Gray mastic		None detected	Mastic/binder	2	Cellulose	
	3	Black plastic		None detected	Plastic		None detected		
11	-		1	Silver soft/elastic material with woven fibrous material		None detected	Binder, Filler	24	Cellulose
29	40535.488-3038	40535.488-3038	2	Gray mastic		None detected	Mastic/binder	3	Cellulose
		3	Black plastic		None detected	Plastic		None detected	
30	40535.488-3039	1	Gray soft/elastic material		None detected	Binder, Filler	2	Cellulose	
31	40535.488-3040	1	Black soft/elastic material		None detected	Binder, Filler	3	Cellulose	
32	40535.488-3041	1	Black soft/elastic material with paint		None detected	Binder, Filler, Paint	2	Cellulose	
		1	White plastic		None detected	Plastic	1	None detected	
33	40535.488-3042	2	Tan paper with mastic and woven fibrous material		None detected	Filler, Mastic/binder	65	Cellulose, Glas fibers	
			1	Silver foil		None detected	Foil/binder		None detected
34	40535.488-3043	2	Tan paper with mastic and woven fibrous material		None detected	Filler, Mastic/binder	69	Cellulose, Glas fibers	
35	40535.488-3044	1	Black asphaltic material		None detected	Asphalt/binder	2	Cellulose	

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ANALYTICAL LABORATORY REPORT

[PLM] EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials [PLM] EPA

Attn.: Mr. Gregg Middaugh. Ms. Claire Tsai

Samples Rec'd: 38

- Job#: 40535.488

Client: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102

Batch#: 202110061 Date Analyzed: 4/29/2021

Date Received: 4/29/2021 Samples Analyzed: 38

Project Loc.: Pierce College Olympic South Emergency Cleanup - Floor 3

he Analyzed by

Chang Approved Signatory Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	1%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fiber
36	40535.488-3045	1	Gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
37	40535.488-3046	1	Gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
38	40535.488-3047	1	Gray sandy/brittle material		None detected	Sand, Filler, Binder	2	Cellulose

SEATTLE ASBESTOS TEST, LLC

Seattle Laboratory: 4500 9th Ave: NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

www.saattleasbestostest.com, admin@seattleasbestostest.com

Project Manager: Mr. Gregg Middaugh, Ms. Claire Tsal Cliant: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Scattle, WA 98102 Tel: 206.233.9639 Date Report Issued: 5/27/2021 Date Analyzed: 5/27/2021 Client Job#: 40535.438 Project Location: Pierce College Olympic South Emergency Clean Up Laboratory batch#: 202110292 Samples Received: 13

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Ching

Steve (Fanyao) Zhang Approved Signatory





LABORATORY CHAIN OF CUSTODY

Project:Pierce College Olyn	npic South Emergency Cleanup	Project #:40535.438	
Analysis requested:	PLM	Date: 5/26/2021	
Relinq'd by/Signature:	uit-sai	Date/Time: 5126/2021 9	30
Received by/Signature:	14- Yee Cyle	Date/Time: 5/26/21 13:22	
	Email ALL INVOICES to: seattleap@	phsusa com	
E-mail results to: Brian Stanford Willem Mager Gregg Middaugh Mark Hiley Tim Ogden	 Prudy Stoudt-McRae Janet Murphy Kaitlin Soukup Claire Tsai Holly Tuttle 	Mike Smith Ferman Fletcher Ryan Hunter Michelle Dodson	
TURN AROUND TIME: 1 Hour 2 Hours 4 Hours	24 Hours 48 Hours	3-5 Days Other	

		SAMPLE DATA FORM	
Sample #	Material	Location	Lab
40535.488-4001	Sandy soil	Northwest elevation near shrubs approximately 20 ft from building from double doors	SAT
40535.488-4002	Soil	West elevation approximately 5 feet from building outside Room 172 window	
40535.488-4003	Sandy soil	West elevation pile of dirt approximately 20 ft from building	-
40535.488-4004	Soil	Southwest elevation approximately 8 ft from building in landscape	
40535.488-4005	Sandy soil	South elevation approximately 35 ft from building under playground rubber chunks	-
40535.488-4006	Sandy soil	Southeast elevation approximately 25 ft from building near column base	
40535.488-4007	Sandy soil	East elevation approximately 25 ft from ECE drive thru double doors	
40535.488-4008	Soil	East elevation approximately 3 ft from building ECE drive thru soil under rocks south of Room 168 exterior door	
40535.488-4009	Soil	East elevation north area approximately 2 ft from building south of skybridge to Cascade	
40535.488-4010	Soil	North elevation at building base in landscape dirt	
40535.488-4011	Soil	North elevation approximately 50 ft from building under tree	_
40535.488-4012	Sand	West elevation approximately 58 ft from building under orange and red play equipment	
40535.488-4013	Soil	Cascade north west elevation base of building 45 feet from southeast corner	

214 EAST GALER STREET, SUITE 300, SEATTLE, WA 98102 * 206.233.9639 MAIN * 866.727.0140 FAX * PESUSA.COM

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105. Tel: 205.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

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[PLM] EPA - 4	CFR Appendix E to Sul	part E of Part	ANALYTICAL LAB 763, Interim Method of the I 6: Method for the Determin	Deter	mination of Asbesto	s in Bulk Insulation Sample	5;	[PLN
Attn.:	Mr. Gregg Middaugh, Ms. ClaireTsai	Client:	PRS Engineering and	and		214 E Galer Street, Suit	e 300,	Seattle, WA 98102
Jobst:	40535.438	Batch#:	202110292		Date Received:	5/26/2021		
Samples Rec'd:	13	Date Analyzed:	5/27/2021		Samples Analyzed:	13		
Project Loc.:	Pierce College Olymp Emergency Clean Up		Analyzed by	Car	Y/4	Approved Signatory	Steve	JE Krowy (Fanyan) Zhiang, Presiden
Lab ID	Client Sample ID	Layer	Description	1%	Asbestos Fibers	Non-fibrous Components	15	Non-asbestos Fiber
1	40535.488-4001	1	Soil		None detected	Soil, Filler, Sand	5	Cellulose
2	40535.488-4002	1	Soil		None detected	Soil, Filler, Sand	2	Cellulose
3	40535.488-4003	1	Soil		None detected	Soil, Filler, Sand	3	Cellulose
4	40535.488-4004	1	Soil		None detected	Soil, Filler, Sand	2	Cellulose
5	40535.488-4005	1	Soil		None detected	Soil, Filler, Sand	2	Cellulose
6	40535.488-4006	t	Soil		None detected	Soil, Filler, Sand	4	Cellulose
7	40535.488-4007	1	Soil		None detected	Soil, Filler, Sand	2	Cellulose
8	40535.488-4008	1	Soil		None detected	Soil, Filler, Sand	3	Cellulose
9	40535.488-4009	1	Soil		None detected	Soil, Filler, Sand	3	Cellulose
10	40535.488-4010	1	Soll		None detected	Soil, Filler, Sand	3	Cellulose
11	40535.488-4011	1	Soil		None detected	Soil, Filler, Sand	5	Cellulose
12	40535.488-4012	1	Soil		None detected	Soil, Filler, Sand	2	Cellulose
13	40535.488-4013	1	Soil		None detected	Soil, Filler, Sand	4	Cellulose

APPENDIX B

TEM Bulk Sampling Information

TEM Bulk Sample Inventory TEM Bulk Sample Laboratory Data Sheets TEM Bulk Sample Chain of Custody Documentation

Pierce College Olympic South Abatement and Repairs Washington Department of Enterprise Services TEM ASBESTOS SAMPLE INVENTORY

PBS Sample #	<u>Material Type</u>	Sample Location	<u>Lab Result</u>	<u>Lab</u>
40535.488 -3/29/21-TEM-1	Yellow pebble sheet vinyl flooring	Kitchen 161B	19.99% Chrysotile	Lab/Cor
40535.488 -4/6/21-TEM-1	Fireproofing	Room 284 on top lay-in ceiling tile	0.04% Winchite	Lab/Cor
40535.488 -4/27/21-TEM-1	Fireproofing	Room 283 west wall on beam above ceiling	0.04% Winchite	Lab/Cor
40535.488 -6/17/21-TEM-1	Fireproofing	LV2 north/south corridor south end	NAD	Lab/Cor
40535.488 -6/17/21-TEM-2	Fireproofing	LV2 mechanical mezzanine	0.05% Winchite	Lab/Cor



ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) Final Report

Job Number: 210266 Client: PBS Engineering + Environmental Address: 214 E Galer Street Seattle, WA 98102 Project Name: Pierce College Early Childhood Education Reno Project No.: 40535.438 PO Number: Sub Project: Reference No.: Report Number: 210266R01 Report Date: 3/31/2021

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
210266 - S1	40535.438-3/29/21-TEM-1 - Yellow Pebble Sheet Vinyl Flooring - Kitchen 161B	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)	All sample layers homogenized, per customer request.	3/30/2021

ELAP Item 198.4 - Preparation and analysis of the above sample(s) was conducted in accordance with the ELAP Item 198.4 for the identification of regulated asbestiform minerals in Non-Friable Organically Bound Bulk Samples. Briefly, each sample was taken from at least three randomly selected areas. The sample was then weighed (Original Sample Weight) on an analytical balance (0.01 milligram sensitivity), ashed in a muffle furnace to remove the organic component, and weighed (Particulate After Ash). After a brief hydrolysis period in concentrated hydrochloric acid, the suspension was immediately diluted in 20 ml of laboratory reagent water. Appropriate aliquots were removed from the suspension and filtered onto mixed cellulose ester filters for TEM analysis. The remaining suspension was then filtered onto pre weighed 0.4µm polycarbonate (PC) filter and re-weighed upon completion of drying (Hydrolysis Adjusted Weight). Upon confirmation of the principal mineral type by diffraction and EDS chemistry, a visual estimate of the regulated asbestiform minerals, relative to the non-asbestos, was determined. Fibers, with an aspect ratio of at least 3:1 and with the proper diffraction/ chemistry, were identified as regulated asbestiform mineral types. 'Trace' is reported for those samples whose percent asbestos is below 1.0%. 'Trace' analytes reported with a Weight Percent of 0.01% are reported at the Limit of Detection.

This test report relates only to the items tested in this report. Samples such as soils, sediments or raw ores may require further mineralogical analysis to differentiate mineral species. Interpretation of these results is the sole responsibility of the client. Results are subject to the variation in the layers of the sample, the accuracy of the balance, the visual estimate on the microscope as well as other variations within the procedure.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

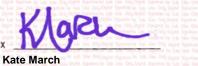
Sincerely, x X Kate March Quality Control Officer



Job Number: 210266 SEA Client: PBS Engineering + Environmental Project Name: Pierce College Early Childhood Education Reno **Report Number:** 210266R01 **Date Received:** 3/30/2021

	mple No.: 40535.4		looring - Kitchen 16		Sample Notes: All sample layers homogen request.	iized, per custome
Analyst(s) KM	Analysis Date 3/31/2021	Microscope JEOL-Sr 1200	Magnification 20000			
Analyte Des	cription		Weight Percent	Gravimetric Reduction	n	Weight Percent
Chrysotil	e		19.99%	Acid Solubles		39.55%
	Tota	I Asbestos Percent	19.99%	Organics		38.84%
				Residue		1.62%

Reviewed by:



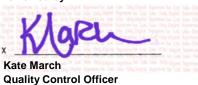
Quality Control Officer



Job Number: 210266 SEA Client: PBS Engineering + Environmental Project Name: Pierce College Early Childhood Education Reno **Report Number:** 210266R01 **Date Received:** 3/30/2021

Lab/Cor Sample No: S1 Client Sample No: 40535.438-3/29/21-TEM-1 Description: Yellow Pebble Sheet Vinyl Flooring - Kitchen 161B				SampleNotes: All sample layers homogenized, per custo request.		
	Container Weight	13.72642 g		Hydrolysis Filter PreWeight	13.76895 g	
	Weight Before Ash	13.81504 g		Filter Post Hydrolysis	13.78793 g	
	Orig Sample Weight	0.08862 g		After Hydrolysis Weight	0.01898 g	
	Weight After Ash	13.78062 g		Hydrolysis Aliquot	19.825 ml	
	Particulate After Ash	0.05420 g		Hydrolysis Adjusted Weight	0.01915 g	
	Percent Organics	38.84%		Begin Volume	20 ml	
	-			Acid Solubles	39.55%	
Grid	Analyte	Visual Estimate	Elements	Comment		
G7	Chrysotile	95.00%				
G8	Chrysotile	90.00%				

Reviewed by:





LABORATORY CHAIN OF CUSTODY

Project: <u>Pierce College Earl</u>	y Childhood Education	Project #: <u>40535.438</u>
Analysis requested:	TEM Bulk	Date: <u>3/29/2021</u>
Relinq'd by/Signature:		Date/Time:
Received by/Signature:		Date/Time:
	Email ALL INVOICES to: seattleap@p	bsusa.com
E-mail results to:		
Brian Stanford	Prudy Stoudt-McRae	Mike Smith
Willem Mager	Janet Murphy	Ferman Fletcher
Gregg Middaugh	Kaitlin Soukup	Ryan Hunter
Mark Hiley	Claire Tsai	Michelle Dodson
Tim Ogden	Holly Tuttle	
TURN AROUND TIME:		
🗌 1 Hour	🔀 24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		

SAMPLE DATA FORM						
Sample #	Material	Location	Lab			
40535.438-3/29/21-TEM-1	Yellow pebble sheet vinyl flooring	Kitchen 161B	Labcor			



Report Number: 210295R02

Report Date: 6/3/2021

ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) Final Report

Job Number: 210295

Client: PBS Engineering + Environmental

Address: 214 E Galer Street

Seattle, WA 98102

Project Name: Pierce College Early Childhood Education Reno Project No.: 40535.438 PO Number: Sub Project: Reference No.:

Revised Report to include LAA memo.

While no Regulated Asbestos was detected in this sample, potential Libby Amphibole Asbestos (LAA) was detected. Libby Amphibole Asbestos has been classified by the EPA as hazardous to human health, please reference https://cfpub.epa.gov/ncea/iris2/chemicalLanding.cfm?substance_nmbr=1026 **Report Note:** for more information on the LAA classification.

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
210295 - S1	40535.438-4/6/21-TEM-1 - Fireproofing - Room 284 on Top Lay- in-Ceiling Tile	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		4/8/2021

ELAP Item 198.4 - Preparation and analysis of the above sample(s) was conducted in accordance with the ELAP Item 198.4 for the identification of regulated asbestiform minerals in Non-Friable Organically Bound Bulk Samples. Briefly, each sample was taken from at least three randomly selected areas. The sample was then weighed (Original Sample Weight) on an analytical balance (0.01 milligram sensitivity), ashed in a muffle furnace to remove the organic component, and weighed (Particulate After Ash). After a brief hydrolysis period in concentrated hydrochloric acid, the suspension was immediately diluted in 20 ml of laboratory reagent water. Appropriate aliquots were removed from the suspension and filtered onto mixed cellulose ester filters for TEM analysis. The remaining suspension was then filtered onto pre weighed 0.4µm polycarbonate (PC) filter and re-weighed upon completion of drying (Hydrolysis Adjusted Weight). Upon confirmation of the principal mineral type by diffraction and EDS chemistry, a visual estimate of the regulated asbestiform minerals, relative to the non-asbestos, was determined. Fibers, with an aspect ratio of at least 3:1 and with the proper diffraction/ chemistry, were identified as regulated asbestiform mineral types. 'Trace' is reported for those samples whose percent asbestos is below 1.0%. 'Trace' analytes reported with a Weight Percent of 0.01% are reported at the Limit of Detection.

This test report relates only to the items tested in this report. Samples such as soils, sediments or raw ores may require further mineralogical analysis to differentiate mineral species. Interpretation of these results is the sole responsibility of the client. Results are subject to the variation in the layers of the sample, the accuracy of the balance, the visual estimate on the microscope as well as other variations within the procedure.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,



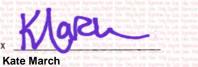


	Job Number: 210295	SEA		
	Client: PBS Engine	ering + Enviro	nmental	
_	Project Name: Pierce Colleg	ge Early Childho	od Education Reno	

Report Number: 210295R02 **Date Received:** 4/8/2021

	n ple No.: S1 m ple No.: 40535.4	38-4/6/21-TEM-1			
Des	scription: Fireproo	fing - Room 284 or	Top Lay-in-Ceiling	Гile	
Analyst(s)	Analysis Date	Microscope	Magnification		
KM	4/9/2021	JEOL-Sr 1200	20000		
Analyte Des	cription		Weight Percent	Gravimetric Reduction	Weight Percent
None Det	tect (Regulated Asl	bestos)	0.00%	Acid Solubles	44.46%
None Dei			0.04%	Organics	17.59%
Winchite			0.0470	organios	11100 /0
		ed Asbestos Perc		Residue	37.92%

Reviewed by:



Quality Control Officer



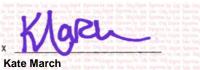
Job Number: 210295 SEA Client: PBS Engineering + Environmental Project Name: Pierce College Early Childhood Education Reno Report Number: 210295R02 Date Received: 4/8/2021

Lab/Cor Sample No: S1

Client Sample No:	40535.438-4/6/21-TEM-1
Description:	Fireproofing - Room 284 on Top Lay-in-Ceiling Tile

	Container Weight	13.66591 g		Hydrolysis	Filter PreWeight	13.68671 g
	Weight Before Ash	13.75183 g		Filter	Post Hydrolysis	13.71871 g
	Orig Sample Weight	0.08592 g		After H	ydrolysis Weight	0.03200 g
	Weight After Ash	13.73672 g		H	ydrolysis Aliquot	19.625 ml
	Particulate After Ash	0.07081 g		Hydrolysis	Adjusted Weight	0.03261 g
	Percent Organics	17.59%			Begin Volume	20 ml
					Acid Solubles	44.46%
Grid	Analyte	Visual Estimate	Elements		Comment	
G5	Winchite	0.10%	Na, Mg, Si,	i, K, Ca, Fe Libby Amphibole Asbestos		ole Asbestos
			ItemType	ItemNum	Confirmed	Comment
			Spectra	J63557SP	KM 4/9/2021	
			Diffraction	J63557DF	KM 4/9/2021	0.53nm ROW SPACING
			Brightfield	J63557BF		
G5	None Detect (Regulated Asbestos)	0.00%				
G6	Winchite	0.10%			Winchite	
G6	None Detect (Regulated Asbestos)	0.00%				

Reviewed by:



Quality Control Officer



2102 95 LABORATORY CHAIN OF CUSTODY

Project: Pierce College E	arly Childhood Education	Project #: 40535.438
Analysis requested:	TEM Bulk	Date: 4/6/2021
Relinq'd by/Signature:	ance I sur	Date/Time: 4/7/2021
Received by/Signature:	Joora Haihl	Date/Time: 4 8 21 0800
	Email ALL INVOICES to: seattleap	@pbsusa.com
E-mail results to: Brian Stanford Willem Mager Gregg Middaugh Mark Hiley Tim Ogden	 Prudy Stoudt-McRae Janet Murphy Kaitlin Soukup Claire Tsai Holly Tuttle 	 Mike Smith Ferman Fletcher Ryan Hunter Michelle Dodson
TURN AROUND TIME: 1 Hour 2 Hours 4 Hours	24 Hours 48 Hours	3-5 Days Other

SAMPLE DATA FORM						
Sample #	Material	Location	Lab			
40535.438-4/6/21-TEM-1	Fireproofing	Room 284 on top lay-in-ceiling-tile	Labcor			
	<u></u>					



Job Number: 210349 Client: PBS Engineering + Environmental Address: 214 E Galer Street Seattle, WA 98102 Project Name: Pierce College Early Childhood Education Project No.: 40535.488 PO Number: Sub Project: Reference No.: Report Number: 210349R01 Report Date: 4/28/2021

While no Regulated Asbestos was detected in this sample, potential Libby Amphibole Asbestos (LAA) was detected. Libby Amphibole Asbestos has been classified by the EPA as hazardous to human health, please reference https://cfpub.epa.gov/ncea/iris2/chemicalLanding.cfm?substance_nmbr=1026 **Report Note:** for more information on the LAA classification.

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
210349 - S1		ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		4/27/2021

ELAP Item 198.4 - Preparation and analysis of the above sample(s) was conducted in accordance with the ELAP Item 198.4 for the identification of regulated asbestiform minerals in Non-Friable Organically Bound Bulk Samples. Briefly, each sample was taken from at least three randomly selected areas. The sample was then weighed (Original Sample Weight) on an analytical balance (0.01 milligram sensitivity), ashed in a muffle furnace to remove the organic component, and weighed (Particulate After Ash). After a brief hydrolysis period in concentrated hydrochloric acid, the suspension was immediately diluted in 20 ml of laboratory reagent water. Appropriate aliquots were removed from the suspension and filtered onto mixed cellulose ester filters for TEM analysis. The remaining suspension was then filtered onto pre weighed 0.4µm polycarbonate (PC) filter and re-weighed upon completion of drying (Hydrolysis Adjusted Weight). Upon confirmation of the principal mineral type by diffraction and EDS chemistry, a visual estimate of the regulated asbestiform minerals, relative to the non-asbestos, was determined. Fibers, with an aspect ratio of at least 3:1 and with the proper diffraction/ chemistry, were identified as regulated asbestiform mineral types. 'Trace' is reported for those samples whose percent asbestos is below 1.0%. 'Trace' analytes reported with a Weight Percent of 0.01% are reported at the Limit of Detection.

This test report relates only to the items tested in this report. Samples such as soils, sediments or raw ores may require further mineralogical analysis to differentiate mineral species. Interpretation of these results is the sole responsibility of the client. Results are subject to the variation in the layers of the sample, the accuracy of the balance, the visual estimate on the microscope as well as other variations within the procedure.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,





	210349 S PBS Engineering + Pierce College Early		ion	•	nber: 210349R01 ived: 4/27/2021
	nple No.: S1 nple No.: 40535.4 scription: Room 28		am Above Ceiling		
Analyst(s) SH	Analysis Date 4/28/2021	Microscope Hitachi 7000FA	Magnification 20000		
Analyte Deso None Det Winchite	ect (Regulated Asl	bestos)	Weight Percent 0.00% 0.04%	Gravimetric Reduction Acid Solubles Organics	Weight Percen 38.48% 17.61%
	Total Regulat	ed Asbestos Perc	ent ND*	Residue Total Other Non-Asbestos Percer	43.87% nt 99.96%

Reviewed by:



Quality Control Officer



	lumber: 210349 SEA Client: PBS Engineering + E t Name: Pierce College Early C	nvironmental			port Number: 210349R01 ate Received: 4/27/2021	
	or Sample No: S1 lient Sample No: 40535.488-4/ Description: Room 283 W		ove Ceiling			
	Container Weight	13.63980 g		Hydrolysis F	ilter PreWeight	13.67933 g
	Weight Before Ash	13.72960 g		Filter F	ost Hydrolysis	13.71842 g
	Orig Sample Weight	0.08980 g		After Hyd	Irolysis Weight	0.03909 g
	Weight After Ash	13.71379 g		Нус	Irolysis Aliquot	19.825 ml
	Particulate After Ash	0.07399 g		Hydrolysis A	djusted Weight	0.03944 g
	Percent Organics	17.61%			Begin Volume	20 ml
	-				Acid Solubles	38.48%
Grid	Analyte	Visual Estimate	Elements		Comment	
G7	Winchite	0.10%	Na, Mg, Al,	Si, K, Ca, Fe		
			ItemType	ItemNum	Confirmed	Comment
			Diffraction	F63682DF	SH 4/28/2021	0.53nm ROW SPACING
			Spectra	F63682SP	SH 4/28/2021	
			Brightfield	F63682BF		
G7	None Detect (Regulated Asbestos)	0.00%				
G8	Winchite	0.10%	Na, Mg, Si,	K, Ca, Fe		
G8	None Detect (Regulated Asbestos)	0.00%				

Reviewed by:



Quality Control Officer



4 Hours

LABORATORY CHAIN OF CUSTODY

610349

Project: Pierce College Early	Childhood Education	Project #: 40535.488
Analysis requested:	TEM Bulk	Date: 4/27/2021
Relinq'd by/Signature:	June Jai	Date/Time: 4/27/2021 Date/Time: 4/27/21 1600
	Email ALL INVOICES to: seattleap(@pbsusa.com
E-mail results to: Brian Stanford Willem Mager Gregg Middaugh Mark Hiley Tim Ogden	 Prudy Stoudt-McRae Janet Murphy Kaitlin Soukup Claire Tsai Holly Tuttle 	 Mike Smith Ferman Fletcher Ryan Hunter Michelle Dodson
TURN AROUND TIME: 1 Hour 2 Hours	24 Hours 48 Hours	3-5 Days Other

SAMPLE DATA FORM					
Sample #	Material	Location	Lab		
40535.488-4/27/21-TEM-1	Fireproofing	Room 283 west wall on beam above ceiling	Labcor		

214 EAST GALER STREET, SUITE 300, SEATTLE, WA 98102 . 206.233.9639 MAIN . 866.727.0140 FAX . PBSUSA.COM



Job Number: 210536

Client: PBS Engineering + Environmental

Address: 214 E Galer Street

Seattle, WA 98102

Project Name: Pierce College Olympic South Abatement and Repairs Project No.: 40535.488 PO Number: Sub Project:

Reference No.:

Report Number: 210536R01 Report Date: 6/18/2021

While no Regulated Asbestos was detected in these samples, potential Libby Amphibole Asbestos (LAA) was detected in one of them. Libby Amphibole Asbestos has been classified by the EPA as hazardous to human health, please reference https://cfpub.epa.gov/ncea/iris2/chemicalLanding.cfm?substance nmbr=1026 for more information on

Report Note: the LAA classification.

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
210536 - S1	40535.488-6/17/21-TEM-1 -	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		6/17/2021
210536 - S2	40535.488-6/17/21-TEM-2 -	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		6/17/2021

ELAP Item 198.4 - Preparation and analysis of the above sample(s) was conducted in accordance with the ELAP Item 198.4 for the identification TEM - Bulk Semi- of regulated asbestiform minerals in Non-Friable Organically Bound Bulk Samples. Briefly, each sample was taken from at least Quantitative three randomly selected areas. The sample was then weighed (Original Sample Weight) on an analytical balance (0.01 (Modified) milligram sensitivity), ashed in a muffle furnace to remove the organic component, and weighed (Particulate After Ash). After a brief hydrolysis period in concentrated hydrochloric acid, the suspension was immediately diluted in 20 ml of laboratory reagent water. Appropriate aliquots were removed from the suspension and filtered onto mixed cellulose ester filters for TEM analysis. The remaining suspension was then filtered onto pre weighed 0.4µm polycarbonate (PC) filter and re-weighed upon completion of drying (Hydrolysis Adjusted Weight). Upon confirmation of the principal mineral type by diffraction and EDS chemistry, a visual estimate of the regulated asbestiform minerals, relative to the non-asbestos, was determined. Fibers, with an aspect ratio of at least 3:1 and with the proper diffraction/ chemistry, were identified as regulated asbestiform mineral types. 'Trace' is reported for those samples whose percent asbestos is below 1.0%. 'Trace' analytes reported with a Weight Percent of 0.01% are reported at the Limit of Detection.

> This test report relates only to the items tested in this report. Samples such as soils, sediments or raw ores may require further mineralogical analysis to differentiate mineral species. Interpretation of these results is the sole responsibility of the client. Results are subject to the variation in the layers of the sample, the accuracy of the balance, the visual estimate on the microscope as well as other variations within the procedure.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,

ulle, Sierra Hinkle

Technician/Analyst



Job Number: 210536 SEA Client: PBS Engineering + Environmental Project Name: Pierce College Olympic South Abatement and Repairs				•	per: 210536R01 red: 6/17/2021
	ple No.: S1 nple No.: 40535.4 scription: Analysis Date	88-6/17/21-TEM-1 Microscope	Magnification		
SH	6/18/2021	Hitachi 7000FA	20000		
Analyte Dese None Det	cription ect (Regulated As	bestos)	Weight Percent 0.00%	Gravimetric Reduction Acid Solubles	Weight Percent 42.31%
Total Regulated Asbestos Percent			ent ND*	Organics	21.91%
				Residue	35.78%
				Total Other Non-Asbestos Percent	100.00%
Des	nple No.: 40535.4 scription:				
Analyst(s)	Analysis Date	Microscope	Magnification		
SH	6/18/2021	Hitachi 7000FA	20000		
Analyte Dese	cription		Weight Percent	Gravimetric Reduction	Weight Percent
None Det	ect (Regulated As	bestos)	0.00%	Acid Solubles	32.14%
Winchite			Trace	Organics	18.27%
	Total Regulat	ted Asbestos Perc	ent ND*	Residue	49.55%
				Total Other Non-Asbestos Percent	99.95%

Reviewed by:

ulle lerra-X

Sierra Hinkle Technician/Analyst



Projec	Number: 210536 SEA Client: PBS Engineering + E E ct Name: Pierce College Olympi	nvironmental	d Repairs	Report Number: 210536R01 Date Received: 6/17/2021		
Lab/C	Cor Sample No: S1					
С	lient Sample No: 40535.488-6/ Description:	/17/21-TEM-1				
	· · ·	13.48536 g			13.52648 g	
	Container Weight Weight Before Ash	13.48538 g 13.57800 g		Filter PreWeight Post Hydrolysis	13.55938 g	
	Orig Sample Weight	0.09264 g		drolysis Weight	0.03290 g	
	Weight After Ash	13.55770 g	•	drolysis Meight	19.85 ml	
	Particulate After Ash	0.07234 g		Adjusted Weight	0.03315 g	
	Percent Organics	21.91%		Begin Volume	20 ml	
	r ercent Organica	21.01/0		Acid Solubles	42.31%	
Grid	Analuto	Visual Estimate	Elements	Commer		
	Analyte		Liements	Commer		
G5	None Detect (Regulated Asbestos)	0.00%				
G6	None Detect (Regulated	0.00%				
40	Asbestos)					
Lab/C	Asbestos) Cor Sample No: S2 lient Sample No: 40535.488-6/ Description:	/17/21-TEM-2				
Lab/C	Cor Sample No: S2 lient Sample No: 40535.488-6/ Description:	/17/21-TEM-2 13.50352 g	Hydrolysis F	Filter PreWeight	13.54654 g	
Lab/C	Cor Sample No: S2 lient Sample No: 40535.488-6/			Filter PreWeight Post Hydrolysis	13.54654 g 13.62839 g	
Lab/C	Cor Sample No: S2 lient Sample No: 40535.488-6/ Description: Container Weight	13.50352 g	Filter	Filter PreWeight Post Hydrolysis drolysis Weight	e e	
Lab/C	Cor Sample No: S2 lient Sample No: 40535.488-6/ Description: Container Weight Weight Before Ash	13.50352 g 13.66979 g	Filter After Hy	Post Hydrolysis	13.62839 g	
Lab/C	Cor Sample No: S2 lient Sample No: 40535.488-6/ Description: Container Weight Weight Before Ash Orig Sample Weight	13.50352 g 13.66979 g 0.16627 g	Filter After Hy Hy	Post Hydrolysis drolysis Weight	13.62839 g 0.08185 g	
Lab/C	Cor Sample No: S2 lient Sample No: 40535.488-6/ Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash	13.50352 g 13.66979 g 0.16627 g 13.63942 g	Filter After Hy Hy	Post Hydrolysis drolysis Weight drolysis Aliquot	13.62839 g 0.08185 g 19.85 ml	
Lab/C	Cor Sample No: S2 lient Sample No: 40535.488-6/ Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash	13.50352 g 13.66979 g 0.16627 g 13.63942 g 0.13590 g	Filter After Hy Hy	Post Hydrolysis drolysis Weight drolysis Aliquot Adjusted Weight	13.62839 g 0.08185 g 19.85 ml 0.08247 g	
Lab/C	Cor Sample No: S2 lient Sample No: 40535.488-6/ Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash	13.50352 g 13.66979 g 0.16627 g 13.63942 g 0.13590 g	Filter After Hy Hy	Post Hydrolysis drolysis Weight drolysis Aliquot djusted Weight Begin Volume	13.62839 g 0.08185 g 19.85 ml 0.08247 g 20 ml 32.14%	
Lab/(C	Cor Sample No: S2 lient Sample No: 40535.488-6/ Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics	13.50352 g 13.66979 g 0.16627 g 13.63942 g 0.13590 g 18.27%	Filter After Hy Hydrolysis A	Post Hydrolysis drolysis Weight drolysis Aliquot djusted Weight Begin Volume Acid Solubles Commer	13.62839 g 0.08185 g 19.85 ml 0.08247 g 20 ml 32.14%	
Lab/(C	Cor Sample No: S2 lient Sample No: 40535.488-6/ Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	13.50352 g 13.66979 g 0.16627 g 13.63942 g 0.13590 g 18.27% Visual Estimate	Filter After Hy Hy Hydrolysis A Elements	Post Hydrolysis drolysis Weight drolysis Aliquot djusted Weight Begin Volume Acid Solubles Commer	13.62839 g 0.08185 g 19.85 ml 0.08247 g 20 ml 32.14%	

Reviewed by:

mille lerra X

Sierra Hinkle Technician/Analyst



LABORATORY CHAIN OF CUSTODY

Project: Pierce College (Dlympic South Abatement and Repairs	Project #: 40535.488
Analysis requested:	TEM Bulk	Date: <u>6/17/2021</u>
Relinq'd by/Signature:	and four	
Received by/Signature:	perto Aute	Date/Time: 6117121 0900
	Email ALL INVOICES to: seattleap@pl	osusa.com
E-mail results to: Brian Stanford Willem Mager Gregg Middaugh Mark Hiley Tim Ogden	 Prudy Stoudt-McRae Janet Murphy Kaitlin Soukup Claire Tsai Holly Tuttle 	 Mike Smith Ferman Fletcher Ryan Hunter Michelle Dodson
TURN AROUND TIME: 1 Hour 2 Hours 4 Hours	24 Hours 48 Hours	3-5 DaysOther

SAMPLE DATA FORM					
Sample #	Material	Location	Lab		
40535.488-6/17/21-TEM-1	Fireproofing	LV2 north/south corridor south end	Labcor		
40535.488-6/17/21-TEM-2	Fireproofing	LV2 mechanical mezzanine			
			-		

APPENDIX C

AA Lead Paint Chip Sampling Information

AA Lead Paint Chip Sample Inventory AA Lead Paint Chip Laboratory Data Sheets AA Lead Paint Chip Chain of Custody Documentation

Pierce College Olympic South Abatement and Repairs Washington Department of Enterprise Services

AA LEAD PAINT CHIP SAMPLE INVENTORY

PBS Sample #		Paint Color / Component or Substrate	Sample Location	<u>Results (mg/kg)</u>	<u>Results (%)</u>	<u>Lab</u>
40535.488	-Pb01	Tan / Gypsum wallboard / Wall	North entrance by 183	<53	<0.0053	NVL
40535.488	-Pb02	Blue / Metal / Door frame	Outside room 180	2800	0.28	NVL
40535.488	-Pb03	Tan / Concrete / Column	Hall by room 168	<54	<0.0054	NVL
40535.488	-Pb04	Blue / Gypsum wallboard / Wall	Northeast corner of room 161	<49	<0.0049	NVL
40535.488	-Pb05	Gray / Concrete / Column	Southwest corner of room 265	<100	<0.010	NVL
40535.488	-Pb06	Tan / Metal / Door	Entrance to 284	<170	<0.017	NVL
40535.488	-Pb07	White / Gypsum wallboard / Wall	North wall 285A	<54	<0.0054	NVL
40535.488	-Pb08	Tan / Gypsum wallboard / Wall	Wall of room 328	<68	<0.0068	NVL

June 22, 2021

Claire Tsai **PBS Environmental - Seattle** 214 E Galer St. Suite. 300 Seattle, WA 98102



NVL Batch # 2111057.00

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

Client Project: 40535.488 Location: Pierce College Olympic South Abatement and Repairs

Dear Ms. Tsai,

NVL Labs received 8 sample(s) for the said project on 6/21/2021. Preparation of these samples was conducted following protocol outlined in EPA 3051/7000B, unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with EPA 7000B Lead by FAA <paint>. The results are usually expressed in mg/Kg and percentage (%). Test results are not blank corrected.

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

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

Sincerely,

Nick Ly, Technical Director

Enc.: Sample results



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)



Batch #: 2111057.00

Matrix: Paint Method: EPA 3051/7000B Client Project #: 40535.488 Date Received: 6/21/2021 Samples Received: 8 Samples Analyzed: 8

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

Attention: Ms. Claire Tsai

Project Location: Pierce College Olympic South Abatement and Repairs

Lab ID	Client Sample #	Sample Weight (g)	RL in mg/Kg	Results in mg/Kg	Results in percent
21074044	40535.488-Pb01	0.1889	53	< 53	<0.0053
21074045	40535.488-Pb02	0.1951	51	2800	0.28
21074046	40535.488-Pb03	0.1855	54	< 54	<0.0054
21074047	40535.488-Pb04	0.2051	49	< 49	< 0.0049
21074048	40535.488-Pb05	0.0994	100	< 100	<0.010
21074049	40535.488-Pb06	0.0585	170	< 170	<0.017
21074050	40535.488-Pb07	0.1840	54	< 54	<0.0054
21074051	40535.488-Pb08	0.1476	68	< 68	<0.0068

Sampled by: Client		On the			
Analyzed by: Shalini Patel	Date Analyzed: 06/22/2021	Anos			
Reviewed by: Nick Ly	Date Issued: 06/22/2021	Nick Ly, Technical Director			
mg/ Kg =Milligrams per kilogram		RL = Reporting Limit			
Percent = Milligrams per kilogram	Percent = Milligrams per kilogram / 10000				
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: 2021-0622-02 FAA-02

LEAD LABORATORY SERVICES



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

Project Manager Ms. Claire Tsai Phone (206) 233-9639

NVL E	Batch N	lumber	21	11057	.00	
TAT	1 Day				AH	No
Rush	TAT					
Due D	ate	6/22/202	21	Time	11:30 AM	
Email	claire	.tsai@pb	susa	a.com		
Fax	(866)	727-014	-0			

Project Name/Number: 40535.488

Project Location: Pierce College Olympic South Abatement and Repairs

Subcategory Flame AA (FAA)

Item Code FAA-02

EPA 7000B Lead by FAA <paint>

Total Number of Samples 8

Rush Samples _____ Lab ID Sample ID Description A/R 1 21074044 40535.488-Pb01 А 2 21074045 40535.488-Pb02 А 3 21074046 40535.488-Pb03 А 4 21074047 40535.488-Pb04 А 5 21074048 40535.488-Pb05 А 6 21074049 А 40535.488-Pb06 7 21074050 40535.488-Pb07 А 8 21074051 40535.488-Pb08 А

	Print Name	Signature	Company	Date	Time		
Sampled by	Client						
Relinquished by	Courier						
Office Use Only	Print Name	Signature	Company	Date	Time		
Received by	Fatima Khan		NVL	6/21/21	1130		
Analyzed by	Shalini Patel		NVL	6/22/21			
Results Called by							
Faxed Emailed							
Special							

Date: 6/21/2021 Time: 12:00 PM Entered By: Kelly AuVu



LABORATORY CH4 2111057

Project: Pierce College Olym	pic South Abatement and Repairs	Project #: <u>40535.488</u>
Analysis requested:	ad in paint	Date: 06/18/2021
Relinq'd by/Signature:	u pon	Date/Time: 6/18/2/
Received by/Signature	Email ALL INVOICES to: seattleap	Date/Time: 601 81 113 Com Comercian
E-mail results to:		
🔲 Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	🔲 Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	🔀 Claire Tsai	
TURN AROUND TIME:		
🔲 1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		

	SAMPLE DATA	FORM	
Sample #	Material	Location	Lab
40535.488-Pb01	Tan/ Gypsum wallboard/ wall	North entrance by 183	NVL
40535.488-Pb02	Blue/ Metal/ doorframe	Outside Room 180	
40535.488-Pb03	Tan/ concrete/ column	Hall by Room 168	-
40535.488-Pb04	Blue/ Gypsum wallboard/ wall	Northeast corner of room 161	
40535.488-Pb05	Grey/ concrete/ column	Southwest corner of room 265	
40535.488-Pb06	Tan/ Metal/ door	Entrance to 284	
40535.488-Pb07	White/ Gypsum wallboard/ wall	North wall 285A	
40535.488-Pb08	Tan/ Gypsum wallboard/ wall	Wall of Room 328	

APPENDIX D

Previous Survey Reports

Olympic South Building Minor Music Improvements Project (May 2016) Olympic Building Early Childhood Education Center Renovations (March 2020) Olympic Building Partial Reclad and Roof Replacement (March 2020)



Engineering + Environmental Est. 1982

May 17, 2016

Mr. Jim Taylor Pierce College Fort Steilacoom 9401 Farwest Drive SW Lakewood, WA 98498

RE: Pierce College Fort Steilacoom – Olympic South Building Music-Minor Improvements Project Limited Hazardous Material Investigation Summary PBS Project #40535.289

Dear Mr. Taylor:

PBS Engineering and Environmental, Inc. (PBS) performed a limited investigation of the Olympic South Building for the Minor Music Improvements Project at Pierce College Fort Steilacoom, Lakewood, Washington to determine the presence of asbestos-containing materials (ACM) and lead-containing paints (LCP). The intent of this letter is to ensure compliance with the Puget Sound Clean Air Agency (PSCAA) and Washington State Department of Labor and Industries' requirement that a "good faith inspection" for ACMs be performed prior to renovation/demolition activities.

Building Description

The Pierce College Olympic South Building was originally constructed in 1976. The original Level 1 is 11,200 sf and Level 2 is 15,000 sf in floor plan area. The work scope area includes level 2 of the Arts and Music Wing. Interior wall finishes include gypsum wallboard walls. Ceilings consist of 2' x 4' ceiling tiles, 12" x 12" glued on ceiling tiles, and gypsum wall board ceilings. Floors are typically carpeting, vinyl floor tile and exposed concrete or ceramic tile in the restrooms. The wall cavity has metal framing and fiberglass insulation with a gypsum wallboard finish on the building interior walls.

Survey Process

PBS inspected areas of the Olympic South Building expected to be impacted by the scope of the Music Improvements project. The work scope was verbally provided by McGranahan Architects during a field walk of the site. It is PBS' understanding that the scope of work at this facility includes replacement of the existing floor coverings, ceiling tile systems, demolition to portions of two walls located in rooms 0270 and 0271, and removal of soundboard materials throughout.

All accessible areas of the planned work scope area was inspected by AHERA Certified Building Inspector Grant Baker (Certification #155037, expiration 1/12/17) on March 16th, 2016. When observed suspect-ACMs were sampled, assigned a unique identification number and transmitted for analysis to Asbestos Northwest LLC (NVLAP #200993-0) under chain-of-custody protocols.

Bandon Bend Boise Eugene Portland Seattle Tri-Cities Vancouver

Olympic South Building Music - Minor Improvements Project Hazardous Materials Survey May 17, 2016 Page 2 of 3

Samples were analyzed according to EPA Method 600/M4-82-020 and 600R-93/116 using Polarized Light Microscopy (PLM), which has a reliable limit of quantification of 1% asbestos by volume.

Asbestos-Containing Materials (ACM)

The attached Asbestos Bulk Sample Inventory identifies all suspect materials that were sampled within the anticipated area of work and analyzed for asbestos. The following materials were found to contain asbestos:

- Pink sink undercoat material in Room 0285A (2% Chrysotile) (Quantity – 1 each)
- White mastic on the HVAC duct systems in the ceiling (10% Chrysotile) (Quantity –throughout on seams)
- Glue dots underneath 12"x12" acoustical ceiling tiles (2% Chrysotile) (Quantity 1,311 SF)

The following materials within the anticipated area of work were found not to contain asbestos include:

- Brown fireproofing debris
- White 12"x12" VFT and associated black mastic
- Brown vinyl threshold
- Tan cove base and associated tan mastic
- Black cove base and associated tan mastic
- Brown cove base mastic
- Yellow mastic associated with foam sound material
- Tan carpet glue
- Brown carpet glue
- Gray and red mastics on HVAC systems in ceiling
- Brown fabric on accordion door
- White 2'x2' drop ceiling tile
- White 12"x12" ceiling tile
- Gypsum wallboard and associated joint compound and tape,

Caution should be exercised during construction, as ACM may exist in various concealed locations. Any material not previously identified in this survey should be sampled to determine its asbestos content prior to impact. Work that may impact asbestos should only be performed by personnel having proper training and utilizing proper worker protection according to WISHA standards. Work impacting asbestos is subject to the requirements of various regulations, including, but not limited to: 40 CFR Part 61, NESHAPS; 40 CFR Part 763, AHERA; WAC 296-62 and 296-65; and Puget Sound Clean Air Agency Regulation III, Article 4, Asbestos Control Standard.

Lead-Containing Paint (LCP)

Three (3) representative paint coatings from interior components was sampled for lead content. The sample was assigned a unique identification number and transmitted for analysis to NVL Laboratories, Inc. (NVLAP #102063) under chain-of-custody protocols. PBS paint samples are analyzed using Flame Atomic Absorption Lead Analysis.

Olympic South Building Music - Minor Improvements Project Hazardous Materials Survey May 17, 2016 Page 3 of 3

The samples collected were determined to contain lead in concentrations ranging from 0.0003% to 0.09%. For sample location and lab results see attached lead laboratory report.

Painted coatings may exist in inaccessible areas of the building or in secondary coatings on building components. These may consist of standard interior paint on walls/floors/ceilings, in wall and ceiling cavities or mechanical chases, or coatings on structural steel. Any previously unidentified painted coatings should be considered lead containing until sampled and proven otherwise.

Impact of any detectable concentrations of lead requires construction activities to be performed according to Washington Labor and Industries regulations for Lead in Construction (WAC 296-155-176). Workers and personnel impacting LCP should be provided the proper personal protective equipment and use proper work methods to limit occupational and environmental exposure to lead until an initial exposure assessment has been conducted.

Please let us know if you have any questions regarding this report.

Report prepared by: PBS Engineering and Environmental, Inc.

bregg Middaugh

Gregg Middaugh Senior Project Manager

Attachments: PLM Asbestos Sample Inventory Lead Sample Inventory Lab Reports PBS Inspector Certifications

PLM ASBESTOS SAMPLE INVENTORY

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.289 -MI-01	Brown fire proofing debris	Hallway above ceiling outside of Room 02	2-Layer 1: Gray fibrous material	NAD	AN
40535.289 -MI-02	Brown fire proofing debris	Hallway above ceiling outside of Room 02	2-Layer 1: Gray fibrous material	NAD	AN
40535.289 -MI-03	Brown fire proofing debris	Hallway above ceiling outside of Room 02	2-Layer 1: Gray fibrous material	NAD	AN
40535.289 -MI-04	Brown fire proofing debris	Hallway above ceiling outside of Room 02	2 Layer 1: Gray fibrous material	NAD	AN
40535.289 -MI-05	Brown fire proofing debris	Hallway above ceiling outside of Room 02	2 Layer 1: Gray fibrous material		
40535.289 -MI-06	White 12"x12" vinyl floor tile Black mastic	Room 0283	Layer 1: Beige tile Layer 2: Black mastic	NAD NAD	AN
40535.289 -MI-07	White 12"x12" vinyl floor tile Black mastic	Room 0283	Layer 1: White tile Layer 2: Black mastic	NAD NAD	AN
40535.289 -MI-08	Threshold - Brown vinyl	Room 0284	Layer 1: Brown rubbery material Layer 2: Yellow mastic	NAD NAD	AN
40535.289 -MI-09	Pink sink undercoat	Room 0285	Layer 1: Pink semi rubbery material	2% Chrysotile	AN
40535.289 -MI-10	Tan cove base Tan mastic	Room 0275	Layer 1: Tan rubbery material Layer 2: Tan mastic	NAD NAD	AN
40535.289 -MI-11	Black cove base Tan mastic	Hallway by Room 0291	Layer 1: Black rubbery material Layer 2: Tan mastic	NAD NAD	AN
40535.289 -MI-12	Brown cove base mastic	Art Gallery wall	Layer 1: Brown rubbery material Layer 2: Tan mastic	NAD NAD	AN
40535.289 -MI-13	Yellow mastic	Foam sound material, Room 0270	Layer 1: Black foam Layer 2: White mastic	NAD NAD	AN
40535.289 -MI-14	Tan carpet glue	Hallway by Room 0275	Layer 1: Tan mastic	NAD	AN
40535.289 -MI-15	Brown carpet glue	Room 0273	Layer 1: Brown mastic	NAD	AN
40535.289 -MI-16	Tan carpet glue	Hallway by Art Gallery	Layer 1: Tan mastic	NAD	AN
40535.289 -MI-17	White mastic	HVAC above ceilings	Layer 1: White/gray mastic Layer 2: Silver foil Layer 3: White woven fibrous material	10% Chrysotile NAD NAD	AN
40535.289 -MI-18	Gray mastic	HVAC above ceilings	Layer 1: Gray mastic Layer 2: White woven fibrous material	NAD NAD	AN

PLM ASBESTOS SAMPLE INVENTORY

PBS Sample # 40535.289 -MI-19	<u>Material Type</u> Red mastic	Sample Location HVAC above ceilings	<u>Lab Description</u> Layer 1: Red mastic Layer 2: Silver foil Layer 3: White woven fibrous material	<u>Lab Result</u> NAD NAD NAD	<u>Lab</u> AN
40535.289 -MI-20	Brown fabric	Accordion Door, Room 0284	Layer 1: Brown woven fibrous material	NAD	AN
40535.289 -MI-21	Brown carpet glue	Room 2078	Layer 1: Yellow mastic	NAD	AN
40535.289 -MI-22	Brown carpet glue	Room 0284, stair steps	Layer 1: Yellow mastic	NAD	AN
40535.289 -MI-23	White 2'x2' drop in ceiling tile	Room 0292	Layer 1: Gray fibrous material w/paint	NAD	AN
40535.289 -MI-24	White 2'x2' drop in ceiling tile	Room 0292	Layer 1: Gray fibrous material w/paint	NAD	AN
40535.289 -MI-25	2'x4' drop in ceiling tile	Hallway by Room 0286	Layer 1: Gray fibrous material w/paint	NAD	AN
40535.289 -MI-26	2'x4' drop in ceiling tile	Hallway by Room 0281	Layer 1: Gray fibrous material w/paint	NAD	AN
40535.289 -MI-27	12"x12" white ceiling tile w/glue dots	Room 0276	Layer 1: Gray fibrous material w/paint Layer 2: Brown mastic	NAD 2% Chrysotile	AN
40535.289 -MI-28	12"x12" white ceiling tile w/glue dots	Room 0272	Layer 1: Gray fibrous material w/paint Layer 2: Brown mastic	NAD 2% Chrysotile	AN
40535.289 -MI-29	Gypsum wallboard	Hallway by Room 0281	Layer 1: White powdery material w/paint Layer 2: White chalky material w/paper	NAD NAD	AN
40535.289 -MI-30	Gypsum wallboard	Room 0283 A	Layer 1: White chalky material w/paper	NAD	AN
40535.289 -MI-31	Gypsum wallboard	Room 0284	Layer 1: White powdery material w/paper Layer 2: White chalky material w/paper	NAD NAD	AN
40535.289 -MI-32	Joint compound Gypsum wallboard	Room 0275	Layer 1: White powdery material w/paint & paper Layer 2: White chalky material w/paper	NAD NAD	AN
40535.289 -MI-33	Joint compound Gypsum wallboard	Room 0283	Layer 1: White powdery material w/paper Layer 2: White chalky material w/paper	NAD NAD	AN
40535.289 -MI-34	Joint compound Gypsum wallboard	Room 0272	Layer 1: White powdery material w/paint & paper Layer 2: White chalky material w/paper	NAD NAD	AN
40535.289 -MI-35	Joint compound Gypsum wallboard	Room 0292	Layer 1: White powdery material w/paint & paper Layer 2: White chalky material w/paper	NAD NAD	AN
40535.289 -MI-36	Joint compound Gypsum wallboard	Art Gallery by Room 0267	Layer 1: White powdery material w/paint & paper Layer 2: White chalky material w/paper	NAD NAD	AN

PLM ASBESTOS SAMPLE INVENTORY

PBS Sample #	Material Type	Sample Location	Lab Description	<u>Lab Result</u>	<u>Lab</u>
40535.289 -MI-37	Joint compound	Room 0278	Layer 1: White powdery material w/paint & paper	NAD	AN
	Gypsum wallboard		Layer 2: White chalky material w/paper	NAD	
40535.289 -MI-38	Joint compound	Room 0275	Layer 1: White powdery material w/paint & paper	NAD	AN
	Gypsum wallboard		Layer 2: White chalky material w/paper	NAD	

AA LEAD PAINT CHIP SAMPLE INVENTORY

PBS Sample #	Paint Color / Component or Substrate	Sample Location	<u>Results (mg/kg)</u>	<u>Results (%)</u>	<u>Lab</u>
40535.289 -Pb-01	Dark Brown/metal	Room 0284; Door Frame	976.0	0.0976	FA
40535.289 -Pb-02	Tan/metal	Room 0276; Door Frame	57.4	0.0057	FA
40535.289 -Pb-03	Tan/concrete	Hallway Column by Room 0264	3.2	0.0003	FA



WVLA9 200993-0

30620 Pacific Hwy S, #103, Federal Way, WA 98003 (253) 941-4343

Attn: Grant Baker

Enclosed please find the analytical report for one or more samples submitted for analysis by Polarized Light Microscopy.

The samples were analyzed in accordance with EPA method 600/R-93/116 and 600/M4-82-020. The analyst used a stereomicroscope to visually inspect the sample to determine homogeneity and material descriptions. The sample was then viewed under the polarized light microscope to determine the presence and percentage of asbestos and non-asbestos fibers.

The limit of detection for PLM 600/R-93/116 is approximately 1%. The EPA recommends that samples found to have asbestos percentages 1%-10% be point counted to acquire a more accurate percentage. We provide 400 point counts and 1000 point counts. The limits of detection are 0.25% and 0.10% respectively.

After analysis is complete, all paperwork will be filed together, and kept in a secure locked filing cabinet away from other clients and laboratory staff. Asbestos Northwest ensures that the files will not be tampered with at any time, and will be removed from the filing cabinet only if the client requests a modification on the report or re-analysis. If you have any concerns or comments, feel free to contact Asbestos Northwest.

Thank you,

rathy Buttles

-These results are only applicable to the samples enclosed, and may not be reproduced, except in full, without the approval of the laboratory. This report may not be used to claim product endorsement by NVLAP, NIST, or any other agency.-

PI	BS Engineering Environmen		201610429		PG lofz	
	ect: PIERCE College	Music I	IN PROVEMENTS	_ Project #:	40535. 289	
	ysis requested:			Date: 3		
Relin	nq'd by/Signature:	LAR	Tah	Date/Time	3/16/16	
Rece	eived by/Signature:	n K	n	Date/Time	- 1-	-
Fax	results to:					
	Brian Stanford		Ferman Fletcher		David Toy	
	Willem Mager		Prudy Stoudt-McRae		Mike Smith	
×	Gregg Middaugh	×	Grant Baker		Chuck Greeb	
	Mark Hiley		Janet Murphy	A	Christine Rmah	
	Tim Ogden		Harry Goren			
TUR	N AROUND TIME:					
	1 Hour		24 Hours	图 (8-5 Days	
	2 Hours		48 Hours		Other	
	4 Hours					-

Report composite results for GWB/joint compound samples only

		BULK SAMPLE DATA F	ORM
Lab #	Sample #	Material	Location
	MI-01	BROWN FIRE PROUFING DEBR	AS HAILWAY ABOVE CETLING OUT
	MI-02		SIDE OF ROOMS 0283-
	MI - 03		0284-0285
	MI-04		
	MI-05	4	
	MI-06	WHITE 12"X12" VFT/BLACKMA	The Room 0283
	MI-07		1
	MI-08	THRESHOW - BROWN VINY!	ROOM 0284
	MI-09	PINK SINK UNDER COAT	ROM 0285 A
	MI-10	TAN Cove base/TAN MASTIC	Room 0275
	MI-11	BLACK Cove base/TAN MASTIC	HANWAY BY PM0291
	MI-12	BROWN Couchase Mastic	ART GALLERY WALL
	MI-13	YEHOW MASTIC	FORM Sound MATERIAN RM 0290
	MI-14	TAN OPT GILLE	HANWAY BY RM0275
	MI-15	BROWNAT GIUE	RM 0273
	MI-16	TAN CAT GIVE	HAllway By ART Galleny
	MI-17	WHITE MASTIC	HUAC ABOVE CEILINGS
	MI-18	GRAY MASTIC	
	MI-19	RED MASTIC	4
	MI-20	BROWN FABRIC	ACCORDIN POUR RM 0284

PI	BS Engineering	+ al			PG 20f
	ect: <u>Pierce College</u> ysis requested: <u>PLM</u> nq'd by/Signature:	Music.	IMPROVEMENTS	Project #:_ Date:3 Date/Time:	40535.289 /16/16 3/16/16
Rece	ived by/Signature:			Date/Time:	
	results to: Brian Stanford Willem Mager Gregg Middaugh Mark Hiley Tim Ogden		Ferman Fletcher Prudy Stoudt-McRae Grant Baker Janet Murphy Harry Goren		David Toy Mike Smith Chuck Greeb Christine Rmah
TURI D D	AROUND TIME: 1 Hour 2 Hours 4 Hours		24 Hours 48 Hours	-BC (€-5 Days Other

Report composite results for GWB/joint compound samples only

Lab #	Complete #	BULK SAMPLE DATA F	ORM	
Lap #	Sample #	Material	Location	Lab
_	MI-21	BROWN CPT GLUE	RM 0278	
	MI-22	BROWN CPT Glue	RM 0284 - STAIRS STEPS	
	MI-23	WHITE 2'X 2' DROP-INT	RM 0292	-
	MI-24	CEILING TILE +	RM 0292	
	MI -25	2X4 DROP-IN CETLING- FILE	HANWAY BY RM 028	1.
_	MI-26	¥	HAILWAY BY RM 0281	4
	MI-27	12"X12" WHITE CERING TILE	RM 0276	
	MI-28	WITH Glub DOTS	RM 0272	-
	MJ-29	Gypsum Wall board	HANWAY BY RM 0281	19.1
-	MI-30	1	RM 0283A	
	MI-31	*	RM 0284	
	MI-32	JOINT COMPOUND/GWB	Rm 0275	
_	MI-33	1	RM 0283	
	MI-34		Rm 0272	
	MI -35		RM 0292	
	MI - 36		ART GALLERY BY RM 026?	
	MI-37		RM 0278	
	MI-38	¥ V	RM 0275	
				-

NORTHWEST

Asbestos Northwest, LLC 30620 Pacific Hwy S, #103, Federal Way, WA 98003 Ph: (253) 941-4343 Fax: (253) 941-4175

PLM Analysis by EPA Method 600/M4-82-020 and 600/R-93/116

Attn: Grant Baker **PBS Environmental** 2517 Eastlake Ave, E Suite 100 Seattle, WA 98102

Date Received: 3/17/2016 Date Analyzed: 3/17/2016 Samples Received: 38 Samples Analyzed: 38 Project #: 40535

Batch Number: 201610429

Project: Pierce College Music Improvement

Client Sample ID	Lab Sample ID	Layer	Description	Matrix	% Non-Asbestos Fibers	% Asbestos Fibers
MI-01		1	Gray fibrous material	Filler	80% Cellulose, Glass fibers	None Detected
MI-02		1	Gray fibrous material	Filler	80% Cellulose, Glass fibers	None Detected
MI-03		1	Gray fibrous material	Filler	80% Cellulose, Glass fibers	None Detected
MI-04		1	Gray fibrous material	Filler	80% Cellulose, Glass fibers	None Detected
MI-05		1	Gray fibrous material	Filler	80% Cellulose, Glass fibers	None Detected
MI-06		1	Beige tile	Vinyl/binder, Mineral grains	2% Cellulose,	None Detected
		2	Black mastic	Mastic/binder	3% Cellulose	None Detected
MI-07		1	White tile	Vinyl/binder, Mineral grains	2% Cellulose	None Detected
		2	Black mastic	Mastic/binder	3% Cellulose	None Detected
MI-08		1	Brown rubbery material	Rubber/binder	None Detected	None Detected
		2	2	Yellow mastic	Mastic/binder	2% Cellulose
MI-09		1	Pink semi rubbery material	Vinyl/binder, Mineral grains	1% Cellulose	2% Chrysotile
MI-10	_	1	Tan rubbery material	Rubber/binder	None Detected	None Detected
		2	Tan mastic	Mastic/binder	2% Cellulose	None Detected

Analyzed By: Cathy Butler

Reviewed By: Dan Lafley

NORTHWEST

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PLM Analysis by EPA Method 600/M4-82-020 and 600/R-93/116

Attn: Grant Baker **PBS Environmental** 2517 Eastlake Ave, E Suite 100 Seattle, WA 98102

Date Received: 3/17/2016 Date Analyzed: 3/17/2016 Samples Received: 38 Samples Analyzed: 38 Project #: 40535

Batch Number: 201610429

Project: Pierce College Music Improvement

Client Sample ID	Lab Sample ID	Layer	Description	Matrix	% Non-Asbestos Fibers	% Asbestos Fibers
MI-11		1	Black rubbery material	Rubber/binder	None Detected	None Detected
		2	Tan mastic	Mastic/binder	2% Cellulose	None Detected
MI-12		1	Brown rubbery material	Rubber/binder	None Detected	None Detected
		2	Tan mastic	Mastic/binder	2% Cellulose	None Detected
MI-13		1	Black foam	Foam	None Detected	Non Detected
		2	White mastic	Mastic/binder	2% Cellulose	None Detected
MI-14		1	Tan mastic	Mastic/binder	2% Cellulose	None Detected
MI-15		1	Brown mastic	Mastic/binder	2% Cellulose	None Detected
MI-16		1	Tan mastic	Mastic/binder	2% Cellulose	None Detected
MI-17		1	White/gray mastic	Mastic/binder	2% Cellulose	10% Chrysotile
		2	Silver foil	Foil/binder	None Detected	None Detected
		3	White woven fibrous material	Filler, binder	70%Synthetic fibers	None Detected
MI-18		1	Gray mastic	Mastic/binder	2% Cellulose	None Detected
		2	White woven fibrous material	Filler, binder	70%Synthetic fibers	None Detected

Analyzed By: Cathy Butler



Reviewed By. Dan Lafley

NORTHWEST

Asbestos Northwest, LLC 30620 Pacific Hwy S, #103, Federal Way, WA 98003 Ph: (253) 941-4343 Fax: (253) 941-4175

Batch Number: 201610429

200993-0

PLM Analysis by EPA Method 600/M4-82-020 and 600/R-93/116

Attn: Grant Baker PBS Environmental 2517 Eastlake Ave, E Suite 100 Seattle, WA 98102

Date Received: 3/17/2016 Date Analyzed: 3/17/2016 Samples Received: 38 Samples Analyzed: 38 Project #: 40535

Project: Pierce College Music Improvement

Client Sample ID	Lab Sample ID	Layer	Description	Matrix	% Non-Asbestos Fibers	% Asbestos Fibers
MI-19		1	Red mastic	Mastic/binder	2% Cellulose	None Detected
		2	Silver foil	Foil/binder	None Detected	None Detected
		3	White woven fibrous material	Filler, binder	70%Synthetic fibers	None Detected
MI-20		1	Brown woven fibrous material	Filler, binder	70% Cellulose	None Detected
M-21		1	Yellow mastic	Mastic/binder	3% Cellulose	None Detected
M-22		1	Yellow mastic	Mastic/binder	3% Cellulose	None Detected
M-23		1	Gray fibrous material with paint	Filler, Perlite, Paint	70% Glass fibers, Cellulose	None Detected
M-24		1	Gray fibrous material with paint	Filler, Perlite, Paint	70% Glass fibers, Cellulose	None Detected
M-25		1	Gray fibrous material with paint	Filler, Perlite, Paint	70% Glass fibers, Cellulose	None Detected
M-26		1	Gray fibrous material with paint	Filler, Perlite, Paint	70% Glass fibers, Cellulose	None Detected
M-27		1	Gray fibrous material with paint	Filler, Perlite, Paint	60% Glass fibers, Cellulose	None Detected
		2	Brown mastic	Mastic/binder	3% Cellulose	2% Chrysotile
MI-28		1	Gray fibrous material with paint	Filler, Perlite, Paint	60% Glass fibers, Cellulose	None Detected
		2	Brown mastic	Mastic/binder	3% Cellulose	2% Chrysotile
MI-29		1	White powdery material with paint	Binder/filler, Paint	10% Cellulose	None Detected

aly But Analyzed By: Cathy Butler

Reviewed By: Dan Lafley

NORTHWEST

Asbestos Northwest, LLC 30620 Pacific Hwy S, #103, Federal Way, WA 98003 Ph: (253) 941-4343 Fax: (253) 941-4175

Attn: Grant Baker PBS Environmental 2517 Eastlake Ave, E Suite 100 Seattle, WA 98102

Date Received: 3/17/2016 Date Analyzed: 3/17/2016 Samples Received: 38 Samples Analyzed: 38 Project #: 40535

Project: Pierce College Music Improvement

Client Sample ID	Lab Sample ID	Layer	Description	Matrix	% Non-Asbestos Fibers	% Asbestos Fibers
		2	White chalky material with paper	Filler/binder, Gypsum/binder	20% Cellulose	None Detected
MI-30		1	White chalky material with paper	Filler/binder, Gypsum/binder	20% Cellulose	None Detected
MI-31		1	White powdery material with paint	Binder/filler, Paint	10% Cellulose	None Detected
		2	White chalky material with paper	Filler/binder, Gypsum/binder	25% Cellulose	None Detected
MI-32		1	White powdery material with paint and paper	Binder/filler, Paint	20% Cellulose	None Detected
		2	White chalky material with paper	Filler/binder, Gypsum/binder	25% Cellulose	None Detected
MI-33		-1	White powdery material with paint	Binder/filler, Paint	10% Cellulose	None Detected
	·	2	White chalky material with paper	Filler/binder, Gypsum/binder	25% Cellulose	None Detected
MI-34		1	White powdery material with paint and paper	Binder/filler, Paint	20% Cellulose	None Detected
		2	White chalky material with paper	Filler/binder, Gypsum/binder	25% Cellulose	None Detected
MI-35		1	White powdery material with paint and paper	Binder/filler, Paint	20% Cellulose	None Detected
		2	White chalky material with paper	Filler/binder, Gypsum/binder	25% Cellulose	None Detected

Reviewed By: Dan Lafley

Analyzed By: Cathy Butler

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Batch Number: 201610429

NORTHWEST

Attn: Grant Baker

Asbestos Northwest, LLC 30620 Pacific Hwy S, #103, Federal Way, WA 98003 Ph: (253) 941-4343 Fax: (253) 941-4175

PBS Environmental

Date Received: 3/17/2016 Date Analyzed: 3/17/2016 Samples Received: 38 Samples Analyzed: 38 Project #: 40535

Project: Pierce College Music Improvement

2517 Eastlake Ave, E Suite 100 Seattle, WA 98102

Client Sample ID	Lab Sample ID	Layer	Description	Matrix	% Non-Asbestos Fibers	% Asbestos Fibers
MI-36		1	White powdery material with paint and paper	Binder/filler, Paint	20% Cellulose	None Detected
		2	White chalky material with paper	Filler/binder, Gypsum/binder	25% Cellulose	None Detected
MI-37		1	White powdery material with paint and paper	Binder/filler, Paint	20% Cellulose	None Detected
		2	White chalky material with paper	Filler/binder, Gypsum/binder	25% Cellulose	None Detected
MI-38		1	White powdery material with paint and paper	Binder/filler, Paint	20% Cellulose	None Detected
		2	White chalky material with paper	Filler/binder, Gypsum/binder	25% Cellulose	None Detected

PLM Analysis by EPA Method 600/M4-82-020 and 600/R-93/116

laty Bith

Analyzed By: Cathy Butler



NVLA9 200993-0

Batch Number: 201610429



3600 Fremont Ave. N. Seattle, WA 98103 T: (206) 352-3790 F: (206) 352-7178 info@fremontanalytical.com

PBS Engineering & Environmental Gregg Middaugh 2517 Eastlake Ave, E #100 Seattle, WA 98102

RE: Pierce College Music Improvements Lab ID: 1603218

March 28, 2016

Attention Gregg Middaugh:

Fremont Analytical, Inc. received 3 sample(s) on 3/21/2016 for the analyses presented in the following report.

Total Metals by EPA Method 6020

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward Project Manager



CLIENT: Project: Lab Order:	PBS Engineering & Environmental Pierce College Music Improvements 1603218	Work Order S	Sample Summary
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1603218-001	MI-Pb-01	03/16/2016 12:00 AM	03/21/2016 9:30 AM
1603218-002	MI-Pb-02	03/16/2016 12:00 AM	03/21/2016 9:30 AM
1603218-003	MI-Pb-03	03/16/2016 12:00 AM	03/21/2016 9:30 AM



Case Narrative

WO#: **1603218** Date: **3/28/2016**

CLIENT:PBS Engineering & EnvironmentalProject:Pierce College Music Improvements

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers & Acronyms



WO#: **1603218** Date Reported: **3/28/2016**

Qualifiers:

- * Flagged value is not within established control limits
- B Analyte detected in the associated Method Blank
- D Dilution was required
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- I Analyte with an internal standard that does not meet established acceptance criteria
- J Analyte detected below Reporting Limit
- N Tentatively Identified Compound (TIC)
- Q Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- (<20%RSD, <20% Drift or minimum RRF)
- S Spike recovery outside accepted recovery limits
- ND Not detected at the Reporting Limit
- R High relative percent difference observed

Acronyms:

%Rec - Percent Recovery **CCB** - Continued Calibration Blank **CCV** - Continued Calibration Verification **DF** - Dilution Factor HEM - Hexane Extractable Material ICV - Initial Calibration Verification LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate MB or MBLANK - Method Blank MDL - Method Detection Limit MS/MSD - Matrix Spike / Matrix Spike Duplicate PDS - Post Digestion Spike Ref Val - Reference Value RL - Reporting Limit **RPD** - Relative Percent Difference SD - Serial Dilution SGT - Silica Gel Treatment SPK - Spike Surr - Surrogate



Analytical Report

 WO#:
 1603218

 Date Reported:
 3/28/2016

CLIENT: PBS Engineering & Environmental

Project: Pierce College Music Improvements

Lab ID:1603218-001Collection Date:3/16/2016Client Sample ID:MI-Pb-01Matrix:Miscellaneous Solid Materials -						
Analyses	Result	RL Q	ual	Units	DF	Date Analyzed
<u>Total Metals by EPA Method 6020</u>				Batch	n ID: 13	283 Analyst: TN
Lead	976	4.08	D	mg/Kg	10	3/24/2016 2:08:18 PM

Lab ID: 1603218-002 Client Sample ID: MI-Pb-02	3/16/2016 eous Solid Materials -				
Analyses	Result	RL Qual	Units	DF	Date Analyzed
<u>Total Metals by EPA Method 6020</u>			Batch	n ID: 1328	83 Analyst: TN
Lead	57.4	0.606	mg/Kg	1	3/24/2016 2:22:29 PM
Lab ID: 1603218-003			Collection	Date: 3	3/16/2016
Client Sample ID: MI-Pb-03			Matrix: M	iscellane	eous Solid Materials -
Analyses	Result	RL Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020			Batch	n ID: 132	83 Analyst: TN
Lead	3.16	0.417	mg/Kg	1	3/24/2016 2:26:01 PM



Work Order: CLIENT: Project:	-	ering & Environn ge Music Improv								SUMMAI		
Sample ID: MB-132	283	SampType: MBL	-K		Units: mg	/Kg		e: 3/23/20		RunNo: 284	01	
Client ID: MBLKS	6	Batch ID: 1328	83				Analysis Dat	e: 3/24/20)16	SeqNo: 533	557	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		ND	0.200									
Sample ID: LCS-13	3283	SampType: LCS	;		Units: mg	/Kg	Prep Dat	e: 3/23/2()16	RunNo: 284	01	
Client ID: LCSS		Batch ID: 1328	83				Analysis Dat	e: 3/24/20	016	SeqNo: 533	558	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		21.5	0.200	25.00	0	85.8	80	120				
Sample ID: 160320	7-004ADUP	SampType: DUP)		Units: mg	/Kg-dry	Prep Dat	e: 3/23/20)16	RunNo: 284	01	
Client ID: BATCH	I	Batch ID: 1328	83				Analysis Dat	e: 3/24/20)16	SeqNo: 533	560	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		7.47	0.175						6.620	12.1	20	
Sample ID: 160320	7-004AMS	SampType: MS			Units: mg	/Kg-dry	Prep Dat	e: 3/23/20)16	RunNo: 284	01	
Client ID: BATCH	I	Batch ID: 1328	83				Analysis Dat	e: 3/24/20	016	SeqNo: 533	564	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		27.6	0.173	21.69	6.620	96.8	75	125				
Sample ID: 160320	7-004AMSD	SampType: MSE)		Units: mg	/Kg-dry	Prep Dat	e: 3/23/20)16	RunNo: 284	01	
Client ID: BATCH	I	Batch ID: 1328	83				Analysis Dat	e: 3/24/20)16	SeqNo: 533	565	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		26.6	0.175	21.85	6.620	91.3	75	125	27.60	3.84	20	



Sample Log-In Check List

Client Name: PBS	Work Order Num	ber: 1603218	
Logged by: Erica Silva	Date Received:	3/21/2016	9:30:00 AM
Chain of Custody			
1. Is Chain of Custody complete?	Yes 🔽	No 🗌	Not Present
2. How was the sample delivered?	<u>Client</u>		
Log In			
3. Coolers are present?	Yes	No 🔽	
	Bulk Material		
4. Shipping container/cooler in good condition?	Yes 🗹	No 🗌	
 Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact) 	Yes	No 🗹	Not Required
6. Was an attempt made to cool the samples?	Yes	No 🗌	NA 🗹
7. Were all items received at a temperature of $>0^{\circ}C$ to $10.0^{\circ}C^{*}$	Yes	No 🗌	NA 🔽
8. Sample(s) in proper container(s)?	Yes 🖌	No 🗌	
9. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🗌	
10. Are samples properly preserved?	Yes 🗹	No 🗌	
11. Was preservative added to bottles?	Yes	No 🗹	NA 🗌
12. Is there headspace in the VOA vials?	Yes	No 🗌	NA 🔽
13. Did all samples containers arrive in good condition(unbroken)?	Yes 🗹	No 🗌	
14. Does paperwork match bottle labels?	Yes 🗹	No 🗌	
15. Are matrices correctly identified on Chain of Custody?	Yes 🗹	No 🗌	
16. Is it clear what analyses were requested?	Yes 🗹	No	
17. Were all holding times able to be met?	Yes 🖌	No	
<u>Special Handling (if applicable)</u>			
18. Was client notified of all discrepancies with this order?	Yes 🔽	No 🗌	
Person Notified: Grant Baker Date	:	3/21/2016	
By Whom: Erica Silva Via:	eMail 🖌 Ph	one 🗌 Fax	In Person
Regarding: Sampling date			
Client Instructions: 3/16/16			
19. Additional remarks:			

Item Information

Item #	Temp °C
Sample	13.2

^{*} Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

PE					1603218	
Proje	et: PIERCE College	Music Im	PROVEMENTS	_ Project #:_	40535.284	
Analy	ysis requested:A	A- LEA	2	Date:	3/16/16	
Relin	q'd by/Signature:	1 × De	h	Date/Time	3/110/16	
Rece	ived by/Signature	Infeed	nan	Date/Time	03/21/16@9:30	
Fax	results to:	1				
	Brian Stanford		Ferman Fletcher		David Toy	
	Willem Mager		Prudy Stoudt-McRae		Mike Smith	
×	Gregg Middaugh	A.	Grant Baker		Chuck Greeb	
	Mark Hiley		Janet Murphy	X	Christine Rmah	
	Tim Ogden		Harry Goren			
TUR	N AROUND TIME:					
	1 Hour		24 Hours	×	25 Days	
	2 Hours		48 Hours		Other	
	4 Hours					

Report composite results for GWB/joint compound samples only

		BULK SAMPLE DAT	A FORM	
Lab #	Sample #	Material	Location	Lab
	MI-Pb-01	DARLE BROWN/METAL	RM 0284 Dave FRAME	
2.5	MI-P6-02	TAN/METAL	RM 0276 Dave France	
	MI-Pb-03	TAN/ CONCRETE	Hallway Columno By RM 0264	
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				2.11
				-

2517 Eattlake Avenue East, Suite 100, Seattle, WA 98102 206,233,9639 Main 866,727 0140 Fax www.pbserv.com

Bend | Boise | Goas Bay | Eugene | Port and | Seattle | Tri-Cities | Vancouver

Certificate of Completion

This is to certify that

Grant F. Baker

4 hours of refresher training as an has satisfactorily completed

Asbestos Building Inspector

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

Certificate # 155037

EPA Provider Certificate #1085

nstructor

Expiration Date: Jan 12, 2017 Date(s) of Training Exam Score: NA

ARGUS DATION DATING TRAINING CONSULTING

an 13, 2016

A Terracon company

ARGUS PACIFIC, INC. • 1900 W NICKERSON ST, SUITE 315 • SEATTLE, WASHINGTON • 98119 • 206.285.3373 • WWW.ARGUSPACIFIC.COM

Limited Hazardous Materials Summary Report

Olympic Building Early Childhood Education Center Renovations Pierce College 9401 Farwest Drive Southwest Lakewood, WA 98498

Prepared for: State of Washington Department of Enterprise Services PO Box 41012 Olympia, WA 98504

March 23, 2020 PBS Project 40535.438



214 EAST GALER STREET SUITE 300 SEATTLE, WA 98102 206.233.9639 MAIN 866.727.0140 FAX PBSUSA.COM

TABLE OF CONTENTS

1	INT	RODUCTION	.1
	1.1	Project Background	. 1
	1.2	Building Descriptions	. 1
	1.3	Building Descriptions Survey Process	. 1
2		DINGS	
	2.1	Asbestos-Containing Materials (ACMs)	. 2
		Lead-Containing Components	
		Mercury-Containing Components	
	2.4	PCB-Containing Components	. 3
3	REC	OMMENDATIONS	.3
	3.1	ACMs	. 3
	3.2	Lead-Containing Components	. 3
	3.3	Mercury-Containing Components	.4
	3.4	PCB-Containing Components	.4

APPENDICES

APPENDIX A: PLM Bulk Sampling Information

PLM Bulk Sample Inventory PLM Bulk Sample Laboratory Data Sheets and Chain of Custody Documentation

APPENDIX B: AA Lead Paint Chip Sampling Information

AA Lead Paint Chip Sample Inventory AA Lead Paint Chip Laboratory Data Sheets and Chain of Custody Documentation

APPENDIX C: Certifications

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1 INTRODUCTION

1.1 Project Background

PBS Engineering and Environmental, Inc. (PBS) performed a survey of portions of the Early Childhood Education Center located in Olympic Building South at the Pierce College Fort Steilacoom Campus, to determine the presence of asbestos-containing materials (ACMs), lead-containing paints (LCP), mercury-containing components, and PCB-containing light fixture ballasts. The intent of this report is to ensure that Pierce College is in compliance with applicable regulatory requirements that a "good faith inspection" for ACMs be performed prior to renovation/demolition activities.

The project area was limited to the following rooms of the Olympic Building South: Rooms O160, O161, O162, O166 and O166A. These portions of the Early Childhood Education Center are to undergo renovations. The survey did not include any other areas in the Olympic Building.

1.2 Building Descriptions

The Olympic Building is a three-story, slab-on-grade structure. The exterior is accented with marblecrete, gypsum wallboard, and EIFS (Exterior Finish and Insulation). Interior finishes within the project areas include the following: floors consist of a concrete substrate covered with carpet, ceramic tile, or sheet vinyl with the exception of Room O160 which contains carpet on a wood substrate. Ceilings throughout consist of a suspended ceiling grid with 2'x4' lay-in ceiling tiles with the exception of Room O161 which contains a painted concrete deck. Walls are constructed of gypsum wallboard throughout. The room is heated via forced air which is supplied by ductwork routed overhead. Domestic water piping is routed through walls and ceiling spaces throughout.

1.3 Survey Process

All accessible areas were inspected by AHERA Certified Building Inspector Ferman Fletcher (Cert. No. 172753 Exp. 4/17/2020) on January 10, 2020. PBS endeavored to inspect all accessible areas of the scope of work. Inaccessible areas consist of those requiring selective demolition, fall protection, or confined space entry protocols in order to gain access.

When observed, suspect materials were sampled. All samples were assigned a unique identification number and transmitted for analysis to Seattle Asbestos Test (NVLAP #201057-0) under chain-of-custody protocols. Samples were analyzed according to EPA Method 600R-93/116 using Polarized Light Microscopy (PLM), which has a reliable limit of quantification of 1% asbestos by volume. Information regarding the type and location of sampled materials can be found on the attached PLM Sample Inventory located in Appendix A.

Suspect ACMs may exist in inaccessible areas. PBS endeavored to determine the presence and estimate the condition of suspect materials in all inaccessible areas included in the scope of work. While PBS has endeavored to identify the ACMs that may be found in concealed locations, additional unidentified ACMs may exist. All building demolition activities should be performed cautiously to prevent impacts to concealed asbestos-containing materials.



2 FINDINGS

2.1 Asbestos-Containing Materials (ACMs)

The following materials were determined to contain greater than 1% asbestos:

- Felt backing associated with sheet vinyl flooring
 - Bottom layer beneath non-asbestos grey pebble pattern sheet flooring Room O161 Sink Area (Northwest corner, Approx. 400 SF);
- Felt backing associated with brown pebble pattern sheet vinyl flooring Room O161 Kitchen (Approx. 230 SF);
- White sink undercoat Room O161 Kitchen (Double sink);
- Pink sink undercoat Room O166A (Approx. 1 EA);
- Joint compound associated with gypsum wallboard (Less than 1% via Lab Composite analysis see below) – Throughout.

Materials observed and found <u>not</u> to be asbestos-containing include:

- Carpet mastic Throughout;
- Ceramic floor tile and associated grout and mortar Room O161, Southwest corner;
- Ceramic wall tiles and associated mastic Room O161, Southwest corner;
- Covebase and associated mastic Throughout;
- 2'x4' Fissure Pattern Lay-in Ceiling Tiles Throughout;
- Black Sink Undercoat Room O161 Break Room (Northwest Corner);
- Window Putty (between frame and glass) Interior windows throughout;
- Hard Mudded Fitting Insulation Above suspended ceilings on fiberglass straight runs.

2.2 Lead-Containing Components

Five (5) representative painted coatings were sampled for lead content. The samples were assigned unique identification numbers and transmitted to NVL Laboratories, Inc. (AIHA IH #101861) in Seattle, Washington under chain-of-custody protocols for analysis using Flame Atomic Absorption (EPA 3051/7000B).

The following painted coating was sampled and found to contain lead:

• Tan paint on interior metal window frames was found to contain 0.0160% lead;

The following painted coatings were sampled and found <u>not</u> to contain lead:

- Tan paint on gypsum wallboard walls;
- Blue paint on gypsum wallboard walls;
- Tan paint on concrete decking.

See Appendix B for locations and laboratory results of paint samples.

2.3 Mercury-Containing Components

All fluorescent light tubes are presumed to contain mercury. PBS counted the number of fluorescent tubes in the project area for the purposes of mercury vapor recovery prior to renovation activities. PBS observed approximately 80 mercury-containing light bulbs throughout the project area. Caution should be exercised during demolition to not break these bulbs.



2.4 PCB-Containing Components

Magnetic fluorescent light ballasts should be presumed to contain PCBs and properly removed, stored, transported and disposed of in accordance with Washington Administrative Code (WAC) 173-303 Dangerous Waste Regulations and 40 CFR Part 761 Subpart D.

PBS used a ballast checker to inspect representative fluorescent light fixture ballasts throughout the work areas. Approximately one (1) ballast was observed to be magnetic and therefore PCB-containing.

The possibility exists for the magnetic ballast to have failed and be leaking. Caution should be exercised during ballast inspection and removal. All ballast residues should be presumed to contain high concentrations of PCBs. Precautions should be taken when handling light fixtures with leaking ballasts.

3 RECOMMENDATIONS

The following is a summary of our conclusions and recommendations for asbestos, lead, PCBs, mercury, and other regulated metals.

3.1 ACMs

PBS recommends that all exposed and concealed ACMs to be impacted by the renovation/demolition activities be removed prior to construction activities. Any impacts to asbestos-containing materials should be performed by a qualified Washington State licensed asbestos abatement contractor. All impacts should be performed according to applicable Puget Sound Clean Air Authority (PSCAA), Washington Administrative Code 296-62-07, and CFR Chapter 40 Part 763 AHERA.

Joint compound mud and wallboard systems as a composite was found to contain less than 1% asbestos. Current regulations do not consider the wallboard/joint compound as a composite to be regulated asbestos material (less than 1% of asbestos). However, these regulations require various employee/worker compliance (for all trades) during impact of less than 1% of asbestos materials, which includes, and is not limited to, worker asbestos training, initial air monitoring, worker and environmental protection, engineering controls (such as the use of wet methods and HEPA vacuums for debris cleanup), and supervision by an asbestos "competent person."

The possibility exist that suspect ACMs may be present in equipment, wall and ceiling cavities, beneath concrete slabs and buried in site soils included in the scope of the work. These may include, but are not limited to waterproofing membrane, internal gaskets, pipe insulation, piping materials, caulking and sealants of HVAC equipment and construction adhesives and wall mastics. Additional suspect-ACMs may be present in concealed spaces. Caution should always be exercised during selective demolition to prevent impact of suspect-ACMs. All suspect ACMs should be presumed asbestos-containing until properly sampled and analyzed. In the event that suspect ACMs is uncovered during construction, contractors should stop work immediately and inform the owner promptly for confirmation testing.

3.2 Lead-Containing Components

Representative painted coatings from the project locations were found to contain lead by laboratory analysis. Impact of painted surfaces with detectable concentrations of lead requires construction activities to be performed according to Washington Labor and Industries regulations for Lead in Construction (WAC 296-155). Workers impacting LCP should be provided the proper personal protective equipment and use proper work methods to limit occupational and environmental exposure to lead until an initial exposure assessment has been conducted. Additionally, all impacts to lead-containing paint shall be in accordance with 40 CFR Part



745. Painted coatings may exist in inaccessible areas of the work area or in secondary coatings. Any previously unidentified painted coatings should be considered lead-containing until sampled and proven otherwise.

3.3 Mercury-Containing Components

Fluorescent lamps are known to contain mercury and mercury vapors. All fluorescent lamps at this site are presumed to be mercury-containing. PBS recommends that all fluorescent lamps be carefully handled and recycled/disposed of in accordance with the contract documents and applicable regulations during demolition activities. Breakage of lamps should be avoided to prevent potential exposures to mercury. Washington Department of Safety and Health requires specific training, handling, engineering controls and disposal practices when performing this work. All waste shall be handled in accordance with WAC 173-303.

3.4 PCB-Containing Components

PBS recommends all light ballasts be inspected prior to disposal. Magnetic ballasts, regardless of labeling, should be presumed to contain PCBs and properly removed, stored, transported and disposed of in accordance with Washington Administrative Code (WAC) 173-303 Dangerous Waste Regulations and 40 CFR Part 761 Subpart D. Electronic ballasts do not contain PCBs and can be disposed of as general debris in compliance with applicable codes and endpoint facility requirements.

Please do not hesitate to contact us if you have any questions regarding this report or require additional information.

Report prepared by: PBS Engineering and Environmental, Inc.,

Ferman Fletcher AHERA Building Inspector Cert. # 172753, expiration 4/17/2020

Report reviewed by: GM



APPENDIX A

PLM Bulk Sampling Information

PLM Bulk Sample Inventory PLM Bulk Sample Laboratory Data Sheets PLM Bulk Sample Chain of Custody Documentation

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.438 -01	Carpet Tile Mastic	Lobby	Layer 1: Clear/yellow mastic Layer 2: Gray soft material	NAD NAD	SAT
40535.438 -02	Carpet Tile Mastic	Room O162	Layer 1: Yellow mastic	NAD	SAT
40535.438 -03	Carpet Tile Mastic	Room O166	Layer 1: Clear/yellow mastic	NAD	SAT
40535.438 -04	Carpet Mastic	Room O161; south end, center	Layer 1: Yellow mastic	NAD	SAT
40535.438 -05	Carpet Mastic	Room O161; southwest corner	Layer 1: Yellow mastic	NAD	SAT
40535.438 -06	Carpet Mastic	Room O160; west end	Layer 1: Yellow mastic	NAD	SAT
40535.438 -07	Beige Pebble Pattern Sheet Vinyl Flooring	Room O161 next to Room O166	Layer 1: Beige vinyl Layer 2: Gray fibrous material with mastic	NAD NAD	SAT
40535.438 -08	Beige Pebble Pattern Sheet Vinyl Flooring	Room O161; northwest corner	Layer 1: Beige vinyl Layer 2: Gray fibrous material with mastic	NAD NAD	SAT
40535.438 -09	Grey Pebble Pattern Sheet Vinyl Flooring (2 layers)	Room O161 Breakroom; southwest corner	Layer 1: Gray vinyl	NAD	SAT
			Layer 2: Gray fibrous material with mastic Layer 3: Beige vinyl	NAD NAD	
			Layer 4: Gray fibrous material with mastic	52% Chrysotile	
40535.438 -10	Grey Pebble Pattern Sheet Vinyl Flooring (2 layers)	Room O161 Breakroom; northeast corner	Layer 1: Gray vinyl	NAD	SAT
			Layer 2: Gray fibrous material with mastic	NAD	
			Layer 3: Beige vinyl Layer 4: Gray fibrous material with mastic	NAD 50% Chrysotile	
40535.438 -11	Brown Pebble Pattern Sheet Vinyl Flooring	Room O161 Kitchen; next to exit door	Layer 1: Brown vinyl	NAD	SAT
			Layer 2: Gray fibrous material with trace mastic	50% Chrysotile	
40535.438 -12	Brown Pebble Pattern Sheet Vinyl Flooring	Room O161 Kitchen; southwest	Layer 1: Brown vinyl	NAD	SAT
		-	Layer 2: Gray fibrous material with trace mastic	51% Chrysotile	
40535.438 -13	Ceramic Floor Tile	Room O161; southwest corner, bathroom	Layer 1: Cream ceramic	NAD	SAT

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
	Grout		Layer 2: Gray brittle/sandy material	NAD	
40535.438 -14	Ceramic Floor Tile Mortar	Room O161; southwest corner, bathroom	Layer 1: Gray brittle/sandy material	NAD	SAT
40535.438 -15	Ceramic Wall Tile	Room O161; southwest corner, bathroom	Layer 1: Tan ceramic	NAD	SAT
	Brown Mastic		Layer 2: White brittle/sandy material Layer 3: Brown/tan mastic	NAD NAD	
40535.438 -16	Tan Covebase Brown Covebase Mastic	Room O161; west wall	Layer 1: Tan rubbery material Layer 2: Brown mastic	NAD NAD	SAT
40535.438 -17	Dark Brown Covebase Brown Covebase Mastic	Room O160	Layer 1: Dark brown rubbery material Layer 2: Brown mastic	NAD NAD	SAT
40535.438 -18	Tan Covebase	Room O161; Breakroom, northwest		NAD	SAT
	Covebase Mastic	corner	Layer 2: Yellow/brown mastic	NAD	
			Layer 3: Tan powdery material with paint Layer 4: Brown paper	2% Chrysotile NAD	
40535.438 -19	Tan Covebase	Room O166; north wall	Layer 1: Tan rubbery material	NAD	SAT
	Covebase Mastic		Layer 2: Trace yellow mastic Layer 3: Trace white powdery material with paint	NAD NAD	
40535.438 -20	Joint Compound Gypsum Wallboard	Room O160; south wall	Layer 1: Off-white powdery material with paint Layer 2: White powdery material with paper	2% Chrysotile 2% Chrysotile	SAT
			Layer 3: White chalky material with paper	NAD Composite <1%	
40535.438 -21	Joint Compound Gypsum Wallboard	Room O161; west wall	Layer 1: Off-white powdery material with paint Layer 2: White powdery material with paper Layer 3: White chalky material with paper	2% Chrysotile 2% Chrysotile NAD Composite <1%	SAT
40535.438 -22	Joint Compound	Room O161; Kitchen, northwest	Layer 1: Off-white powdery material with paint	2% Chrysotile	SAT
	Gypsum Wallboard	corner	Layer 2: White powdery material with paper Layer 3: White chalky material with paper Composite Analysis Results	2% Chrysotile NAD Composite <1%	

PBS Engineering + Environmental PBS Project #40535.438

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.438 -23	Joint Compound Gypsum Wallboard	Room O166A; northwest corner	Layer 1: Off-white powdery material with paint Layer 2: White powdery material with paper Layer 3: White chalky material with paper	2% Chrysotile 2% Chrysotile NAD Composite <1%	SAT
40535.438 -24	2'x4' Fissure Pattern Lay-in Ceiling Tile	Room O160	Layer 1: Gray fibrous material with glass beads and paint	NAD	SAT
40535.438 -25	2'x4' Fissure Pattern Lay-in Ceiling Tile	Room O162	Layer 1: Gray fibrous material with glass beads and paint	NAD	SAT
40535.438 -26	2'x4' Fissure Pattern Lay-in Ceiling Tile	Room O166	Layer 1: Gray fibrous material with glass beads and paint	NAD	SAT
40535.438 -27	White Sink Undercoat	Room O161, Kitchen	Layer 1: White soft/loose material	3% Chrysotile	SAT
40535.438 -28	Black Sink Undercoat	Room O161; Breakroom; Upper sink	Layer 1: Black soft/loose material	NAD	SAT
40535.438 -29	Pink Sink Undercoat	Room O166A; north wall	Layer 1: Pink soft/loose material	3% Chrysotile	SAT
40535.438 -30	Interior Window Putty	Room O161; east wall	Layer 1: Black soft/elastic material with paint and debris	NAD	SAT
40535.438 -31	Interior Window Putty	Room O161; south wall	Layer 1: Black soft/elastic material with paint and debris	NAD	SAT
40535.438 -32	Interior Window Putty	Room O162; south wall	Layer 1: Black soft/elastic material with paint and debris	NAD	SAT
40535.438 -33	Hard Mudded Fitting Insulation	Room O162; above suspended ceiling	Layer 1: Off-white powdery material with woven fibrous material	NAD	SAT
40535.438 -34	Hard Mudded Fitting Insulation	Room O162; above suspended ceiling	Layer 1: Off-white powdery material with woven fibrous material	NAD	SAT
40535.438 -35	Hard Mudded Fitting Insulation	Room O162; above suspended ceiling	Layer 1: Off-white powdery material with woven fibrous material	NAD	SAT

SEATTLE ASBESTOS TEST, LLC

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

www.seattleasbestostest.com, admin@seattleasbestostest.com

Project Manager:	Ferman Fletcher	Date Analyzed:	1/13/2020
	PBS Engineering and Environmental, Seattle	Client Job#:	40535.438
Address:	214 E Galer Street, Suite 300, Seattle, WA 98102	Project Location:	Pierce College: Olympic Bldg ECE Renovations
Tel:	206.233.9639	Laboratory batch#:	
		Samples Received:	35

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

5_hang

Steve (Fanyao) Zhang President

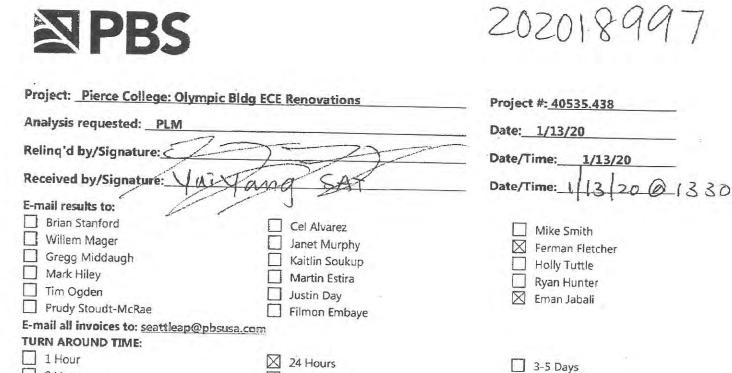
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E-mail all invoice	s to: seattleap@obsusa.com	e	
TURN AROUND T 1 Hour 2 Hours 4 Hours	TIME: 24 Hours 48 Hours	3-5 Days	

	SAMPLE DATA	FORM					
Sample # Material Location							
40535.438-01	Carpet Tile Mastic	Lobby	Lab				
-02	u		SAT				
-03	i ć	Room 0162					
		Room 0166					
-04	Carpet Mastic	Room 0161; S. end, Center					
-05	a	Room 0161; SW corner					
-06	34	Room 0160; W. end					
-07	Beige Pebble Pattern Sheet Vinyl Flooring	Room O161 next to Room O166					
-08	н	Room O161; NW corner					
-09	Grey Pebble Pattern Sheet Vinyl Flooring (2 layers)	Room O161 Breakroom; SW corner					
-10	4	Room O161 Breakroom; NE corner					
-11	Brown Pebble Pattern Sheet Vinyl Flooring	Room O161 Kitchen; next to exit door					
-12	u	Room O161 Kitchen; SW corner					
-13	Ceramic Floor Tile/Grout	Room O161; SW corner, bathroom					
-14	Ceramic Floor Tile Mortar	Room O161; SW corner, bathroom	-				
-15	Ceramic Wall Tile/Brown Mastic	Room O161; SW corner, bathroom					
-16	Tan CB/Brown CB Mastic	Room O161; W. Wall					
-17	Dark Brown CB/Brown CB Mastic	Room O160					
-18	Tan CB/CB Mastic	Room O161; Breakroom, NW Corner					
-19	Tan CB/CB Mastic	Room O166; N. wall					

4258611118

Other

p.2



48 Hours

_	1 Hour	
	2 Hours	

4 Hours

SAMPLE DATA FORM						
Sample #	Material	Location	Lab			
40535.438-20	JC/GWB (Composite analysis requested # applicable)	Room O160; S. wall	SAT			
-21	к	Room O161; W. wall				
-22	u	Room O161; Kitchen, NW corner				
-23	а .	Room O166A; NW corner				
-24	2'x4' Fissure Pattern LICT	Room O160				
-25	μ	Room O162				
-26	u	Room O166				
-27	White Sink Undercoat	Room O161, Kitchen				
-28	Black Sink Undercoat	Room O161; Breakroom; Upper sink				
-29	Pink Sink Undercoat	Room O166A; N. Wall				
-30	Interior Window Putty	Room O161; E. wall				
-31	E .	Room O161; S. wall				
-32	ť.	Room O162; S. wall				
-33	Hard Mudded Fitting Insulation	Room O162; above suspended ceiling	-			
-34	ü	Room O162; above suspended ceiling				
-35	e,	Room O162; above suspended ceiling				

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

ANALYTICAL LABORATORY REPORT PLM by Method EPA/600/R-93/116

	Ferman Fletcher 40535.438 35 Pierce College: Olyr Renovations	Client: Batch#: Date Analyzed: npic Bldg ECE	Environmental, Seattle 202018997		Address Date Received Samples Analyzed:		e 300,	
	Renovations		Analyzed by	Y: Yu	i Yang/Cassie Huang	- Reviewed by	Ctow	e (Fanyao) Zhang, President
Lab ID	Client Sample ID	Layer	Description	1 %	Asbestos Fibers	Non-fibrous Components	%	
1	40535.438-01	1	Clear/yellow mastic	:	None detected	Mastic/binder	4	Non-asbestos Fiber Synthetic fibers Cellulose
		2	Gray soft material		None detected	Filler, Binder	2	Cellulose
2	40535.438-02	1	Yellow mastic		None detected	Mastic/binder	5	Synthetic fibers Cellulose
3	40535.438-03	1	Clear/yellow mastic		None detected	Mastic/binder	5	Synthetic fibers Cellulose
4	40535.438-04	1	Yellow mastic		None detected	Mastic/binder	4	Synthetic fibers Cellulose
5	40535.438-05	1	Yellow mastic		None detected	Mastic/binder	4	Synthetic fibers Cellulose
6	40535.438-06	1	Yellow mastic		None detected	Mastic/binder	5	Synthetic fibers Cellulose
7	40535.438-07		Beige vinyl		None detected	Vinyl/binder	2	Cellulose
	10000.100-07	2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	67	Cellulose
8	40525 428 00		Beige vinyl		None detected	Vinyl/binder	2	Cellulose
0	40535.438-08	2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	65	Cellulose
			Gray vinyl		None detected	Vinyl/binder	2	Cellulose
9	40535.438-09	2 1	Gray fibrous naterial with nastic		None detected	Binder/filler, Mastic/binder	63	Cellulose
			Beige vinyl		None detected	Vinyl/binder	2	Cellulose
		4 r	Gray fibrous naterial with nastic	52	Chrysotile	Binder/filler, Mastic/binder	38	Cellulose
			Gray vinyl		None , detected	Vinyl/binder	3	Cellulose
10	40535.438-10 -	2 n	Gray fibrous naterial with nastic			Binder/filler, Mastic/binder	65	Cellulose
			Beige vinyl		None v	/inyl/binder	2	Cellulose
		4 n	Bray fibrous naterial with nastic	50	Chrysotile	Binder/filler, Mastic/binder	34	Cellulose
11	40535.438-11	1 B	rown vinyl		None detected	/inyl/binder	2	Cellulose

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

ANALYTICAL LABORATORY REPORT PLM by Method EPA/600/R-93/116 PBS Engineering and Attn .: Ferman Fletcher Client: Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Environmental, Seattle Job#: 40535.438 Batch#: 202018997 Date Received: 1/13/2020 Samples Rec'd: 35 Date Analyzed: 1/15/2020 Samples Analyzed: 35 Pierce College: Olympic Bldg ECE Project Loc.: Renovations SZhana Analyzed by: Yui Yang/Cassie Huang Reviewed by: Steve (Fanyao) Zhang, President Lab ID Client Sample ID Layer Description % Asbestos Fibers Non-fibrous Components % Non-asbestos Fibers Gray fibrous Binder/filler, 11 40535.438-11 2 material with trace 50 Chrysotile Cellulose 34 Mastic/binder mastic None 1 Brown vinyl Vinyl/binder 2 Cellulose detected 12 40535.438-12 Gray fibrous Binder/filler. 2 material with trace 51 Chrysotile 35 Cellulose Mastic/binder mastic None 1 Cream ceramic Ceramic/binder None detected detected 13 40535.438-13 Gray brittle/sandy None 2 Binder, Sand 2 Cellulose material detected Gray brittle/sandy None 14 40535.438-14 1 Binder, Sand 3 Cellulose material detected None 1 Tan ceramic Ceramic/binder None detected detected White brittle/sandy 15 None 40535.438-15 2 Binder, Sand 2 Cellulose material detected None 3 Brown/tan mastic Mastic/binder 2 Cellulose detected Tan rubbery None 1 Rubber/binder 2 Cellulose material detected 16 40535.438-16 None 2 Brown mastic Mastic/binder 3 Cellulose detected Dark brown None 1 Rubber/binder 3 Cellulose rubbery material detected 17 40535.438-17 None 2 Brown mastic Mastic/binder 3 Cellulose detected Tan rubbery None 1 Rubber/binder 2 Cellulose material detected Yellow/brown None 2 Mastic/binder 3 Cellulose mastic detected 18 40535.438-18 Tan powdery 3 2 Chrysotile Binder/filler, Paint 4 Cellulose material with paint None 4 Brown paper Filler 70 Cellulose detected Tan rubberv None 1 Rubber/binder 2 Cellulose material detected Trace yellow None 2 19 40535.438-19 Mastic/binder 2 Cellulose mastic detected Trace white None 3 powdery material Binder/filler, Paint 2 Cellulose detected with paint Off-white powdery 20 40535.438-20 1 2 Chrysotile Binder/filler. Paint 5 material with paint Cellulose Composite White powdery 20 2 2 Chrysotile Binder/filler result <1% 31 Cellulose material with paper

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

ANALYTICAL LABORATORY REPORT PLM by Method EPA/600/R-93/116

	Diama Oully Ol	Client: Batch#: Date Analyzed: npic Bldg ECE	Environmental, Seattle 202018997		Address	 214 E Galer Street, Suit 1/13/2020 35 	e 300,	Seattle, WA 98102
			Analyzed by	Yui	Yang/Cassie Huang	Reviewed by	/ Steve	(Fanyao) Zhang, President
Lab ID	Client Sample ID	Layer	Description	%	~	Non-fibrous Components	1	
20	Composite result <1%	3	White chalky material with paper	1	None detected	Binder/filler, Gypsum/binder	% 25	Non-asbestos Fibers Cellulose, Glass fibers
	40535.438-21	1	Off-white powdery material with paint	2		Binder/filler, Paint	3	Cellulose
21	Composite	2	White powdery material with paper	2	Chrysotile	Binder/filler	35	Cellulose
	result <1%	3	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	26	Cellulose, Glass fibers
-	40535.438-22	1	Off-white powdery material with paint	2	Chrysotile	Binder/filler, Paint	5	Cellulose
22	Composite	2	White powdery material with paper	2	Chrysotile	Binder/filler	37	Cellulose
	result <1%	3	White chalky material with paper	ſ	None detected	Binder/filler, Gypsum/binder	21	Cellulose, Glass fibers
	40535.438-23		Off-white powdery material with paint	2	Chrysotile	Binder/filler, Paint	4	Cellulose
23	Composite	2	White powdery material with paper	2	Chrysotile	Binder/filler	33	Cellulose
	result <1%	3	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose, Glass fibers
24	40535.438-24	1	Gray fibrous material with glass beads and paint		None detected	Filler, Fine particles, Glass beads, Paint	90	Mineral wool
25	40535.438-25	1	Gray fibrous material with glass beads and paint		None detected	Filler, Fine particles, Glass beads, Paint	95	Mineral wool
26	40535.438-26	1	Gray fibrous material with glass beads and paint		None detected	Filler, Fine particles, Glass beads, Paint	91	Mineral wool
27	40535.438-27		White soft/loose material	3	Chrysotile	Filler, Fine particles	5	Cellulose
28	40535.438-28	1	Black soft/loose material		None detected	Filler, Fine particles	4	Cellulose
29	40535.438-29	1	Pink soft/loose material	3	Chrysotile	Filler, Fine particles	4	Cellulose
30	40535.438-30	1 1	Black soft/elastic material with paint and debris		None detected	Binder, Filler, Paint, Debris	3	Cellulose
31	40535.438-31	1 r	Black soft/elastic material with paint and debris		None detected	Binder, Filler, Paint, Debris	3	Cellulose
32	40535.438-32	1 r	Black soft/elastic material with paint and debris			Binder, Filler, Paint, Debris	2	Cellulose
33	40535.438-33	1 r	Off-white powdery naterial with voven fibrous naterial		None detected	Binder/filler	37	Cellulose, Glass fibers

40535.438-35

35

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

material with

material

woven fibrous

1

Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

ANALYTICAL LABORATORY REPORT

			FLW by Method	EPA	V600/R-93/116			
Attn.:	Ferman Fletcher	Client:	PBS Engineering and Environmental, Seattle		Address:	214 E Galer Street, Suite	e 300.	Seattle, WA 98102
Job#:	40535.438	Batch#:	202018997		Date Received:			000000, 111100102
Samples Rec'd:	35	Date Analyzed:	1/15/2020		Samples Analyzed:			
Project Loc.:	Pierce College: Olyn Renovations	npic Bldg ECE	Analyzed by:	Yui	Yang/Caskie Huang	Reviewed by:	Steve	SZhang (Fanyao) Zhang, President
Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	1 %	Non-asbestos Fibers
34	40535.438-34	1	Off-white powdery material with woven fibrous material		None detected	Binder/filler	35	Cellulose, Glass fibers
			Off-white powdery					1

None

detected

Binder/filler

Cellulose, Glass

fibers

35

APPENDIX B

AA Lead Paint Chip Sampling Information

AA Lead Paint Chip Sample Inventory AA Lead Paint Chip Laboratory Data Sheets AA Lead Paint Chip Chain of Custody Documentation

AA LEAD PAINT CHIP SAMPLE INVENTORY

PBS Sample #	Paint Color / Component or Substrate	Sample Location	<u>Results (mg/kg)</u>	<u>Results (%)</u>	<u>Lab</u>
40535.438 -Pb01	Tan / Concrete / Decking	Room O161	<77	<0.0077	NVL
40535.438 -Pb02	Blue / Gypsum Wallboard / Wall	Room O160; South Wall	<53	<0.0053	NVL
40535.438 -Pb03	Tan / Gypsum Wallboard / Wall	Room O161; West Wall	<56	<0.0056	NVL
40535.438 -Pb04	Tan / Metal / Interior Window Frame	Room O161; South Wall	160	0.0160	NVL
40535.438 -Pb05	Tan / Gypsum Wallboard / Wall	Room O166; East Wall	<43	<0.0043	NVL

January 14, 2020



Ferman Fletcher **PBS Environmental - Seattle** 214 E Galer St. Suite. 300 Seattle, WA 98102

RE: Metals Analysis; NVL Batch # 2000854.00

Dear Mr. Fletcher,

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,

Nick Ly, Technical Director

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

Total Lead (Pb)



Batch #: 2000854.00

Matrix: Paint Method: EPA 3051/7000B Client Project #: 40535.438 Date Received: 1/13/2020 Samples Received: 5 Samples Analyzed: 5

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

Attention: Mr. Ferman Fletcher

Project Location: Pierce College: Olympic Bldg ECE Renovations

La	ab ID	Client Sample #	Sample Weight (g)	RL in mg/Kg	Results in mg/Kg	Results in percent
20	0013731	40535.438-Pb01	0.1295	77	< 77	<0.0077
20	0013732	40535.438-Pb02	0.1884	53	< 53	<0.0053
20	0013733	40535.438-Pb03	0.1774	56	< 56	<0.0056
20	0013734	40535.438-Pb04	0.1775	56	160	0.016
20	0013735	40535.438-Pb05	0.2340	43	< 43	<0.0043

Sampled by: Client		82			
Analyzed by: Shalini Patel	Date Analyzed: 01/14/2020	the			
Reviewed by: Nick Ly	Date Issued: 01/14/2020	Nick Ly, Technical Director			
mg/ Kg =Milligrams per kilogram		RL = Reporting Limit			
Percent = Milligrams per kilogram		'<' = 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.					

LEAD LABORATORY SERVICES



Company	PBS Environmental - Seattle
Address	214 E Galer St. Suite. 300
	Seattle, WA 98102
Project Manager	Mr. Ferman Fletcher
Phone	(206) 233-9639

NVL E	Batch N	lumber	200	0854.	00
TAT	1 Day				AH No
Rush	TAT				
Due D	ate	1/14/202	20	Time	1:55 PM
Email	ferma	an.fletche	r@pl	osusa.co	om
Fax	(866)	727-014	0		

Project Name/Number: 40535.438

Cell (206) 491-1389

Project Location: Pierce College: Olympic Bldg ECE Renovations

Subcategory Flame AA (FAA)

Item Code FAA-02

EPA 7000B Lead by FAA <paint>

Total Number of Samples 5

Rush Samples _____ Lab ID Sample ID Description A/R 1 20013731 А 40535.438-Pb01 2 20013732 40535.438-Pb02 А 3 20013733 40535.438-Pb03 А 4 20013734 40535.438-Pb04 А 5 20013735 40535.438-Pb05 А

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Courier				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Emily Schubert		NVL	1/13/20	1355
Analyzed by	Shalini Patel		NVL	1/14/20	
Results Called by					
Faxed Emailed					
Special					
Instructions:					

Date: 1/13/2020 Time: 1:54 PM Entered By: Emily Schubert



2000854

Project: <u>Pierce College: Olym</u>	pic Bldg ECE Renovations	Project #: <u>40535.438</u>
Analysis requested: <u>AAS for</u>	Pb	Date: 1/13/20
Relinq'd by/Signature:	1227-	Date/Time: <u>1/13/20</u>
Received by/Signature:	allys QCF NVL	Date/Time: 1 18 2020
E-mail results to:		1355
Brian Stanford	Cel Alvarez	□ Mike Smith COUVL
🔲 Willem Mager	Janet Murphy	🔀 Ferman Fletcher
Gregg Middaugh	Kaitlin Soukup	Holly Tuttle
Mark Hiley	Martin Estira	🔲 Ryan Hunter
🔲 Tim Ogden	🔲 Justin Day	🖾 Eman Jabali
Prudy Stoudt-McRae	Filmon Embaye	
E-mail all invoices to: seattleap@p	bsusa.com	
TURN AROUND TIME:		
🗌 1 Hour	🔀 24 Hours	🔲 3-5 Days
2 Hours	48 Hours	Other
4 Hours		

SAMPLE DATA FORM				
Sample #	Material	Location	Lab	
40535.438- Pb01	Tan/Concrete/Decking	Room O161	NVL	
-Pb02	Blue/GWB/Wall	Room O160; S. Wall		
-Pb03	Tan/GWB/Wall	Room O161; W. wall		
-Pb04	Tan/Metal/Interior Window Frame	Room O161; S. Wall		
-Pb05	Tan/GWB/Wall	Room O166; E. Wall		

APPENDIX C

Certifications

Certificate of Completion

This is to certify that Ferman L. Fletcher

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

Jusn N Maas

Instructor



NING CONSULTIN

A TETTACON COMPANY

Apr 17, 2019 Date(s) of Training Expires in 1 year.

Exam Score: N/A (if applicable)

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

Limited Hazardous Materials Summary Report

Olympic Building Partial Reclad and Roof Replacement 9401 Farwest Drive Southwest

Lakewood, WA 98498

Prepared for: State of Washington Department of Enterprise Services PO Box 41012 Olympia, WA 98504

March 20, 2020 PBS Project 40535.437



214 EAST GALER STREET SUITE 300 SEATTLE, WA 98102 206.233.9639 MAIN 866.727.0140 FAX PBSUSA.COM

TABLE OF CONTENTS

1	INT	RODUCTION	.1
	1.1	Project Background	. 1
	1.2	Building Descriptions	. 1
	1.3	Survey Process	. 1
2	FINI	DINGS	.1
	2.1	Asbestos-Containing Materials (ACMs)	. 1
	2.2	Lead-Containing Components	. 2
	2.3	PCB-Containing Components	. 2
3	REC	OMMENDATIONS	.2
	3.1	ACMs	. 2
	3.2	Lead-Containing Components	. 3

APPENDICES

APPENDIX A: PLM Bulk Sampling Information

PLM Bulk Sample Inventory PLM Bulk Sample Laboratory Data Sheets and Chain of Custody Documentation

APPENDIX B: AA Lead Paint Chip Sampling Information

AA Lead Paint Chip Sample Inventory AA Lead Paint Chip Laboratory Data Sheets and Chain of Custody Documentation

APPENDIX C: Bulk PCB Sampling Information

Bulk PCB Sample Inventory Bulk PCB Laboratory Data Sheets and Chain of Custody Documentation

APPENDIX D: Certifications

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1 INTRODUCTION

1.1 Project Background

PBS Engineering and Environmental, Inc. (PBS) performed a survey of the first floor exterior and the roof of the Olympic Building South, located at the Pierce College Fort Steilacoom Campus, to determine the presence of asbestos-containing materials (ACMs), lead-containing paints (LCP), and PCB-containing materials. The intent of this report is to ensure that Pierce College is in compliance with applicable regulatory requirements that a "good faith inspection" for ACMs be performed prior to renovation/demolition activities.

It is PBS' understanding that the scope of work for this project includes the replacement of existing exterior finishes surrounding the first floor of the building and the building roof. The survey did not include any other areas in the Olympic Building.

1.2 Building Descriptions

The Olympic Building is a three-story, slab-on-grade structure originally constructed in 1976. The exterior is accented with marblecrete, gypsum wallboard, concrete, and EIFS (Exterior Finish and Insulation). Windows are aluminum-framed.

1.3 Survey Process

All accessible areas were inspected by AHERA Certified Building Inspector Ferman Fletcher (Cert. No. 172753 Exp. 4/17/2020) on January 10, 2020. PBS endeavored to inspect all accessible areas of the scope of work. Inaccessible areas consist of those requiring selective demolition, fall protection, or confined space entry protocols in order to gain access.

When observed, suspect materials were sampled. All samples were assigned a unique identification number and transmitted for analysis to Seattle Asbestos Test (NVLAP #201057-0) under chain-of-custody protocols. Samples were analyzed according to EPA Method 600R-93/116 using Polarized Light Microscopy (PLM), which has a reliable limit of quantification of 1% asbestos by volume. Information regarding the type and location of sampled materials can be found on the attached PLM Sample Inventory located in Appendix A.

Suspect ACMs may exist in inaccessible areas. PBS endeavored to determine the presence and estimate the condition of suspect materials in all inaccessible areas included in the scope of work. While PBS has endeavored to identify the ACMs that may be found in concealed locations, additional unidentified ACMs may exist. All building demolition activities should be performed cautiously to prevent impacts to concealed asbestos-containing materials.

2 FINDINGS

2.1 Asbestos-Containing Materials (ACMs)

The following materials were determined to contain greater than 1% asbestos:

 Residual grey sealant beneath non-asbestos dark grey sealant – 1st Floor West elevation sealant on Northwest corner column and sealant between concrete deck and metal storefront (Approx. 70 LF);

Materials sampled and found not to be asbestos-containing include:

Marblecrete paneling – South and West elevation;



- Dark grey transition sealant surrounding substrates on the south and west elevation of the first floor;
- Gypsum wallboard paneling Columns throughout;
- EIFS paneling North, East and South elevation;
- Membrane roofing and associated insulation Roof.

For a complete listing of representative bulk sampling and associated laboratory analysis, refer to the inventory in Appendix A.

PBS sampled visible **dark grey** sealant from the Olympic South Building in several locations along the West and South elevations on the 1st floor and obtained mixed results. The sampling discovered a second layer of asbestos-containing **residual grey** sealant in two locations on the west elevation. It is PBS' opinion that this is a residual material from older sealant. While PBS endeavored to locate this material by conducting additional sampling it is possible that the older sealant may exist in other concealed locations.

2.2 Lead-Containing Components

Two (2) representative painted coatings were sampled for lead content. The samples were assigned unique identification numbers and transmitted to NVL Laboratories, Inc. (AIHA IH #101861) in Seattle, Washington under chain-of-custody protocols for analysis using Flame Atomic Absorption (EPA 3051/7000B).

The following painted coatings were sampled and found to contain lead:

- Tan paint on exterior column walls was found to contain 0.010% lead;
- Tan paint on wood doors was found to contain 0.020% lead.

See Appendix B for locations and laboratory results of paint samples.

2.3 PCB-Containing Components

The following sealant was tested by PBS for the presence of PCBs:

• Dark Grey Storefront Sealant – West elevation.

One (1) representative sample was collected for analysis. The sample was assigned a unique identification number and transmitted to NVL Labs, Seattle, Washington under chain-of-custody protocols for analysis using EPA Method 8082 for PCBs.

The material sampled was not found to contain detectible PCBs. For the locations and laboratory results of PCB sampling see Appendix C.

3 **RECOMMENDATIONS**

3.1 ACMs

PBS recommends that all exposed and concealed ACMs to be impacted by the renovation/demolition activities be removed prior to construction activities. Any impacts to asbestos-containing materials should be performed by a qualified Washington State licensed asbestos abatement contractor. All impacts should be performed according to applicable Puget Sound Clean Air Authority (PSCAA), Washington Administrative Code 296-62-07 and CFR Chapter 40 Part 763 AHERA.



The possibility exists that suspect ACMs may be present in equipment, wall and ceiling cavities, beneath concrete slabs and buried in site soils included in the scope of the work. These may include, but are not limited to waterproofing membrane, internal gaskets, pipe insulation, piping materials, caulking and sealants of HVAC equipment and construction adhesives and wall mastics. Additional suspect-ACMs may be present in concealed spaces. Caution should always be exercised during selective demolition to prevent impact of suspect-ACMs. All suspect ACMs should be presumed asbestos-containing until properly sampled and analyzed. In the event that suspect ACMs is uncovered during construction, contractors should stop work immediately and inform the owner promptly for confirmation testing.

3.2 Lead-Containing Components

Representative painted coatings from the project locations were found to contain lead by laboratory analysis. Impact of painted surfaces with detectable concentrations of lead requires construction activities to be performed according to Washington Labor and Industries regulations for Lead in Construction (WAC 296-155). Workers impacting LCP should be provided the proper personal protective equipment and use proper work methods to limit occupational and environmental exposure to lead until an initial exposure assessment has been conducted. Additionally, all impacts to lead-containing paint shall be in accordance with 40 CFR Part 745.

Painted coatings may exist in inaccessible areas of the work area or in secondary coatings. Any previously unidentified painted coatings should be considered lead containing until sampled and proven otherwise.

Please do not hesitate to contact us if you have any questions regarding this report or require additional information.

Report prepared by: PBS Engineering and Environmental, Inc.,

Ferman Fletcher AHERA Building Inspector Cert. # 172753, expiration 4/17/2020

Report reviewed by: GM



APPENDIX A

PLM Bulk Sampling Information

PLM Bulk Sample Inventory PLM Bulk Sample Laboratory Data Sheets PLM Bulk Sample Chain of Custody Documentation

PLM ASBESTOS SAMPLE INVENTORY

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.437 -01	Marblecrete	South elevation, west end	Layer 1: Gray sandy/brittle material	NAD	SAT
40535.437 -02	Marblecrete	South elevation, west end	Layer 1: Gray sandy/brittle material	NAD	SAT
40535.437 -03	Marblecrete	West elevation, south end	Layer 1: Gray sandy/brittle material	NAD	SAT
40535.437 -04	Marblecrete	West elevation, Center	Layer 1: Gray sandy/brittle material	NAD	SAT
40535.437 -05	Marblecrete	West elevation, south end	Layer 1: Gray sandy/brittle material with stone	NAD	SAT
40535.437 -06	EIFS Panel	North elevation, west end	Layer 1: Gray brittle material with woven fibrous material	NAD	SAT
40535.437 -07	Grey Window Frame Caulking	West elevation, north end of windows	Layer 1: Gray soft/elastic material	NAD	SAT
40535.437 -08	Grey Column Sealant	South elevation	Layer 1: Gray soft/elastic material with paint	NAD	SAT
40535.437 -09	Transition Caulk between marblecrete and metal store front	South elevation; entrance	Layer 1: Gray soft/elastic material	NAD	SAT
40535.437 -10	Grey Sealant between EIFS Panels	North elevation	Layer 1: Gray soft/elastic material	NAD	SAT
40535.437 -11	Grey Transition Caulk between EIFS and concrete	North elevation	Layer 1: Gray soft/elastic material	NAD	SAT
40535.437 -12	Grey Transition caulk between Marblecrete and gypsum wallboard	West elevation, north end	Layer 1: Gray soft/elastic material	3% Chrysotile	SAT
	Marbiecrete and gypsum waliboard		Layer 2: Gray soft material	NAD	
40535.437 -13	Grey Storefront Sealant	South elevation	Layer 1: Gray soft/elastic material	NAD	SAT
40535.437 -14	Membrane/Insulation	Roof	Layer 1: White/blue soft/elastic material with fibrous material	NAD	SAT
			Layer 2: Trace black asphaltic material	NAD	
			Layer 3: Brown fibrous material	NAD	
			Layer 4: Silver foil	NAD	
			Layer 5: Tan paper with black mastic	NAD	

Layer 6: Yellow foamy material

NAD

PBS Engineering + Environmental PBS Project #40535.437

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	Lab
			Layer 7: Black asphaltic fibrous material Layer 8: Black asphaltic material	NAD NAD	
40535.437 -15	Grey Column Insulation	South elevation. Column next to storefront entry	Layer 1: Gray soft/elastic material with paint	NAD	SAT
40535.437 -16	Dark Grey Column Caulking (2 layers between marblecrete and gypsum	West elevation; north most column, central height	Layer 1: Dark gray soft/elastic material	NAD	SAT
			Layer 2: Gray soft material	3% Chrysotile	
40535.437 -17	Dark Grey Column Caulking (between marblecrete and gypsum wallboard)	West elevation; north most column, base of column	Layer 1: Dark gray soft/elastic material	NAD	SAT
			Layer 2: White foamy material	NAD	
40535.437 -18	Dark Grey Caulking	West elevation; North end, south of North doorway	Layer 1: Dark gray soft/elastic material	NAD	SAT
	Foam (beneath metal window frame over marblecrete panel)		Layer 2: White foamy material	NAD	
40535.437 -19	Dark Grey Caulking	West elevation; north end, North of North door	Layer 1: Dark gray soft/elastic material	NAD	SAT
	Foam (surrounding north metal door frame)		Layer 2: White foamy material	NAD	
40535.437 -20	Dark Grey Column Caulking (between marblecrete and gypsum wallboard)	West elevation; Central Column, north side	Layer 1: Dark gray soft/elastic material	NAD	SAT
			Layer 2: White chalky material with paper	NAD	
40535.437 -21	Dark Grey Column Caulking (between marblecrete and gypsum wallboard)	West elevation; Central Column, south side	Layer 1: Dark gray/beige soft/elastic material	NAD	SAT
			Layer 2: White chalky material with paper	NAD	
40535.437 -22	Dark Grey Caulking	West elevation; North side of south door	Layer 1: Dark gray soft/elastic material	NAD	SAT
	Foam (surroudning south metal door frame)		Layer 2: White foamy material	NAD	

PBS Engineering + Environmental PBS Project #40535.437

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.437 -23	Dark Grey Caulking	West elevation; South side of south door	Layer 1: Dark gray soft/elastic material	NAD	SAT
	Foam (surroudning south metal door frame)		Layer 2: White foamy material	NAD	
40535.437 -24	Dark Grey Caulking caulk (2 layers between metal window frame and concrete deck)	West elevation; South end	Layer 1: Dark gray soft/elastic material Layer 2: Gray soft material	NAD 3% Chrysotile	SAT
40535.437 -25	Dark Grey Caulking Foam (surrounding south metal window frame)	West elevation; southwest corner	Layer 1: Dark gray soft/elastic material Layer 2: White foamy material	NAD NAD	SAT
40535.437 -26	Dark Grey Column Caulking (between marblecrete and gypsum wallboard)	South elevation; west end column, east side	Layer 1: Dark gray soft/elastic material with paint	NAD	SAT
			Layer 2: White chalky material with paper	NAD	
40535.437 -27	Dark Grey Column Caulking (between marblecrete and gypsum wallboard)	South elevation; west central column	Layer 1: Dark gray soft/elastic material with paint	NAD	SAT
40535.437 -28	Dark Grey Column Caulking (between marblecrete and gypsum wallboard)	South elevation; east central column	Layer 1: Dark gray soft/elastic material with paint	NAD	SAT

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Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

www.seattleasbestostest.com, admin@seattleasbestostest.com

Project Manager: Ferman Fletcher Client: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 206.233.9639 Date Analyzed: 1/13/2020 Client Job#: 40535.437 Project Location: Pierce College: Olympic Bldg Roof Replacement Laboratory batch#: 202018998 Samples Received: 13

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Thing

Steve (Fanyao) Zhang President

-

PBS		202018998
Project: <u>Pierce College: Olym</u> Analysis requested: <u>PL</u> Relinq'd by/Signature:	pic Bldg Roof Replacement	Project #: <u>40535.437</u> Date: 1/13/20 Date/Time: 1/13/20
Received by/Signature	STATA SAT	Date/Time: 113 20 @1330
E-mail results to:	5 4	
Brian Stanford	Cet Alvarez	Mike Smith
🔲 Willem Mager	Janet Murphy	Ferman Fletcher
Gregg Middaugh	Kaitlin Soukup	Holly Tuttle
Mark Hiley	Martin Estira	Ryan Hunter
Tim Ogden	Justin Day	🖾 Eman Jabali
Prudy Stoudt-McRae	Filmon Embaye	
E-mail all invoices to: seattleap@	pbsusa.com	
TURN AROUND TIME:		
🗌 1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other

4 Hours

Sample #	Material	Location	Lab
40535.437-01	Marblecrete	S. elevation, W. end	SAT
-02	"	S. elevation, W. end	
-03	u	W. elevation, S. end	
-04		W. elevation, Center	
-05	н	W. elevation, S. end	
-06	EIFS Panel	N. elevation, W. end	
-07	Grey Window Frame Caulking	W. elevation, N. end of windows	
-08	Grey Column Sealant	S. elevation	1
-09	Transition Caulk b/w marblecrete and metal store front	S. elevation; entrance	
-10	Grey Sealant b/w EIFS Panels	N. elevation	
-11	Grey Transition Caulk b/w EIFS and concrete	N. elevation	
-12	Grey Transition caulk b/w Marblecrete and GWB	W. elevation, N end	
-13	Grey Storefront Sealant	S. elevation	V
	Jied : Xiv GPinglin Ler Street, Suite 300, SEATTLE WA 98102 - 206.		

SEATTLE ASBESTOS TEST

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

			ANALYTICAL LAB PLM by Method			т		
Attn.: Job#: Samples Rec'd:	10000.101	Client: Batch#: Date Analyzed:	202010000		Address: Date Received: Samples Analyzed:		300,	Seattle, WA 98102
Project Loc.:	Pierce College: Olyn Replacement	npic Bldg Roof	0	\times	Yang/Xingping Lin			SZhang
Lab ID	Client Sample ID	Layer	Description	Yui %	Asbestos Fibers	Reviewed by: Non-fibrous Components	Steve	(Fanyao) Zhang, President Non-asbestos Fibers
1	40535.437-01	1	Gray sandy/brittle material		None	Sand, Filler, Binder	2	Cellulose
2	40535.437-02	1	Gray sandy/brittle material		None detected	Sand, Filler, Binder	2	Cellulose
3	40535.437-03	1	Gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
4	40535.437-04	1	Gray sandy/brittle material		None detected	Sand, Filler, Binder	2	Cellulose
5	40535.437-05	1	Gray sandy/brittle material with stone		None detected	Sand, Filler, Binder	3	Cellulose
6	40535.437-06		Gray brittle material with woven fibrous material		None detected	Filler, Binder	25	Cellulose, Glass fibers
7	40535.437-07	1	Gray soft/elastic material		None detected	Binder, Filler	4	Cellulose
8	40535.437-08	1	Gray soft/elastic material with paint		None detected	Binder, Filler, Paint	3	Cellulose
9	40535.437-09		Gray soft/elastic material		None detected	Binder, Filler	3	Cellulose
10	40535.437-10		Gray soft/elastic material		None detected	Binder, Filler	2	Cellulose
11	40535.437-11	1	Gray soft/elastic material		None detected	Binder, Filler	3	Cellulose
12	40535.437-12		Gray soft/elastic material	3	Chrysotile	Binder, Filler	2	Cellulose
		1 I	Gray soft material		None detected	Filler, Binder	3	Cellulose
13	40535.437-13		Gray soft/elastic material		None detected	Binder, Filler	2	Cellulose

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Seattle Laboratory: 4500 9th Ave, NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax, 206.633.4747, NVLAP Lab Code: 201057-0.

www.seattleasbestostest.com, admin@seattleasbestostest.com

Project Manager: Ms. Eman Jabali, Mr. Ferman Fletcher Client: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 206.233.9639

Date Analyzed: 2/26/2020. Client Job#: 40525.437 Project Location: Plerce College: Olympic Bldg. Roof Replacement Laboratory batch#: 202019484 Samples Received: 2

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763. Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except. in full, without written approval of the laboratory.

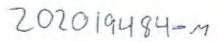
This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

hours

Steve (Fanyao) Zhang President





Project: _Pierce College: Olym	pic Bldg Roof Replacement	Project #: 40535.437
Analysis requested: PLM		Date: 2/25/20
Relinq'd by/Signature:	177	Date/Time: 2/25/20
Received by/Signature: Const 1 yes	Hate Carte	Date/Time: 2/25/2012:12 Doute17:me: 2/25/20 12:12
E-mail results to:		Constitute 6161.153 10:11
Brian Stanford	Cel Alvarez	Mike Smith
Willem Mager	Janet Murphy	Ferman Fletcher
Gregg Middaugh	Kaitlin Soukup	Holly Tuttle
Mark Hiley	Martin Estira	Ryan Hunter
Tim Ogden	Justin Day	Eman Jabali
Prudy Stoudt-McRae	Filmon Embaye	
E-mail all invoices to: seattleap@r		
TURN AROUND TIME:		
1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		

SAMPLE DA	ATA FORM	
Material	Location	Lab
Membrane/Insulation	Roof	SAT
Grey Column Insulation	S elevation. Column next to storefront entry	
	Material Membrane/Insulation	Membrane/Insulation Roof Grey Column Insulation S elevation. Column next to storefront

214 EAST GALER STREET, SUITE 300, SEATTLE, WA 98102 * 206.233.9639 MAIN * 866.727.0140 FAX * PBSUSA COM

SEATTLE ASBESTOS TEST

Seattle Laboratory, 4500 9th Ave, NE, Suite 300, Seattle, WA 98105, Tel: 206,633.1111, Fax: 206,633.4747, NVLAP Lab Code: 201057-0

STREET, STREET

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			ANALYTICAL LAB PLM by Method			rt.		
Altn.:	Ms. Eman Jabali, Mr. Ferman Fletcher	Client:	PBS Engineering and Environmental, Seattle		Addross:	214 E Galer Street, Suite	300,	Seattle, WA 98102
.adoL	40525.437	Batch#:	202019484		Date Received:	2/25/2020		
Samples Rec'd:	2	Date Analyzed:	2/26/2020		Samples Analyzed:	2	Rev.	Code:P2p847
Project Loc.:	Pierce College: Olyn Roof Replacement	npic Bldg.	Analyzed by:	Gar	n lite	- Reviewed by	Stone	SZ having (Fanyao) Zhung, President
Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	36	Non-asbestos Fibers
	40535.437-14	1	White/blue soft/elastic material with fibrous material		None detected	Filler	30	Synthetic fibers
		2	Trace black asphaltic material		None detected	Asphalt/binder	3	Cellulose
		3	Brown fibrous material		None detected	Filler	88	Cellulose
1		4	Silver foil		None detected	Foil/binder		None detected
		5	Tan paper with black mastic		None detected	Filler, Asphalt/binder	70	Cellulose
		6	Yellow foamy material		None detected	Synthetic foam		None detected
		7	Black asphaltic fibrous material		None detected	Asphalt/binder, Filler	65	Cellulose
		8	Black asphaltic material		None detected	Asphalt/binder	2	Cellulose
	the second of the	1	Gray soft/elastic material with paint		None detected	Binder, Filler, Paint	2	Cellulose
2	40535.437-15	2	Brown fibrous material		None detected	Filler	71	Cellulose
2	40000.407-10	3	Trace dark brown soft/elastic material		None detected	Binder, Filler	2	Cellulose
		4	Trace pink powdery material		None detected	Binder, Filler	2	Cellulose

Page 1 of 1

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Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

www.seattleasbestostest.com, admin@seattleasbestostest.com

Project Manager: Ferman Fletcher Client: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 206.233.9639

 Date Analyzed:
 3/10/2020

 Client Job#:
 40535.437

 Project Location:
 Pierce College: Olympic Bldg Roof

 Laboratory batch#:
 202019655

 Samples Received:
 13

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

SZhang

Steve (Fanyao) Zhang President



202019655

Project: <u>Pierce College: Olymp</u>	bic Bldg Roof Replacement	Project #: 40535.437	2
Analysis requested: <u>PLM</u>		Date:3/6/20	
Relinq'd by/Signature:	A M	Date/Time: <u>3/6/20</u>	
Received by/Signature:	Xang SAT	Date/Time: 392001	700
E-mail results to:	1 5-		
Brian Stanford	Cel Alvarez	Mike Smith	
Willem Mager	Janet Murphy	Ferman Fletcher	
Gregg Middaugh	Kaitlin Soukup	Holly Tuttle	
Mark Hiley	Martin Estira	Ryan Hunter	
Tim Ogden	Justin Day	Eman Jabali	
Prudy Stoudt-McRae	Filmon Embaye		
E-mail all invoices to: seattleap@p			
TURN AROUND TIME:			
🗌 1 Hour	24 Hours	3-5 Days	
2 Hours	48 Hours	Other	
4 Hours			

	SAMPLE DATA F	ORM	
Sample #	Material	Location	Lab
40535.437-16	Dark Grey Column Caulking (2 layers b/w marble crete and GWB)	W. elevation; N. most column, Central height	SAT
-17	Dark Grey Column Caulking (b/w marble crete and GWB)	W. elevation; N. most column, Base of column	
-18	Dark Grey Caulking/Foam (Beneath metal window frame over marblecrete panel)	W. elevation; North end, south of North doorway	
-19	Dark Grey Caulking/Foam (Surrounding N. metal door frame)	W. elevation N. end North of North door	
-20	Dark Grey Column Caulking (b/w marble crete and GWB)	W. elevation; Central Column, N. side	
-21	Dark Grey Column Caulking (b/w marble crete and GWB)	W. elevation; Central Column, S. side	
-22	Dark Grey Caulking/Foam (Surrounding S. metal door frame)	W. elevation; North side of south door	
-23	Dark Grey Caulking/Foam (Surrounding S. metal door frame)	W. elevation; South side of south door	
-24	Dark Grey Caulking/Foam (2 layers b/w metal window frame and concrete deck)	West elevation; South end	
-25	Dark Grey Caulking/Foam (Surrounding S. metal window frame)	W. elevation; SW corner	
-26	Dark Grey Column Caulking (b/w marblecrete and GWB)	South elevation; W. end column, E. side	
-27	Dark Grey Column Caulking (b/w marblecrete and GWB)	South elevation; W. central column	
-28	Dark Grey Column Caulking (b/w marblecrete and GWB)	South elevation; E. central column	

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Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

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	Ferman Fletcher 40535.437	Client: Batch#:	PBS Engineering and Environmental, Seattle 202019655			ss: 214 E Galer Street, Suite nd: 3/9/2020	e 300,	Seattle, WA 98102
Samples Rec'd:	13	Date Analyzed:	3/10/2020		Samples Analyze			
Project Loc.:	Pierce College: Olyr Replacement	npic Bldg Roof	(C	1.4			SZhang
Lab ID	01. 10. 1.15		Analyzed by:	-	ATT	VVE	Steve	(Fanyao) Zhang, President
Lab ID	Client Sample ID	Layer	Description	%	V	Non-fibrous Components	%	Non-asbestos Fiber
1	40535.437-16	1	Dark gray soft/elastic material		None detected	Binder, Filler	2	Cellulose
	and the second second	2	Gray soft material	3	Chrysotile	Filler, Binder	4	Cellulose
2	40535.437-17	1	Dark gray soft/elastic material		None detected	Binder, Filler	2	Cellulose
		2	White foamy material		None detected	Synthetic foam		None detected
3	40535.437-18	1	Dark gray soft/elastic material		None detected	Binder, Filler	3	Cellulose
		2	White foamy material		None detected	Synthetic foam		None detected
4	40535.437-19	1	Dark gray soft/elastic material		None detected	Binder, Filler	3	Cellulose
	10000.101 10	2	White foamy material		None detected	Synthetic foam	11	None detected
5	40535.437-20	1	Dark gray soft/elastic material		None detected	Binder, Filler	2	Cellulose
	40000.407 20	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
6	40535.437-21	1	Dark gray/beige soft/elastic material		None detected	Binder, Filler	3	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	27	Cellulose
7	40535.437-22	1	Dark gray soft/elastic material		None detected	Binder, Filler	2	Cellulose
		2	White foamy material		None detected	Synthetic foam		None detected
8	40535.437-23		Dark gray soft/elastic material		None detected	Binder, Filler	2	Cellulose
			White foamy material		None detected	Synthetic foam		None detected
9	40535.437-24		Dark gray soft/elastic material		None detected	Binder, Filler	3	Cellulose
			Gray soft material	3	Chrysotile	Filler, Binder	3	Cellulose
10	40535.437-25		Dark gray soft/elastic material		None detected	Binder, Filler	2	Cellulose
		2	White foamy material		None detected	Synthetic foam		None detected
11	40535.437-26	1	Dark gray soft/elastic material with paint		None detected	Binder, Filler, Paint	2	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
12	40535.437-27	1	Dark gray soft/elastic material with paint		None detected	Binder, Filler, Paint	3	Cellulose

SEATTLE ASBESTOS TEST

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

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ANALYTICAL LABORATORY REPORT PLM by Method EPA/600/R-93/116

			i Lini by method	LI PU	000/11-33/110			
Attn.:	Ferman Fletcher	Client:	PBS Engineering and Environmental, Seattle		Address:	214 E Galer Street, Suite	300, 3	Seattle, WA 98102
Job#:	40535.437	Batch#:	202019655		Date Received:	3/9/2020		
Samples Rec'd:	13	Date Analyzed:	3/10/2020		Samples Analyzed:	13		
Project Loc.:	Pierce College: Olyr Replacement	npic Bldg Roof	Analyzed by-	Yui Y	Ingotto	Reviewed by:	Steve	SZhang (Fanyao) Zhang, President
Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
13	40535.437-28	1	Dark gray soft/elastic material		None detected	J Binder, Filler, Paint	3	Cellulose

APPENDIX B

AA Lead Paint Chip Sampling Information

AA Lead Paint Chip Sample Inventory AA Lead Paint Chip Laboratory Data Sheets AA Lead Paint Chip Chain of Custody Documentation

AA LEAD PAINT CHIP SAMPLE INVENTORY

PBS Sample #	Paint Color / Component or Substrate	Sample Location	<u>Results (mg/kg)</u>	<u>Results (%)</u>	<u>Lab</u>
40535.437 -Pb01	Tan / Gypsum Wallboard / Column	South elevation	100	0.010	NVL
40535.437 -Pb02	Tan / Wood / Door	West elevation	200	0.020	NVL

January 14, 2020



Ferman Fletcher **PBS Environmental - Seattle** 214 E Galer St. Suite. 300 Seattle, WA 98102

RE: Metals Analysis; NVL Batch # 2000855.00

Dear Mr. Fletcher,

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,

Nick Ly, Technical Director

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

Total Lead (Pb)



Batch #: 2000855.00

Matrix: Paint Method: EPA 3051/7000B Client Project #: 40535.437 Date Received: 1/13/2020 Samples Received: 2 Samples Analyzed: 2

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

Attention: Mr. Ferman Fletcher

Project Location: Pierce College: Olympic Bldg Roof Replacement

Lab	D		Sample Weight (g)	RL in mg/Kg	Results in mg/Kg	Results in percent
200	13736	40535.437-Pb01	0.2297	44	100	0.010
200	13737	40535.437-Pb02	0.2090	48	200	0.020

Sampled by: Client		On the		
Analyzed by: Shalini Patel	Date Analyzed: 01/14/2020			
Reviewed by: Nick Ly	Date Issued: 01/14/2020	Nick Ly, Technical Director		
mg/ Kg =Milligrams per kilogram		RL = Reporting Limit		
Percent = Milligrams per kilogram	'<' = 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.				

LEAD LABORATORY SERVICES



Company	PBS Environmental - Seattle
Address	214 E Galer St. Suite. 300
	Seattle, WA 98102
Project Manager	Mr. Ferman Fletcher
Phone	(206) 233-9639
Cell	(206) 491-1389

NVL Batch Number 2000855.00					
TAT	1 Day	/		AH No	
Rush	TAT				
Due D	Date	1/14/2020	Time	1:55 PM	
Email ferman.fletcher@pbsusa.com					
Fax	(866)	727-0140			

Project Name/Number: 40535.437

Project Location: Pierce College: Olympic Bldg Roof Replacement

Subcategory Flame AA (FAA)

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

Lab ID Sample ID Description A/R 1 20013736 40535.437-Pb01 A 2 20013737 40535.437-Pb02 A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Courier				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Emily Schubert		NVL	1/13/20	1355
Analyzed by	Shalini Patel		NVL	1/14/20	
Results Called by					
Faxed Emailed					
Special Instructions:					

Date: 1/13/2020 Time: 1:59 PM Entered By: Emily Schubert



2000855

Project: <u>Pierce College: Olympi</u>	Project #: <u>40535.437</u>	
Analysis requested:AAS for P	b	Date: 1/13/20
Relinq'd by/Signature:	527	Date/Time: <u>1/13/20</u>
Received by/Signature: Eyes	the erer	Date/Time: 1/13/2020 1355
E-mail results to:		courter
Brian Stanford	Cel Alvarez	Mike Smith
🔲 Willem Mager	🔲 Janet Murphy	🔀 Ferman Fletcher
Gregg Middaugh	Kaitlin Soukup	Holly Tuttle
Mark Hiley	Martin Estira	🔲 Ryan Hunter
🔲 Tim Ogden	🔲 Justin Day	🔀 Eman Jabali
Prudy Stoudt-McRae	🔲 Filmon Embaye	
E-mail all invoices to: seattleap@pb	susa.com	
TURN AROUND TIME:		
🔲 1 Hour	🛛 24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		

SAMPLE DATA FORM			
Lab	Locati	Material	Sample #
NVL	S. elevation	Tan/GWB/Column	40535.437- Pb01
	W. elevation	Tan/wood/door	-Pb02

214 EAST GALER STREET, SUITE 300, SEATTLE, RASE 14 20 406.233.9639 MAIN • 866.727.0140 FAX • PBSUSA.COM

APPENDIX C

Bulk PCB Sampling Information

Bulk PCB Sample Inventory Bulk PCB Laboratory Data Sheets Bulk PCB Chain of Custody Documentation

PCB SAMPLE INVENTORY

PBS Sample #	<u>Material</u>	Sample Location	<u>Analyte</u>	<u>Lab Results (mg/kg)</u>	<u>Lab</u>
40535.437 -PCB01	Grey sealant around metal storefront	West elevation; north end	Aroclor - 1016	<1.1	NVL
40555.457 -PCB01	Grey sealant around metal storenom	west elevation, north end	Aroclor - 1221	<1.1	INVL
			Aroclor - 1232	<1.1	
			Aroclor - 1242	<1.1	
			Aroclor - 1248	<1.1	
			Aroclor - 1254	<1.1	
			Aroclor - 1260	<1.1	

PCBs, Total <1.1

January 16, 2020



Mr. Ferman Fletcher

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

Re: NVL Batch 2000857.00

Project Name/Number: 40535.437

Project location: Pierce College: Olympic Bldg Roof Replacement

Dear Mr. Fletcher,

Enclosed please find test results for samples submitted to our laboratory for analysis. Preparation and analysis of these samples were conducted in accordance with published industry standards and methods specified on the attached analytical report.

The content of this package consists of the following:

-Case Narrative & Definition of Data Qualifiers -Analytical Test Results -Applicable QC Summary -Client Chain-of-Custody (CoC) -NVL Receiving Record

The 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 will be discarded after two weeks.

Thank you for using our laboratory services. If you need further assistance, please contact us at 206-547-0100 or 1-888-NVLLABS.

Sincerely,

Nick Ly, Technical Director Enclosure: 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

Case Narrative:

The following summarizes samples received on date as shown on the accompanied Chain of custody by NVL Laboratories, Inc. from PBS Environmental for Project Number: 40535.437. Samples were logged in for PCB analysis per client request using both customer sample ID's and laboratory assigned ID's as listed on the Chain-of-Custody (CoC). All samples as received were processed and analyzed within specified turnaround time without any abnormalities and deviations that may affect the analytical results. All quality control requirements were acceptable unless stated otherwise. The conditions of all samples were acceptable at time of receipt and all samples submitted with this batch were analyzed unless stated otherwise on the CoC.

Test Results are reported based on dry weight in milligrams per kilograms (mg/kg) for PCB samples as shown on the analytical reports.



Definition Appendix

Terms

% Rec	Percent recovery.
<	Below Reporting Limit(RL) or Limit of Quantitation(LoQ) of the instrument.
В	Blank contamination. The recorded results is associated with a contaminated blank.
DF	Dilution Factor
J	The reported concentration is an estimated value because something may be present in the sample that interfered with the analysis.
J1	The reported concentration is an estimated value because the laboratory control sample (LCS) is out of control limits.
J2	The reported concentration is an estimated value because the percent recovery for matrix spike is out of control limits.
J3	The reported concentration is an estimated value because the relative percent difference(RPD) for duplicate analysis is out of control limits.
J4	Percent recovery is outside of established control limits.
LCS	Laboratory Control Sample.
LFS	Laboratory Fortified Spike
Limits	The upper and lower control limits for spike recoveries.
LN	Quality control sample is outside of control limits. This analyte was not detected in the sample.
LOQ	Limit of quantitation(same as RL)
mg/kg	Milligrams per kilogram.
ND	Analyte not detected or below the reporting limit of the instrument or methodology



Definition Appendix

Terms

РРМ	Parts per Million.
QC Batch Group	Quality Control Batch Group. The entity that links analytical results and supporting quality control results.
R	The data are not reliable due to possible contamination or loss of material during preparation or analysis. Re-sampling and reanalysis are necessary for verification.
RL	Reporting Limit. The minimum concentration that can be quantified under routine operating conditions.
RPD	Relative Percent Difference. The relative difference between duplicate results(matrix spike, blank spike, or samples duplicate) expressed as a percentage.
RPD Limit	The maximum RPD allowed for a set of duplicate measurements(see RPD).
SMI	Surrogate has matrix interference.
Spike Conc.	The measured concentration, in sample basis units, of a spiked sample.
SURR-ND	Surrogate was not detected due to matrix interference or dilution.
ug/m3	Micrograms per cubic meter.
ug/mL	Micrograms per milliliter
mg/Kg	milligram per kilogram

ANALYSIS REPORT



Polychlorinated Biphenyls by Gas Chromatography

Client SDG Number Date Reported Project Number Location	PBS Environmental 2000857.00 01/16/2020 40535.437 Pierce College: Olympic Bldg Roof Replacement	Samples Receiv Analyzed By Samples Analyz Analysis Method Preparation Met	Aaron Brown zed* 1 d 8082A
Sample Numbe	r 40535.437-PCB01	Received	01/13/2020
Lab Sample ID	20013740	Matrix	Material
Initial Sample Siz	e 1.8528 gm	Units of Result	mg/Kg, as received
Analyte		RL	Final Result Analysis Date
Aroclor-1016		1.1	< 1.1 01/14/2020
Aroclor-1221		1.1	< 1.1 01/14/2020
Aroclor-1232		1.1	< 1.1 01/14/2020
Aroclor-1242		1.1	< 1.1 01/14/2020
Aroclor-1248		1.1	< 1.1 01/14/2020
Aroclor-1254		1.1	< 1.1 01/14/2020
Aroclor-1260		1.1	< 1.1 01/14/2020
PCBs, Total		1.1	<1.1



Quality Control Results

Project Number:	40535.437			SDG Nu Project I	mber: Manager:		000857 erman Fle	etcher		
QC Batch(es):	Q1128			Analysis	Method:	808	2A			
QC Batch Method:	3546PR (PCB)			Analysis Dese	cription:		-	-	henyls by Ga	as
Preparation Date:	01/14/2020					Chr	omatogra	phy		
Blank: MBLK-20008	57									
	Blank				RL		Control			
Analyte	Result	Units	DF				Limit			Qualifiers
Aroclor-1016	ND	mg/Kg	1		1.0		1			
Aroclor-1221	ND	mg/Kg	1		1.0		1			
Aroclor-1232	ND	mg/Kg	1		1.0		1			
Aroclor-1242	ND	mg/Kg	1		1.0		1			
Aroclor-1248	ND	mg/Kg	1		1.0		1			
Aroclor-1254	ND	mg/Kg	1		1.0		1			
Aroclor-1260	ND	mg/Kg	1		1.0		1			
PCBs, Total	ND	mg/Kg	1		1.0		1			
Surrogates:						% Rec				
Tetrachloro-m-xylene			1			66	40-140			
Decachlorobiphenyl			1			100	40-140			
Lab Control Sample:		57								
A maluta	Blank Spike	1.1		Spike		0/ Dee	% Rec			Qualifiers
Analyte Aroclor-1254	Result	Units	DF 1	Conc. 20.0		% Rec 79	Limits 40-140			Quaimers
Surrogates:	15.9	mg/Kg	1	20.0		79	40-140			
Tetrachloro-m-xylene			1			79	40-140			
Decachlorobiphenyl			1			107	40-140			
Lab Control Sample:	LCS-1016-1260-	2000857								
Lab Control Sample			-2000857							
	Blank Spike			Spike						
Analyte	Result	Units	DF	Conc.		% Rec	Limits	RPD	RPD Limit	Qualifiers
Aroclor-1016	16.2	mg/Kg	1	20.0		81	40-140			
	17			20.0		85	40-140	5	50	
Aroclor-1260	19.3	mg/Kg	1	20.0		97	40-140	~		
Sumanatas	19.9			20.0		99	40-140	3	50	
Surrogates:							10 1 10			
Tetrachloro-m-xylene			1			78 76	40-140			
Decachlorobiphenyl			1			76 110	40-140 40-140			
Бесаснюгоррнену			I			106	40-140 40-140			
						100	10 170			



Surrogate Recovery Summary Report

Client	PBS Environmenta	L

SDG Number 2000857

Project <u>40535.437</u>				
Customer Sample ID	Lab Sample ID	Analyte	Recovery	Limits
40535.437-PCB01	20013740	Decachlorobiphenyl	97%	40-140
40535.437-PCB01	20013740	Tetrachloro-m-xylene	89%	40-140
LCS-1016-1260-2000857	LCS-1016-1260-2000857	Decachlorobiphenyl	110%	40-140
LCS-1016-1260-2000857	LCS-1016-1260-2000857	Tetrachloro-m-xylene	78%	40-140
LCS-1254-2000857	LCS-1254-2000857	Decachlorobiphenyl	107%	40-140
LCS-1254-2000857	LCS-1254-2000857	Tetrachloro-m-xylene	79%	40-140
LCSD-1016-1260-2000857	LCSD-1016-1260-2000857	Decachlorobiphenyl	106%	40-140
LCSD-1016-1260-2000857	LCSD-1016-1260-2000857	Tetrachloro-m-xylene	76%	40-140
MBLK-2000857	MBLK-2000857	Decachlorobiphenyl	100%	40-140
MBLK-2000857	MBLK-2000857	Tetrachloro-m-xylene	66%	40-140

* Recovery outside limits



INITIAL AND CONTINUING CALIBRATION VERIFICATION

SDG No: <u>2000857</u>

Contract:

Determination: 8082 PCB Aroclors <Material>

Run	Sample	Source	Analyzed	Analyte	True	Found	Unit	% Rec	Limits
R001121	CCV1-1016- 1260	PCB_2019-1-2	01/14/2020	Aroclor-1016	5	5	ug/mL	100	80-120
		PCB_2019-1-2	01/14/2020	Aroclor-1260	5	5	ug/mL	100	80-120
	CCV1-1254	PCB_2019-1-3	01/14/2020	Aroclor-1254	5	5	ug/mL	100	80-120
	ICV 1016-1254- 1260	PCB_2019-1-4	01/14/2020	Aroclor-1016	5	4.652	ug/mL	93	85-115
		PCB_2019-1-4	01/14/2020	Aroclor-1254	5	4.738	ug/mL	95	85-115
		PCB_2019-1-4	01/14/2020	Aroclor-1260	5	4.984	ug/mL	100	85-115
	CCV2-1016- 1260	PCB_2019-1-2	01/14/2020	Aroclor-1016	5	5.288	ug/mL	106	80-120
		PCB_2019-1-2	01/14/2020	Aroclor-1260	5	5.674	ug/mL	113	80-120
	CCV2-1254	PCB_2019-1-3	01/14/2020	Aroclor-1254	5	5.72	ug/mL	114	80-120

Page 8 of 10

ORGANICS LABORATORY SERVICES

	PBS Environmental - Seattle 214 E Galer St. Suite. 300 Seattle, WA 98102	NVL Batch Number 2000857.00 TAT 3 Days AH No Rush TAT	I
Project Manager	Mr. Ferman Fletcher	Due Date 1/16/2020 Time 1:55 PM	
-	(206) 233-9639	Email ferman.fletcher@pbsusa.com	
Cell	(206) 491-1389	Fax (866) 727-0140	
Project Name/N	Number: 40535.437 Pro	ject Location: Pierce College: Olympic Bldg Roof Replacement	_

Subcategory	Quantitative analysis
	000.05

Item Code ORG-05

Method 8082 PCB Aroclors <Bulk>

Total Number of Samples ____1

Rush Samples

27

	Lab ID	Sample ID	Description	A/R
1	20013740	40535.437-PCB01		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Courier				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Emily Schubert		/ NVL	1/13/20	1355
Analyzed by	Aim Brie		NVL	1/14/20	13:30
Results Called by		1/			
Faxed Emailed					
Special nstructions:					
ntered By: Emily Schuber	t	Date: 1/13/2020	Time: 2:04 PM		1 of
4708	3 Aurora Ave North, Se	attle, WA 98103 p 206.5	47.0100 f 206.634.1936	www.nvllabs.com	



2000857

Project: <u>Pierce College: Olympic Bldg</u>	Roof Replacement	Project #: <u>40535.437</u>	
Analysis requested:Bulk PCB (EPA 8	082)	Date: 1/13/20	
Relinq'd by/Signature:	597)	Date/Time: <u>1/13/20</u>	
Received by/Signature:	DCIE NVL	Date/Time: 1 13 2020	1355
E-mail results to:			lourier
Brian Stanford	Ceł Alvarez	Mike Smith	
Willem Mager	Janet Murphy	🔀 Ferman Fletcher	
Gregg Middaugh	Kaitlin Soukup	Holly Tuttle	
Mark Hiley	Martin Estira	Ryan Hunter	
🔲 Tim Ogden	🔲 Justin Day	🛛 Eman Jabali	
Prudy Stoudt-McRae	Filmon Embaye		
E-mail all invoices to: seattleap@pbsusa.co	m		
TURN AROUND TIME:			
1 Hour	24 Hours	🔀 3 Days	
2 Hours	48 Hours	Other	
4 Hours Analyzed by Amo	n Brown	NU 1/14/20 13:30	

SAMPLE DATA FORM					
Sample #	Material	Location	Lak		
40535.437- PCB01	Grey Sealant around Metal Storefront	W. elevation; N. end	NVL		
			_		

APPENDIX D

Certifications

Certificate of Completion

This is to certify that Ferman L. Fletcher

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

Jusn N Maas

Instructor



NING CONSULTIN

A TETTACON COMPANY

Apr 17, 2019 Date(s) of Training Expires in 1 year.

Exam Score: N/A (if applicable)

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

APPENDIX E

Certifications

THIS IS TO CERTIFY THAT CLAIRE TSAI

HAS SUCCESSFULLY COMPLETED THE TRAINING COURSE

for

ONLINE AHERA ASBESTOS INSPECTOR REFRESHER

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

Course Date:

01/18/2021

Course Location:

Portland, OR

Certificate:

IRO-21-7316B

For verification of the authenticity of this certificate contact: PBS Engineering and Environmental Inc. 4412 S Corbett Avenue Portland, Oregon 97239 503.248.1939



4-Hour Online AHERA Inspector Refresher Training; AHERA is the Asbestos Hazard Emergency Response Act enacting Title II of Toxic Substance Control Act (TSCA)

Expiration Date:

01/18/2022

ander fisley

Andy Fridley, Instructor

THIS IS TO CERTIFY THAT

FERMAN L FLETCHER

HAS SUCCESSFULLY COMPLETED THE TRAINING COURSE for ASBESTOS INSPECTOR REFRESHER

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

|--|

04/01/2021

Course Location:

Portland, OR

Certificate:

IR-21-8539B

For verification of the authenticity of this certificate contact: PBS Engineering and Environmental Inc. 4412 S Corbett Avenue Portland, Oregon 97239 503.248.1939



CCB #SRA0615 4-Hr Training

4-Hour AHERA Inspector Refresher Training; AHERA is the Asbestos Hazard Emergency Response Act enacting Title II of Toxic Substance Control Act (TSCA)

Expiration Date: 04/01/2022

ander Fieldy

Andy Fridley, Instructor

THIS IS TO CERTIFY THAT

FERMAN L FLETCHER

HAS SUCCESSFULLY COMPLETED THE TRAINING COURSE for ASBESTOS INSPECTOR REFRESHER

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

Course Date

Certificate:

04/01/2020

Course Location:

Portland, OR IR-20-8539B

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



CCB #SRA0615 4-Hr Training

CCB #SRA0615 4-Hr Training

Expiration Date: 04/01/2021

ander Fridly

Andy Fridley, Instructor

THIS IS TO CERTIFY THAT **STEFAN RANKIN**

HAS SUCCESSFULLY COMPLETED THE TRAINING COURSE

for

ONLINE AHERA ASBESTOS INSPECTOR REFRESHER

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

Course Date:

09/03/2020

Course Location:

Portland, OR

Certificate:

IRO-20-5564B

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



4-Hour Online AHERA Inspector Refresher Training; AHERA is the Asbestos Hazard Emergency Response Act enacting Title II of Toxic Substance Control Act (TSCA)

Expiration Date:

09/03/2021

ander Fridly

Andy Fridley, Instructor

THIS IS TO CERTIFY THAT

NICK PARR

HAS SUCCESSFULLY COMPLETED THE TRAINING COURSE

for

ONLINE AHERA ASBESTOS INSPECTOR REFRESHER

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

Course Date:

09/03/2020

Course Location:

Portland, OR

Certificate:

IRO-20-4749B

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



4-Hour Online AHERA Inspector Refresher Training; AHERA is the Asbestos Hazard Emergency Response Act enacting Title II of Toxic Substance Control Act (TSCA)

Expiration Date:

09/03/2021

ander Fridly

Andy Fridley, Instructor

APPENDIX B

Construction Phase PLM Bulk Sampling Information

PLM Bulk Sample Inventory PLM Bulk Sample Laboratory Data Sheets PLM Bulk Sample Chain of Custody Documentation

Construction Phase Asbestos PLM Bulk

PBS Samp	le #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488	9/7/2021-01	Brown cork board mastic behind shelving	Room 166A middle casework	Layer 1: Brown mastic Layer 2: Silver foil Layer 3: Off-white mastic	NAD NAD NAD	SAT
40535.488	9/20/2021-01	Tan mirror mastic	Olympic South Room 338B	Layer 1: Tan/yellow mastic	NAD	SAT
40535.488	9/20/2021-02	Tan mirror mastic	Olympic South Room 338B	Layer 1: Tan/yellow mastic	NAD	SAT
40535.488	9/21/2021-01	Tan/white board mastic	Olympic South Room 324	Layer 1: Tan/yellow mastic	NAD	SAT
40535.488	9/21/2021-02	Tan/white board mastic	Olympic South Room 324	Layer 1: Tan/yellow mastic	NAD	SAT
40535.488	9/21/2021-03	White residue/ exterior of conduit	Olympic South Room. 173	Layer 1: White brittle material	NAD	SAT
40535.488	9/23/2021-01	White fire brick	Provided by maintenance department historical building material	Layer 1: White/ gray/ sandy brittle material	NAD	SAT
40535.488	9/23/2021-02	White fire brick	Provided by maintenance department historical building material	Layer 1: White sandy/ brittle material	NAD	SAT
40535.488	9/24/2021-01	Surface dust	Room 164 south supply ~14,000,000	Layer 1: Dust	NAD	SAT
40535.488	9/24/2021-02	Surface dust	Room 163 east wall supply ~9,000,000	Layer 1: Dust	NAD	SAT
40535.488	9/24/2021-03	Surface dust	FL1 corridor west side east supply duct ~1,000,000	Layer 1: Dust	NAD	SAT
40535.488	9/24/2021-04	Surface dust	FL1 corridor west side center return duct ~500,000	Layer 1: Dust	NAD	SAT
40535.488	9/24/2021-05	Surface dust	ECE center supply duct ~12,000	Layer 1: Dust	NAD	SAT

Construction Phase Asbestos PLM Bulk

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488 9/29/2021-01	Tan mastic behind duct insulation	Mechanical Room 173 intake duct	Layer 1: Tan/yellow mastic	NAD	SAT
40535.488 9/29/2021-02	Tan mastic server floor support	Room 325 server floor	Layer 1: Tan/yellow mastic	NAD	SAT
40535.488 12/17/2021-0	1 Black mastic on wood	East wall subfloor horizontal beam	Layer 1: Black mastic Layer 2: black soft/elastic material	NAD NAD	SAT
40535.488 12/17/2021-0	2 Black mastic on wood	North wall subfloor horizontal beam	Layer 1: Black mastic Layer 2: black soft/elastic material	NAD NAD	SAT
40535.488 12/17/2021-0	3 Black mastic on wood	South wall subfloor horizontal beam	Layer 1: Black mastic Layer 2: black soft/elastic material	NAD NAD	SAT
40535.488 2022/1/27-01	Black mastic – Fire alarm coating	Near Rm. O260	Layer 1: Black mastic with paint	4% Chrysotile	SAT
40535.488 2022/1/27-02	Black vapor barrier	O267 Restroom – under ceramic floor tile	Layer 1: Black asphaltic material with paint Layer 2: Black asphaltic fibrous material Layer 3: Black asphaltic fibrous material	NAD NAD NAD	SAT
40535.488 2022/1/27-03	Black asphaltic debris	Lv. 2 column cavity – Near west skybridge	Layer 1: Black asphaltic fibrous material Layer 2: Black asphaltic fibrous material Layer 3: Black asphaltic material	NAD NAD NAD	SAT
40535.488 2022/1/27-04	Black asphaltic debris	Lv2. Column cavity – Near 270 – SW	Layer 1: Black asphaltic material Layer 2: Black asphaltic fibrous material	NAD NAD	SAT
40535.488 2022/2/2-01	Concealed woven fabric	Room O265 – North wall	Layer 1: Off-white woven fibrous material	NAD	SAT
40535.488 2/7/22-01	White leveling compound	Level 2 hall ramp near 275	Layer 1: White brittle material Layer 2: Trace yellow mastic	NAD NAD	SAT
40535.488 2/7/22-02	Yellow/brown carpet mastic white leveling compound,	Level 2 hall ramp near 275	Layer 1: Gray sandy/brittle material Layer 2: Trace white brittle material with paint	NAD NAD	SAT

Construction Phase Asbestos PLM Bulk

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
	Concrete,		Layer 3: Brown mastic	NAD	
40535.488 2/7/22-03	Black asphaltic material	Level 2 Restrooms below ceramic	Layer 1: Black asphaltic material	NAD	SAT
		floor tile	Layer 2: Black asphaltic fibrous material	NAD	
			Layer 3: Black asphaltic material	NAD	
			Layer 4: Black asphaltic fibrous material	NAD	
			Layer 5: Black asphaltic material	NAD	
			Layer 6: Black asphaltic fibrous material	NAD	
40535.488 2/17/22-01	Asphalt	South elevation northeast of	Layer 1: Black asphaltic material	NAD	SAT
		Robin's Nest	Layer 2: Gray hard sandy/brittle material	NAD	
40535.488 2/17/22-02	Asphalt	South elevation northwest of	Layer 1: Black asphaltic material	NAD	SAT
		Robin's Nest	Layer 2: Gray hard sandy/brittle material	NAD	
40535.488 2/17/22-03	Grey sealant	Room 283 pan decking above west concrete masonry unit wall	Layer 1: Gray soft material	NAD	SAT
40535.488 2/17/22-04	Grey sealant	Room 283 east column	Layer 1: Gray/off-white soft/elastic material with paint	NAD	SAT
			Layer 2: Trace off-white foamy material	NAD	
			Layer 3: Orange/brown brittle material	NAD	
40535.488 2/17/22-05	Grey sealant	Room 283 south column	Layer 1: Gray soft/elastic material with paint Layer 2: Gray sandy/brittle material	NAD NAD	SAT
40535.488 3/1/22-001	Asphaltic roofing	LVL 2 above concrete ceiling below pan decking northeast opening	Layer 1: Black asphaltic material Layer 2: Black asphaltic material with fibrous material	NAD NAD	SAT
40535.488 3/7/22-001	Insulation	278 ceiling above pan decking	Layer 1: Black soft/elastic material with fibrous material	NAD	SAT
			Layer 2: Black fibrous material	NAD	
40535.488 3/7/22-002	Caulking	Level 2 mechanical mezzanine along southern edge	Layer 1: Off-white soft material Layer 2: Brown fibrous material	NAD NAD	SAT

Construction Phase Asbestos PLM Bulk

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
			Layer 3: Gray brittle material	NAD	
40535.488 3/16/22-01	Residual black mastic	Level 2 near east wall of below previous Rm 264 casework	Layer 1: Black asphaltic material	4% Chrysotile	SAT
40535.488 3/16/22-02	Black brittle material	Level 2 below west wall studs previous Rm 264	Layer 1: Black asphaltic material	3% Chrysotile	SAT
40535.488 3/16/22-03	Gypsum wallboard vapor barrier	Level 1 north exterior wall from inside	Layer 1: White chalky material with paper	NAD	SAT
			Layer 2: Gray fibrous material	NAD	
40535.488 3/16/22-04	Gypsum wallboard	Level 2 east wall north of skybridge doors	Layer 1: White chalky material with paper	NAD	SAT
40535.488 3/18/22-01	Residual black mastic	Previous Rm 171 southeast column on concrete	Layer 1: Black mastic	3% Chrysotile	SAT
40535.488 3/18/22-02	Residual black mastic White leveling compound	Previous Rm 283 center area	Laver 1: Black mastic Layer 2: White brittle material with paint	NAD NAD	SAT
40535.488 3/18/22-03	Residual black mastic	West windows on base plate	Layer 1: Black asphaltic material with fibrous material	NAD	SAT
40535.488 3/18/22-04	Residual black mastic	West windows on concrete below base plate	Layer 1: Black mastic	3% Chrysotile	SAT
40535.488 3/18/22-05	Residual black mastic	Previous Rm 270 near slab step up	Layer 1: Black asphaltic material with fibrous material	NAD	SAT
40535.488 3/22/22-01	Black Rubbery Material	Flower Bed W of Ramp SW of the Building	Layer 1: Black rubbery material Layer 2: Clear mastic	NAD NAD	SAT
40535.488 3/23/22-01	Concrete	E Elevation N Skybridge Containment	Layer 1: Gray sandy/brittle material	NAD	SAT
40535.488 3/23/22-02	Roofing Tar	E Elevation N Skybridge Containment	Layer 1: Black asphaltic material	NAD	SAT

Construction Phase Asbestos PLM Bulk

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
			Layer 2: Trace yellow fibrous material	NAD	
40535.488 3/23/22-03	Gray Mastic	E Elevation N Skybridge Containment	Layer 1: Trace beige sandy/brittle material	NAD	SAT
			Layer 2: Gray sandy/brittle material with paint Layer 3: White foamy material	NAD NAD	
40535.488 3/29/22-01	Black brittle material	Level 3 north west area sub floor below concrete	Layer 1: Black asphaltic material	NAD	SAT
40535.488 3/29/22-02	Black vapor barrier	Level 2 base of CMU wall previous Room 283A	Layer 1: Black asphaltic fibrous material	NAD	SAT
40535.488 4/7/22/-01	Joint Compound	W of 168 Ext. Door S column S side	Layer 1: White compacted powdery material with paint	NAD	NVL
	Joint Compound		Layer 2: White compacted powdery material with paper	NAD	
	Gypsum wallboard Gypsum wallboard		Layer 3: Off-white chalky material with paper Layer 4: White chalky material with paper	NAD NAD	
40535.488 4/7/22/-02	Joint Compound Gypsum wallboard Gypsum wallboard	S Elev. Center column S side	Layer 1: Off-white compacted powdery material with paint Layer 2: Brown chalky material with paper Layer 3: Off-white chalky material with paper	2% Chrysotile NAD NAD	NVL
	Gypsum wallboard		Layer 4: White chalky material with paper	NAD	
40535.488 4/7/22/-03	Joint Compound Gypsum wallboard Gypsum wallboard Gypsum wallboard	E Elev. S column E side	Layer 1: Off-white compacted powdery material with paint Layer 2: Brown chalky material with paper Layer 3: Off-white chalky material with paper Layer 4: White chalky material with paper	2% Chrysotile NAD NAD NAD	NVL
40535.488 4/7/22/-04	Joint Compound Joint Compound	S stairwell column W side	Layer 1: Off-white compacted powdery material with paint Layer 2: Off-white compacted powdery material with paper	2% Chrysotile 2% Chrysotile	NVL

Construction Phase Asbestos PLM Bulk

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
	Gypsum wallboard		Layer 3: White chalky material with paper	NAD	
40535.488 4/7/22/-0	5 Joint Compound	Room 164 SE column N side inside	Layer 1: White compacted powdery material with paint	NAD	NVL
	Joint Compound	building	Layer 2: White compacted powdery material with paper	NAD	
	Gypsum wallboard Gypsum wallboard		Layer 3: White chalky material with paper Layer 4: White chalky material with paper	NAD NAD	
40535.488 4/7/22/-0	6 Joint Compound	S Elev. W column E side	Layer 1: Off-white compacted powdery material with paint	2% Chrysotile	NVL
	Joint Compound		Layer 2: Off-white compacted powdery material with	2% Chrysotile	
	Gypsum wallboard		paper Layer 3: White chalky material with paper	NAD	
40535.488 4/7/22/-0	7 Joint Compound	S of ECE double door S column S side inside building	Layer 1: White compacted powdery material with paper	NAD	NVL
40535.488 4/7/22/-0	8 Plaster	N Elevation Ext. from interior	Layer 1: Gray sandy/brittle material with paper	NAD	NVL
40535.488 4/7/22/-0	9 Cementitious Material	N wall on back of EFIS from interior	Layer 1: Grey cementitious material with debris	NAD	NVL
40535.488 4/7/22/-1) Yellow carpet mastic	East stairwell level 1	Layer 1: Yellow brittle mastic	NAD	NVL
40535.488 4/7/22/-1	1 Yellow carpet mastic	East stairwell level 3	Layer 1: Yellow brittle mastic	NAD	NVL
40535.488 4/7/22/-1	2 Yellow stair tread mastic	East stairwell level 2 going down	Layer 1: Beige/yellow soft mastic	NAD	NVL
40535.488 4/7/22/-1	3 Yellow stair tread mastic	East stairwell level 3 going down	Layer 1: Yellow soft mastic	NAD	NVL
40535.488 4/7/22/-1	4 Tan cove base mastic	East stairwell level 1 west wall	Layer 1: Off-white soft mastic Layer 2: White compacted powdery material	NAD NAD	NVL
40535.488 4/7/22/-1	5 Joint compound	East stairwell level 1 northeast corner under stairs	Layer 1: White compacted powdery material with paint	NAD	NVL

Construction Phase Asbestos PLM Bulk

PBS Sampl	<u>e #</u>	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
				Layer 2: White compacted powdery material with paper	NAD	
				Layer 3: White chalky material with paper	NAD	
40535.488	4/7/22/-16	Joint compound	East stairwell level 3 northeast corner	Layer 1: White compacted powdery material with paint	NAD	NVL
		Joint compound		Layer 2: White compacted powdery material with paper	NAD	
		Gypsum wallboard		Layer 3: White chalky material with paper	NAD	
40535.488	4/12/22-1	Gypsum wallboard caulking	E Elevation Column N of double doors S side	Layer 1: Beige fibrous material with paint Layer 2: Gray rubbery material	NAD NAD	NVL
40535.488	4/12/22-2	Gypsum wallboard caulking	E Elevation Column S of double doors N side	Layer 1: Beige fibrous material with paint Layer 2: Gray rubbery material	NAD NAD	NVL
40535.488	4/13/22/-1	Gray sealant Gray sealant	Level 3 supply plenum SW penetration under I beam	Layer 1: Gray rubbery material with paint Layer 2: Gray soft mastic	NAD NAD	NVL
40535.488	4/13/22/-2	Gray sealant fibrous material	Level 3 supply plenum SW penetration under I beam	Layer 1: Gray rubbery material Layer 2: Black fibrous material	NAD NAD	NVL
40535.488	4/20/22-1	White leveling compound	Level 1 northeast crack in slab	Layer 1: White crumbly material	NAD	NVL
40535.488	4/20/22-2	White leveling compound	Level 1 northeast area in slab	Layer 1: White crumbly material	NAD	NVL
40535.488	5/5/22-PLM01	Marble Crete	Olympic S Level 3 S wall W side	Grey granular homogenous material	NAD	ALS
40535.488	5/5/22-PLM02	Marble Crete	Olympic S Level 3 S wall E side	Grey granular homogenous material	NAD	ALS
40535.488	5/5/22-PLM03	Marble Crete	Olympic S Level 2 Stairwell near doorway	Grey granular homogenous material	NAD	ALS
40535.488	5/5/22-PLM04	Marble Crete	Olympic S Level 1 Stairwell near N penetration	Grey granular homogenous material	NAD	ALS

Construction Phase Asbestos PLM Bulk

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488 5/5/22-PLM0	5 Marble Crete	Olympic S Exterior S elev. W side	Grey granular homogenous material	NAD	ALS
40535.488 5/5/22-PLM0	6 Marble Crete	Olympic S Exterior SE corner E column	Grey granular homogenous material	NAD	ALS
40535.488 5/10/22-1	Red Fire Caulking	Level 3 Stairwell along pan decking and I beam	Layer 1: Red soft/elastic material with fibrous material	NAD	SAT
40535.488 5/10/22-2	Red Fire Caulking	Level 3 Stairwell along pan decking and I beam	Layer 1: Red soft/elastic material with fibrous material	NAD	SAT
40535.488 6/17/22-01	Gasket	Level 1 mechanical room fire sprinkler main	Layer 1: Black soft/elastic material with paint & debris	NAD	NVL
40535.488 6/17/22-02	Black paper backing	Level 2 east wall second column south back of Marble Crete	Layer 1: Black asphaltic fibrous material with paint	NAD	NVL
40535.488 6/17/22-03	Black soft caulk	Level 1 northwest base of window below stairs	Layer 1: Black soft/elastic material with debris	NAD	NVL
40535.488 6/17/22-04	Soft grey caulk	Level 1 north window center area	Layer 1: Gray soft material with paint & debris	7%	NVL
	grey caulk		Layer 2: Gray brittle material with debris	Chrysotile 9% Chrysotile	
40535.488 6/17/22-05	Grey sealant	Level 1 southwest window rough opening	Layer 1: Dark gray brittle material with debris	6% Chrysotile	NVL
40535.488 6/17/22-06	White sealant	Level 1 southwest window rough opening	Layer 1: White brittle material with debris	NAD	NVL
40535.488 6/17/22-07	White caulk Grey caulk	Level 1 south west window	Layer 1: White soft/elastic material with debris Layer 2: Dark gray soft/elastic material with debris	NAD NAD	NVL
40535.488 6/17/22-08	Residual white exterior window caulk	South elevation level 1 base of window	Layer 1: Off-white brittle material with debris	6% Chrysotile	NVL

Construction Phase Asbestos PLM Bulk

PBS Sample #	Material Type	Sample Location	Lab Description	Lab Result	<u>Lab</u>
40535.488 6/17/22-09	Soft tan caulk	East elevation top of window wall	Layer 1: Tan soft/elastic material with paint & debris	NAD	NVL
40535.488 6/17/22-10	Soft grey caulk	West elevation window	Layer 1: Gray soft/elastic material with debris	NAD	NVL
40535.488 6/17/22-11	Grey caulk	North elevation top of level 1 window	Layer 1: Gray brittle material with debris	NAD	NVL
40535.488 6/17/22-12	Soft tan caulk	North elevation level 2 window	Layer 1: Tan soft/elastic material with paint & debris	NAD	NVL
40535.488 6/17/22-13	Soft grey caulk grey brittle material	West elevation under skybridge penetration	Layer 1: Gray soft/elastic material with debris Layer 2: Gray brittle material with debris	NAD NAD	NVL
40535.488 7/5/22-01	Brown sealant	Level 1 west wall north center window rough opening	Layer 1: Brown soft material	5% Chrysotile	NVL
40535.488 7/5/22-02	Brown sealant	Level 1 west wall south center window rough opening	Layer 1: Brown soft material	6% Chrysotile	NVL

SEATTLE ASBESTOS TEST, LLC

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425,673,9850, Fax: 425,673,9810, NVLAP Lab Code: 200768-0

www.scattleasbestostest.com, admin@seattleasbestostest.com

Project Manager: Gregg Middaugh, Claire Tsai Client: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 206.233.9639 Date Report Issued: 9/8/2021 Date Analyzed: 9/8/2021 Client Job#: 40535.488 Project Location: Dlympic South Abatement and Repairs Laboratory batch#: 202111229 Samples Received: 1

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA, recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Sumar

Steve (Fanyao) Zhang Approved Signatory 202111229



LABORATORY CHAIN OF CUSTODY

Project: Olympic South Abate	ement and Repairs	Project #: <u>40535,488</u>
Analysis requested: PLM		Date: 09/7/2021
Relinq'd by/Signature:	u Flar	Date/Time: 9/7/2.02/
Received by/Signature: Caroly	where Cipa	Date/Time: 9/7/21 13:51
	Email ALL INVOICES to: seattleap	@pbsusa.com
E-mail results to:		
Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	🖾 Claire Tsai	ū
TURN AROUND TIME:		
1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		

SAMPLE DATA FORM					
Sample #	Material	Location	Lab		
40535.488-9/7/2021-01	Brown cork board mastic behind shelving	Room 166A middle casework	SAT		
			-		
			_		

214 EAST GALER STREET, SUITE 300, SEATTLE, WA 98102 • 206.233.9639 MAIN • 866.727.0140 FAX • PBSUSA.COM

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ANALYTICAL LABORATORY REPORT

[PLM] EPA - 4	O CFR Appendix E to S	EPA 600/R-93/1	763, Interim Method of the 16: Method for the Determi	Deter	mination of Asbestos of Asbestos in Bulk	in Bulk Insulation Samples; Building Materials		[PLM]
Attn.;	Gregg Middaugh, Claire Tsai	Client:	PBS Engineering and Environmental, Seattle			214 E Galer Street, Suite	300,	Seattie, WA 98102
Job#;	40535.488	Batch#:	202111229		Date Received:	9/7/2021		
Samples Rec'd:	1	Date Analyzed:	9/8/2021		Samples Analyzod:	1		
Project Loc,	Olympic South Abat Repairs	ement and		a	the			Dhany
			Analyzari by			Approved Signatory	Steve	(Fanyao) Zhang, President
Lab IO	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-Ebrous Components	16	Non-asbestos Fibers
		1	Brown mastic		None detected	Mastic/binder	2	Cellulose
1	40535.488- 9/7/2021-01	2	Silver foil		None detected	Foil/binder		None detected
		3	Off-white mastic	1	None detected	Mastic/binder	3	Cellulose

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www.seattleasbestostest.com, admin@seattleasbestostest.com

Project Manager: Gregg Middaugh, Claire Tsai, Michael Smith Client: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 206,233,9639 Date Report Issued: 9/21/2021 Date Analyzed: 9/21/2021 Client Job#: 40535.488 Project Location: Pierce College Olympic South Abatement and Repairs Laboratory batch#: 202111330 Samples Received: 2

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

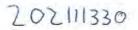
This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Samo

Steve (Fanyao) Zhang Approved Signatory





LABORATORY CHAIN OF CUSTODY

Project:Pierce College Olympi	c South Abatement & Repairs	Project #: 40535.488
Analysis requested:PLM		Date: 09/20/2021
Relinq'd by/Signature: Peter	Stensland Pitre Strange	Date/Time: 1/20/2
Received by/Signature: Caroly	Yes ayes	Date/Time: 9/20/21 16:06
A CONTRACTOR OF A	mail ALL INVOICES to: seattleap@	obsusa.com
E-mail results to:		
Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	Claire Tsai	
TURN AROUND TIME:		
1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		

SAMPLE DATA FORM					
Sample #	Material	Location	Lab		
40535.488-9/20/2021-01	Tan mirror mastic	Olympic South Room 338B	SAT		
40535.488-9/20/2021-02	Tan mirror mastic	Olympic South Room 338B	_		

SEATTLE ASBESTOS TEST

Lynnwood Laboratory: 19701 Scriber Lake Road. Stiller 103. Lynnwood, WA 96036, Tel: 425,673.9850, Fax: 425,673.9810, NVLAP Lab Code: 200768-0

Disclarmen: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIS (, or any agency of the Faderal government.

ANALYTICAL LABORATORY REPORT

			ANALT HGAL LAD					
[PLM] EPA - 40	CFR Appendix E to Subp	600/R-93/116	3, Interim Method of the De Method for the Determina	termin tion of	ation of Asbestos in Asbestos in Bulk Bu	Bulk Insulation Samples: ilding Materials		(PLM) EPA
Attn.:	Gregg Middaugh. Claire Tsai, Michael Smith	Client;	PBS Engineering and Environmental, Seattle			214 E Galer Street, Suite	300, 8	Seattle, WA 98102
Job#:	40535.488	Batch#:	202111330		Date Received:	9/20/2021		
Samples Rec'd:	2	Date Analyzed:	9/21/2021		Samples Analyzed:	2		
Project Loc.:	Pierce College Olympi Abatoment and Repair			ú	to			Thomas
			Analyzed b	y: Carol	lyn Yeo	Approved Signatory	Steve	Fanyau) Zhang, President
Lab ID	Client Sample ID	Layer	Description	1%	Asbestos Fibers	Non-fibrous Components	1%	Non-ashestos Fibers
	10000 100						-	and the second se

- 16		Concern A settinger 100	- in fac	Dopenhion	 Asucarua ripers	Non-nonous components	W.	Non-aspesios ribers
	1	40535.488- 9/20/2021-01	1	Tan/yellow mastic	None detected	Mastic/binder	3	Cellulose
	2	40535.488- 9/20/2021-02	1	Tan/yellow mastic	None detected	Mastic/binder	3	Cellulose

SEATTLE ASBESTOS TEST, LLC

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673,9850, Fax: 425.673,9810, NVLAP Lab Code: 200768-0

www.seattleasbestostesi.com, admin@scattleasbestostest.com

Project Manager:	Gregg Middaugh, Claire Tsal, Michael Smith	Date Analyzod:	9/22/2021
Client:	PBS Engineering and Environmental. Seattle	Client Job#.	40535,488
Áddress:	214 E Galer Street, Suite 300, Seattle, WA 98102	Project Location:	Pierce College Olympic South Abatement & Repairs
Tel:	206.233.9639	Laboratory batch#:	
Date Report Issued:	9/22/2021	Samples Received:	3

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases loward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

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This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after line analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

hann

Steve (Fanyao) Zhang. Approved Signatory 202111339



LABORATORY CHAIN OF CUSTODY

Project: <u>Pierce College Olympic</u>	South Abatement & Repairs	Project #: 40535.488
Analysis requested:PLM	1	Date: 09/21/2021
Relinq'd by/Signature: fet	Sendal titre Strall	Date/Time: <u>9/2//2/</u>
Received by/Signature: Carolyn	Yes ayles	Date/Time: 9/21/2021 16:35
Er	nail ALL INVOICES to: seattleap@	pbsusa.com
E-mail results to:		
Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	🛛 Claire Tsai	
TURN AROUND TIME:		
1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		

SAMPLE DATA FORM						
Sample #	Material	Location	Lab			
40535.488-9/21/2021-01	Tan/white board mastic	Olympic South Room 324	SAT			
40535.488-9/21/2021-02	Tan/white board mastic	Olympic South Room 324				
40535.488-9/21/2021-03	White residue/ exterior of conduit	Olympic South Room. 173				
		1				
			-			

SEATTLE ASBESTOS TEST

9/21/2021-03

3

Lynnwood Laboratory. 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

1

material

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ANALYTICAL LABORATORY REPORT

[PLM] EPA - 4	IO CFR Appendix E to Su	EPA 600/R-93/1	763, Interim Method of the I 16: Method for the Determi	Deterr	nination of Asbestos of Asbestos in Bulk	in Bulk Insulation Samples; Building Materials		[PLM]
Attn.:	Gregg Middaugh,	Client	PBS Engineering and Environmental, Seattle			214 E Galer Street, Suite	300.	Seattle, WA 98102
Job#:	40535.488	Batchv:	202111339		Date Received:	9/21/2021		
Samples Rec'd:	3	Date Analyzed:	9/22/2021		Samples Analyzed:	3		
Project Loc.:	Pierce College Olymp Abatement & Repairs			6	the			Schang
-			Analyzod by	Caro	Nya Yeo	Approved Signatory:	Slava	(Fanyaa) Zhang, President
Lab (D)	Client Sample ID	Layer	Description	3%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
1	40535.488- 9/21/2021-01	1	Tan/yellow mastic		None detected	Mastic/binder	2	Cellulose
2	40535.488- 9/21/2021-02	1	Tan/yellow mastic		None detected	Mastic/binder	2	Cellulose
3	40535.488-	1	White brittle		None	Diados Eillos	2	Calludana

detected

Binder, Filler

3

Cellulose

SEATTLE ASBESTOS TEST, LLC

Lynnwood Laberatory: 19701 Scriber Lake Road, Suite 103; Lynnwood, WA 98036, Tel: 425 673,9850, Fax: 425.673,9810, NVLAP Lab Code: 200768-0

www.scattleasbestostest.com, admin@seattleasbestostest.com

Project Manager: Gregg Middaugh, Claire Tsal, Michael Smith Client: PBS Engineering and Environmental, Scattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 206.233.9639 Date Report Issued: 9/27/2021 Date-Analyzed: 9/27/2021 Client.Job#: 40535.488 Project Location: Pierce College Olympic South Abatement and Repairs Laboratory batch#: 202111366 Samples Received: 2

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis, Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Schang

Steve (Fanyao) Zhang Approved Signatory



LABORATORY CHAIN OF CUSTODY

Project: Pierce College Olym	Project #: 40535.488		
Analysis requested:PLM		Date: 09/23/2021	
Relinq'd by/Signature:	toan hywyer	Date/Time:09/23/21	
Received by/Signature: Caro	14 Yes ayles	Date/Time: 09/28/21 15:07	
	Email ALL INVOICES to: seattleap@p	obsusa.com	
E-mail results to:			
Willem Mager	Janet Murphy	Holly Tuttle	
Gregg Middaugh	Kaitlin Soukup	Mike Smith	
Mark Hiley	Allison Welch	Ferman Fletcher	
Tim Ogden	Toan Nguyen	Cameron Budnick	
Ryan Hunter	Peter Stensland	Michelle Dodson	
Prudy Stoudt-McRae	Claire Tsai		
TURN AROUND TIME:			
1 Hour	24 Hours	3-5 Days	
2 Hours	48 Hours	Other	
4 Hours			

SAMPLE DATA FORM					
Sample #	Material	Location	Lab		
40535.488-9/23/2021-01	White fire brick	A Provided by Maintenance Dozal	TheSAT		
40535.488-9/23/2021-02	White fire brick	R Provided by Maintenance Depar Historical Building material"			
		9			
		Location for both			
		Location for both Samples			

214 EAST GALER STREET, SUITE 300. SEATTLE, WA 98102 * 206.233.9639 MAIN * 866.727.0140 FAX * PBSUSA COM

SEATTLE ASBESTOS TEST

40535.488-

9/23/2021-02

2

Lyonwood Laboratory; 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200766-0

material

material

1

White sandy/brittle

Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

ANALYTICAL LABORATORY REPORT [PLM] EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials [PLM] EPA Gregg Middaugh, Claire Tsal, Michael PBS Engineering and Attn.: Client' Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Environmental, Seattle Smith Job# 40535.488 Batch#: 202111366 Date Received: 9/24/2021 Samples Rec'd: 2 Date Analyzed: 9/27/2021 Samples Analyzed: 2 Pierce College Olympic South Chung Project Loc.: Abatement and Repairs Analyzed by Caroly Approved Signalory Sleve (Lampto) Zhang, President Client Sample ID Labit Layer Description % Asbestos Fibers Non-fibrous Components % Non-asbestos Fibers White/gray 40535.488-None 1 ï sandy/brittle Sand, Filler, Binder 3 Cellulose 9/23/2021-01 detected

None

detected

Sand, Filler, Binder

2

Cellulose

SEATTLE ASBESTOS TEST, LLC

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel. 425,673,9850, Fax: 425,673,9810, NVLAP Lab Code. 200768-0

www.seattleasbestostest.com.admin@seattleasbestostest.com

Project Manager: Gregg Middaugh, Claire Tsai, Michael Smith Client: PBS Engineering and Environmental Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 206.233,9639 Date Report Issued: 9/28/2021 Date Analyzed: 9/28/2021 Client Job#: 40535.488 Project Location: Pierce College Olympic South Abatement & Repairs Laboratory batch#: 202111375 Samples Received: 5

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

The Castin

Steve (Fanyao) Zhang Approved Signatory 202111375



LABORATORY CHAIN OF CUSTODY

Project:Pierce College Olym	Project #: <u>40535.488</u>			
Analysis requested:PLM	Date: 09/24/2021 Date/Time: 9/24/2021			
Relinq'd by/Signature:				
Received by/Signature: Carol	1. Yes Gyles	Date/Time: 9/27/21 13:15		
	Email ALL INVOICES to: seattleap@	pbsusa.com		
E-mail results to:	and the second			
Willem Mager	Janet Murphy	Holly Tuttle		
Gregg Middaugh	Kaitlin Soukup	Mike Smith		
Mark Hiley	Allison Welch	Ferman Fletcher		
Tim Ogden	Toan Nguyen	Cameron Budnick		
Ryan Hunter	Peter Stensland	Michelle Dodson		
Prudy Stoudt-McRae	Claire Tsai			
TURN AROUND TIME:				
1 Hour	24 Hours	3-5 Days		
2 Hours	48 Hours	Other		
4 Hours		And a start a		

SAMPLE DATA FORM					
Sample #	Material	Location	Lab		
40535.488-9/24/2021-01	Surface dust	Room 164 south supply ~14,000,000	SAT		
40535.488-9/24/2021-02	Surface dust	Room 163 east wall supply ~9,000,000			
40535.488-9/24/2021-03	Surface dust	FL1 corridor west side east supply duct ~1,000,000			
40535.488-9/24/2021-04	Surface dust	FL1 corridor west side center return duct ~500,000			
40535.488-9/24/2021-05	Surface dust	ECE center supply duct ~12,000			
			1		
		1			
	-				

214 EAST GALER STREET, SUITE 300, SEATTLE, WA 98102 * 206.233 9639 MAIN * 866.727.0140 FAX * PESUSA COM

SEATTLE ASBESTOS TEST

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 96036, Tel: 425,673,9850, Fax: 425,673,9810, NVLAP Lab Code: 200768-0

Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

			ANALYTICAL LAE	BOR	ATORY REPOR	Г		
[PLM] EPA 4	40 CFR Appendix E to Su	EPA 600/R-93/1		Deterr	nination of Asbestos	in Bulk Insulation Samples:		[PLM]
Atta.:	Gregg Middaugh, Claire Tsai, Michael Smith	Client:				214 E Galer Street, Suite	300,	Seattle, WA 98102
Job#:	40535.488	Batch#:	202111375		Date Received:	9/27/2021		
Samples Rec'd:	5	Date Analyzed:	9/28/2021		Samples Analyzed:	5		
Project Loc.:	Pierce College Olymp Abatement & Repairs			6	10			Bluny
			Analyzed by	Card	ilyn Yea	Approved Signatory:	Steve	(Fanyao) Zhang, Presiden
Lab (D	Client Sample ID	Layer	Description	1%	Asbestos Fibers	Non-fibrous Components	1%	Non-asbestos Fibe
1	40535.488- 9/24/2021-01	1	Dust		None detected	Fine particles, Debris, Filler	2	Cellulose, Synthetic fiber
2	40535.488- 9/24/2021-02	2	Dust		None detected	Fine particles, Debris, Filler	2	Cellulose, Synthetic fiber
3	40535.488- 9/24/2021-03	3	Dust		None detected	Fine particles, Debris, Filler	3	Cellulose, Synthetic fiber
4	40535.488- 9/24/2021-04	4	Dust		None detected	Fine particles, Debris, Filler	2	Cellulose, Synthetic fiber
5	40535.488- 9/24/2021-05	5	Dust		None detected	Fine particles, Debris, Filler	5	Cellulose, Synthetic fiber

SEATTLE ASBESTOS TEST, LLC

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425,673,9850, Fax: 425,673,9810, NVLAP Lab Code: 200768-0

www.seattleasbestostest.com, admin@seattleasbestostest.com

Project Manager: Gregg Middaugh, Clairc Tsai, Michael Smith Client: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 205.233.9639 Date Report Issued: 10/1/2021 Date Analyzed: 10/1/2021 Client Job#: 40535.488 Project Location: Pierce College Olympic South Abatement & Repairs Laboratory batch#: 202111417 Samples Received: 2

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

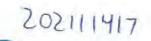
This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Elning

Steve (Fanyao) Zhang Approved Signatory





LABORATORY CHAIN OF CUSTODY

Project:Pierce College Olympic	Project #: <u>40535.488</u>				
Analysis requested: PLM	Date: 09/29/2021				
Relinq'd by/Signature: 12ts	Date/Time:				
Received by/Signature: Carrolyo	te ayre	Date/Time: 9/30/21 10:46			
En	nail ALL INVOICES to: seattleap@	obsusa.com			
E-mail results to:					
Willem Mager	Janet Murphy	Holly Tuttle			
Gregg Middaugh	Kaitlin Soukup	Mike Smith			
Mark Hiley	Allison Welch	Ferman Fletcher			
Tim Ogden	Toan Nguyen	Cameron Budnick			
Ryan Hunter	Peter Stensland	Michelle Dodson			
Prudy Stoudt-McRae	🛛 Claire Tsai	Ξ			
TURN AROUND TIME:					
1 Hour	24 Hours	3-5 Days			
2 Hours	48 Hours	Other			
4 Hours					

SAMPLE DATA FORM					
Sample #	Material	Location	Lab		
40535.488-9/29/2021-01	Tan mastic behind duct insulation	Mechanical Room 173 intake duct	SAT		
40535.488-9/29/2021-02	Tan mastic server floor support	Room 325 server floor			
			-		

SEATTLE ASBESTOS TEST

9/29/2021-02

2

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 96036, Tel: 425,673,9850, Fax: 425,673,9810, NVLAP Lab Code: 200768-0

Tan/yellow mastic

1

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			ANALYTICAL LAB					
[PLM] EPA	40 CFR Appendix E to Su	bpart E of Part EPA 600/R-93/1	763, Interim Method of the 16: Method for the Determin	Deterr	nination of Asbestos of Asbestos in Bulk	in Bulk Insulation Samples; Building Materials		[PLM]
Atta.:	Gregg Middaugh, Claire Tsai, Michael Smith	Client:	PBS Engineering and Environmental, Seattle		Address:	214 E Galer Street, Suite	300,	Seattle, WA 98102
.Job#:	40535.488	Batch#:	202111417		Date Received:	9/30/2021		
Samples Rec'di	2	Date Analyzed:	10/1/2021		Samples Analyzed:	2		
Project Loc.:	Pierce College Olymp Abatement & Repairs			G	No			Schung
			Analyzed by	Care	aliyn Yelo	Approved Signatory:	Steve	Fanyao) Zhang, President
Lab ID	Client Striple ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	36	Non-asbestos Fibers
1	40535.488- 9/29/2021-01	1	Tan/yellow mastic		None detected	Mastic/binder	3	Cellulose
2	40535,488-	1	Tenhollow montio	11	None	Mary Call Section	0	0.00.0000

detected

Mastic/binder

Cellulose

3

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425,673,9850, Fax: 425,673,9810, NVLAP Lab Code: 200768-0

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Project Manager:	Gregg Middaugh, Peter Stensland, Claire Tsai, Michael Smith, Cameron Budnick	Date Analyzed:	12/20/2021
	PBS Engineering and Environmental, Seattle	Client Job#:	
Address:	214 E Galer Street, Suite 300, Seattle, WA 98102	Project Location:	Olympic South Abatement and Repairs
Tel:	206.233.9639	Laboratory batch#	202111999
Date Report Issued:	12/20/2021	Samples Received!	3

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Parl 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Chano

202111999



LABORATORY CHAIN OF CUSTODY

Project: Olympic South Abater	nent & Repairs	Project #: 40535.488
Analysis requested: PLM		Date: 12/17/2021
Relinq'd by/Signature:	le	Date/Time: 2:30
Received by/Signature: (9-01	Ya yes Cryla	Date/Time: 12/20/21 10:50
	Email ALL INVOICES to: seattleap	@pbsusa.com
E-mail results to:		
Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	Toan Nguyen	Cameron Budnick
Ryan Hunter	Aeter Stensland	Michelle Dodson
Prudy Stoudt-McRae	alaire Tsai	
TURN AROUND TIME:	_	
1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours	and Theorem	

	SAMPLE	DATA FORM		
Sample #	Material	Location	Lab	
40535.488- 12/17/2021-01	Black mastic on wood	East wall subfloor horizontal beam	SAT	
40535.488- 12/17/2021-02	Black mastic on wood	North wall subfloor horizontal beam		
40535.488- 12/17/2021-03	Black mastic on wood	South wall subfloor horizontal beam		
0			-	
			1	

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Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

Disclaimer: This report must not be used by the dient to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

(PLM) EPA - 4	0 CFR Appendix E to St	bpart E of Part EPA 600/R-93/1	ANALYTICAL LAB 763, Interim Method of the 16: Method for the Determin	Deterr	mination of Asbestos	in Bulk Insulation Samples;		(PLM)	
Atta.:	Gregg Middaugh, Peter Stensland, Claire Tsai, Michael Smith, Cameron Budnick	Client	PBS Engineering and Environmental, Seattle		Address:	214 E Galer Street, Suite	300, 5	Seattle, WA 98102	
.#dolL	40535.488	Batch#:	202111999		Date Received:	12/20/2021			
Samples Rec'd:	3	Date Analyzed:	12/20/2021		Samples Analyzed:	3			
Project Loc.:	Olympic South Abate Repairs	ment and		6	de			Schang	
			Analyzed by	Caro	olyn Yeo	Approved Signatory	Steve	(Fanyao) Zhang, President	
Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers	
1.24	40535.488-	1	Black mastic	1	None detected	Mastic/binder	2	Cellulose	
1	12/17/2021-01	2	Black soft/elastic material		None detected	Binder, Filler	2	Cellulose	
	40535.488-	1	Black mastic	17	None detected	Mastic/binder	2	Cellulose	
2	12/17/2021-02	2	Black soft/elastic material		None detected	Binder, Filler	3	Cellulose	
2		40535.488-	1	Black mastic		None detected	Mastic/binder	3	Cellulose
	12/17/2021-03	2	Black soft/elastic material		None detected	Binder, Filler	2	Cellulose	

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425,673,9850, Fax: 425,673,9810, NVLAP Lab Code: 200768-0

www.seatlleasbestostest.com, admin@scattleasbestostest.com

Project Manager: Gregg Middaugh, Claire Tsai, Michael Smith Client: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 206.233.9639 Date Report Issued: 1/28/2022 Date Analyzed: 1/28/2022 Client Job#: 40535,488 Project Location: Pierce College Olympic South Apartment & Repairs Laboratory batch#: 202209091 Samples Received: 4

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detoction, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirely consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Scheen



Project:Pierce College Olym	Project #: 40535.488	
Analysis requested: PLM		Date: 01/27/2022
Relinq'd by/Signature:	ille Todi	Date/Time:
Received by/Signature: Carol		Date/Time: 1/27/22 15:08
	Email ALL INVOICES to: seattleap@	pbsusa.com
E-mail results to:	Carls and Charlins of Streams	
Willem Mager	Janet Murphy	Holly Tuttle
🛛 Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
🗌 Tim Ogden	Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	🖾 Claire Tsai	□
TURN AROUND TIME:		
1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		

SAMPLE DATA FORM					
Sample #	Material	Location	Lab		
40535.488-2022/1/27-01	Black mastic – Fire alarm coating	Near Rm. O260	SAT		
40535.488-2022/1/27-02	Black vapor barrier	O267 Restroom – under ceramic floor tile.			
40535.488-2022/1/27-03	Black asphaltic debris	Lv. 2 column cavity – Near west skybridge			
40535.488-2022/1/27-04	Black asphaltic debris	Lv2. Column cavity – Near 270 – SW			
			1		
			-		
			-		

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Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 96036, Tel: 425,673,9850, Fax: 425,673,9810, NVLAP Lab Code: 200768-0

Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test_LLC, NVLAP, NIST, or any agency of the Federal government.

PLM] EPA - 40	CFR Appendix E to Subj	600/R-93/116:	, Interim Method of the Dete Method for the Determinati	ermin on of	ation of Asbestos in I Asbestos in Bulk Bui	Bulk Insulation Samples; Iding Materials		(PLM) EPA
Attn.:	Gregg Middaugh, Claire Tsai, Michael Smith	Client:	PBS Engineering and Environmental, Seattle	540 80		214 E Galer Street, Suite	300,	Scallic, WA 98102
Job#:	40535.488	Batchu:	202209091		Date Received:	1/27/2022		
Samples Rec'd:	4	Dato Analyzed:	1/28/2022		Samples Analyzed:	4		
Project Loc.:	Pierce College Olymp Apartment & Repairs	c South		C	No			Thang
			Analyzed by:	Gard	lyn Yoo	Approved Signatory	Steve	(Fanyao) Zhang, President.
Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibera
1	40535.488- 2022/1/27-01	1	Black mastic with paint	4	Chrysotile	Mastic/binder, Paint	2	Cellulose
2 40535.488- 2022/1/27-02	1	Black asphaltic material with paint	1	None detected	Asphalt/binder. Paint	3	Cellulose	
	2	Black asphaltic fibrous material	1	None detected	Asphalt/binder, Filler	68	Cellulose, Glas fibers	
		3	Black asphaltic fibrous material		None detected	Asphalt/binder, Filler	66	Cellulose, Glas fibers
		1	Black asphaltic material		None detected	Asphalt/binder	2	Cellulose
3	40535.488- 2022/1/27-03	2	Black asphaltic fibrous material		None detected	Asphalt/binder, Filler	65	Cellulose
		3	Black asphaltic material		None detected	Asphalt/binder	2	Cellulose
4	40535.488-	1	Black asphaltic material	Ļ	None detected	Asphalt/binder	2	Cellulose
-4	2022/1/27-04	2	Black asphaltic fibrous material		None detected	Asphalt/binder, Filler	61	Cellulose

Lynnwood Laboratory: 19701 Scriber Lake Road, Suile 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

www.seattleasbestostest.com, admin@seattleasbestostest.com

Project Manager: Gregg Middaugh, Claire Tsai, Michael Smith Client: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 206.233.9639 Date Report Issued: 2/4/2022 Date Analyzed: 2/4/2022 Client Job#: 40535.488 Project Location: Pierce College Olympic South Abatement and Repairs Laboratory batch#: 202209159 Samples Received: 1

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763. Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116,

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Samo

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code 200768-0

www.seattleasbestostest.com, admin@scattleasbestostest.com

Project Manager.	Gregg Middaugh, Claire Tsal, Michael Smith	Date Analyzed:	2/4/202
	PBS Engineering and Environmental. Seattle	Client Job#:	40535,
Address:	214 E Galer Street, Suite 300, Seattle, WA 98102	Project Location:	Pierce Abaten
Tel·	206.233.9639	Laboratory batch#:	
Date Report Issued:	2/4/2022	Samples Received:	1

Date Analyzed: 2/4/2022 Client Job#: 40535,488 roject Location: Pierce College Olympic South Abatement and Repairs oratory batch#: 202209159 uples Received: 1

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

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Thank you for using our service and let us know if we can further assist you.

Sincerely

Sannie

202209159

PBS

LABORATORY CHAIN OF CUSTODY

Project:Pierce College Olymp	Project #: 40535.488	
Analysis requested:PLM	Date: 2/2/2022	
Relinq'd by/Signature: Cla	Date/Time: 2/2/2022	
Received by/Signature: Caro	in yea a the	Date/Time: 2/3/22 14:47
	Email ALL INVOICES to: seattleap@g	obsusa.com
E-mail results to:		
Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	Claire Tsai	
TURN AROUND TIME:		
1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours	-5.71 Star 14: 0	

SAMPLE DATA FORM					
Sample #	Material	Location	Lab		
40535.488-2022/2/2-01	Concealed woven fabric	Room O265 – North wall	SAT		
	1				

214 EAST GALER STREET, SUITE 300, SEATTLE, WA 98102 . 206.233.9639 MAIN . 866.727.0140 FAX . PBSUSA.COM

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Disclaimen: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

ANALYTICAL LABORATORY REPORT

[PLM] EPA - 40	CFR Appendix E to Subpa	<pre>int E of Part 763 600/R-93/116;</pre>	3, Interim Method of the Det Method for the Determinat	ermination of Asbestos in ion of Asbestos in Bulk Bu	Bulk Insulation Samples; Iding Materials	[PLM] EPA
Attn.:	Gregg Middaugh, Claire Tsai, Michael Smith	Client:	PBS Engineering and Environmental, Seattle		214 E Galer Street, Suite	300, Seattle, WA 98102
Job#:	40535.488	Batch#:	202209159	Date Received:	2/3/2022	
Samples Rec'd:	1	Date Analyzed:	2/4/2022	Samples Analyzed:	1	
Project Loc.:	Pierce College Olympic Abatement and Repairs			6.46		Thong
			Analyzed by	Carolyn Yeo	Approved Signatory	Stove (Foriyoo) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	36	Non-asbestos Fibers
1	40535.488- 2022/2/2-01	1	Off-white woven fibrous material		None detected	Filler	87	Synthetic fibers

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Project Manager:	Gregg Middaugh, Claire Tsai, Michael Smith	
Client:	PBS Engineering and Environmental, Seattle	
Address:	214 E Galer Street, Suite 300, Seattle, WA 98102	
	206.233.9639	
ate Report Issued:	2/10/2022	

Date Analyzed: 2/10/2022 Client Job#: 40535.488 Project Location: Pierce College Olympic South Abatement & Repairs Laboratory batch#: 202209211 Samples Received: 3

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

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This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

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Project: Pierce College Olympic	South Abatement & Repairs	Project #: 40535.488
Analysis requested: PLM		Date: 2/7/2022
Relinq'd by/Signature:	u poar	Date/Time: 2/9/2022
Received by/Signature: Coursely	yea Citle	Date/Time: 2/9/22 16:08
E	mail ALL INVOICES to: seattleap@g	obsusa.com
E-mail results to:		
Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	🖾 Claire Tsai	□
TURN AROUND TIME:		
1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		

SAMPLE DATA FORM				
Sample #	Material	Location	Lab	
40535.488-2/7/22-01	White leveling compound	Level 2 hall ramp near 275	SAT	
40535.488-2/7/22-02	Concrete, white leveling compound, yellow/brown carpet mastic	Level 2 hall ramp near 275		
40535.488-2/7/22-03	Black asphaltic material	Level 2 Restrooms below ceramic floor tile		

Lynnwood Laboratory: 19701 Scriber Laku Road, Suite 103, Lynnwood, WA 96036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

Disclamen: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

[PLM] EPA 4	0 CFR Appendix E to St	ubpart E of Part EPA 600/R-93/1	ANALYTICAL LAE 763, Interim Method of the 16: Method for the Determin	Deten	mination of Asbestos	in Bulk Insulation Samples;		[PLM]
Attr.:	Gregg Middaugh, Claire Tsai, Michael Smith	Client:	PBS Engineering and Environmental, Scattle			214 E Galer Street, Suite	300, \$	Seattle, WA 98102
Job#:	40535.488	Batch#:	202209211		Date Received:	2/9/2022		
Samples Rec'd:	3	Date Analyzed:	2/10/2022		Samples Analyzed:	3		
Project Loc.:	Pierce College Olym Abatement & Repairs			G	ye			Thang
			Analyzed by	Garo	ilyn Yeo	Approved Signatory	Steve	(Fanyao) Zhang, President
Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	- %	Non-asbestos Fiber
1	40535.488-	1	White brittle material	1	None detected	Binder, Filler	2	Cellulose
	2/7/22-01	2	Trace yellow mastic		None detected	Mastic/binder	2	Cellulose
		1	Gray sandy/brittle material	-	None detected	Sand, Filler, Binder	3	Cellulose
2	40535.488- 2/7/22-02	2	Trace white brittle material with paint		None detected	Binder, Filler, Paint	3	Cellulose
		3	Brown mastic		None detected	Mastic/binder	2	Cellulose
		1	Black asphaltic material		None detected	Asphalt/binder	2	Cellulose
3 40535.488- 2/7/22-03		2	Black asphaltic fibrous material		None detected	Asphalt/binder, Filler	65	Cellulose
	40535.488-	3	Black asphaltic material		None detected	Asphalt/binder	3	Cellulose
	3	4	Black asphaltic fibrous material		None detected	Asphalt/binder, Filler	61	Cellulose
		5	Black asphaltic material		None detected	Asphalt/binder	2	Cellulose
		6	Black asphaltic fibrous material		None detected	Asphalt/binder, Filler	68	Cellulose

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

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Project Manager: Gregg Middaugh, Claire Tsai, Michael Smith Client: PBS Engineering and Environmental Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 206.233.9639 Date Report Issued: 2/21/2022 Date Analyzed: 2/21/2022 Client Job#: 40535.488 Project Location: Pierce College Olympic South Abatement & Repairs Laboratory batch#: 202209320 Samples Received: 5

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

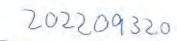
The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

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Thank you for using our service and let us know if we can further assist you.

Sincerely

Schang





Project: Pierce College Olymp	pic South Abatement & Repairs	Project #: 40535.488
Analysis requested:PLM	Mi +	Date: 2/17/2022
Relinq'd by/Signature:	ullom	Date/Time: 2117/202>
Received by/Signature: Carol	40 yes Carpo	Date/Time: 2/18/22 13:08
	Email ALL INVOICES to: seattleap@p	obsusa.com
E-mail results to:		
Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	Claire Tsai	
TURN AROUND TIME:		
1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		

	SAMPLE D	ATA FORM	
Sample #	Material	Location	Lab
40535.488-2/17/22-01	Asphalt	South Elevation northeast of Robin's Nest	SAT
40535.488-2/17/22-02	Asphalt	South Elevation northwest of Robin's Nest	
-03	Grey sealant	Room 283 pandecking	abour 1
-04	15 11	Rm283 Eastcolumn Rm283 South Columns	
-05	v() /	Rm283 South Colums	
· · · · · · · · · · · · · · · · · · ·			-
			-

Lynnwood Laboratory: 19701 Scriber Lake Road, Suile 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

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[PLM] EPA 4	0 CFR Appendix E to St			etern	nination of Asbestos	in Bulk Insulation Samples;		[PLM]
Atta.:	Gregg Middaugh, Claire Tsai, Michael Smith	EPA 600/R-93/1 Client:	16: Method for the Determin PBS Engineering and Environmental, Seattle	ation		Building Materials 214 E Galer Street, Suite	300,	Seattle, WA 98102
Job#:	40535.488	Batch#:	202209320		Date Received:	2/18/2022		
Samples Rec'd:	5	Date Analyzed:	2/21/2022		Samples Analyzed:	5		
Project Loc.:	Pierce College Olymp Abatement & Repairs			6	ye			Thang
			Analyzed by:	Caro	lým Yeo	Approved Signatory	Sleve	(Fanyao) Zharig, Presidenti
Lab (D	Client Sample ID	Layer	Description	2%	Asbestos Fibers	Non-fibrous Components	26	Non-asbestos Fiber
18.11	40535.488-	1	Black asphaltic material		None detected	Asphalt/binder	3	Cellulose
1	2/17/22-01	2	Gray hard sandy/brittle material	Ī	None detected	Sand, Filler, Cement/binder	3	Cellulose
1.81	40525 400	1	Black asphaltic material		None detected	Asphalt/binder	3	Cellulose
2	40535.488- 2/17/22-02	2	Gray hard sandy/brittle material		None detected	Sand, Filler, Cement/binder	2	Cellulose
3	40535.488- 2/17/22-03	1	Gray soft material		None detected	Binder, Filler	2	Cellulose
	10505 100	1	Gray/off-white soft/elastic material with paint		None detected	Binder, Filler, Paint	3	Cellulose
4	40535.488- 2/17/22-04	2	Trace off-white foamy material		None detected	Synthetic foam		None detected
		3	Orange/brown brittle material	0	None detected	Binder, Filler	2	Cellulose
5	40535.488-	1	Gray soft/elastic material with paint		None detected	Binder, Filler, Paint	2	Cellulose
5	2/17/22-05	2	Gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code; 200768-0

www.seattleasbestostest.com, admin@seattleasbestostest.com

Project Manager: Gregg Middaugh, Michael Smith Client: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 206.233.9639 Date Report Issued: 3/2/2022

Date Analyzed: 3/2/2022 Client Job#: 40535.488 Project Location: Pierce College Olympic South Abatement & Repairs Laboratory batch#: 202209411 Samples Received: 1

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

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Thank you for using our service and let us know if we can further assist you.

Sincerely

Schang



Project: <u>Pierce College Olym</u>	pic South Abatement & Repairs	Project #: <u>40535.488</u>
Analysis requested: PLM		Date: <u>3/1/2022</u>
Relinq'd by/Signature: Mike	Source Markel my	Date/Time: 3/1/2022
Received by/Signature:	in .	Date/Time: 3/2/2022
	Email ALL INVOICES to: seattleap@r	obsusa.com
E-mail results to:		
Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	Claire Tsai	
TURN AROUND TIME:		
1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		

	SAMPLE DATA FORM			
Sample #	Material	Location	Lab	
40535.488-3/1/22-001	Asphaltic roofing	LVL 2 above concrete ceiling below pan decking NE opening.	SAT	
tat (to out)				

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

fibrous material

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Federal government. ANALYTICAL LABORATORY REPORT [PLM] EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials [PLM] Client: PBS Engineering and Gregg Middaugh, Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Attn.: Michael Smith Environmental, Seattle Job#: 40535.488 Batch#: 202209411 Date Received: 3/1/2022 Samples Rec'd: 1 Date Analyzed: 3/2/2022 Samples Analyzed: 1 Pierce College Olympic South 52 hang Project Loc.: Abatement & Repairs Analyzer by: Cier Xu Approved Signatory: Steve (Fanyao) Zhang, President Client Sample ID Description % Asbestos Fibers Non-fibrous Components % Non-asbestos Fibers Lab ID Layer Black asphaltic None 1 Asphalt/binder 25 Glass fibers material detected 40535.488-1 Black asphaltic 3/1/22-001 None Asphalt/binder, Synthetic fibers, 2 material with 23

detected

Filler

1 of 1

Cellulose

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code=200768-0

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Project Manager:	Gregg Middaugh, Peter Stensland, Claire Tsai, Michael Smith	Date Analyzed:	3/8/2022
Client:	PBS Engineering and Environmental. Seattle	Client Job#:	40535,488
Address:	214 E Galer Street, Suite 300, Seattle, WA 98102	Project Location:	Pierce College Olympic South Abatement & Repairs
Tel:	206.233.9639	Laboratory batch#:	· · · · · · · · · · · · · · · · · · ·
Date Report Issued:	3/8/2022	Samples Received:	2

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

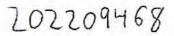
The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the aculty of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

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Thank you for using our service and let us know if we can further assist you.

Sincerely

SZhana





Project:Pierce College Olympi	c South Abatement & Repairs	Project #: <u>40535.488</u>
Analysis requested: PLM	1 0 1	Date: 3/7/2022
Relinq'd by/Signature: Peter St	ensland I the Sturt	Date/Time: 3/7/2022
Received by/Signature: Compil	1 Yes (1 the	Date/Time: 3/7/2216:03
	Email ALL INVOICES to: seattleap@p	obsusa.com
E-mail results to:		
Willem Mager	Janet Murphy	Holly Tuttle
🛛 Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	D Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	🛛 Claire Tsai	Ō
FURN AROUND TIME:		
1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		

	SAMPLE DATA FORM			
Sample #	Material	Location	Lab	
40535.488-3/7/22-001	Insulation	278 Ceiling above pan decking	SAT	
40535.488-3/7/22-002	Caulking	Level 2 Mechanical mezzanine along southern edge		
			-	
			-	
	+			

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

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ANALYTICAL LABORATORY REPORT

[PLM] EPA 4	0 CFR Appendix E to Si	EPA 600/R-93/	763, Interim Method of the I 16: Method for the Determin	Deter	mination of Asbestos	in Bulk Insulation Samplas		[PLM]
Attn.:	Gregg Middaugh, Peter Stensland, Claire Tsaï, Michael Smith	Client:	DDC Contractor of	auor		214 E Galer Street, Suite	300,	Seattle, WA 98102
Job#:	40535.488	Batch#:	202209468		Date Received:	3/7/2022		
Samples Rec'd:	2	Date Analyzed:	3/8/2022		Samples Analyzed:			
Project Loc.;	Pierce College Olymp Abatement & Repairs			C	x			SZhang
			Analyzed by:	Caro	lyn Yeo/Xingping Lin	Approved Signatory:	Steve	(Fanyao) Zhang, President
Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
1	40535.488-	1	Black soft/elastic material with fibrous material		None detected	Binder, Filler	12	Cellulose
	3/7/22-001	2	Black fibrous material		None detected	Filler	89	Glass fibers
1	1000	1	Off-white soft material		None detected	Binder, Filler	3	Cellulose
Attn.: Job#: 4 amples Roc'd: 5 Project Loc.: 5	40535.488- 3/7/22-002	2	Brown fibrous material		None detected	Filler	86	Cellulose
-		3	Gray brittle material		None	Binder, Filler	3	Cellulose

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

www.seattleasbestostest.com, admin@seattleasbestostest.com

Gregg Middaugh, Claire Tsal, Michael Smith	
PBS Engineering and Environmental, Seattle	
214 E Galer Street, Suite 300, Seattle, WA 98102	
206.233.9639	1
3/17/2022	S
	PBS Engineering and Environmental, Seattle 214 E Galer Street, Suite 300, Seattle, WA 98102 206.233.9639

Date Analyzed: 3/17/2022 Client Job#: 40535,488 Project Location: Project Location: Abatement & Repairs Laboratory batch#: 202209542 Samples Received: 4

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

SZlinny





Project: <u>Pierce College Olym</u>	pic South Abatement & Repairs	Project #: <u>40535.488</u>
Analysis requested:PLM	· · · · · · · · · · · · · · · · · · ·	Date: 3/16/2022
Relinq'd by/Signature:	ul Foli 1	Date/Time: <u>3/16/2022</u>
Received by/Signature:	APIS UN	Date/Time: 3/17/2022 11:50
	Email ALL INVOICES to: seattleap@	pbsusa.com
E-mail results to:		
Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	🔀 Claire Tsai	
TURN AROUND TIME:		
1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		A through the

SAMPLE DATA FORM				
Sample #	Material	Location	Lab	
40535.488-3/16/22-01	Residual black mastic	Level 2 near east wall of below previous Rm 264 casework	SAT L	
40535.488-3/16/22-02	Black brittle material	Level 2 below west wall studs previous Rm 264		
40535.488-3/16/22-03	Gypsum wallboard vapor barrier	Level 1 north exterior wall from inside		
40535.488-3/16/22-04	Gypsum wallboard	Level 2 east wall north of skybridge doors		

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

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ANALYTICAL LABORATORY REPORT [PLM] EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; [PLM] EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials Gregg Middaugh, Attn.: Claire Tsai ,Michael Client: PBS Engineering and Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Environmental, Seattle Smith Job#: 40535 488 Batch#: 202209542 Date Received: 3/17/2022 Samples Rec'd: 4 Date Analyzed: 3/17/2022 Samples Analyzed: 4 Pierce College Olympic South Abatement & Repairs Schang Project Loc.: 2 Analyzed by: Xingping Lin Approved Signatory: Steve (Fanyao) Zhang, President Client Sample ID Lab ID Layer Description Asbestos Fibers Non-fibrous Components % Non-asbestos Fibers % 40535.488 -3 Black asphaltic 1 1 Chrysotile Asphalt/binder 3 Cellulose 4 material /16/22-01 40535.488 -3 Black asphaltic 2 1 3 Chrysotile Asphalt/binder 5 Cellulose /16/22-02 material Cellulose, Glass White chalky None Binder/filler, 25 1 40535.488 -3 material with paper detected Gypsum/binder fibers 3 /16/22-03 Gray fibrous None 2 Binder/filler 65 Cellulose detected material None Cellulose, Glass 40535.488 -3 White chalky Binder/filler, 27 4 1 Gypsum/binder detected fibers /16/22-04 material with paper

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Project Manager: Gregg Middaugh,Michael Smith, Claire Tsai Client: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 206.233.9639 Date Report Issued: 3/23/2022 Date Analyzed: 3/23/2022 Client Job#: 40535,488 Project Location: Pierce College Olympic South Abatement & Repairs Laboratory batch#: 202209577 Samples Received: 5

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

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This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

SZhang



Project:Pierce College Olym	pic South Abatement & Repairs	Project #: <u>40535.488</u>
Analysis requested:PLM		Date: 3/18/2022
Relinq'd by/Signature: Cla	ill Toci	Date/Time: 3/21/2022
Received by/Signature:	spor LIN	Date/Time: 3/22/2022 15:20
L	Email ALL INVOICES to: seattleap@	pbsusa.com
E-mail results to:		
Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	Claire Tsai	—
TURN AROUND TIME:		
1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		

Sample #	Material	Location	Lab
40535.488-3/18/22-01	Residual black mastic	Previous Rm 171 southeast column on concrete	SATLy
40535.488-3/18/22-02	Residual black mastic, white leveling compound	Previous Rm 283 center area	
40535.488-3/18/22-03	Residual black mastic	West windows on base plate	
40535.488-3/18/22-04	Residual black mastic	West windows on concrete below base plate	
40535.488-3/18/22-05	Residual black mastic	Previous Rm 270 near slab step up	
			<u> </u>
6 I			
		har tota a mineran	

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ANALYTICAL LABORATORY REPORT [PLM] EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; [PLM] EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials Gregg Middaugh, Client: PBS Engineering and Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Attn.: Michael Smith, Environmental, Seattle Claire Tsai 40535.488 Batch#: 202209577 Date Received: 3/22/2022 Job#: Samples Rec'd: 5 Date Analyzed: 3/23/2022 les Analyzed: Cici Xu Pierce College Olympic South Abatement & Repairs SZhang Project Loc.: Approved Signatory: Steve (Fanyao) Zhang, President zed by: Cici Xe An Client Sample ID Lab ID Description % Asbestos Fibers Non-fibrous Components % Non-asbestos Fibers Layer 40535.488-1 1 Black mastic 3 Chrysotile Mastic/binder 3 Cellulose 3/18/22-01 None 1 Black mastic Mastic/binder 4 Cellulose 40535.488detected 2 3/18/22-02 White brittle None 2 2 Filler, Binder, Paint Cellulose material with paint detected Black asphaltic 40535.488-None Asphalt/binder, 3 1 material with 25 Cellulose detected Filler 3/18/22-03 fibrous material 40535.488-Mastic/binder 3 4 1 Black mastic 3 Chrysotile Cellulose 3/18/22-04 Black asphaltic 40535.488-None Asphalt/binder, 5 1 material with 24 Cellulose 3/18/22-05 detected Filler fibrous material

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Project Manager:	Gregg Middaugh, Michael Smith, Claire Tsai
Client:	PBS Engineering and Environmental, Seattle
Address:	214 E Galer Street, Suite 300, Seattle, WA 98102
Tel:	206.233.9639
Date Report Issued:	3/23/2022

 Date Analyzed:
 3/23/2022

 Client Job#:
 40535.488

 Project Location:
 Pierce College Olympic South Abatement & Repairs

 Laboratory batch#:
 202209578

 Samples Received:
 1

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Schang



Project:Pierce College Olym	pic South Abatement & Repairs	Project #: <u>40535.488</u>
Analysis requested:PLM		Date: 3/22/2022
Relinq'd by/Signature: Peter S	Stensland / Titre Stugt	Date/Time: <u>3/22/2022</u>
Received by/Signature:	grag VIN	Date/Time: 3/22 /2022
	Email ALL INVOICES to: seattlea	p@pbsusa.com
E-mail results to:		
Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	🖾 Claire Tsai	<u> </u>
TURN AROUND TIME:		
1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		

SAMPLE DATA FORM						
Sample #	Material	Location	Lab			
40535.488-3/22/22-01	Black Rubbery Material	Flower Bed W of Ramp SW of the Building	SAT			
<u> </u>						
		taria				
An and a state of the state of	an a	A MANA ANA ANA ANA ANA ANA ANA ANA ANA A				

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2

Clear mastic

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ANALYTICAL LABORATORY REPORT

[PLM] EPA 4	0 CFR Appendix E to S	Subpart E of Part EPA 600/R-93/1	763, Interim Method of the 116: Method for the Determi	Detern	mination of Asbestos of Asbestos in Bulk	in Bulk Insulation Samples; Building Materials		[PLM]
Attn.:	Gregg Middaugh, Michael Smith, Client: Claire Tsai		PBS Engineering and Address: 2		s: 214 E Galer Street, Suite 300, Seattle, WA 98			
Job#:	40535.488	Batch#:	202209578		Date Received:	3/22/2022		
Samples Rec'd:	1	Date Analyzed:	3/23/2022		Samples Analyzed:	Cici Xu		
Project Loc.:	Pierce College Olyn Abatement & Repair		Analyzed by		Xu	Approved Signatory:	Steve	SZhang (Fanyao) Zhang, President
Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
4	40535.488-	1	Black rubbery material		None detected	3/22/2022 Cici Xu SZhang Approved Signatory: Steve (Fanyao) Zhang, Presid	Cellulose	
1	3/22/22-01	2	Closer mantia	1	None	Mastic/binder	2	Colluloso

detected

Mastic/binder

2

Cellulose

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

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Project Manager: Gregg Middaugh,Michael Smith Client: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 205.233.9639 Date Report Issued: 3/25/2022

Date Analyzed: 3/25/2022 Client Job#: 40535.488 Project Location: Pierce College Olympic South Abatement & Repairs Laboratory batch#: 202209595 Samples Received: 3

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

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Thank you for using our service and let us know if we can further assist you.

Sincerely

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Project: <u>Pierce College Olym</u>	pic South Abatement & Repairs	Project #: <u>40535.488</u>
Analysis requested:PLM		Date: 3/23/2022
Relinq'd by/Signature:_Peter S	tensland / Pite Staff	Date/Time: 3/23/2022
Received by/Signature:/	igner un	Date/Time: 3/3/2022 12:10
	Email ALL INVOICES to: seattleap@p	
E-mail results to:	to seattleaper	JUSUSA.COM
 Willem Mager Gregg Middaugh Mark Hiley Tim Ogden Ryan Hunter Prudy Stoudt-McRae 	 Janet Murphy Kaitlin Soukup Allison Welch Toan Nguyen Peter Stensland Claire Tsai 	 Holly Tuttle Mike Smith Ferman Fletcher Cameron Budnick Michelle Dodson
TURN AROUND TIME: 1 Hour 2 Hours 4 Hours	24 Hours 48 Hours	3-5 Days Other

SAMPLE DATA FORM				
Sample #	Material	Location	Lab	
40535.488-3/23/22-01	Concrete	E Elevation N Skybridge Containment	SAT	
40535.488-3/23/22-02	Roofing Tar	E Elevation N Skybridge Containment	-	
40535.488-3/23/22-03	Gray Mastic	E Elevation N Skybridge Containment	-	
	n			
- T -				
	(-	

214 EAST GALER STREET, SUITE 300, SEATTLE, WA 98102 = 206.233.9639 MAIN = 866.727.0140 FAX = PBSUSA.COM

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ANALYTICAL LABORATORY REPORT

Attn.:	Gregg Middaugh, Michael Smith 40535.488 3 Biarro College Oliv	Client Batch#: Date Analyzed:	PBS Engineering and Environmental, Seattle 202209595	natio	n of Asbestos in Bull Address	214 E Galer Street, Suite 3/24/2022		[PLM] Seattle, WA 98102
	Abatement & Repair	rs	Analyzed by	Cas		Approved Signatory:	Steve	SZhang (Fanyao) Zhang, President
Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	1%	Non-asbestos Fibers
1	40535.488- 3/23/22-01	1	Gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
2	40535.488- 3/23/22-02	1	Black asphaltic material		None detected	Asphalt/binder	7	Cellulose
-		2	Trace yellow fibrous material		None detected	Filler	90	Glass fibers
3	40535.488- 3/23/22-03	1	Trace beige sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
		2	Gray sandy/brittle material with paint		None detected	Sand, Filler, Binder, Paint	3	Cellulose
		3	White foamy material		None detected	Synthetic foam		None detected

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425,673,9850, Fax: 425,673,9810, NVLAP Lab Code: 200768-0

www.seattleasbestostest.com, admin@seattleasbestostest.com

Project Manager: Claire Tsai ,Michael Smith,Gregg Middaugh Client: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 206.233.9639 Date Report Issued: 3/31/2022 Date Analyzed: 3/31/2022 Client Job#: 40535.488 Project Location: Pierce College Olympic South Abatement & Repairs Laboratory batch#: 202209662 Samples Received: 2

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos In Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

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Thank you for using our service and let us know if we can further assist you.

Sincerely

Thang



Project:Pierce College Olym	pic South Abatement & Repairs	Project #: <u>40535.488</u>
Analysis requested:PLM		Date: 3/29/2022
Relinq'd by/Signature:	me Toar	Date/Time: <u>3/29/2022</u>
Received by/Signature:	gpg LIN	Date/Time: 3/20/2020 (7:20
	Email ALL INVOICES to: seattleap@	pbsusa.com
E-mail results to:	· · · · · · · · · · · · · · · · · · ·	
Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	Claire Tsai	
TURN AROUND TIME:		
1 Hour	🔀 24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		

SAMPLE DATA FORM								
Sample #	Material	Location	Lab					
40535.488-3/29/22-01	Black brittle material	Level 3 north west area sub floor below concrete	SAT					
40535.488-3/29/22-02	Black vapor barrier	Level 2 base of CMU wall previous Room 283A						
			1					
			- 4					
			11					

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SEATTLE ASBESTOS TEST

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ANALYTICAL LABORATORY REPORT

[PLM] EPA - 4	0 CFR Appendix E to Si		763, Interim Method of the 16: Method for the Determi			in Bulk Insulation Samples; Building Materials		[PLM]
Attn.:	Claire Tsai ,Michael Smith,Gregg Middaugh	Glient:	PBS Engineering and Environmental, Seattle		Address:	214 E Galer Street, Suite	300, 5	Seattle, WA 98102
Job#:	40535.488	Batch#:	202209662		Date Received:	3/30/2022		
Samples Rec'd:	2	Date Analyzed:	3/31/2022		Samples Analyzed:	2		
Project Loc.:	Pierce College Olym Abatement & Repairs		Analyzed by	Xind		Approved Signatory:	Steve	SZhang Fanyao) Zhang, President
Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
	40535 488 3		Black apphaltic		None	0	·	A-0.00

	Sugar Guinpia ID					nen norous sompentine	1.	Their sourcestow i locity
1	40535.488 -3 /29/22-01	1	Black asphaltic material		None detected	Asphalt/binder	6	Cellulose
2	40535.488 -3 /29/22-02	1	Black asphaltic fibrous material	111	None detected	Filler, Asphalt, Binder	67	Cellulose

April 8, 2022



Claire Tsai PBS Environmental - Seattle 214 E Galer St. Suite. 300 Seattle, WA 98102

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 2206630.00

Client Project: 40535.488 Location: Pierce College Olympic South Abatement & Repairs

Dear Ms. Tsai,

Enclosed please find test results for the 9 sample(s) submitted to our laboratory for analysis on 4/8/2022.

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

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

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

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

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

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

Sincerely,

Nick Ly, Technical Director

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

🌼 NVL

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

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

Attention: Ms. Claire Tsai

Project Location: Pierce College Olympic South Abatement & Repairs

Batch #: 2206630.00 Client Project #: 40535.488 Date Received: 4/8/2022 Samples Received: 9 Samples Analyzed: 9 Method: EPA/600/R-93/116

Lab ID: 2234	•	22-01	
	ce College Olympic South Abatement & Repairs		
Comments:	Unsure of correct layer sequence.		
Layer 1 of 4	Description: White compacted powdery mater	•	Asbestos Type: %
	Non-Fibrous Materials:	Other Fibrous Materials:%	
	Binder/Filler, Fine particles, Paint	Cellulose <1%	None Detected ND
Layer 2 of 4	Description: White compacted powdery mater	ial with paper	
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Fine particles	Cellulose 26%	None Detected ND
Layer 3 of 4	Description: Off-white chalky material with paper	per	
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Gypsum/Binder, Fine particles	Cellulose 21%	None Detected ND
		Glass fibers 9%	
Layer 4 of 4	Description: White chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Gypsum/Binder, Fine particles	Cellulose 22%	None Detected ND
		Glass fibers 5%	
Lab ID: 2234	1258 Client Sample #: 40535.488-4/7/2	22-02	
Location: Pier	ce College Olympic South Abatement & Repairs		
Comments:	Unsure of correct layer sequence.		
Layer 1 of 4	Description: Off-white compacted powdery ma	aterial with paint	
-	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %

Sampled by: Client		Intern
Analyzed by: Kunga Woser	Date: 04/08/2022	
Reviewed by: Nick Ly	Date: 04/08/2022	Nick Ly, Technical Director



Batch #: 2206630.00

Date Received: 4/8/2022 Samples Received: 9 Samples Analyzed: 9

Client Project #: 40535.488

Method: EPA/600/R-93/116

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

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

Attention: Ms. Claire Tsai

Project Location: Pierce College Olympic South Abatement & Repairs

Layer 2 of 4 Description: Brown chalky material with paper Asbestos Type: % Other Fibrous Materials:% Non-Fibrous Materials: **None Detected ND** Gypsum/Binder, Fine particles Cellulose 20% Glass fibers 10% Layer 3 of 4 Description: Off-white chalky material with paper Asbestos Type: % Non-Fibrous Materials: Other Fibrous Materials:% None Detected ND Gypsum/Binder, Fine particles Cellulose 21% Glass fibers 9% Layer 4 of 4 Description: White chalky material with paper Asbestos Type: % Non-Fibrous Materials: Other Fibrous Materials:% **None Detected ND** Gypsum/Binder, Fine particles Cellulose 22% Glass fibers 5% Client Sample #: 40535.488-4/7/22-03 Lab ID: 22341259 Location: Pierce College Olympic South Abatement & Repairs Comments: Unsure of correct layer sequence. Layer 1 of 4 Description: Off-white compacted powdery material with paint Asbestos Type: % Non-Fibrous Materials: Other Fibrous Materials:% Chrysotile 2% Calcareous binder, Calcareous particles, Paint Cellulose 2% Layer 2 of 4 Description: Brown chalky material with paper Asbestos Type: % Non-Fibrous Materials: Other Fibrous Materials:% None Detected ND Gypsum/Binder, Fine particles Cellulose 21% Glass fibers 9% Layer 3 of 4 Description: Off-white chalky material with paper Non-Fibrous Materials: Asbestos Type: % Other Fibrous Materials:% None Detected ND Gypsum/Binder, Fine particles Cellulose 22% Sampled by: Client Analyzed by: Kunga Woser Date: 04/08/2022 Reviewed by: Nick Ly Date: 04/08/2022 Nick Ly, Technical Director



By Polarized Light Microscopy

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

Attention: Ms. Claire Tsai

Project Location: Pierce College Olympic South Abatement & Repairs

Batch #: 2206630.00 Client Project #: 40535.488 Date Received: 4/8/2022 Samples Received: 9 Samples Analyzed: 9 Method: EPA/600/R-93/116

	Glass fibers 8%		
		Description: White chalky material with paper	Layer 4 of 4
Asbestos Type:	Other Fibrous Materials:%	Non-Fibrous Materials:	
None Detected N	Cellulose 24%	Gypsum/Binder, Fine particles	
	Glass fibers 3%		
	2-04	260 Client Sample #: 40535.488-4/7/2	Lab ID: 223412
		e College Olympic South Abatement & Repairs	Location: Pierce
	erial with paint	Description: Off-white compacted powdery ma	Layer 1 of 3
Asbestos Type:	Other Fibrous Materials:%	Non-Fibrous Materials:	
Chrysotile 2	Cellulose <1%	alcareous binder, Calcareous particles, Paint	Cal
	erial with paper	Description: Off-white compacted powdery mail	Layer 2 of 3
Asbestos Type:	Other Fibrous Materials:%	Non-Fibrous Materials:	
Chrysotile 2	Cellulose 24%	Calcareous binder, Calcareous particles	
		Description: White chalky material with paper	Layer 3 of 3
Asbestos Type:	Other Fibrous Materials:%	Non-Fibrous Materials:	
None Detected N	Cellulose 21%	Gypsum/Binder, Fine particles	
	Glass fibers 7%		
	2-05	261 Client Sample #: 40535.488-4/7/2 e College Olympic South Abatement & Repairs	Lab ID: 223412 Location: Pierce
	al with paint	Description: White compacted powdery materia	Layer 1 of 4
Asbestos Type:	Other Fibrous Materials:%	Non-Fibrous Materials:	
None Detected N	Cellulose 2%	alcareous binder, Calcareous particles, Paint	Cal

Sampled by: Client		In from
Analyzed by: Kunga Woser	Date: 04/08/2022	
Reviewed by: Nick Ly	Date: 04/08/2022	Nick Ly, Technical Director



By Polarized Light Microscopy

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

Attention: Ms. Claire Tsai

Project Location: Pierce College Olympic South Abatement & Repairs

Batch #: 2206630.00 Client Project #: 40535.488 Date Received: 4/8/2022 Samples Received: 9 Samples Analyzed: 9 Method: EPA/600/R-93/116

Layer 2 of 4	Description: White compacted powdery mater	ial with paper	
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Calcareous binder, Calcareous particles	Cellulose 25%	None Detected ND
Layer 3 of 4	Description: White chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
G	Sypsum/Binder, Fine particles, Metallic flakes	Cellulose 21%	None Detected ND
		Glass fibers 7%	
Layer 4 of 4	Description: White chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
G	Sypsum/Binder, Fine particles, Metallic flakes	Cellulose 22%	None Detected ND
		Glass fibers 6%	
Lab ID: 22341	262 Client Sample #: 40535.488-4/7/2	22-06	
Location: Piero	ce College Olympic South Abatement & Repairs		
Layer 1 of 3	Description: Off-white compacted powdery ma	aterial with paint	
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Ca	alcareous binder, Calcareous particles, Paint	Cellulose 2%	Chrysotile 2%
Layer 2 of 3	Description: Off-white compacted powdery ma	aterial with paper	
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Calcareous binder, Calcareous particles	Cellulose 24%	Chrysotile 2%
Layer 3 of 3	Description: White chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Gypsum/Binder, Fine particles	Cellulose 21%	None Detected ND
		Glass fibers 7%	

Sampled by: Client		Otros -
Analyzed by: Kunga Woser	Date: 04/08/2022 _	Uttons S
Reviewed by: Nick Ly	Date: 04/08/2022	Nick Ly, Technical Director



By Polarized Light Microscopy

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

Attention: Ms. Claire Tsai

Project Location: Pierce College Olympic South Abatement & Repairs

Batch #: 2206630.00 Client Project #: 40535.488 Date Received: 4/8/2022 Samples Received: 9 Samples Analyzed: 9 Method: EPA/600/R-93/116

Lab ID: 22341 Location: Pierc	263 Client Sample #: 40535.488-4/7/2 e College Olympic South Abatement & Repairs	22-07	
Layer 1 of 1	Description: White compacted powdery materi	ial with paper	
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Fine particles	Cellulose 25%	None Detected ND
Lab ID: 22341 Location: Pierce	264 Client Sample #: 40535.488-4/7/2 e College Olympic South Abatement & Repairs	22-08	
Layer 1 of 1	Description: Gray sandy/brittle material with pa	aper	
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Sand, Granules	Cellulose 21%	None Detected ND
Lab ID: 22341 Location: Pierc Layer 1 of 1	265 Client Sample #: 40535.488-4/7/2 e College Olympic South Abatement & Repairs Description: Gray cementitious material with d		
-	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Cem	ent/Binder, Cementitious particles, Granules	Cellulose <1%	None Detected ND
	Debris		

Sampled by: Client		Antin
Analyzed by: Kunga Woser	Date: 04/08/2022	All in
Reviewed by: Nick Ly	Date: 04/08/2022	Nick Ly, Technical Director

ASBESTOS LABORATORY SERVICES



Rush Samples _____

CompanyPBS Environmental - SeattleAddress214 E Galer St. Suite. 300Seattle, WA 98102

Project Manager Ms. Claire Tsai Phone (206) 233-9639

AH No
_
:00 PM

Project Name/Number: 40535.488

Project Location: Pierce College Olympic South Abatement & Repairs

Subcategory PLM Bulk

Item Code ASB-02

EPA 600/R-93-116 Asbestos by PLM <bulk>

Total Number of Samples 9

Lab ID Sample ID Description A/R 22341257 1 40535.488-4/7/22-01 А 2 22341258 40535.488-4/7/22-02 А 3 22341259 40535.488-4/7/22-03 А 4 22341260 40535.488-4/7/22-04 А 5 22341261 40535.488-4/7/22-05 А 6 22341262 40535.488-4/7/22-06 А 7 22341263 40535.488-4/7/22-07 А 8 22341264 40535.488-4/7/22-08 А 9 22341265 40535.488-4/7/22-09 А

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Drop Box				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Kelly AuVu		NVL	4/8/22	800
Analyzed by	Kunga Woser		NVL	4/8/22	
Results Called by					
Faxed Emailed					
Special Instructions:					

Date: 4/8/2022 Time: 8:19 AM Entered By: Kelly AuVu



4 Hours

LABORATORY CH



Project: <u>Pierce College Olym</u>	Project #: <u>40535.488</u>	
Analysis requested:PLM		Date: <u>4/7/2022</u>
Relinq'd by/Signature:	in Totai	Date/Time: <u>4/7/2022</u>
Received by/Signature:	infile enn	Date/Time: 148 22 SUVP
	Email ALL INVOICES to: seattleap@p	obsusa.com
E-mail results to:		
🗍 Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	Kaitlin Soukup	🔀 Mike Smith
Mark Hiley	Allison Welch	Erman Fletcher
	Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	Claire Tsai	
TURN AROUND TIME:		_
🔲 1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other

	SAMPLE D	DATA FORM	-
Sample #	Material	Location	Lab
40535.488-4/7/22-01	GWB / JC	W of 168 Ext. Door S column S side	NVL
40535.488-4/7/22-02	GWB / JC	S Elev. Center column S side	
40535.488-4/7/22-03	GWB / JC	E Elev. S column E side	1
40535.488-4/7/22-04	GWB / JC	S stairwell column W side	
40535.488-4/7/22-05	GWB / JC	Room 164 SE column N side inside building	
40535.488-4/7/22-06	GWB / JC	S Elev. W column E side	
40535.488-4/7/22-07	Joint Compound	S of ECE double door S column S side inside building	
40535.488-4/7/22-08	Plaster	N Elevation Ext. from interior	
40535.488-4/7/22-09	Cementitious Material	N wall on back of EFIS from interior	

April 8, 2022



Claire Tsai PBS Environmental - Seattle 214 E Galer St. Suite. 300 Seattle, WA 98102

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 2206631.00

Client Project: 40535.488 Location: Pierce College Olympic South Abatement & Repairs

Dear Ms. Tsai,

Enclosed please find test results for the 7 sample(s) submitted to our laboratory for analysis on 4/8/2022.

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

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

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

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

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

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

Sincerely,

Nick Ly, Technical Director

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



Batch #: 2206631.00

Date Received: 4/8/2022 Samples Received: 7 Samples Analyzed: 7

Client Project #: 40535.488

Method: EPA/600/R-93/116

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

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

Attention: Ms. Claire Tsai

Project Location: Pierce College Olympic South Abatement & Repairs

Client Sample #: 40535.488-4/7/22-10 Lab ID: 22341266 Location: Pierce College Olympic South Abatement & Repairs Layer 1 of 1 Description: Yellow brittle mastic Asbestos Type: % Non-Fibrous Materials: Other Fibrous Materials:% None Detected ND Mastic/Binder, Fine grains, Fine particles Cellulose 3% Client Sample #: 40535.488-4/7/22-11 Lab ID: 22341267 Location: Pierce College Olympic South Abatement & Repairs Layer 1 of 1 Description: Yellow brittle mastic Asbestos Type: % Non-Fibrous Materials: Other Fibrous Materials:% None Detected ND Mastic/Binder, Fine grains, Fine particles Synthetic fibers 14% Lab ID: 22341268 Client Sample #: 40535.488-4/7/22-12 Location: Pierce College Olympic South Abatement & Repairs Description: Beige/yellow soft mastic Layer 1 of 1 Asbestos Type: % Non-Fibrous Materials: Other Fibrous Materials:% **None Detected ND** Mastic/Binder, Fine particles None Detected ND Client Sample #: 40535.488-4/7/22-13 Lab ID: 22341269 Location: Pierce College Olympic South Abatement & Repairs Layer 1 of 1 **Description:** Yellow soft mastic Non-Fibrous Materials: Other Fibrous Materials:% Asbestos Type: % None Detected ND Mastic/Binder, Fine particles None Detected ND Lab ID: 22341270 Client Sample #: 40535.488-4/7/22-14 Location: Pierce College Olympic South Abatement & Repairs Layer 1 of 2 Description: Off-white soft mastic Asbestos Type: % Non-Fibrous Materials: Other Fibrous Materials:% **None Detected ND** Mastic/Binder, Fine particles None Detected ND Sampled by: Client Analyzed by: Akane Yoshikawa Date: 04/08/2022 Nick Ly, Technical Director Reviewed by: Nick Ly Date: 04/08/2022



Batch #: 2206631.00

Date Received: 4/8/2022 Samples Received: 7 Samples Analyzed: 7

Client Project #: 40535.488

Method: EPA/600/R-93/116

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

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

Attention: Ms. Claire Tsai

Project Location: Pierce College Olympic South Abatement & Repairs

Layer 2 of 2	Description: White compacted powdery mater	ial with paint	
-	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Fine grains, Fine particles	None Detected ND	None Detected ND
	Paint		
Lab ID: 22341	271 Client Sample #: 40535.488-4/7/2	22-15	
Location: Pierc	e College Olympic South Abatement & Repairs		
Layer 1 of 3	Description: White compacted powdery mater	ial 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 compacted powdery mater	ial with paper	
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Fine grains, Fine particles	Cellulose 8%	None Detected ND
Layer 3 of 3	Description: White chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Gyps	um/Binder, Fine grains, Calcareous particles	Cellulose 16%	None Detected ND
		Glass fibers 7%	
Lab ID: 22341	272 Client Sample #: 40535.488-4/7/2	22-16	
Location: Pierc	e College Olympic South Abatement & Repairs		
Layer 1 of 3	Description: White compacted powdery mater	ial 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		An the
Analyzed by: Akane Yoshikawa	Date: 04/08/2022	
Reviewed by: Nick Ly	Date: 04/08/2022	Nick Ly, Technical Director



By Polarized Light Microscopy

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

Attention: Ms. Claire Tsai

Project Location: Pierce College Olympic South Abatement & Repairs



Client Project #: 40535.488 Date Received: 4/8/2022 Samples Received: 7 Samples Analyzed: 7 Method: EPA/600/R-93/116

Layer 2 of 3	Description: White compacted powdery materia	l with paper	
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Fine grains, Fine particles	Cellulose 7%	None Detected ND
Layer 3 of 3	Description: White chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Gypsi	ım/Binder, Fine grains, Calcareous particles	Cellulose 18%	None Detected ND
		Glass fibers 6%	

L	Reviewed by: Nick Ly	Date: 04/08/2022	Nick Ly, Technical Director
	Analyzed by: Akane Yoshikawa	Date: 04/08/2022	
	Sampled by: Client		Antino

ASBESTOS LABORATORY SERVICES



Rush Samples _____

CompanyPBS Environmental - SeattleAddress214 E Galer St. Suite. 300Seattle, WA 98102

Project Manager Ms. Claire Tsai Phone (206) 233-9639

Batch N	umber	220	6631.	.00	
4 Hrs				AH	No
TAT					
ate	4/8/202	2 T	ime	12:00 PM	N
claire.	tsai@pb	susa.	com		
(866)	727-014	0			
	4 Hrs TAT ate claire.	4 Hrs TAT ate 4/8/202 claire.tsai@pb	4 Hrs TAT ate 4/8/2022 T claire.tsai@pbsusa.o	4 Hrs TAT ate 4/8/2022 Time claire.tsai@pbsusa.com	TAT ate

Project Name/Number: 40535.488

Project Location: Pierce College Olympic South Abatement & Repairs

Subcategory PLM Bulk

Item Code ASB-02

EPA 600/R-93-116 Asbestos by PLM <bulk>

Total Number of Samples ____7___

Lab ID Sample ID Description A/R 22341266 1 40535.488-4/7/22-10 А 2 22341267 40535.488-4/7/22-11 А 3 22341268 40535.488-4/7/22-12 А 4 22341269 40535.488-4/7/22-13 А 5 22341270 40535.488-4/7/22-14 А 6 22341271 40535.488-4/7/22-15 А 7 22341272 40535.488-4/7/22-16 А

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Drop Box				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Kelly AuVu		NVL	4/8/22	800
Analyzed by	Akane Yoshikawa		NVL	4/8/22	
Results Called by					
Faxed Emailed					
Special Instructions:					

Date: 4/8/2022 Time: 8:25 AM Entered By: Kelly AuVu



LABORATORY C 2206631

Project: Pierce College Olymp	Project #: <u>40535.488</u>	
Analysis requested:PLM		Date: <u>4/7/2022</u>
Relinq'd by/Signature:	un sal	Date/Time: <u>4/7/2022</u>
Received by/Signature:	prén e pin	Date/Time: 418122 600 P
,	Email ALL INVOICES to: seattleap@	pbsusa.com
E-mail results to:		
🔲 Willem Mager	🔲 Janet Murphy	Holly Tuttle
Gregg Middaugh	🔲 Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	🔲 Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	🛛 Claire Tsai	
TURN AROUND TIME:		
🔲 1 Hour	24 Hours	3-5 Days
2 Hours	48 Hours	Other
4 Hours		

	SAMPLE DATA FORM			
Sample #	Material	Location	Lab	
40535.488-4/7/22-10	Yellow carpet mastic	East stairwell level 1	NVL	
40535.488-4/7/22-11	Yellow carpet mastic	East stairwell level 3		
40535.488-4/7/22-12	Yellow stair tread mastic	East stairwell level 2 going down		
40535.488-4/7/22-13	Yellow stair tread mastic	East stairwell level 3 going down		
40535.488-4/7/22-14	Tan cove base mastic	East stairwell level 1 west wall		
40535.488-4/7/22-15	Gypsum wallboard joint compound	ound East stairwell level 1 northeast corner under stairs		
40535.488-4/7/22-16	Gypsum wallboard joint compound	East stairwell level 3 northeast corner		
	-		-	

April 13, 2022



Gregg Middaugh PBS Environmental - Seattle 214 E Galer St. Suite. 300 Seattle, WA 98102

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 2206934.00

Client Project: 40535.488 Location: Pierce College Olympic South Abatement & Repairs

Dear Mr. Middaugh,

Enclosed please find test results for the 2 sample(s) submitted to our laboratory for analysis on 4/12/2022.

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

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

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

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

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

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

Sincerely,

Nick Ly, Technical Director

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



Batch #: 2206934.00

Client Project #: 40535.488

Date Received: 4/12/2022 Samples Received: 2 Samples Analyzed: 2

Method: EPA/600/R-93/116

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

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

Attention: Mr. Gregg Middaugh

Project Location: Pierce College Olympic South Abatement & Repairs

Lab ID: 22343 Location: Pierce	101Client Sample #: 40535.488-4/12/22-1e College Olympic South Abatement & Repairs		
Layer 1 of 2	Description: Beige fibrous material with paint		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Fine particles, Paint	Cellulose 63%	None Detected ND
Layer 2 of 2	Description: Gray rubbery material		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Caulking compound	None Detected ND	None Detected ND
Lab ID: 22343	102 Client Sample #: 40535.488-4/12/22-2		
Location: Pierce	e College Olympic South Abatement & Repairs		
Layer 1 of 2	Description: Beige fibrous material with paint		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Binder/Filler, Fine particles, Paint Cellulose 66% None Detected N		None Detected ND	
Layer 2 of 2	Description: Gray rubbery material		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Caulking compound	None Detected ND	None Detected ND

Sampled by: Client		Anterio
Analyzed by: Shane Christian	Date: 04/13/2022	
Reviewed by: Nick Ly	Date: 04/13/2022	Nick Ly, Technical Director

ASBESTOS LABORATORY SERVICES



Rush Samples _____

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

NVL Batch Number2206934.00TAT1 DayAHNoRush TATDue Date4/13/2022Time4:45 PMEmailgregg.middaugh@pbsusa.comFax(866) 727-0140

Project Name/Number: 40535.488

Project Location: Pierce College Olympic South Abatement & Repairs

Subcategory PLM Bulk

Item Code ASB-02

EPA 600/R-93-116 Asbestos by PLM <bulk>

Total Number of Samples 2

		•		
	Lab ID	Sample ID	Description	A/R
1	22343101	40535.488-4/12/22-1		Α
2	22343102	40535.488-4/12/22-2		Α

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Kelly AuVu		NVL	4/12/22	1645
Analyzed by	Shane Christian		NVL	4/13/22	
Results Called by					
Faxed Emailed					
Special					
Instructions:					

Date: 4/12/2022 Time: 4:40 PM Entered By: Kelly AuVu



LABORATORY CH 2206934

Project: <u>Pierce College Olym</u>	Project #: <u>40535.488</u>		
Analysis requested: <u>PLM</u>		Date: 4/12/2022	
Relinq'd by/Signature: Peter S	tensland / 10th Strutt	Date/Time: <u>4/12/2022</u>	
Received by/Signature:	upper e nur	Date/Time: 4/12/22/1645	
	Email ALL INVOICES to: seattleap@g	obsusa.com	
E-mail results to:			
🔲 Willem Mager	Janet Murphy	Holly Tuttle	
Gregg Middaugh	🔲 Kaitlin Soukup	Mike Smith	
Mark Hiley	Allison Welch	Ferman Fletcher	
Tim Ogden	🔲 Toan Nguyen	Cameron Budnick	
Ryan Hunter	🔀 Peter Stensland	Michelle Dodson	
Prudy Stoudt-McRae	🔀 Claire Tsai		
TURN AROUND TIME:	_		
🔲 1 Hour	🔀 24 Hours	3-5 Days	
2 Hours	48 Hours	Other	
4 Hours			

SAMPLE DATA FORM						
Sample # Material Location Lab						
40535.488-4/12/22-1	GWB / JC	E Elevation Column N of double doors S side	NVL			
40535.488-4/7/22-2	GWB / JC	E Elevation Column S of double doors N side				
CT EDIT: 40535.48	8-4/12/22-2					

April 14, 2022



Gregg Middaugh PBS Environmental - Seattle 214 E Galer St. Suite. 300 Seattle, WA 98102

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 2207043.00

Client Project: 40535.488 Location: Pierce College Olympic South Abatement & Repairs

Dear Mr. Middaugh,

Enclosed please find test results for the 2 sample(s) submitted to our laboratory for analysis on 4/14/2022.

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

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

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

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

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

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

Sincerely,

Nick Ly, Technical Director

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



Batch #: 2207043.00

Client Project #: 40535.488

Date Received: 4/14/2022 Samples Received: 2 Samples Analyzed: 2

Method: EPA/600/R-93/116

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

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

Attention: Mr. Gregg Middaugh

Project Location: Pierce College Olympic South Abatement & Repairs

Lab ID: 22344 Location: Pierce	054 Client Sample #: 40535.488-4/13/ e College Olympic South Abatement & Repairs	22-1	
Layer 1 of 2	Description: Gray rubbery material with paint		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Caulking compound, Paint	None Detected ND	None Detected ND
Layer 2 of 2	Description: Gray soft mastic		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Mastic/Binder	None Detected ND	None Detected ND
Lab ID: 22344 Location: Pierce	055 Client Sample #: 40535.488-4/13/ e College Olympic South Abatement & Repairs	22-2	
Layer 1 of 2	Description: Gray rubbery material		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Caulking compound, Debris	None Detected ND	None Detected ND
Layer 2 of 2	Description: Black fibrous material		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Glass debris	Glass fibers 94%	None Detected ND

Sampled by: Client		Anton
Analyzed by: Shane Christian	Date: 04/14/2022 _	
Reviewed by: Nick Ly	Date: 04/14/2022	Nick Ly, Technical Director

ASBESTOS LABORATORY SERVICES



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

NVL Batch Number 2207043.00 TAT 1 Day AH No Rush TAT Due Date 4/15/2022 Time 8:00 AM Email gregg.middaugh@pbsusa.com Fax (866) 727-0140

Project Name/Number: 40535.488

Project Location: Pierce College Olympic South Abatement & Repairs

Subcategory PLM Bulk

Item Code ASB-02

EPA 600/R-93-116 Asbestos by PLM <bulk>

Total Number of Samples 2

То	tal Numbei	r of Samples 2		Rush Samples		
_	Lab ID	Sample ID	Description	A/R		
1	22344054	40535.488-4/13/22-1		Α		
2	22344055	40535.488-4/13/22-2		Α		

Print Name	Signature	Company	Date	Time
Client				
Drop Box				
Print Name	Signature	Company	Date	Time
Fatima Khan		NVL	4/14/22	800
Shane Christian		NVL	4/14/22	
	Client Drop Box Print Name Fatima Khan Shane Christian	Client Drop Box Print Name Signature Fatima Khan Shane Christian	Client Client Drop Box Company Print Name Signature Company NVL Shane Christian NVL	Client Client Drop Box Company Print Name Signature Company Date Fatima Khan NVL Shane Christian NVL

Date: 4/14/2022 Time: 8:29 AM Entered By: Rachelle Miller



LABORATORY CHA

2207043

Project: <u>Pierce College Olympic</u>	South Abatement & Repairs	Project #: <u>40535.488</u>		
Analysis requested: PLM		Date: <u>4/13/2022</u>		
Relinq'd by/Signature:	e foll	Date/Time: 4/13/2022		
Received by/Signature:	Ca nulles	Date/Time: 4/14/22 SanDB		
E	mail ALL INVOICES to: seattleap@	pbsusa.com		
E-mail results to: Willem Mager Gregg Middaugh Mark Hiley Tim Ogden Ryan Hunter	 Janet Murphy Kaitlin Soukup Allison Welch Toan Nguyen Peter Stensland Claire Tsai 	 Holly Tuttle Mike Smith Ferman Fletcher Cameron Budnick Michelle Dodson 		
 Prudy Stoudt-McRae TURN AROUND TIME: 1 Hour 2 Hours 4 Hours 	 Claire Isal 24 Hours 48 Hours 	 3-5 Days Other 		

SAMPLE DATA FORM							
Sample # Material Location La							
40535.488-4/13/22-1	Gray sealant	Level 3 supply plenum SW penetration under I beam	NVL				
40535.488-4/13/22-2	Gray sealant on fibrous material	Level 3 supply plenum SW penetration under I beam					
	_						

April 21, 2022



Claire Tsai PBS Environmental - Seattle 214 E Galer St. Suite. 300 Seattle, WA 98102

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 2207493.00

Client Project: 40535.488 Location: Pierce College Olympic South Abatement & Repairs

Dear Ms. Tsai,

Enclosed please find test results for the 2 sample(s) submitted to our laboratory for analysis on 4/20/2022.

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

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

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

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

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

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

Sincerely,

Nick Ly, Technical Director

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



Batch #: 2207493.00

Client Project #: 40535.488

Date Received: 4/20/2022 Samples Received: 2 Samples Analyzed: 2

Method: EPA/600/R-93/116

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

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

Attention: Ms. Claire Tsai

Project Location: Pierce College Olympic South Abatement & Repairs

Lab ID: 22346	678	Client Sample #: ^{40535.488-4/20/22-1}			
Location: Pierc	e Colleg	e Olympic South Abatement & Repairs			
Layer 1 of 1	Descr	iption: White crumbly material			
		Non-Fibrous Materials:	Other Fibrous Materia	als:%	Asbestos Type: %
Cal	careous	binder, Calcareous particles, Debris	Cellulose	2%	None Detected ND
Lab ID: 22346 Location: Pierc		Client Sample #: ^{40535.488-4/20/22-2} e Olympic South Abatement & Repairs			
Layer 1 of 1	Descr	iption: White crumbly material			
		Non-Fibrous Materials:	Other Fibrous Materia	als:%	Asbestos Type: %
Cal	careous	binder, Calcareous particles, Debris	Cellulose	3%	None Detected ND

Sampled by: Client		Anten
Analyzed by: Shane Christian	Date: 04/21/2022	
Reviewed by: Nick Ly	Date: 04/21/2022	Nick Ly, Technical Director

ASBESTOS LABORATORY SERVICES



Rush Samples _____

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

Project Manager Ms. Claire Tsai Phone (206) 233-9639

Project Name/Number: 40535.488

Project Location: Pierce College Olympic South Abatement & Repairs

Subcategory PLM Bulk

Item Code ASB-02

EPA 600/R-93-116 Asbestos by PLM <bulk>

Total Number of Samples 2

		•		
	Lab ID	Sample ID	Description	A/R
1	22346678	40535.488-4/20/22-1		Α
2	22346679	40535.488-4/20/22-2		Α

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Drop Box				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Kelly AuVu		NVL	4/20/22	1630
Analyzed by	Shane Christian		NVL	4/21/22	
Results Called by					
Faxed Emailed					
Special					
Instructions:					

Date: 4/20/2022 Time: 4:43 PM Entered By: Kelly AuVu



4 Hours

LABORATORY CH 2207493

Project: <u>Pierce College Olympic Sout</u>	h Abatement & Repairs	Project #: <u>40535.488</u>
Analysis requested: PLM		Date: 4/20/2022
Relinq'd by/Signature:	78a	Date/Time: <u>4/20/2022</u>
Received by/Signature: Keungfo	In a put	Date/Time: 4/20/22
Email	ALL INVOICES to: seattleap@pbsus	a.com
E-mail results to:		
🔲 Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	🔲 Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	🛛 Claire Tsai	
TURN AROUND TIME:	_	
🔲 1 Hour	🔀 24 Hours	3-5 Days
2 Hours	48 Hours	Other

		SAMPLE DATA FORM	
Sample #	Material	Location	Lab
40535.488-4/20/22-1	White leveling compound	Level 1 northeast crack in slab	NVL
40535.488-4/20/22-2	White leveling compound	Level 1 northeast area in slab	
			1
	1		



01-Jun-2022

Gregg Middaugh PBS 214 East Galer St, Suite 300 Seattle, WA 98102

Re: Pierce College Olympic South Abatement and Repairs; 40 Work Order: 22050712

Dear Gregg,

ALS Environmental received 6 samples on 19-May-2022 02:45 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 12.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,



Electronically approved by: Rob Nieman

Rob Nieman Project Manager

Report of Laboratory Analysis

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347 ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental 🎾

www.alsglobal.com

RIGHT SOLUTIONS BIGHT PARTNER

PBS

22050712

22050712-06 40535.488-5/5/2022-PLM06

Client:

Project:

Work Order:

Pierce College Olympic South Abatement and Repairs; 4053

Lab Samp ID Client Sample ID <u>Matrix</u> Tag Number Collection Date Date Received Hold 22050712-01 40535.488-5/5/2022-PLM01 Bulk 5/5/2022 5/19/2022 14:45 5/19/2022 14:45 22050712-02 40535.488-5/5/2022-PLM02 Bulk 5/5/2022 5/19/2022 14:45 22050712-03 40535.488-5/5/2022-PLM03 Bulk 5/5/2022 5/19/2022 14:45 22050712-04 40535.488-5/5/2022-PLM04 Bulk 5/5/2022 22050712-05 40535.488-5/5/2022-PLM05 Bulk 5/5/2022 5/19/2022 14:45

Bulk

Work Order Sample Summary

Date: 01-Jun-22

5/19/2022 14:45

5/5/2022

ALS Environmental Date: 01-Jun-22 Client: PBS Project: Pierce College Olympic South Abatement and Repairs; 405 Case Narrative Work Order: 22050712

	PBS Pierce College	Olympic South Aba	tement and	Work Order: 2205071			
Lab ID:	b ID: 22050712-01A				Collection Date: 5/5/2022		
Client Sample ID	: 40535.488-5	/5/2022-PLM01			Matrix: BULK		
Analyses		Result	Units		Analytical Results		
Asbestos by PLM			Date Analyzed 5/24/2022				
Macroscopic Examination Prep Date: 5/23/2		5/23/2022	E600/R-93/116	Analyst: MRS			
Color		Grey					
Description		Material					
Homogeneity		Homogeneous					
Texture		Granular					
Other Materials				E600/R-93/116			
Cellulose		ND	%				
Fiberglass		ND	%				
Non-fibrous		>90<=100	%				
Other fibers		ND	%				
Resin/binder		ND	%				
Asbestiform Min	erals			E600/R-93/116			
Amosite		ND	%				
Anthophyllite		ND	%				
Chrysotile		ND	%				
Crocidolite		ND	%				
Tremolite - actinolite	е	ND	%				
Total asbestos		ND	%				

	PBS Work Ord Pierce College Olympic South Abatement and Repairs				
Lab ID:	22050712-0	02A		Collect	tion Date: 5/5/2022
Client Sample ID:	40535.488-	5/5/2022-PLM02		Matrix: BULK	
Analyses		Result	Units		Analytical Results
Asbestos by PLM				Date Analyzed 5/24/2022	
Macroscopic Examination Prep Date: 5/23/2022		E600/R-93/116	Analyst: MRS		
Color		Grey			
Description		Material			
Homogeneity		Homogeneous			
Texture		Granular			
Other Materials				E600/R-93/116	
Cellulose		ND	%		
Fiberglass		ND	%		
Non-fibrous		>90<=100	%		
Other fibers		ND	%		
Resin/binder		ND	%		
Asbestiform Min	erals			E600/R-93/116	
Amosite		ND	%		
Anthophyllite		ND	%		
Chrysotile		ND	%		
Crocidolite		ND	%		
Tremolite - actinolite	9	ND	%		
Total asbestos		ND	%		

	PBS Pierce College Olympic South Abatement and Repairs				Work Order: 22050712
Lab ID:	22050712-0)3A		Collect	tion Date: 5/5/2022
Client Sample ID	40535.488-	5/5/2022-PLM03			Matrix: BULK
Analyses		Result	Units		Analytical Results
Asbestos by PLM				Date Analyzed 5/24/2022	
Macroscopic Examination Prep Date: 5/23/2022		5/23/2022	E600/R-93/116	Analyst: MRS	
Color		Grey			
Description		Material			
Homogeneity		Homogeneous			
Texture		Granular			
Other Materials				E600/R-93/116	
Cellulose		ND	%		
Fiberglass		ND	%		
Non-fibrous		>90<=100	%		
Other fibers		ND	%		
Resin/binder		ND	%		
Asbestiform Min	erals			E600/R-93/116	
Amosite		ND	%		
Anthophyllite		ND	%		
Chrysotile		ND	%		
Crocidolite		ND	%		
Tremolite - actinolite	e	ND	%		
Total asbestos		ND	%		

Client: Project:	PBS Pierce College	Dlympic South Aba	tement and	Repairs	Work Order: 22050712		
Lab ID:	b ID: 22050712-04A				Collection Date: 5/5/2022		
Client Sample ID	: 40535.488-5/	/5/2022-PLM04		Matrix: BULK			
Analyses		Result	Units		Analytical Results		
Asbestos by PLM			Date Analyzed 5/24/2022				
-		5/23/2022	E600/R-93/116	Analyst: MRS			
Color		Grey					
Description		Material					
Homogeneity		Homogeneous					
Texture		Granular					
Other Materials				E600/R-93/116			
Cellulose		ND	%				
Fiberglass		ND	%				
Non-fibrous		>90<=100	%				
Other fibers		ND	%				
Resin/binder		ND	%				
Asbestiform Mir	erals			E600/R-93/116			
Amosite		ND	%				
Anthophyllite		ND	%				
Chrysotile		ND	%				
Crocidolite		ND	%				
Tremolite - actinolit	е	ND	%				
Total asbestos		ND	%				

	PBS Pierce College Olympic South Abatement and Repairs				Work Order: 22050712	
Lab ID:	22050712-0	5A		Collec	tion Date: 5/5/2022	
Client Sample ID:	: 40535.488-5	5/5/2022-PLM05			Matrix: BULK	
Analyses		Result	Units		Analytical Results	
Asbestos by PLM			Date Analyzed 5/24/2022			
Macroscopic Examination		Prep Date:	5/23/2022	E600/R-93/116	Analyst: MRS	
Color		Grey				
Description		Material				
Homogeneity		Homogeneous				
Texture		Granular				
Other Materials				E600/R-93/116		
Cellulose		ND	%			
Fiberglass		ND	%			
Non-fibrous		>90<=100	%			
Other fibers		ND	%			
Resin/binder		ND	%			
Asbestiform Min	erals			E600/R-93/116		
Amosite		ND	%			
Anthophyllite		ND	%			
Chrysotile		ND	%			
Crocidolite		ND	%			
Tremolite - actinolite	9	ND	%			
Total asbestos		ND	%			

	PBS Pierce College Olympic South Abatement and Repairs				Work Order: 22050712	
Lab ID:	22050712-	06A		Collect	tion Date: 5/5/2022	
Client Sample ID:	: 40535.488-	-5/5/2022-PLM06			Matrix: BULK	
Analyses		Result	Units		Analytical Results	
Asbestos by PLM				Date Analyzed 5/24/2022		
Macroscopic Examination Prep Date: 5/23/202		5/23/2022	E600/R-93/116	Analyst: MRS		
Color		Grey				
Description		Material				
Homogeneity		Homogeneous				
Texture		Granular				
Other Materials				E600/R-93/116		
Cellulose		ND	%			
Fiberglass		ND	%			
Non-fibrous		>90<=100	%			
Other fibers		ND	%			
Resin/binder		ND	%			
Asbestiform Min	erals			E600/R-93/116		
Amosite		ND	%			
Anthophyllite		ND	%			
Chrysotile		ND	%			
Crocidolite		ND	%			
Tremolite - actinolite	9	ND	%			
Total asbestos		ND	%			

ALS Environmental

Client: Project: WorkOrder:	PBS Pierce College Olympic South Abatement and Repairs 22050712	QUALIFIERS, ACRONYMS, UNITS
Qualifier	Description	
*	Value exceeds Regulatory Limit	
а	Not accredited	
В	Analyte detected in the associated Method Blank above the Reporting Limit	
Ε	Value above quantitation range	
Н	Analyzed outside of Holding Time	
J	Analyte detected below quantitation limit	
n	Not offered for accreditation	
ND	Not Detected at the Reporting Limit	
0	Sample amount is > 4 times amount spiked	
P R	Dual Column results percent difference > 40% RPD above laboratory control limit	
S	Spike Recovery outside laboratory control limits	
U	Analyzed but not detected above the MDL	
Acronym	Description	
DUP	Method Duplicate	
Е	EPA Method	
LCS	Laboratory Control Sample	
LCSD	Laboratory Control Sample Duplicate	
MBLK	Method Blank	
MDL	Method Detection Limit	
MQL	Method Quantitation Limit	
MS	Matrix Spike	
MSD	Matrix Spike Duplicate	
PDS	Post Digestion Spike	
PQL	Practical Quantitaion Limit	
SDL	Sample Detection Limit	
SW	SW-846 Method	
Units Reporte	d Description	

%

ALS Environmental

Sample Receipt Checklist

Client Name: <u>PBS-SEATTLE</u>		Date/Time F	Received:	<u>19-May-2</u> 2	<u>2 14:45</u>	
Work Order: <u>22050712</u>		Received by	y:	<u>AB</u>		
Checklist completed by: A lec Bolender	19-May-22 Date	Reviewed by:	R ob Niem	ian		23-May-22 Date
Matrices: <u>bulk</u> Carrier name: <u>FedEx</u>			-			I
Shipping container/cooler in good condition?	Yes 🗸	No 🗌	Not Prese	ent 🗌		
Custody seals intact on shipping container/cooler?	Yes	No 🗌	Not Prese	ent 🗸		
Custody seals intact on sample bottles?	Yes	No 🗌	Not Prese	ent 🗸		
Chain of custody present?	Yes 🗹	No 🗌				
Chain of custody signed when relinquished and received?	Yes 🗹	No 🗌				
Chain of custody agrees with sample labels?	Yes 🗹	No 🗌				
Samples in proper container/bottle?	Yes 🗹	No 🗌				
Sample containers intact?	Yes 🗹	No 🗌				
Sufficient sample volume for indicated test?	Yes 🗹	No 🗌				
All samples received within holding time?	Yes 🗸	No 🗌				
Container/Temp Blank temperature in compliance?	Yes 🗸	No 🗌				
Sample(s) received on ice? Temperature(s)/Thermometer(s):	Yes	No 🗸				
Cooler(s)/Kit(s):						
Date/Time sample(s) sent to storage:					_	
Water - VOA vials have zero headspace?	Yes	No	No VOA vials	submitted	\checkmark	
Water - pH acceptable upon receipt?	Yes	No 🗌	N/A			
pH adjusted? pH adjusted by:	Yes	No 🗌	N/A 🗸			

Login Notes:

Client Contacted:	Date Contacted:	Person Contacted:	
Contacted By:	Regarding:		
Comments:			
CorrectiveAction:			
		c	SF
			л.



123456

LABORATORY CHAIN OF CUSTODY

22050712

Project: Pierce College Olym	Project #: <u>40535.488</u>				
Analysis requested:PLM bu	Date: 5/17/2022				
Relinq'd by/Signature: Peter	Stensland /	will our	Date/Time: 5/17/2022		
Received by/Signature: Alu	· 2		Date/Time: 5/19 199	5	
	Email ALL IN	/OICES to: seattleap@pbs	iusa.com		
E-mail results to:					
🔲 Willem Mager	/lager 🗌 Jan		Holly Tuttle		
Gregg Middaugh	🗌 Ка	itlin Soukup	Mike Smith		
Mark Hiley		ison Welch	Ferman Fletcher		
Tim Ogden	🔲 То	an Nguyen	Cameron Budnick		
Ryan Hunter	🖾 Pe	ter Stensland	Michelle Dodson		
Prudy Stoudt-McRae	🛛 Cla	aire Tsai			
TURN AROUND TIME:					
1 Hour	24	Hours	5 Days		
2 Hours	48	Hours	Results by 5/27/22		
4 Hours			•		
- Als Eni	vivonmen	tal · Attn: St	ella Hanis		
	SA	MPLE DATA FORM		_	
Sample #	Material	Lo	cation	Lab	
40535.488-5/5/2022-PLM01	Marblecrete	Olympic S Level 3 S wall	Wside	ALS	
40535.488-5/5/2022-PLM02	Marblecrete	Olympic S Level 3 S wall	E side		
40535.488-5/5/2022-PLM03	Marblecrete	Olympic S Level 2 Stairwo	ell near doorway		
40535.488-5/5/2022-PLM04	Marblecrete	Olympic S Level 1 Stairwo	ell near N penetration		
40535.488-5/5/2022-PLM05	Marblecrete	Olympic S Exterior S elev	. W side		
40535.488-5/5/2022-PLM06	Marblecrete	Olympic S Exterior SE co			
10000.100 010110111 1 111100		orympic o Exterior de do			
			rner E column		



214 EAST GALER STREET, SUITE 300, SEATTLE, WA 98102 = 206.233.9639 MAIN = 866.727.0140 FAX = PBSUSA.COM

SEATTLE ASBESTOS TEST, LLC

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

www.seattleasbestostest.com, admin@seattleasbestostest.com

Project Manager: Claire Tsai Client: PBS Engineering and Environmental, Seattle Address: 214 E Galer Street, Suite 300, Seattle, WA 98102 Tel: 206.233.9639 Date Report Issued: 5/10/2022

Date Analyzed: 5/10/2022 Client Job#: 40535.488 Project Location: Pierce College Olympic South Abatement & Repairs Laboratory batch#: 202209972 Samples Received: 2

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. If the sample is inhomogeneous the sub-samples of the components are analyzed separately as layers. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is page numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

Thang

Steve (Fanyao) Zhang Approved Signatory



LABORATORY CHAIN OF CUSTODY

Project: <u>Pierce College Olympic</u>	South Abatement & Repairs	Project #: <u>40535.488</u>
Analysis requested:PLM		and the second
Reling'd by/Signature: Peter Ster	sland / Actor Start	Date: <u>5/10/2022</u> Date/Time: <u>5/10/2022</u>
Received by/Signature:	h/	Date/Time:/// // // //
E	mail ALL INVOICES to: seattleap(anhsusa com
E-mail results to: Willem Mager Gregg Middaugh Mark Hiley Tim Ogden Ryan Hunter Prudy Stoudt-McRae	 Janet Murphy Kaitlin Soukup Allison Welch Toan Nguyen Peter Stensland Claire Tsai 	Holly Tuttle Holly Tuttle Kike Smith Ferman Fletcher Cameron Budnick Michelle Dodson
TURN AROUND TIME: 1 Hour 2 Hours 4 Hours	24 Hours 48 Hours	3-5 DaysOther

with the second s	S	AMPLE DATA FORM	
Sample #	Material	Location	Lab
40535.488-5/10/22-1	Red Fire Caulking	Level 3 Stairwell along pan decking and I beam	SAT
40535.488-5/10/22-2	Red Fire Caulking	Level 3 Stairwell along pan decking and I beam	

SEATTLE ASBESTOS TEST

Lynnwood Laboratory: 19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel: 425.673.9850, Fax: 425.673.9810, NVLAP Lab Code: 200768-0

fibrous material

Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

ANALYTICAL LABORATORY REPORT

PLMIEPA - A	O CER Annondix E to (ANALYTICAL LA	BOR	ATORY REPOR	T		
r. and an idea	o or it appendix E to :	EPA 600/R-93/	mentod tot ute Detettil	Deter	mination of Asbestos n of Asbestos in Bulk	CI In Bulk insulation Samples Building Materials		[PLM]
Attn.:	Claire Tsai	Client:	PBS Engineering and Environmental, Seattle			214 E Galer Street, Suite	300	Soottle MA DD400
Job#:	40535.488	Batch#;			Date Received:		- 500,	Seame, WA 98102
Samples Rec'd:	2	Date Analyzed:	5/10/2022		Samples Analyzed:	The state of the second s		
Project Loc.:	Pierce College Olyn Abatement & Repair:	npic South s	Analyzed by	Cesi	1~		Steve	SZ kang (Fanyao) Zhang, President
Lab ID	Client Sample ID	Layer	Description	1%	Asbestos Fibers	Non-fibrous Components	1%	T
1	40535.488 -5 /10/22-1	1	Red soft/elastic material with fibrous material		None detected	Binder, Filler	23	Non-asbestos Fibers Synthetic fibers Cellulose
2	40535.488 -5		Red soft/elastic material with		None detected	Binder, Filler	28	Synthetic fibers

Cellulose

June 21, 2022



Gregg Middaugh PBS Environmental - Seattle 214 E Galer St. Suite. 300 Seattle, WA 98102

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 2211266.00

Client Project: 40535.488 Location: Pierce College Olympic South Abatement and Repairs

Dear Mr. Middaugh,

Enclosed please find test results for the 13 sample(s) submitted to our laboratory for analysis on 6/21/2022.

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

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

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

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

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

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

Sincerely,

Munaf Khan, Laboratory Director

Testing

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

Batch #: 2211266.00 Client Project #: 40535.488

Date Received: 6/21/2022 Samples Received: 13 Samples Analyzed: 13

Method: EPA/600/R-93/116

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

Attention: Mr. Gregg Middaugh

Project Location: Pierce College Olympic South Abatement and Repairs

Lab ID: 22369	931 Client Sample #: 40535.488-6/17/22-0	1	
Location: Piero	e College Olympic South Abatement and Repairs		
Layer 1 of 1	Description: Black soft/elastic material with pair	nt & debris	
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Paint, Debris	Cellulose <1%	None Detected ND
Lab ID: 22369	932 Client Sample #: 40535.488-6/17/22-0	2	
Location: Piero	e College Olympic South Abatement and Repairs		
Layer 1 of 1	Description: Black asphaltic fibrous material with	th paint	
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Asphalt/Binder, Asphaltic Particles, Paint	Cellulose 41%	None Detected ND
Location: Pierc	e College Olympic South Abatement and Repairs Description: Black soft/elastic material with deb Non-Fibrous Materials:	oris Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Debris	Polyethylene fibers 7%	None Detected ND
Lab ID: 22369 Location: Pierc Layer 1 of 2	934 Client Sample #: ^{40535.488-6/17/22-0} e College Olympic South Abatement and Repairs Description: Gray soft material with paint & deb		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
			Chrysotile 7%
	Binder/Filler, Paint, Debris	Cellulose 3%	Chrysolite 7 /6
Layer 2 of 2	Binder/Filler, Paint, Debris Description: Gray brittle material with debris	Cellulose 3%	
Layer 2 of 2		Cellulose 3% Other Fibrous Materials:%	Asbestos Type: %

Sampled by: Client		Mund than
Analyzed by: Kunga Woser	Date: 06/21/2022	
Reviewed by: Munaf Khan	Date: 06/21/2022	Munaf Khan, Laboratory Director



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

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

Attention: Mr. Gregg Middaugh

Project Location: Pierce College Olympic South Abatement and Repairs

Batch #: 2211266.00 Client Project #: 40535.488 Date Received: 6/21/2022 Samples Received: 13 Samples Analyzed: 13 Method: EPA/600/R-93/116

Layer 1 of 1	Description: Dark gray brittle material with debris		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Debris	Cellulose 3%	Chrysotile 6%
Lab ID: 22369	936 Client Sample #: ^{40535.488-6/17/22-06}		
Location: Pierce	e College Olympic South Abatement and Repairs		
Layer 1 of 1	Description: White brittle material with debris		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Fine particles, Debris	Cellulose <1%	None Detected ND
Lab ID: 22369	937 Client Sample #: ^{40535.488-6/17/22-07}		
Location: Pierce	e College Olympic South Abatement and Repairs		
Layer 1 of 2	Description: White soft/elastic material with debri	s	
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Debris	Cellulose <1%	None Detected ND
Layer 2 of 2	Description: Dark gray soft/elastic material with d	lebris	
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Debris	Polyethylene fibers 7%	None Detected ND
Lab ID: 22369	938 Client Sample #: 40535.488-6/17/22-08		
Location: Pierce	e College Olympic South Abatement and Repairs		
Layer 1 of 1	Description: Off-white brittle material with debris		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
			Chrysotile 6%

Location: Pierce College Olympic South Abatement and Repairs

Sampled by: Client		Hund then
Analyzed by: Kunga Woser	Date: 06/21/2022	
Reviewed by: Munaf Khan	Date: 06/21/2022	Munaf Khan, Laboratory Director



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

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

Attention: Mr. Gregg Middaugh

Project Location: Pierce College Olympic South Abatement and Repairs

Batch #: 2211266.00 Client Project #: 40535.488 Date Received: 6/21/2022 Samples Received: 13 Samples Analyzed: 13 Method: EPA/600/R-93/116

Layer 1 of 1	Description: Tan soft/elastic material v	vith paint & debris		
	Non-Fibrous Materi	als: Other Fib	ous Materials:	% Asbestos Type: %
	Binder/Filler, Paint, De	bris Polyethyl	ene fibers 6	% None Detected NE
Lab ID: 22369	940 Client Sample #: 40535.48	8-6/17/22-10		
Location: Pierc	e College Olympic South Abatement and	Repairs		
Layer 1 of 1	Description: Gray soft/elastic material	with debris		
	Non-Fibrous Materi	als: Other Fib	ous Materials:	% Asbestos Type: %
	Binder/Filler, De	bris	Cellulose <19	% None Detected NE
_ab ID: 22369	941 Client Sample #: 40535.48	8-6/17/22-11		
_ocation: Pierc	e College Olympic South Abatement and	Repairs		
Layer 1 of 1	Description: Gray brittle material with	debris		
	Non-Fibrous Materi	als: Other Fibr	ous Materials:	% Asbestos Type: %
	Binder/Filler, De	bris	Cellulose <19	% None Detected ND
ab ID: 22369.	942 Client Sample #: 40535.48	8-6/17/22-12		
_ocation: Pierc	e College Olympic South Abatement and	Repairs		
_ayer 1 of 1	Description: Tan soft/elastic material v	vith paint & debris		
	Non-Fibrous Materi	als: Other Fib	ous Materials:	% Asbestos Type: %
	Binder/Filler, Paint, De	bris	Cellulose <19	% None Detected ND
ab ID: 22369	943 Client Sample #: 40535.48	8-6/17/22-13		
Location: Pierc	e College Olympic South Abatement and	Repairs		
Layer 1 of 2	Description: Gray soft/elastic material	with debris		
	Non-Fibrous Materi	als: Other Fib	ous Materials:	% Asbestos Type: %
	Binder/Filler, Debris, Granu	ules	Cellulose 2	% None Detected ND
	Mineral grains, Pe	rlite		
Sampled b	y: Client			, e H.)
-	y : Kunga Woser	Date: 06/21/2022	M	ral form
Reviewed by: Munaf Khan		Date: 06/21/2022 Munaf Khan, Laboratory Director		



Batch #: 2211266.00

Client Project #: 40535.488

Date Received: 6/21/2022 Samples Received: 13 Samples Analyzed: 13

Method: EPA/600/R-93/116

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

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

Attention: Mr. Gregg Middaugh

Project Location: Pierce College Olympic South Abatement and Repairs

Description: Gray brittle material with debris Layer 2 of 2 Non-Fibrous Materials: Binder/Filler, Mineral grains, Granules

Debris

Other Fibrous Materials:% Wollastonite 3% **None Detected ND**

Asbestos Type: %

Sampled by: Client Analyzed by: Kunga Woser Reviewed by: Munaf Khan

Date: 06/21/2022 Date: 06/21/2022 Munaf Khan, Laboratory Director

ASBESTOS LABORATORY SERVICES

🔅 NVL

Company	PBS Environmental - Seattle	NVL Batch	n Num	nber	22 '	11266.	.00
Address	214 E Galer St. Suite. 300	TAT 1 Da	ay				AH No
	Seattle, WA 98102	Rush TAT					
Project Manager	Mr. Gregg Middaugh	Due Date	6/2	22/202	22	Time	8:00 AM
Phone	(206) 233-9639	Email gree	gg.mi	iddaug	gh@	pbsusa.	com
Office:	(800) 628-9639	Fax (866	6) 72	7-014	0		

Project Name/Number: 40535.488

Project Location: Pierce College Olympic South Abatement and Repairs

Subcategory PLM Bulk

Item Code ASB-02

EPA 600/R-93-116 Asbestos by PLM <bulk>

Total Number of Samples 13

Rush Samples _____

_	Lab ID	Sample ID	Description	A/R
1	22369931	40535.488-6/17/22-01		Α
2	22369932	40535.488-6/17/22-02		Α
3	22369933	40535.488-6/17/22-03		Α
4	22369934	40535.488-6/17/22-04		Α
5	22369935	40535.488-6/17/22-05		Α
6	22369936	40535.488-6/17/22-06		Α
7	22369937	40535.488-6/17/22-07		Α
8	22369938	40535.488-6/17/22-08		Α
9	22369939	40535.488-6/17/22-09		Α
10	22369940	40535.488-6/17/22-10		Α
11	22369941	40535.488-6/17/22-11		Α
12	22369942	40535.488-6/17/22-12		Α
13	22369943	40535.488-6/17/22-13		Α

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Drop Box				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Rachelle Miller		NVL	6/21/22	800
Analyzed by	Kunga Woser		NVL	6/21/22	
Results Called by					
Faxed Emailed					
Special Instructions:					

Date: 6/21/2022 Time: 7:48 AM Entered By: Rachelle Miller

2211266

LABORATORY CHAIN OF CUSTODY

Project: Pierce College Olym	pic South Abatement and Repairs	Project #: <u>40535.488</u> Page 1 of 1
Analysis requested:	PLM une folli	Date: <u>6/17/2022</u> Date/Time: <u>6/20/2022</u> Date/Time: <u>6/21/22 Ban</u> MB
,	Email ALL INVOICES to: seattleap	@pbsusa.com
E-mail results to: Willem Mager Gregg Middaugh Mark Hiley Tim Ogden Ryan Hunter Prudy Stoudt-McRae	 Janet Murphy Kaitlin Soukup Allison Welch Toan Nguyen Peter Stensland Claire Tsai 	 Holly Tuttle Mike Smith Ferman Fletcher Cameron Budnick Kameron DeMonnin
TURN AROUND TIME: 1 Hour 2 Hours 4 Hours	24 Hours 48 Hours	3-5 DaysOther

PBS

SAMPLE DATA FORM					
Sample #	Material	Location			
40535.488-6/17/22-01	Gasket	Level 1 mechanical room fire sprinkler main	NVL		
40535.488-6/17/22-02	Black paper backing	Level 2 east wall second column south back of Marble Crete			
40535.488-6/17/22-03	Black soft caulk	Level 1 northwest base of window below stairs			
40535.488-6/17/22-04	Soft grey caulk on grey caulk	Level 1 north window center area			
40535.488-6/17/22-05	Grey sealant	Level 1 southwest window rough opening			
40535.488-6/17/22-06	White sealant	Level 1 southwest window rough opening			
40535.488-6/17/22-07	White on grey caulk	Level 1 south west window			
40535.488-6/17/22-08	Residual white exterior window caulk	South elevation level 1 base of window			
40535.488-6/17/22-09	Soft tan caulk	East elevation top of window wall			
40535.488-6/17/22-10	Soft grey caulk	West elevation window			
40535.488-6/17/22-11	Grey caulk	North elevation top of level 1 window			
40535.488-6/17/22-12	Soft tan caulk	North elevation level 2 window			
40535.488-6/17/22-13		West elevation under skybridge penetration			

214 EAST GALER STREET, SUITE 300, SEATTLE, WA 98102 = 206.233.9639 MAIN = 866.727 0140 FAX = PBSUSA.COM

July 7, 2022



Gregg Middaugh PBS Environmental - Seattle 214 E Galer St. Suite. 300 Seattle, WA 98102

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 2212282.00

Client Project: 40535.488 Location: Pierce College Olympic South Abatement and Repairs

Dear Mr. Middaugh,

Enclosed please find test results for the 2 sample(s) submitted to our laboratory for analysis on 7/6/2022.

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

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

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

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

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

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

Sincerely,

Nick Ly, Technical Director

Testing

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



Batch #: 2212282.00

Client Project #: 40535.488

Method: EPA/600/R-93/116

Date Received: 7/6/2022 Samples Received: 2 Samples Analyzed: 2

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

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

Attention: Mr. Gregg Middaugh

Project Location: Pierce College Olympic South Abatement and Repairs

Lab ID: 22375 Location: Pierc	Client Sample #: ^{40535.488-7/5/22-01} e College Olympic South Abatement and Repairs		
Layer 1 of 1	Description: Brown soft material		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Fine particles, Caulking compound	Cellulose 3%	Chrysotile 5%
Lab ID: 22375 Location: Pierc	666Client Sample #: 40535.488-7/5/22-02e College Olympic South Abatement and Repairs		
Layer 1 of 1	Description: Brown soft material		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Fine particles, Caulking compound	Cellulose 2%	Chrysotile 6%

Sampled by: Client		Antin	
Analyzed by: Muhammad Yousuf	Date: 07/07/2022		
Reviewed by: Nick Ly	Date: 07/07/2022	Nick Ly, Technical Director	
Note: If samples are not homogeneous, then subsamples	of the components were analyzed separate	ly. All bulk samples are analyzed using both	EPA

ASBESTOS LABORATORY SERVICES



Rush Samples _____

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

NVL Batch Number2212282.00TAT1 DayAHNoRush TATDue Date7/7/2022Time1:10 PMEmailgregg.middaugh@pbsusa.comFax(866) 727-0140

Project Name/Number: 40535.488

Project Location: Pierce College Olympic South Abatement and Repairs

Subcategory PLM Bulk

Item Code ASB-02

EPA 600/R-93-116 Asbestos by PLM <bulk>

Total Number of Samples 2

		•		
	Lab ID	Sample ID	Description	A/R
1	22375665	40535.488-7/5/22-01		Α
2	22375666	40535.488-7/5/22-02		Α

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Courier				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Kelly AuVu		NVL	7/6/22	1310
Analyzed by	Muhammad Yousuf		NVL	7/7/22	
Results Called by					
Faxed Emailed					
Special					
Instructions:					

Date: 7/6/2022 Time: 1:41 PM Entered By: Kelly AuVu



4 Hours

LABORATORY CHA 2212282

Project: <u>Pierce College (</u>	Dlympic South Abatement and Repairs	Project #: <u>40535.488</u> Page 1 of 1
Analysis requested:	PLM	Date: 7/5/2022
Relinq'd by/Signature:	Claure Fron	Date/Time:7/5/2022
Received by/Signature:	Kullanden 2 pu	<u>Date/Time: 7622 370</u>
	Email ALL INVOICES to: seattleap@	Depbsusa.com
E-mail results to: Willem Mager Gregg Middaugh Mark Hiley Tim Ogden Ryan Hunter Prudy Stoudt-McRae	 Janet Murphy Kaitlin Soukup Allison Welch Toan Nguyen Peter Stensland Claire Tsai 	 Holly Tuttle Mike Smith Ferman Fletcher Cameron Budnick Kameron DeMonnin
TURN AROUND TIME:	24 Hours 48 Hours	3-5 Days Other

SAMPLE DATA FORM					
Material	Location	Lab			
Brown sealant	Level 1 west wall north center window rough opening	NVI			
Brown sealant	Level 1 west wall south center window rough opening				
		-			
		+			
		-			
		-			
	Material Brown sealant	Material Location Brown sealant Level 1 west wall north center window rough opening			

214 EAST GALER STREET, SUITE 300, SEATTLE, WA 98102 = 206.233.9639 MAIN = 866.727.0140 FAX = PBSUSA.COM

APPENDIX C

Lab/Cor PLM vs. TEM Letter

Lab/Cor Inc. Polarized Light Microscopy vs Transmission Electron Microscopy for Bulk Building Materials



Laboratories in Seattle, Portland and Eugene

PBS Engineering and Environmental 214 Galer Street Seattle, WA 98102

June 6, 2022

Attn: Claire Tsai

RE: Polarized Light Microscopy vs Transmission Electron Microscopy for Bulk Building Materials

Dear Claire,

There are several factors to evaluate when comparing Polarized Light Microscopy (PLM) to Transmission Electron Microscopy (TEM).

SAMPLE ANALYSIS:

PLM is typically performed at a much lower magnification, 100x for PLM compared to 20,000x for TEM. The lower magnification prevents PLM analysts from observing individual fibrils. If samples are excessively manipulated, asbestiform bundles can be further reduced into individual fibrils that are unable to be detected using standard PLM techniques. Traditional TEM methods will detect smaller fibrils that may have otherwise been unobserved by standard PLM methods. The limit of detection for thin fibrils is 0.05µm in width, which is difficult to resolve at PLM magnification which are 1µm in width at best.

PLM analysis will analyze a much larger representative portion of the sample than what would otherwise occur with TEM analysis. PLM preparation performs at minimum, three slide mounts from the sampled material, which is a significantly greater area analyzed than the area observed via TEM analysis. The TEM procedure begins with a greater volume of material which is gravimetrically reduced to eliminate as much background or interfering matrix as possible. The sample is then homogenized in solution which is aliquoted onto a filter. The TEM grids prepared from this filter are approximately 3mm in diameter. Albeit, the area analyzed in comparison is much less than what is analyzed by PLM, however much of the interfering matrix has been chemically and thermally removed thus giving a more accurate observation of the percent asbestos.

Often there are coatings or other interferences in the material and PLM has a difficult time distinguishing these and is unable to provide an accurate fiber identification without further reduction or TEM confirmation. The TEM's at LabCor, Inc are equipped with Thermo Fisher X-Ray Spectral analyzers with Silicon Drift Detectors. A spectral analysis is performed with a probe size between 30-200nm to determine the chemistry of the individual fibers. Furthermore, crystalline diffraction lattices are captured using a digital CCD camera to further identify the specific fiber type through mineralogical d-spacings. This specificity is not available with PLM.



SAMPLE PREPARTION:

The various materials being sampled and tested can also contribute to the differences between PLM and TEM analyses. Some matrices can be difficult to reduce without the assistance of gravimetric reduction; the use of sample ashing and hydrolysis. Gravimetric reduction is standard for all TEM bulk sample analyses. Occasionally bulk materials may have binders that coat the fibers of interest, thus obscuring the optical properties used to identify fibers via PLM. In conjunction, there are several ACM materials that are difficult to process by PLM due to the sample matrix.

Both analyses are dependent on a trained analyst choosing representative areas for testing. With TEM sample prep, the sample is much more homogenized which contributes to a more accurate analysis. Both PLM and TEM analyses will analyze individual layers, but occasionally obtaining enough material for TEM analysis is difficult with the sample provided. This may result in a biased result if the original starting weight isn't greater than 100mg of material.

Signed by:

Kate March Quality Assurance Officer

Derk Wipprecht Laboratory Manager

APPENDIX D

Construction Phase TEM Bulk Sampling Information

TEM Bulk Sample Inventory TEM Bulk Sample Laboratory Data Sheets TEM Bulk Sample Chain of Custody Documentation Pierce College Olympic South Abatement and Repairs Washington Department of Enterprise Services TEM ASBESTOS SAMPLE INVENTORY

Construction Phase TEM Bulk

PBS Engineering + Environmental PBS Project # 40535.488

PBS Sample	<u>#</u>	Material	Sample Location	Weight Percent	<u>Lab</u>
40535.488	9/29/2021-TEM01	Surface dust	Room 164 south supply ~14,000,000	16.27% Chrysotile 1.48% Tremolite Total Asbestos 17.75%	Lab/cor
40535.488	9/29/2021-TEM02	Surface dust	Room 163 east wall supply ~9,000,000	2.14% Chrysotile	Lab/cor
40535.488	9/29/2021-TEM03	Surface dust	FL1 corridor west side east supply duct ~1,000,000	1.06% Actinolite 2.64% Chrysotile Total Asbestos 3.70%	Lab/cor
40535.488	9/29/2021-TEM04	Surface dust	FL1 corridor west side center return duct ~500,000	0.77% Actinolite 1.53% Chrysotile Total Asbestos 2.30%	Lab/cor
40535.488	9/29/2021-TEM05	Surface dust	ECE center supply duct ~12,000	1.92% Chrysotile	Lab/cor
40535.488	10/5/2021-TEM01	Surface dust	Room 270 southwest supply duct ~6,000	NAD	Lab/cor
40535.488	10/13/2021-TEM01	Surface dust	2nd Floor Mechanical – MZ2 – post filter - supply duct ~4,000	NAD	Lab/cor
40535.488	10/13/2021-TEM02	Surface dust	2nd Floor Mechanical – MZ3 – post filter - return duct ~5,000	NAD	Lab/cor
40535.488	2/17/2022-TEM01	Fill dirt	South elevation northeast of Robin's Nest	0.10% Actinolite 0.10% Chrysotile Total Asbestos 0.19%	Lab/cor
40535.488	2/17/2022-TEM02	Fill dirt	South elevation northwest of Robin's Nest	0.15% Actinolite	Lab/cor
40535.488	2/17/2022-TEM03	Fill dirt	West elevation play mound east area	0.09% Chrysotile	Lab/cor
40535.488	2/17/2022-TEM04	Sand	West elevation near orange play structure	0.10% Anthophyllite	Lab/cor
40535.488	3/25/2022-TEM01	Concrete	LV1 former kitchen steps	0.29% Actinolite	Lab/cor

	ege Olympic South A n Department of En		epairs Construction Phase TEM Bulk	PBS Engineering + Environmental PBS Project # 40535.488		
PBS Sample # Material		<u>Material</u>	Sample Location	Weight Percent	Lab	
40535.488	3/25/2022-TEM02	Concrete	LV1 near previous 165 restroom	0.07% Actinolite 0.07% Chrysotile Total Asbestos 0.13%	Lab/cor	
40535.488	3/25/2022-TEM03	Concrete	LV1 northeast area at column near double doors	0.05% Tremolite	Lab/cor	
40535.488	3/25/2022-TEM04	Concrete	LV2 previous room 284 north floor	0.08% Actinolite	Lab/cor	
40535.488	3/25/2022-TEM05	Concrete	LV2 previous room 268	0.07% Tremolite	Lab/cor	
40535.488	3/25/2022-TEM06	Concrete	LV2 previous room 260	NAD	Lab/cor	
40535.488	3/25/2022-TEM07	Concrete	LV3 previous room 323 lower floor slab	0.05% Actinolite	Lab/cor	
40535.488	3/25/2022-TEM08	Concrete	LV3 northeast lower slab below room 329	0.16% Actinolite 0.05% Chrysotile Total Asbestos 0.21%	Lab/cor	
40535.488	3/25/2022-TEM09	Concrete	LV3 northwest lower slab below room 327	0.15% Actinolite 0.03% Chrysotile Total Asbestos 0.19%	Lab/cor	
40535.488	4/7/2022-TEM01	Surface Dust	Black swimming flipper – central shed - ECE	0.16% Actinolite	Lab/cor	
40535.488	4/7/2022-TEM02	Surface Dust	Olympic South covered shed west elevation wood shelf	0.10% Actinolite	Lab/cor	
40535.488	4/7/2022-TEM03	Concrete	East stairwell level 1	0.40% Actinolite 0.10% Chrysotile Total Asbestos 0.50%	Lab/cor	
40535.488	4/7/2022-TEM04	Concrete	East stairwell level 3	0.07% Chrysotile	Lab/cor	
40535.488	5/5/2022-TEM01	Marblecrete	Olympic S Level 3 S wall W side	1.34% Actinolite 4.55% Chrysotile Total Asbestos 5.89%	Lab/cor	

	ege Olympic South A n Department of Ent	PBS Engineering + Environmental PBS Project # 40535.488			
PBS Sample	<u>#</u>	<u>Material</u>	Sample Location	Weight Percent	Lab
40535.488	5/5/2022-TEM02	Marblecrete	Olympic S Level 3 S wall E side	3.09% Chrysotile	Lab/cor
40535.488	5/5/2022-TEM03	Marblecrete	Olympic S Level 2 Stairwell near doorway	2.40% Chrysotile	Lab/cor
40535.488	5/5/2022-TEM04	Marblecrete	Olympic S Level 1 Stairwell near N penetration	0.96% Actinolite	Lab/cor
40535.488	5/5/2022-TEM05	Marblecrete	Olympic S Exterior S elev. W side	0.14% Actinolite	Lab/cor
40535.488	5/5/2022-TEM06	Marblecrete	Olympic S Exterior SE corner E column	0.08% Actinolite	Lab/cor
40535.488	5/5/2022-TEM01QC	Marblecrete	Olympic S Level 3 S wall W side	1.81% Chrysotile	ALS
40535.488	5/5/2022-TEM02QC	Marblecrete	Olympic S Level 3 S wall E side	1.84% Chrysotile	ALS
40535.488	5/5/2022-TEM03QC	Marblecrete	Olympic S Level 2 Stairwell near doorway	1.56% Chrysotile	ALS
40535.488	5/5/2022-TEM04QC	Marblecrete	Olympic S Level 1 Stairwell near N penetration	NAD	ALS
40535.488	5/5/2022-TEM05QC	Marblecrete	Olympic S Exterior S elev. W side	NAD	ALS
40535.488	5/5/2022-TEM06QC	Marblecrete	Olympic S Exterior SE corner E column	NAD	ALS
40535.488	5/9/2022-TEM01	Plaster / gypsum	Olympic S Exterior NE Soffit bottom of the lid	1.83% Chrysotile	Lab/cor
40535.488	5/9/2022-TEM02	Plaster	Olympic S Exterior Bottom of the skybridge W of the columns	4.44% Chrysotile	Lab/cor
40535.488	5/9/2022-TEM03	EIFS	Olympic S Exterior N Elevation E side	NAD	Lab/cor
40535.488	5/9/2022-TEM04	EIFS	Olympic S Exterior N Elevation W side	NAD	Lab/cor
40535.488	5/17/2022-TEM01	Plaster	Olympic S Stairwell North Elevation	0.49% Actinolite	Lab/cor
40535.488	5/17/2022-TEM02	Plaster	Olympic S Stairwell East Elevation	0.65% Tremolite	Lab/cor
40535.488	5/17/2022-TEM03	Plaster	Olympic S Stairwell South Elevation	0.48% Tremolite	Lab/cor

	ege Olympic South A	PBS Engineering + Environmental PBS Project # 40535.488			
PBS Sample	<u>#</u>	<u>Material</u>	Sample Location	Weight Percent	Lab
40535.488	5/17/2022-TEM04	CMU	Olympic S wall between 283/284	1.12% Actinolite	Lab/cor
40535.488	5/17/2022-TEM05	СМU	Olympic S wall between 283/284	0.79% Actinolite 1.11% Tremolite Total Asbestos 1.90%	Lab/cor
40535.488	5/17/2022-TEM06	CMU	Olympic S wall between 283/284	0.76% Tremolite	Lab/cor
40535.488	5/26/22-TEM01	Soil	East elevation under stairs to mechanical mezzanine	0.11% Chrysotile 0.04% Tremolite Total Asbestos 0.15%	Lab/cor
40535.488	5/26/22-TEM02	Soil	East elevation drive thru near north exterior column	0.01% Chrysotile 0.14% Tremolite Total Asbestos 0.15%	Lab/cor
40535.488	6/17/2022-TEM01	Concrete	Level 1 northwest stairs	0.06% Actinolite	Lab/cor



ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) Final Report

Job Number: 210969 Client: PBS Engineering + Environmental Address: 214 E Galer Street Seattle, WA 98102 Project Name: Pierce College Olympic South Abatement and Repairs Project No.: 40535.488 PO Number: Sub Project: Reference No.: Report Number: 210969R01 Report Date: 10/4/2021

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample ; 210969 - S1	# Client Sample # and Description 40535.488-9/29/2021-TEM01 -	Analysis ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)	Analysis Notes	Date Received: 9/30/2021
210969 - S2	40535.488-9/29/2021-TEM02 -	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		9/30/2021
210969 - S3	40535.488-9/29/2021-TEM03 -	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		9/30/2021
210969 - S4	40535.488-9/29/2021-TEM04 -	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		9/30/2021
210969 - S5	40535.488-9/29/2021-TEM05 -	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		9/30/2021

ELAP Item 198.4 -TEM - Bulk Semi-Quantitative (Modified) Preparation and analysis of the above sample(s) was conducted in accordance with the ELAP Item 198.4 for the identification of regulated asbestiform minerals in Non-Friable Organically Bound Bulk Samples. Briefly, each sample was taken from at least three randomly selected areas. The sample was then weighed (Original Sample Weight) on an analytical balance (0.01 milligram sensitivity), ashed in a muffle furnace to remove the organic component, and weighed (Particulate After Ash). After a brief hydrolysis period in concentrated hydrochloric acid, the suspension was immediately diluted in 20 ml of laboratory reagent water. Appropriate aliquots were removed from the suspension and filtered onto mixed cellulose ester filters for TEM analysis. The remaining suspension was then filtered onto pre weighed 0.4µm polycarbonate (PC) filter and re-weighed upon completion of drying (Hydrolysis Adjusted Weight). Upon confirmation of the principal mineral type by diffraction and EDS chemistry, a visual estimate of the regulated asbestiform minerals, relative to the non-asbestos, was determined. Fibers, with an aspect ratio of at least 3:1 and with the proper diffraction/ chemistry, were identified as regulated asbestiform mineral types. 'Trace' is reported for those samples whose percent asbestos is below 1.0%. 'Trace' analytes reported with a Weight Percent of 0.01% are reported at the Limit of Detection.

This test report relates only to the items tested in this report. Samples such as soils, sediments or raw ores may require further mineralogical analysis to differentiate mineral species. Interpretation of these results is the sole responsibility of the client. Results are subject to the variation in the layers of the sample, the accuracy of the balance, the visual estimate on the microscope as well as other variations within the procedure.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,

Sierra Hinkle

Technician/Analyst



ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) -Final Report

	210969 S PBS Engineering H Pierce College Olyn		ent and Repairs	Report Number: 210969R01 Date Received: 9/30/2021		
	ple No.: S1 nple No.: 40535.4 scription: Analysis Date 10/4/2021	88-9/29/2021-TEM Microscope Hitachi 7000FA	01 Magnification 20000			
Analyte Desc			Weight Percent	Gravimetric Reduction	Weight Percent	
Chrysotile			16.27%	Acid Solubles	52.19%	
Tremolite			1.48%	Organics	18.24%	
		Asbestos Percer		 Residue	11.83%	
				Total Other Non-Asbestos Percent	82.25%	
	ple No.: S2 nple No.: 40535.4 scription: Analysis Date	88-9/29/2021-TEM Microscope	02 Magnification			
SH	10/4/2021	Hitachi 7000FA	20000			
Analyte Desc	cription		Weight Percent	Gravimetric Reduction	Weight Percent	
Chrysotile	е		2.14%	Acid Solubles	72.41%	
	Tota	I Asbestos Percen	nt 2.14%	Organics	19.02%	
				Residue	6.43%	
				Residue Total Other Non-Asbestos Percent	6.43% 97.86%	
Client San	ple No.: S3 nple No.: 40535.4 scription: Analysis Date 10/4/2021	88-9/29/2021-TEM Microscope Hitachi 7000FA	03 Magnification 20000			
Client San Des Analyst(s)	nple No.: 40535.4 scription: Analysis Date 10/4/2021	Microscope	Magnification		97.86%	
Client San Des Analyst(s) SH	nple No.: 40535.4 scription: Analysis Date 10/4/2021 cription	Microscope	Magnification 20000	Total Other Non-Asbestos Percent	97.86%	
Client San Des Analyst(s) SH Analyte Desc	nple No.: 40535.4 scription: Analysis Date 10/4/2021 cription	Microscope	Magnification 20000 Weight Percent	Total Other Non-Asbestos Percent Gravimetric Reduction	97.86% Weight Percent	
Client San Des Analyst(s) SH Analyte Desc Actinolite	nple No.: 40535.4 scription: Analysis Date 10/4/2021 cription e	Microscope	Magnification 20000 Weight Percent 1.06% 2.64%	Gravimetric Reduction Acid Solubles Organics Residue	97.86% Weight Percent 20.43%	
Client San Des Analyst(s) SH Analyte Desc Actinolite	nple No.: 40535.4 scription: Analysis Date 10/4/2021 cription e	Microscope Hitachi 7000FA	Magnification 20000 Weight Percent 1.06% 2.64%	Gravimetric Reduction Acid Solubles Organics	97.86% Weight Percent 20.43% 26.78%	
Des Analyst(s) SH Analyte Desc Actinolite Chrysotile Lab/Cor Sam Client San	nple No.: 40535.4 scription: Analysis Date 10/4/2021 cription e e Tota	Microscope Hitachi 7000FA	Magnification 20000 Weight Percent 1.06% 2.64% at 3.70%	Gravimetric Reduction Acid Solubles Organics Residue	97.86% Weight Percent 20.43% 26.78% 49.10%	
Client San Des Analyst(s) SH Analyte Desc Actinolite Chrysotile Lab/Cor Sam Client San Des Analyst(s) SH	nple No.: 40535.4 Analysis Date 10/4/2021 cription e Tota ple No.: S4 nple No.: 40535.4 scription Analysis Date 10/4/2021	Microscope Hitachi 7000FA I Asbestos Percer 88-9/29/2021-TEM Microscope	Magnification 20000 Weight Percent 1.06% 2.64% ot 3.70%	Gravimetric Reduction Acid Solubles Organics Residue Total Other Non-Asbestos Percent	97.86% Weight Percent 20.43% 26.78% 49.10% 96.30%	
Client San Des Analyst(s) SH Analyte Desc Actinolite Chrysotile Lab/Cor Sam Client San Des Analyst(s) SH Analyte Desc	nple No.: 40535.4 scription: Analysis Date 10/4/2021 cription e Tota nple No.: S4 nple No.: 40535.4 scription: Analysis Date 10/4/2021 cription	Microscope Hitachi 7000FA I Asbestos Percer 88-9/29/2021-TEM Microscope	Magnification 20000 Weight Percent 1.06% 2.64% ot 3.70% 04 Magnification 20000 Weight Percent	Gravimetric Reduction Acid Solubles Organics Residue Total Other Non-Asbestos Percent	97.86% Weight Percent 20.43% 26.78% 49.10% 96.30%	
Client San Des Analyst(s) SH Analyte Desc Actinolite Chrysotile Lab/Cor Sam Client San Des Analyst(s) SH Analyte Desc Actinolite	nple No.: 40535.4 scription: Analysis Date 10/4/2021 cription e Tota ple No.: S4 nple No.: 40535.4 scription: Analysis Date 10/4/2021 cription	Microscope Hitachi 7000FA I Asbestos Percer 88-9/29/2021-TEM Microscope	Magnification 20000 Weight Percent 1.06% 2.64% nt 3.70% 04 Magnification 20000 Weight Percent 0.77%	Gravimetric Reduction Acid Solubles Organics Residue Total Other Non-Asbestos Percent	97.86% Weight Percent 20.43% 26.78% 49.10% 96.30% Weight Percent 29.75%	
Client San Des Analyst(s) SH Analyte Desc Actinolite Chrysotile Lab/Cor Sam Client San Des Analyst(s) SH Analyte Desc	nple No.: 40535.4 scription: Analysis Date 10/4/2021 cription e Tota pple No.: S4 nple No.: 40535.4 scription: Analysis Date 10/4/2021 cription e	Microscope Hitachi 7000FA I Asbestos Percer 88-9/29/2021-TEM Microscope	Magnification 20000 Weight Percent 1.06% 2.64% at 3.70% 04 Magnification 20000 Weight Percent 0.77% 1.53%	Gravimetric Reduction Acid Solubles Organics Residue Total Other Non-Asbestos Percent	97.86% Weight Percent 20.43% 26.78% 49.10% 96.30% Weight Percent	



ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) -Final Report

Job Number: : Client: I	210969 S PBS Engineering ·	EA + Environmental		Report Number Date Receive	er: 210969R01 ed: 9/30/2021
	mple No.: 40535.4	88-9/29/2021-TEM	05		
Des Analyst(s) SH	scription: Analysis Date 10/4/2021	Microscope Hitachi 7000FA	Magnification 20000		
Analyte Description Chrysotile		Weight Percent 1.92%	Gravimetric Reduction Acid Solubles	Weight Percent 24.85%	
	Tota	I Asbestos Percen	t 1.92%	Organics Residue	36.84% 36.40%
				Total Other Non-Asbestos Percent	98.08%

Reviewed by:

inkle lerra-X Sierra Hinkle

Technician/Analyst



ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) -Final Report

			Final Rep	oort		
	Number: 210969 S Client: PBS Engineering + t Name: Pierce College Olyn		nd Repairs			eport Number: 210969R01 Date Received: 9/30/2021
	Cor Sample No: S1 lient Sample No: 40535.488 Description:	3-9/29/2021-TEM01				
Grid	Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	13.54762 g 13.62680 g 0.07918 g 13.61236 g 0.06474 g 18.24% Visual Estimate	Elements	Filter F After Hyc Hyc	ilter PreWeight Post Hydrolysis drolysis Weight drolysis Aliquot djusted Weight Begin Volume Acid Solubles Comment	13.58972 g 13.61264 g 0.02292 g 19.575 ml 0.02342 g 20 ml 52.19%
G9	Tremolite	4.00%	Mg, Si, Ca ItemType Diffraction Spectra Brightfield	ItemNum F66460DF F66460SP F66460BF	Confirmed SH 10/4/2021 SH 10/4/2021	Comment 0.53nm ROW SPACING
G9	Chrysotile	50.00%	Mg, Si, Fe ItemType Diffraction Spectra Brightfield	ltemNum F66461DF F66461SP F66461BF	Confirmed SH 10/4/2021 SH 10/4/2021	Comment 0.53nm ROW SPACING

G10 Tremolite 6.00% G10 Chrysotile 60.00%

Lab/Cor Sample No: S2

Client Sample No: 40535.488-9/29/2021-TEM02 Decembrations

	Description:					
	Container Weight	13.41323 g		Hydrolysis	Filter PreWeight	13.45475 g
	Weight Before Ash	13.55745 g		Filter	· Post Hydrolysis	13.46687 g
	Orig Sample Weight	0.14422 g		After H	ydrolysis Weight	0.01212 g
	Weight After Ash	13.53002 g		H	ydrolysis Aliquot	19.6 ml
	Particulate After Ash	0.11679 g		Hydrolysis	Adjusted Weight	0.01237 g
	Percent Organics	19.02%			Begin Volume	20 ml
					Acid Solubles	72.41%
Grid	Analyte	Visual Estimate	Elements		Comment	
G7	Chrysotile	20.00%				
G8	Chrysotile	30.00%	Mg, Si, Fe			
			ItemType	ItemNum	Confirmed	Comment
			Diffraction	F66464DF	SH 10/4/2021	0.53nm ROW SPACING
			Spectra	F66464SP	SH 10/4/2021	
			Brightfield	F66464BF		

Mg, Si, Ca

Mg, Si, Fe



			Final Repo			
Job N	lumber: 210969 SE Client: PBS Engineering +					port Number: 210969R01 ate Received: 9/30/2021
Lab/C	or Sample No: S3					
	lient Sample No: 40535.488-	9/29/2021-TEM03				
	Description:					
	Container Weight	13.63612 g		Hydrolysis	s Filter PreWeight	13.67653 g
	Weight Before Ash	13.71017 g			r Post Hydrolysis	13.71484 g
	Orig Sample Weight	0.07405 g			lydrolysis Weight	0.03831 g
	Weight After Ash	13.69034 g			lydrolysis Aliquot	19.6 ml
	Particulate After Ash	0.05422 g			Adjusted Weight	0.03909 g
	Percent Organics	26.78%			Begin Volume	20 ml
	•				Acid Solubles	20.43%
rid	Analyte	Visual Estimate	Elements		Comment	
7	Chrysotile	4.00%	Mg, Si, Fe			
	,		ItemType	ItemNum	Confirmed	Comment
			Diffraction	F66465DF	SH 10/4/2021	0.53nm ROW SPACING
			Spectra	F66465SP	SH 10/4/2021	
			Brightfield	F66465BF		
7	Actinolite	1.00%	Mg, Al, Si, Ca,	Mn, Fe		
3	Chrysotile	6.00%	Mg, Si, Fe			
В	Actinolite	3.00%	Mg, Al, Si, Ca,	Mn, Fe		
			ItemType	ItemNum	Confirmed	Comment
			Diffraction	F66466DF	SH 10/4/2021	0.53nm ROW SPACING
			Spectra Brightfield	F66466SP F66466BF	SH 10/4/2021	
	or Sample No: S4 lient Sample No: 40535.488-	9/29/2021-TEM04	Spectra	F66466SP		
	=	9/29/2021-TEM04	Spectra	F66466SP		
	lient Sample No: 40535.488- Description:		Spectra	F66466SP F66466BF	SH 10/4/2021	
	lient Sample No: 40535.488- Description: Container Weight	13.67077 g	Spectra	F66466SP F66466BF Hydrolysis	SH 10/4/2021	13.71314 g
	lient Sample No: 40535.488- Description: Container Weight Weight Before Ash		Spectra	F66466SP F66466BF Hydrolysis Filte	SH 10/4/2021 S Filter PreWeight Fr Post Hydrolysis	
	lient Sample No: 40535.488- Description: Container Weight	13.67077 g 13.73546 g	Spectra	F66466SP F66466BF Hydrolysis Filte After H	SH 10/4/2021 s Filter PreWeight er Post Hydrolysis Hydrolysis Weight	13.71314 g 13.73743 g
	lient Sample No: 40535.488- Description: Container Weight Weight Before Ash Orig Sample Weight	13.67077 g 13.73546 g 0.06469 g	Spectra	F66466SP F66466BF Hydrolysis Filte After H	SH 10/4/2021 S Filter PreWeight Fr Post Hydrolysis	13.71314 g 13.73743 g 0.02429 g
	lient Sample No: 40535.488- Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash	13.67077 g 13.73546 g 0.06469 g 13.71480 g	Spectra	F66466SP F66466BF Hydrolysis Filte After H	SH 10/4/2021 s Filter PreWeight r Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot	13.71314 g 13.73743 g 0.02429 g 19.6 ml
	lient Sample No: 40535.488- Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash	13.67077 g 13.73546 g 0.06469 g 13.71480 g 0.04403 g	Spectra	F66466SP F66466BF Hydrolysis Filte After H	SH 10/4/2021 s Filter PreWeight er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot s Adjusted Weight	13.71314 g 13.73743 g 0.02429 g 19.6 ml 0.02479 g
C	lient Sample No: 40535.488- Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash	13.67077 g 13.73546 g 0.06469 g 13.71480 g 0.04403 g	Spectra	F66466SP F66466BF Hydrolysis Filte After H	SH 10/4/2021 s Filter PreWeight er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot s Adjusted Weight Begin Volume	13.71314 g 13.73743 g 0.02429 g 19.6 ml 0.02479 g 20 ml
	lient Sample No: 40535.488- Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics	13.67077 g 13.73546 g 0.06469 g 13.71480 g 0.04403 g 31.94%	Spectra Brightfield	F66466SP F66466BF Hydrolysis Filte After H	SH 10/4/2021 s Filter PreWeight er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot s Adjusted Weight Begin Volume Acid Solubles	13.71314 g 13.73743 g 0.02429 g 19.6 ml 0.02479 g 20 ml
C	lient Sample No: 40535.488- Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	13.67077 g 13.73546 g 0.06469 g 13.71480 g 0.04403 g 31.94% Visual Estimate	Spectra Brightfield	F66466SP F66466BF Hydrolysis Filte After H	SH 10/4/2021 s Filter PreWeight er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot s Adjusted Weight Begin Volume Acid Solubles	13.71314 g 13.73743 g 0.02429 g 19.6 ml 0.02479 g 20 ml
C	lient Sample No: 40535.488- Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	13.67077 g 13.73546 g 0.06469 g 13.71480 g 0.04403 g 31.94% Visual Estimate	Spectra Brightfield Elements Mg, Si, Fe	F66466SP F66466BF Hydrolysis Filte After H Hydrolysis	SH 10/4/2021 s Filter PreWeight er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot s Adjusted Weight Begin Volume Acid Solubles Comment	13.71314 g 13.73743 g 0.02429 g 19.6 ml 0.02479 g 20 ml 29.75%
C	lient Sample No: 40535.488- Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	13.67077 g 13.73546 g 0.06469 g 13.71480 g 0.04403 g 31.94% Visual Estimate	Spectra Brightfield Elements Mg, Si, Fe ItemType Diffraction Spectra	F66466SP F66466BF Hydrolysis Filte After H Hydrolysis ItemNum F66467DF F66467SP	SH 10/4/2021 s Filter PreWeight er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot s Adjusted Weight Begin Volume Acid Solubles Comment	13.71314 g 13.73743 g 0.02429 g 19.6 ml 0.02479 g 20 ml 29.75% Comment
C	lient Sample No: 40535.488- Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	13.67077 g 13.73546 g 0.06469 g 13.71480 g 0.04403 g 31.94% Visual Estimate	Spectra Brightfield Elements Mg, Si, Fe ItemType Diffraction	F66466SP F66466BF Hydrolysis Filte After H Hydrolysis	SH 10/4/2021 s Filter PreWeight er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot s Adjusted Weight Begin Volume Acid Solubles Comment Confirmed SH 10/4/2021	13.71314 g 13.73743 g 0.02429 g 19.6 ml 0.02479 g 20 ml 29.75% Comment
C rid 7	lient Sample No: 40535.488- Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	13.67077 g 13.73546 g 0.06469 g 13.71480 g 0.04403 g 31.94% Visual Estimate	Spectra Brightfield Elements Mg, Si, Fe ItemType Diffraction Spectra	F66466SP F66466BF Hydrolysis Filte After H Hydrolysis ItemNum F66467DF F66467SP F66467SF	SH 10/4/2021 s Filter PreWeight er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot s Adjusted Weight Begin Volume Acid Solubles Comment Confirmed SH 10/4/2021	13.71314 g 13.73743 g 0.02429 g 19.6 ml 0.02479 g 20 ml 29.75% Comment
C	lient Sample No: 40535.488- Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte Chrysotile	13.67077 g 13.73546 g 0.06469 g 13.71480 g 0.04403 g 31.94% Visual Estimate 3.00%	Spectra Brightfield Elements Mg, Si, Fe ItemType Diffraction Spectra Brightfield	F66466SP F66466BF Hydrolysis Filte After H Hydrolysis ItemNum F66467DF F66467SP F66467SF	SH 10/4/2021 s Filter PreWeight er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot s Adjusted Weight Begin Volume Acid Solubles Comment Confirmed SH 10/4/2021	13.71314 g 13.73743 g 0.02429 g 19.6 ml 0.02479 g 20 ml 29.75% Comment
C irid 7	lient Sample No: 40535.488- Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte Chrysotile	13.67077 g 13.73546 g 0.06469 g 13.71480 g 0.04403 g 31.94% Visual Estimate 3.00%	Spectra Brightfield	F66466SP F66466BF Hydrolysis Filte After H Hydrolysis ItemNum F66467DF F66467BF Ca, Mn, Fe ItemNum F66468DF	SH 10/4/2021 s Filter PreWeight r Post Hydrolysis Hydrolysis Aliquot s Adjusted Weight Begin Volume Acid Solubles Comment Confirmed SH 10/4/2021 SH 10/4/2021	13.71314 g 13.73743 g 0.02429 g 19.6 ml 0.02479 g 20 ml 29.75% Comment 0.53nm ROW SPACING
C rid	lient Sample No: 40535.488- Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte Chrysotile	13.67077 g 13.73546 g 0.06469 g 13.71480 g 0.04403 g 31.94% Visual Estimate 3.00%	Spectra Brightfield	F66466SP F66466BF Hydrolysis Filte After H Hydrolysis ItemNum F66467DF F66467BF Ca, Mn, Fe ItemNum F66468DF F66468SP	SH 10/4/2021	13.71314 g 13.73743 g 0.02429 g 19.6 ml 0.02479 g 20 ml 29.75% Comment 0.53nm ROW SPACING
C rid	lient Sample No: 40535.488- Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte Chrysotile	13.67077 g 13.73546 g 0.06469 g 13.71480 g 0.04403 g 31.94% Visual Estimate 3.00%	Spectra Brightfield Elements Mg, Si, Fe ItemType Diffraction Spectra Brightfield Mg, Al, Si, K, O ItemType Diffraction Spectra Brightfield	F66466SP F66466BF Hydrolysis Filte After H Hydrolysis ItemNum F66467DF F66467BF Ca, Mn, Fe ItemNum F66468DF	SH 10/4/2021 s Filter PreWeight r Post Hydrolysis Hydrolysis Aliquot s Adjusted Weight Begin Volume Acid Solubles Comment Confirmed SH 10/4/2021 SH 10/4/2021	13.71314 g 13.73743 g 0.02429 g 19.6 ml 0.02479 g 20 ml 29.75% Comment 0.53nm ROW SPACING
C rid	lient Sample No: 40535.488- Description: Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte Chrysotile	13.67077 g 13.73546 g 0.06469 g 13.71480 g 0.04403 g 31.94% Visual Estimate 3.00%	Spectra Brightfield	F66466SP F66466BF Hydrolysis Filte After H Hydrolysis ItemNum F66467DF F66467BF Ca, Mn, Fe ItemNum F66468DF F66468SP	SH 10/4/2021 s Filter PreWeight r Post Hydrolysis Hydrolysis Aliquot s Adjusted Weight Begin Volume Acid Solubles Comment Confirmed SH 10/4/2021 SH 10/4/2021	13.71314 g 13.73743 g 0.02429 g 19.6 ml 0.02479 g 20 ml 29.75% Comment 0.53nm ROW SPACING

ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) -Final Report



ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) -Final Report

Job N	Number: 210969 SE Client: PBS Engineering +	EA Environmental				eport Number: 210969R0 Date Received: 9/30/2021
	Cor Sample No: S5 lient Sample No: 40535.488 Description:	9/29/2021-TEM05				
	Container Weight	13.57802 g		Hydrolysis	Filter PreWeight	13.62084 g
	Weight Before Ash	13.65126 g		Filter	Post Hydrolysis	13.64834 g
	Orig Sample Weight	0.07324 g		After H	ydrolysis Weight	0.02750 g
	Weight After Ash	13.62428 g		H	drolysis Aliquot	19.6 ml
	Particulate After Ash	0.04626 g		Hydrolysis	Adjusted Weight	0.02806 g
	Percent Organics	36.84%			Begin Volume	20 ml
					Acid Solubles	24.85%
Grid	Analyte	Visual Estimate	Elements		Comment	
G7	Chrysotile	4.00%	Mg, Si			
			ItemType	ItemNum	Confirmed	Comment
			Diffraction	F66469DF	SH 10/4/2021	0.53nm ROW SPACING
			Spectra	F66469SP	SH 10/4/2021	
			Brightfield	F66469BF		
G8	Chrysotile	6.00%	Mg, Si			

Reviewed by:

inkle lerra-X

Sierra Hinkle Technician/Analyst



LABORATORY CHAIN OF CUSTODY

Project: <u>Pierce College Olympic</u>	South Abatement & Repairs	Project #: <u>40535.488</u>
Analysis requested:		Date: 09/29/2021
Relinq'd by/Signature: 1 the	Sturt	Date/Time:
Received by/Signature:	by	Date/Time: 130/21 Sum
E	mail ALL INVOICES to: seattleap@p	bsusa.com
E-mail results to: Willem Mager Gregg Middaugh Mark Hiley Tim Ogden Ryan Hunter Prudy Stoudt-McRae	 Janet Murphy Kaitiin Soukup Allison Welch Toan Nguyen Peter Stensland Claire Tsai 	 Holly Tuttle Mike Smith Ferman Fletcher Cameron Budnick Michelle Dodson
TURN AROUND TIME: 1 Hour 2 Hours 4 Hours	24 Hours 48 Hours	X 35 Days

SAMPLE DATA FORM						
Sample #	Material	Location	Lab			
40535.488-9/29/2021-TEM01	Surface dust	Room 164 south supply ~14,000,000				
40535.488-9/29/2021-TEM02	Surface dust	Room 163 east wall supply ~9,000,000	Lab co			
40535.488-9/29/2021-TEM03	Surface dust	FL1 corridor west side east supply duct ~1,000,000				
40535.488-9/29/2021-TEM04	Surface dust	FL1 corridor west side center return duct ~500,000				
40535.488-9/29/2021-TEM05	Surface dust	ECE center supply duct ~12,000				
		· · · · · · · · · · · · · · · · · · ·				
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		· · · ·				
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ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) Final Report

 Job Number: 211000
 Report Number: 211000R01

 Client: PBS Engineering + Environmental
 Report Date: 10/8/2021

 Address: 214 E Galer Street
 Seattle, WA 98102

 Project Name: Pierce College Olympic South Abatement and Repairs
 Project No.: 40535.488

 PO Number:
 Sub Project:

 Sub Project:
 Reference No.:

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
211000 - S1	40535.488-10/5/2021-TEM01 -	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)	Many Mg-Al-Si fibers present	10/5/2021

ELAP Item 198.4 - Preparation and analysis of the above sample(s) was conducted in accordance with the ELAP Item 198.4 for the identification of regulated asbestiform minerals in Non-Friable Organically Bound Bulk Samples. Briefly, each sample was taken from at least three randomly selected areas. The sample was then weighed (Original Sample Weight) on an analytical balance (0.01 milligram sensitivity), ashed in a muffle furnace to remove the organic component, and weighed (Particulate After Ash). After a brief hydrolysis period in concentrated hydrochloric acid, the suspension was immediately diluted in 20 ml of laboratory reagent water. Appropriate aliquots were removed from the suspension and filtered onto mixed cellulose ester filters for TEM analysis. The remaining suspension was then filtered onto pre weighed 0.4µm polycarbonate (PC) filter and re-weighed upon completion of drying (Hydrolysis Adjusted Weight). Upon confirmation of the principal mineral type by diffraction and EDS chemistry, a visual estimate of the regulated asbestiform minerals, relative to the non-asbestos, was determined. Fibers, with an aspect ratio of at least 3:1 and with the proper diffraction/ chemistry, were identified as regulated asbestiform mineral types. 'Trace' is reported for those samples whose percent asbestos is below 1.0%. 'Trace' analytes reported with a Weight Percent of 0.01% are reported at the Limit of Detection.

This test report relates only to the items tested in this report. Samples such as soils, sediments or raw ores may require further mineralogical analysis to differentiate mineral species. Interpretation of these results is the sole responsibility of the client. Results are subject to the variation in the layers of the sample, the accuracy of the balance, the visual estimate on the microscope as well as other variations within the procedure.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,

Sierra Hinkle

Technician/Analyst



ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) -Final Report

Job Number: 211000 SEA Client: PBS Engineering + Environmental				•	ort Number: 211000R01 te Received: 10/5/2021	
		npic South Abatem	ent and Repairs	-		
Lab/Cor Sample No.: S1 Client Sample No.: 40535.488-10/5/2021-TEM01				Sample Notes: Many Mg-AI-Si fibers present		
			01			
Des	scription:					
Analyst(s)	Analysis Date	Microscope	Magnification			
SH	10/8/2021	Hitachi 7000FA	20000			
Analyte Description		Weight Percent	Gravimetric Reduction	Weight Percen		
None Detect (Regulated Asbestos) 0.00%		0.00%	Acid Solubles	40.92%		
Total Regulated Asbestos Percent ND*			ent ND*	Organics	25.00%	
				Residue	34.08%	
				Total Other Non-Asbestos	Percent 100.00%	

Reviewed by:

ulle X

Sierra Hinkle Technician/Analyst



ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) -Final Report

Job Number: 211000 SEA Client: PBS Engineering + Environmental Project Name: Pierce College Olympic South Abatement and Repairs				Report Number: 211000R01 Date Received: 10/5/2021		
Lab/Cor Sample No: S1 Client Sample No: 40535.488-10/5/2021-TEM01 Description:			SampleNotes: Many Mg-Al-Si fibers present			
	Container Weight	13.51000 g		Hydrolysis Filter PreWeight	13.55073 g	
	Weight Before Ash	13.62054 g		Filter Post Hydrolysis	13.58760 g	
	Orig Sample Weight	0.11054 g		After Hydrolysis Weight	0.03687 g	
	Weight After Ash	13.59290 `		Hydrolysis Aliquot	19.575 ml	
	Particulate After Ash	0.08290 g		Hydrolysis Adjusted Weight	0.03767 g	
	Percent Organics	25.00%		Begin Volume	20 ml	
	-			Acid Solubles	40.92%	
Grid	Analyte	Visual Estimate	Elements	Comment		
G9	None Detect (Regulated Asbestos)	0.00%				
G10	None Detect (Regulated Asbestos)	0.00%				

Reviewed by:

inkle X Sierra Hinkle

Technician/Analyst



LABORATORY CHAIN OF CUSTODY

Project:Pierce College Olym	Project #: <u>40535.488</u>		
Analysis requested:Semi-g	Date: 10/5/2021		
Relinq'd by/Signature:	van Heide	Date/Time: 10/5/2021 Date/Time: 10/5/21 16:07	
	Email ALL INVOICES to: seattleap@		
E-mail results to:			
Willem Mager	Janet Murphy	Holly Tuttle	
Gregg Middaugh	Kaitlin Soukup	Mike Smith	
Mark Hiley	Allison Welch	Ferman Fletcher	
Tim Ogden	🔲 Toan Nguyen	Cameron Budnick	
Ryan Hunter	Peter Stensland	Michelle Dodson	
Prudy Stoudt-McRae	🔀 Claire Tsai		
TURN AROUND TIME:			
1 Hour	24 Hours	3 Days	
2 Hours	48 Hours	Other	
4 Hours			

SAMPLE DATA FORM				
Sample #	Material	Location	Lab	
40535.488-10/5/2021-TEM01	Surface dust	Room 270 southwest supply duct ~6,000	SAT	



Report Number: 211029R01

Report Date: 10/21/2021

ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) Final Report

Job Number: 211029 Client: PBS Engineering + Environmental Address: 214 E Galer Street Seattle, WA 98102 Project Name: Pierce College Olympic South Abatement and Repairs Project No.: 40535.488 PO Number: Sub Project: Reference No.:

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample # 211029 - S1	Client Sample # and Description 40535.488-10/13/2021-TEM01 -	Analysis ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)	Analysis Notes	Date Received: 10/15/2021
211029 - S2	40535.488-10/13/2021-TEM02 -	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		10/15/2021

ELAP Item 198.4 - Preparation and analysis of the above sample(s) was conducted in accordance with the ELAP Item 198.4 for the identification of regulated asbestiform minerals in Non-Friable Organically Bound Bulk Samples. Briefly, each sample was taken from at least three randomly selected areas. The sample was then weighed (Original Sample Weight) on an analytical balance (0.01 milligram sensitivity), ashed in a muffle furnace to remove the organic component, and weighed (Particulate After Ash). After a brief hydrolysis period in concentrated hydrochloric acid, the suspension was immediately diluted in 20 ml of laboratory reagent water. Appropriate aliquots were removed from the suspension and filtered onto mixed cellulose ester filters for TEM analysis. The remaining suspension was then filtered onto pre weighed 0.4µm polycarbonate (PC) filter and re-weighed upon completion of drying (Hydrolysis Adjusted Weight). Upon confirmation of the principal mineral type by diffraction and EDS chemistry, a visual estimate of the regulated asbestiform minerals, relative to the non-asbestos, was determined. Fibers, with an aspect ratio of at least 3:1 and with the proper diffraction/ chemistry, were identified as regulated asbestiform mineral types. 'Trace' is reported for those samples whose percent asbestos is below 1.0%. 'Trace' analytes reported with a Weight Percent of 0.01% are reported at the Limit of Detection.

This test report relates only to the items tested in this report. Samples such as soils, sediments or raw ores may require further mineralogical analysis to differentiate mineral species. Interpretation of these results is the sole responsibility of the client. Results are subject to the variation in the layers of the sample, the accuracy of the balance, the visual estimate on the microscope as well as other variations within the procedure.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,

Sierra Hinkle

Technician/Analyst



Job Number: 211029 SEA Client: PBS Engineering + Environmental Project Name: Pierce College Olympic South Abatement and Repairs				•	oer: 211029R01 ed: 10/15/2021
	•	88-10/13/2021-TEN Microscope	//01 Magnification		
SH	10/21/2021	Hitachi 7000FA	20000		
Analyte Des None Det	ect (Regulated As	bestos) ed Asbestos Perc	Weight Percent 0.00% ent ND*	Gravimetric Reduction Acid Solubles Organics Residue	Weight Percent 25.80% 59.86% 14.34%
				Total Other Non-Asbestos Percent	
	•	88-10/13/2021-TEN Microscope Hitachi 7000FA	//02 Magnification 20000		
Analyte Des			Weight Percent	Gravimetric Reduction	Weight Percent
•	ect (Regulated As	bestos)	0.00%	Acid Solubles	23.88%
		ed Asbestos Perc		Organics	64.90%
	-			Residue	11.23%
				Total Other Non-Asbestos Percent	100.00%

Reviewed by:

mele lerra-X

Sierra Hinkle Technician/Analyst



	Number: 211029 SEA Client: PBS Engineering + E t Name: Pierce College Olympic	nvironmental	d Repairs	Report Number: 211029R0 Date Received: 10/15/202		
Lab/C	cor Sample No: S1					
С	lient Sample No: 40535.488-10	0/13/2021-TEM01				
	Description:					
	Container Weight	13.45939 g		Hydrolysis Filter PreWeight	13.50074 g	
	Weight Before Ash	13.52977 g		Filter Post Hydrolysis	13.51074 g	
	Orig Sample Weight	0.07038 g		After Hydrolysis Weight	0.01000 g	
	Weight After Ash	13.48764 g		Hydrolysis Aliquot	19.825 ml	
	Particulate After Ash	0.02825 g		Hydrolysis Adjusted Weight	0.01009 g	
	Percent Organics	59.86%		Begin Volume	20 ml	
				Acid Solubles	25.80%	
Grid	Analyte	Visual Estimate	Elements	Commen	nment	
G7	None Detect (Regulated Asbestos)	0.00%				
G8	None Detect (Regulated Asbestos)	0.00%				
	Cor Sample No: S2 lient Sample No: 40535.488-10 Description:	0/13/2021-TEM02				
	Container Weight	13.49004 g		Hydrolysis Filter PreWeight	13.52908 g	
	Weight Before Ash	13.58841 g		Filter Post Hydrolysis	13.54003 g	
	Orig Sample Weight	0.09837 g		After Hydrolysis Weight	0.01095 g	
	Weight After Ash	13.52457 g		Hydrolysis Aliquot	19.825 ml	
	Particulate After Ash	0.03453 g		Hydrolysis Adjusted Weight	0.01104 g	
	Percent Organics	64.90%		Begin Volume	20 ml	
	-			Acid Solubles	23.88%	
Grid	Analyte	Visual Estimate	Elements	Commen	t	
G7	None Detect (Regulated Asbestos)	0.00%				
G8	None Detect (Regulated Asbestos)	0.00%				

Reviewed by:

mile lerra-X Sierra Hinkle

Technician/Analyst



211 029 1/1 LABORATORY CHAIN OF CUSTODY

Project: <u>Pierce College Olympi</u>	c South Abatement & Repairs	Project #: <u>40535.488</u>
Analysis requested:Semi-qu	antitative TEM bulk	Date: 10/13/2021
Relinq'd by/Signature:	u Toai	Date/Time: 101 15 12021
Received by/Signature:	~kpr	Date/Time: 10/15/21 4:20pm
	Email ALL INVOICES to: seattleap@j	•
E-mail results to:	••••••••••••••••••••••••••••••••••••••	
 Willem Mager Gregg Middaugh Mark Hiley Tim Ogden Ryan Hunter 	Janet Murphy Kaitlin Soukup Allison Welch Toan Nguyen Peter Stensland	Holly Tuttle Mike Smith Ferman Fletcher Cameron Budnick
Prudy Stoudt-McRae	Claire Tsai	Michelle Dodson
TURN AROUND TIME:		
1 Hour 2 Hours 4 Hours	24 Hours 48 Hours	X 3 Days Other

	S	SAMPLE DATA FORM				
Sample #	Material	Location	Lab			
40535.488-10/13/2021-TEM01	Surface dust	2 nd Floor Mechanical – MZ2 – post filter - supply duct ~4,000	SAT			
40535.488-10/13/2021-TEM02	Surface dust	2 nd Floor Mechanical – MZ3 – post filter - return duct ~5,000				
· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·			
i ministra i nor i del constatione		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			
	<u> </u>	Reviewed by				
······		Results / Invoice Sent:	· · · · · · · · · · · · · · · · · · ·			
	· · · · · · · · · · · · · · · · · · ·	Sample Condition / Temp:				
			<u></u>			
	l					



Job Number: 220163 Client: PBS Engineering + Environmental Address: 214 E Galer Street Seattle, WA 98102 Project Name: Pierce College Olympic South Abatement and Repairs Project No.: 40535.488 PO Number: Sub Project: Reference No.: Report Number: 220163R01 Report Date: 2/22/2022

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Num.	Client Sample Number	Analysis	Analysis Notes	Date Sampled:	Date Received:
220163 - S1	40535.488-2/17/2022- TEM01	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)	Hornblends Present	2/17/2022	2/18/2022
220163 - S2	40535.488-2/17/2022- TEM02	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)	Hornblends Present	2/17/2022	2/18/2022
220163 - S3	40535.488-2/17/2022- TEM03	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		2/17/2022	2/18/2022
220163 - S4	40535.488-2/17/2022- TEM04	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)	Hornblends Present	2/17/2022	2/18/2022

ELAP Item 198.4 - Preparation and analysis of the above sample(s) was conducted in accordance with the ELAP Item 198.4 for the identification of regulated asbestiform minerals in Non-Friable Organically Bound Bulk Samples. Briefly, each sample was taken from at least three randomly selected areas. The sample was then weighed (Original Sample Weight) on an analytical balance (0.01 milligram sensitivity), ashed in a muffle furnace to remove the organic component, and weighed (Particulate After Ash). After a brief hydrolysis period in concentrated hydrochloric acid, the suspension was immediately diluted in 20 ml of laboratory reagent water. Appropriate aliquots were removed from the suspension and filtered onto mixed cellulose ester filters for TEM analysis. The remaining suspension was then filtered onto pre weighed 0.4µm polycarbonate (PC) filter and re-weighed upon completion of drying (Hydrolysis Adjusted Weight). Upon confirmation of the principal mineral type by diffraction and EDS chemistry, a visual estimate of the regulated asbestiform minerals, relative to the non-asbestos, was determined. Fibers, with an aspect ratio of at least 3:1 and with the proper diffraction/ chemistry, were identified as regulated asbestiform mineral types. 'Trace' is reported for those samples whose percent asbestos is below 1.0%. 'Trace' analytes reported with a Weight Percent of 0.01% are reported at the Limit of Detection.

This test report relates only to the items tested in this report. Samples such as soils, sediments or raw ores may require further mineralogical analysis to differentiate mineral species. Interpretation of these results is the sole responsibility of the client. Results are subject to the variation in the layers of the sample, the accuracy of the balance, the visual estimate on the microscope as well as other variations within the procedure.

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If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,





Job Number: 220163 SEA

Client: PBS Engineering + Environmental

Project Name: Pierce College Olympic South Abatement and Repairs

Lab/Cor Sample No · S1

Report Number: 220163R01 Date Received: 2/18/2022

Lab/Cor Sample No.: S1 Client Sample No.: 40535.488-2/17/2022-TEM01				Sample Notes: Hornblends Present		
Analyst(s) SB	Analysis Date 2/22/2022	Microscope JEOL-Sr 1200	Magnification 20000			
Analyte Description Actinolite Chrysotile		Weight Percent 0.10% 0.10%	Gravimetric Reduction Acid Solubles Organics	Weight Percent 1.18% 2.07%		
	Tota	I Asbestos Percer	nt 0.19%	Residue Total Other Non-Asbestos Percent	96.55% 99.81%	
Lab/Cor Sam Client Sar	nple No.: S2 nple No.: 40535.4	88-2/17/2022-TEM	02	Sample Notes: Hornblends Present		
Analyst(s) SB	Analysis Date 2/22/2022	Microscope JEOL-Sr 1200	Magnification 20000			
Analyte Dese Actinolite		I Asbestos Percer	Weight Percent 0.15% ht 0.15%	Gravimetric Reduction Acid Solubles Organics	Weight Percent 1.63% 1.44%	

Residue

Residue

Total Other Non-Asbestos Percent

Total Other Non-Asbestos Percent

Lab/Cor Sample No.: S3

Client Sample No.: 40535.488-2/17/2022-TEM03

Analyst(s)	Analysis Date	Microscope	Magnification		
SB	2/22/2022	JEOL-Sr 1200	20000		
Analyte Des	cription		Weight Percent	Gravimetric Reduction	Weight Percent
Chrysotile			0.09%	Acid Solubles	1.10%
	Tota	I Asbestos Percer	nt 0.09%	Organics	4.38%
				Residue	94.42%
				Total Other Non-Asbestos Percent	99.91%
Lab/Cor Sam Client Sar	nple No.: S4 nple No.: 40535.4	88-2/17/2022-TEM	104	Total Other Non-Asbestos Percent Sample Notes: Hornblends Present	99.91%
	-	88-2/17/2022-TEM Microscope	04 Magnification	Sample Notes:	99.91%
Client Sar	nple No.: 40535.4			Sample Notes:	99.91%
Client Sar Analyst(s)	nple No.: 40535.4 Analysis Date 2/22/2022	Microscope	Magnification	Sample Notes:	99.91% Weight Percent
Client Sar Analyst(s) SB	Analysis Date 2/22/2022	Microscope	Magnification 20000	Sample Notes: Hornblends Present	

97.43%

99.90%

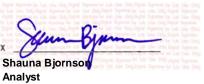
96.79%

99.85%



Job Number: 220163 SEA Client: PBS Engineering + Environmental **Report Number:** 220163R01 **Date Received:** 2/18/2022

Reviewed by:





ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) -
Final Report

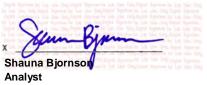
	Iumber: 220163 SE Client: PBS Engineering + t Name: Pierce College Olympic	Environmental	d Repairs			oort Number: 220163R01 te Received: 2/18/2022
	or Sample No: S1 ient Sample No: 40535.488-	2/17/2022-TEM01			SampleNotes: Hornblends Present	
	Container Weight	13.66820 g		Hydrolysis F	ilter PreWeight	13.70670 g
	Weight Before Ash	14.43222 g			Post Hydrolysis	14.43200 g
	Orig Sample Weight	0.76402 g			drolysis Weight	0.72530 g
	Weight After Ash	14.41638 g		-	drolysis Aliquot	19.625 ml
	Particulate After Ash	0.74818 g		Hydrolysis A	djusted Weight	0.73916 g
	Percent Organics	2.07%			Begin Volume	20 ml
	-				Acid Solubles	1.18%
Grid	Analyte	Visual Estimate	Elements		Comment	
G10	Actinolite	0.10%	Mg, Si, Ca,	Fe		
			ItemType	ItemNum	Confirmed	Comment
			Brightfield	J67658BF		
			Diffraction	J67658DF	SB 2/22/2022	0.53nm ROW SPACING
			Spectra	J67658SP	SB 2/22/2022	
G10	Chrysotile	0.10%	Mg, Si			
			ItemType	ItemNum	Confirmed	Comment
			Brightfield	J67659BF		
			Diffraction Spectra	J67659DF J67659SP	SB 2/22/2022 SB 2/22/2022	0.53nm ROW SPACING
	a	0.4004	opeend	00700001	OD LILLILOLL	
G11	Actinolite	0.10%				
G11	Chrysotile	0.10%				
	or Sample No: S2	0/17/0000 TEM00			SampleNotes: Hornblends Present	
	ient Sample No: 40535.488-	2/17/2022-1 EIVIU2			Hombienus Freseni	
	Container Weight	13.42827 g		Hydrolysis F	ilter PreWeight	13.46835 g
	Weight Before Ash	13.90613 g		Filter I	Post Hydrolysis	13.92000 g
	Orig Sample Weight	0.47786 g		After Hyd	drolysis Weight	0.45165 g
	Weight After Ash	13.89632 g		Нус	drolysis Aliquot	19.625 ml
	Particulate After Ash	0.46805 g		Hydrolysis A	djusted Weight	0.46028 g
	Percent Organics	1.44%			Begin Volume	20 ml
					Acid Solubles	1.63%
Grid	Analyte	Visual Estimate	Elements		Comment	
G7	Actinolite	0.20%	Mg, Al, Si, C	Ca, Fe		
			ItemType	ItemNum	Confirmed	Comment
			Brightfield	J67660BF		A FA BOW OB A ONLO
			Diffraction	J67660DF J67660SP	SB 2/22/2022 SB 2/22/2022	0.53nm ROW SPACING
			Spectra	J070003P	3D 2/22/2022	
G8	Actinolite	0.10%				

Page 4 of 5



Job I	Number: 220163 SE					eport Number: 220163R0
	Client: PBS Engineering +	Environmental			D	ate Received: 2/18/2022
Lab/0	Cor Sample No: S3					
C	lient Sample No: 40535.488-	2/17/2022-TEM03				
	Container Weight	13.28347 g		Hydrolysis	Filter PreWeight	13.32305 g
	Weight Before Ash	13.83007 g		Filter	Post Hydrolysis	13.83000 g
	Orig Sample Weight	0.54660 g		After H	ydrolysis Weight	0.50695 g
	Weight After Ash	13.80612 g		Hy	drolysis Aliquot	19.625 ml
	Particulate After Ash	0.52265 g		Hydrolysis .	Adjusted Weight	0.51664 g
	Percent Organics	4.38%			Begin Volume	20 ml
					Acid Solubles	1.10%
Grid	Analyte	Visual Estimate	Elements		Comment	
G4	Chrysotile	0.10%	Mg, Si			
	-		ItemType	ItemNum	Confirmed	Comment
			Diffraction	J67661DF	SB 2/22/2022	0.53nm ROW SPACING
			Spectra	J67661SP	SB 2/22/2022	
			Brightfield	J67661BF		
G5	Chrysotile	0.10%				
Lab/0	Cor Sample No: S4				SampleNotes:	
C	Client Sample No: 40535.488-	2/17/2022-TEM04			Hornblends Present	
	Container Weight	13.58258 g		Hydrolysis	Filter PreWeight	13.62176 g
	Weight Before Ash	14.29259 g		Filter	Post Hydrolysis	14.31165 g
	Orig Sample Weight	0.71001 g		After H	drolysis Weight	0.68989 g
	Weight After Ash	14.28696 g		Hy	drolysis Aliquot	99.625 ml
	Particulate After Ash	0.70438 g		Hydrolysis	Adjusted Weight	0.69249 g
		0 700/			Begin Volume	100 ml
	Percent Organics	0.79%			_og	
	Percent Organics	0.79%			Acid Solubles	1.68%
Grid	Percent Organics Analyte	0.79% Visual Estimate	Elements		•	1.68%
	-		Elements Mg, Si, Fe		Acid Solubles	1.68%
	Analyte	Visual Estimate		ItemNum	Acid Solubles	1.68% Comment
	Analyte	Visual Estimate	Mg, Si, Fe ItemType Brightfield	J67662BF	Acid Solubles Comment Confirmed	Comment
Grid G10	Analyte	Visual Estimate	Mg, Si, Fe ItemType Brightfield Diffraction	J67662BF J67662DF	Acid Solubles Comment Confirmed SB 2/22/2022	
	Analyte	Visual Estimate	Mg, Si, Fe ItemType Brightfield	J67662BF	Acid Solubles Comment Confirmed	Comment

Reviewed by:





2 Hours 4 Hours

LABORATORY CHAIN OF CUSTODY

		220163
Project: Pierce College Olym	pic South Abatement & Repairs	Project #: <u>40535.488</u>
Analysis requested:Semi-o	uantitative TEM bulk	Date: 2/17/2022
Relinq'd by/Signature:	uie Then	Date/Time: 2/17/2022
Received by/Signature: Th	7.30	Date/Time: 2.17.22 5pm
	Email ALL INVOICES to: seattleap@	pbsusa.com
E-mail results to:	_	
Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	Claire Tsai	
TURN AROUND TIME:		
1 Hour	24 Hours	🛛 3 Days
2 Hours	48 Hours	Other

48 Hours

SAMPLE DATA FORM					
Sample #	Material	Location	Lab		
40535.488-2/17/2022-TEM01	Fill dirt	South Elevation northeast of Robin's Nest	Labcor		
40535.488-2/17/2022-TEM02	Fill dirt	South Elevation northwest of Robin's Nest			
40535.488-2/17/2022-TEM03	Fill dirt	West Elevation Play mound east area			
40535.488-2/17/2022-TEM04	Sand	West Elevation near orange play structure			



Report Number: 220306R02

Report Date: 3/31/2022

ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) Final Report

Job Number: 220306

Client: PBS Engineering + Environmental

Address: 214 E Galer Street

Seattle, WA 98102

Project Name: Pierce College Olympic South Abatement and Repairs Project No.: 40535.488 PO Number: Sub Project: Reference No.:

Report Note: R01 was the Preliminary Report

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Num.	Client Sample Number	Analysis	Analysis Notes	Date Received:
220306 - S1	40535.488-3/25/22- TEM01	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		3/28/2022
220306 - S2	40535.488-3/25/22- TEM02	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		3/28/2022
220306 - S3	40535.488-3/25/22- TEM03	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		3/28/2022
220306 - S4	40535.488-3/25/22- TEM04	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		3/28/2022
220306 - S5	40535.488-3/25/22- TEM05	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		3/28/2022
220306 - S6	40535.488-3/25/22- TEM06	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		3/28/2022
220306 - S7	40535.488-3/25/22- TEM07	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		3/28/2022
220306 - S8	40535.488-3/25/22- TEM08	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		3/28/2022
220306 - S9	40535.488-3/25/22- TEM09	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		3/28/2022



Job Number: 220306

Client: PBS Engineering + Environmental

Report Number: 220306R02 Report Date: 3/31/2022

Project Name: Pierce College Olympic South Abatement and Repairs

ELAP Item 198.4 - Preparation and analysis of the above sample(s) was conducted in accordance with the ELAP Item 198.4 for the identification of TEM - Bulk Semi-Quantitative (Modified) regulated asbestiform minerals in Non-Friable Organically Bound Bulk Samples. Briefly, each sample was taken from at least three randomly selected areas. The sample was then weighed (Original Sample Weight) on an analytical balance (0.01 milligram sensitivity), ashed in a muffle furnace to remove the organic component, and weighed (Particulate After Ash). After a brief hydrolysis period in concentrated hydrochloric acid, the suspension was immediately diluted in 20 ml of laboratory reagent water. Appropriate aliquots were removed from the suspension and filtered onto mixed cellulose ester filters for TEM analysis. The remaining suspension was then filtered onto pre weighed 0.4µm polycarbonate (PC) filter and re-weighed upon completion of drying (Hydrolysis Adjusted Weight). Upon confirmation of the principal mineral type by diffraction and EDS chemistry, a visual estimate of the regulated asbestiform minerals, relative to the non-asbestos, was determined. Fibers, with an aspect ratio of at least 3:1 and with the proper diffraction/ chemistry, were identified as regulated asbestiform mineral types. 'Trace' is reported for those samples whose percent asbestos is below 1.0%. 'Trace' analytes reported with a Weight Percent of 0.01% are reported at the Limit of Detection.

This test report relates only to the items tested in this report. Samples such as soils, sediments or raw ores may require further mineralogical analysis to differentiate mineral species. Interpretation of these results is the sole responsibility of the client. Results are subject to the variation in the layers of the sample, the accuracy of the balance, the visual estimate on the microscope as well as other variations within the procedure.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,





Job Number: 220306 SEA Client: PBS Engineering + Environmental Report Number: 220306R02 Date Received: 3/28/2022

Client: PBS Engineering + Environmental Project Name: Pierce College Olympic South Abatement and Repairs

Lab/Cor Sample No.: S1

Client Sample No.: 40535.488-3/25/22-TEM01

Analyst(s) KM	Analysis Date 3/31/2022	Microscope JEOL-Sr 1200	Magnification 20000		
Analyte Des			Weight Percent	Gravimetric Reduction	Weight Percent
Actinolite	-		0.29%	Acid Solubles	16.55%
	Tota	I Asbestos Perce	nt 0.29%	Organics	5.99%
				Residue	77.16%
				Total Other Non-Asbestos Percent	99.71%
	nple No.: S2 mple No.: 40535.4	88-3/25/22-TEM02	<u>!</u>		
Analyst(s)	Analysis Date	Microscope	Magnification		
KM	3/31/2022	JEOL-Sr 1200	20000		
Analyte Des	cription		Weight Percent	Gravimetric Reduction	Weight Percen
Actinolite	9		0.07%	Acid Solubles	27.09%
Chrysotil	le		0.07%	Organics	5.47%
	Tota	I Asbestos Perce	nt 0.13%	Residue	67.30%
				Total Other Non-Asbestos Percent	99.87%
Analyst(s) KM	Analysis Date 3/31/2022	Microscope JEOL-Sr 1200	Magnification 20000		
Analyte Des	cription		Weight Percent	Gravimetric Reduction	Weight Percen
Tremolite	9		0.05%	Acid Solubles	32.12%
	Tota	I Asbestos Perce	nt 0.05%	Organics	5.53%
				Residue	62.30%
				Total Other Non-Asbestos Percent	99.95%
Lab/Cor San Client Sa	nple No.: S4 mple No.: 40535.4	88-3/25/22-TEM04			
Analyst(s) KM	Analysis Date 3/31/2022	Microscope JEOL-Sr 1200	Magnification 20000		
Analyte Des					
	cription		Weight Percent	Gravimetric Reduction	Weight Percen
Actinolite	•		Weight Percent 0.08%	Gravimetric Reduction Acid Solubles	Weight Percen 17.70%
Actinolite	e	I Asbestos Perce	0.08%		-
Actinolite	e	I Asbestos Perce	0.08%	Acid Solubles	17.70%

Total Other Non-Asbestos Percent 99.92%



Job Number: Client:	220306 S PBS Engineering +	EA ⊦ Environmental		-	er: 220306R02 ed: 3/28/2022
Lab/Cor Sam Client Sa	nple No.: S5 mple No.: 40535.4	88-3/25/22-TEM05			
Analyst(s) KM	Analysis Date 3/31/2022	Microscope JEOL-Sr 1200	Magnification 20000		
Analyte Des Tremolite	•		Weight Percent 0.07%	Gravimetric Reduction Acid Solubles	Weight Percent 22.01%
	Tota	I Asbestos Percen	t 0.07%	Organics Residue	6.88% 71.04%
				Total Other Non-Asbestos Percent	99.93%
Lab/Cor San Client San	nple No.: S6 mple No.: 40535.4	88-3/25/22-TEM06			
Analyst(s) KM	Analysis Date 3/31/2022	Microscope JEOL-Sr 1200	Magnification 20000		
Analyte Des	cription		Weight Percent	Gravimetric Reduction	Weight Percen
None Det	ect (Regulated As	bestos)	0.00%	Acid Solubles	27.12%
				Organics	6.88%
				Residue Total Other Non-Asbestos Percent	66.00% 100.00%
Analyst(s)	Malysis Date	Microscope	Magnification		
KM	3/31/2022	JEOL-Sr 1200	20000	Oravier strip Doduction	Mainht Danaan
Analyte Des Actinolite	-		Weight Percent 0.05%	Gravimetric Reduction Acid Solubles	Weight Percen 28.44%
Actinonite		Asbestos Percen		_ Organics	9.39%
				Residue	62.12%
				Total Other Non-Asbestos Percent	99.95%
l ab/Cor Sam	nple No.: S8 mple No.: 40535.4	88-3/25/22-TEM08			
	Analysis Date 3/31/2022	Microscope JEOL-Sr 1200	Magnification 20000		
Client Sar Analyst(s)	Analysis Date 3/31/2022	Microscope	-	Gravimetric Reduction	Weight Percen
Client San Analyst(s) KM	Analysis Date 3/31/2022 cription	Microscope	20000	Gravimetric Reduction Acid Solubles	Weight Percen 36.13%
Client Sat Analyst(s) KM Analyte Des	Analysis Date 3/31/2022 cription	Microscope	20000 Weight Percent		-
Client Sat Analyst(s) KM Analyte Desc Actinolite	Analysis Date 3/31/2022 cription e	Microscope	20000 Weight Percent 0.16% 0.05%	Acid Solubles Organics Residue	36.13%
Client Sat Analyst(s) KM Analyte Desc Actinolite	Analysis Date 3/31/2022 cription e	Microscope JEOL-Sr 1200	20000 Weight Percent 0.16% 0.05%	Acid Solubles Organics	0.62%



Job Number:	220306	SEA		Report Numb	er: 220306R02
Client:	PBS Engineering	y + Environmental		Date Receive	ed: 3/28/2022
Lab/Cor Sam Client Sam	-	.488-3/25/22-TEM09			
Analyst(s)	Analysis Date	Microscope	Magnification		
KM	3/31/2022	JEOL-Sr 1200	20000		
Analyte Des	cription		Weight Percent	Gravimetric Reduction	Weight Percent
Actinolite)		0.15%	Acid Solubles	23.10%
Chrysotil	e		0.03%	Organics	9.60%
	То	tal Asbestos Percer	nt 0.19%	Residue	67.12%
				Total Other Non-Asbestos Percent	99.81%

Reviewed by:





	Iumber: 220306 SE Client: PBS Engineering + t Name: Pierce College Olympic	Environmental	d Repairs			eport Number: 220306R02 ate Received: 3/28/2022
	cor Sample No: S1 lient Sample No: 40535.488-	3/25/22-TEM01				
	Container Weight	13.65157 g		Hvdrolvsi	s Filter PreWeight	13.69101 g
	Weight Before Ash	14.06746 g			er Post Hydrolysis	14.01032 g
	Orig Sample Weight	0.41589 g			Hydrolysis Weight	0.31931 g
	Weight After Ash	14.04253 g			Hydrolysis Aliquot	19.825 ml
	Particulate After Ash	0.39096 g			s Adjusted Weight	0.32213g
	Percent Organics	5.99%			Begin Volume	20 ml
	i olooni organioo				Acid Solubles	16.55%
Grid	Analyte	Visual Estimate	Elements		Comment	
G4	Actinolite	0.50%	Mg, Al, Si, I	K, Ca, Ti, Mn, Fe)	
			ItemType	ItemNum	Confirmed	Comment
			Spectra	J67921SP	KM 3/31/2022	
			Diffraction Brightfield	J67921DF J67921BF	KM 3/31/2022	0.53nm ROW SPACING
G5	Actinolite	0.25%				
	Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics	13.65127 g 14.02782 g 0.37655 g 14.00723 g 0.35596 g 5.47%		Filte After I	s Filter PreWeight er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot s Adjusted Weight Begin Volume Acid Solubles	13.68914 g 13.94086 g 0.25172 g 19.825 ml 0.25394 g 20 ml 27.09%
Grid	Analyte	Visual Estimate	Elements		Comment	
G4	Chrysotile	0.10%	Mg, Si ItemType Spectra	ltemNum J67923SP	Confirmed KM 3/31/2022	Comment
			Diffraction Brightfield	J67923DF J67923BF		0.53nm ROW SPACING
G4	Actinolite	0.10%				
			ItemType	ItemNum	Confirmed	Comment
			Spectra	J67924SP	KM 3/31/2022	
			Diffraction Brightfield	J67924DF J67924BF	KM 3/31/2022	0.53nm ROW SPACING
~~	Ohmusatila	0.400/	Brightlield	JU/ J24DF		
G5	Chrysotile	0.10%				
G5	Actinolite	0.10%				



Jop I	Number: 220306 SE	A			Re	eport Number: 220306R0
	Client: PBS Engineering +	Environmental			C	Date Received: 3/28/2022
Lab/C	Cor Sample No: S3					
	lient Sample No: 40535.488-	3/25/22-TEM03				
	Container Weight	13.61877 g		Hydrolysis	s Filter PreWeight	13.65881 g
	Weight Before Ash	13.69414 g			er Post Hydrolysis	13.70539 g
	Orig Sample Weight	0.07537 g			lydrolysis Weight	0.04658g
	Weight After Ash	13.68997 g			lydrolysis Aliquot	19.825 ml
	Particulate After Ash	0.07120 g			Adjusted Weight	0.04699 g
	Percent Organics	5.53%		, ,	Begin Volume	20 ml
	Jan 19				Acid Solubles	32.12%
Grid	Analyte	Visual Estimate	Elements		Comment	
G4	Tremolite	0.05%	Mg, Si, Ca,	Fe		
			ItemType	ItemNum	Confirmed	Comment
			Spectra	J67925SP	KM 3/31/2022	
			Diffraction	J67925DF	KM 3/31/2022	0.53nm ROW SPACING
			Brightfield	J67925BF		
G5	Tremolite	0.10%	Brightfield	J67925BF		
	Tremolite	0.10%	Brightfield	J67925BF		
Lab/C			Brightfield	J67925BF		
Lab/C	Cor Sample No: S4		Brightfield		s Filter PreWeight	13.69640 g
Lab/C	Cor Sample No: S4 lient Sample No: 40535.488-	3/25/22-TEM04	Brightfield	Hydrolysis	s Filter PreWeight er Post Hydrolysis	13.69640 g 14.18794 g
Lab/C	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight	3/25/22-TEM04 13.65465 g	Brightfield	Hydrolysis	-	e e
Lab/C	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight Weight Before Ash	3/25/22-TEM04 13.65465 g 14.30111 g	Brightfield	Hydrolysis Filte After H	er Post Hydrolysis	14.18794 g
Lab/C	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight	3/25/22-TEM04 13.65465 g 14.30111 g 0.64646 g	Brightfield	Hydrolysis Filte After H	er Post Hydrolysis Hydrolysis Weight	14.18794g 0.49154g
Lab/C	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash	3/25/22-TEM04 13.65465 g 14.30111 g 0.64646 g 14.26497 g	Brightfield	Hydrolysis Filte After H	er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot	14.18794g 0.49154g 19.825ml
Lab/C	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash	3/25/22-TEM04 13.65465 g 14.30111 g 0.64646 g 14.26497 g 0.61032 g	Brightfield	Hydrolysis Filte After H	er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot 5 Adjusted Weight	14.18794g 0.49154g 19.825ml 0.49588g
Lab/(C	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash	3/25/22-TEM04 13.65465 g 14.30111 g 0.64646 g 14.26497 g 0.61032 g	Elements	Hydrolysis Filte After H	er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot Adjusted Weight Begin Volume	14.18794 g 0.49154 g 19.825 ml 0.49588 g 20 ml
Lab/C C	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics	3/25/22-TEM04 13.65465 g 14.30111 g 0.64646 g 14.26497 g 0.61032 g 5.59%		Hydrolysis Filte After H Hydrolysis	er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot Adjusted Weight Begin Volume Acid Solubles Comment	14.18794 g 0.49154 g 19.825 ml 0.49588 g 20 ml
Lab/C C	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	3/25/22-TEM04 13.65465 g 14.30111 g 0.64646 g 14.26497 g 0.61032 g 5.59% Visual Estimate	Elements	Hydrolysis Filte After H Hydrolysis	er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot Adjusted Weight Begin Volume Acid Solubles Comment	14.18794 g 0.49154 g 19.825 ml 0.49588 g 20 ml 17.70%
Lab/C C	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	3/25/22-TEM04 13.65465 g 14.30111 g 0.64646 g 14.26497 g 0.61032 g 5.59% Visual Estimate	Elements Mg, Al, Si, C	Hydrolysis Filte After H Hydrolysis Ca, Mn, Fe	er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot 5 Adjusted Weight Begin Volume Acid Solubles Comment Additional Si fr	14.18794 g 0.49154 g 19.825 ml 0.49588 g 20 ml 17.70%
Lab/C C	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	3/25/22-TEM04 13.65465 g 14.30111 g 0.64646 g 14.26497 g 0.61032 g 5.59% Visual Estimate	Elements Mg, Al, Si, C ItemType Spectra Diffraction	Hydrolysis Filte After H Hydrolysis Ca, Mn, Fe ItemNum J67926SP J67926DF	er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot 5 Adjusted Weight Begin Volume Acid Solubles Comment Additional Si fr Confirmed	14.18794 g 0.49154 g 19.825 ml 0.49588 g 20 ml 17.70%
<u>с</u>	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	3/25/22-TEM04 13.65465 g 14.30111 g 0.64646 g 14.26497 g 0.61032 g 5.59% Visual Estimate	Elements Mg, Al, Si, C ItemType Spectra	Hydrolysis Filte After H Hydrolysis Ca, Mn, Fe ItemNum J67926SP	er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot 5 Adjusted Weight Begin Volume Acid Solubles <u>Comment</u> Additional Si fr Confirmed KM 3/31/2022	14.18794 g 0.49154 g 19.825 ml 0.49588 g 20 ml 17.70%



	Number: 220306 SEA				eport Number: 220306R0 Date Received: 3/28/2022
Lab/C	Cor Sample No: S5				
	lient Sample No: 40535.488-3	3/25/22-TEM05			
	Container Weight	13.67210 g		Hydrolysis Filter PreWeight	13.71279g
	Weight Before Ash	13.93469 g		Filter Post Hydrolysis	13.89788 g
	Orig Sample Weight	0.26259 g		After Hydrolysis Weight	0.18509g
	Weight After Ash	13.91663 g		Hydrolysis Aliquot	19.825 ml
	Particulate After Ash	0.24453 g		Hydrolysis Adjusted Weight	0.18672g
	Percent Organics	6.88%		Begin Volume	20 ml
				Acid Solubles	22.01%
Grid	Analyte	Visual Estimate	Elements	Comment	
G4	Tremolite	0.10%			
G5	Tremolite	0.10%	Mg, Si, Ca,	Fe	
			ItemType	ItemNum Confirmed	Comment
			Spectra	J67927SP KM 3/31/2022	
			Diffraction Brightfield	J67927DF KM 3/31/2022	0.53nm ROW SPACING
			Diffraction Brightfield	J67927DF KM 3/31/2022 J67927BF	0.53nm ROW SPACING
	Cor Sample No: S6				0.53nm ROW SPACING
	Cor Sample No: S6 lient Sample No: 40535.488-3	3/25/22-TEM06			0.53nm ROW SPACING
	•	3/25/22-TEM06 13.72945 g			0.53nm ROW SPACING 13.77062 g
	lient Sample No: 40535.488-3			J67927BF	
	lient Sample No: 40535.488-3 Container Weight	13.72945 g		J67927BF Hydrolysis Filter PreWeight	13.77062 g
	lient Sample No: 40535.488-3 Container Weight Weight Before Ash	13.72945 g 13.84788 g		J67927BF Hydrolysis Filter PreWeight Filter Post Hydrolysis	13.77062 g 13.84810 g
	lient Sample No: 40535.488-3 Container Weight Weight Before Ash Orig Sample Weight	13.72945 g 13.84788 g 0.11843 g		J67927BF Hydrolysis Filter PreWeight Filter Post Hydrolysis After Hydrolysis Weight	13.77062 g 13.84810 g 0.07748 g
	lient Sample No: 40535.488-3 Container Weight Weight Before Ash Orig Sample Weight Weight After Ash	13.72945 g 13.84788 g 0.11843 g 13.83973 g		J67927BF Hydrolysis Filter PreWeight Filter Post Hydrolysis After Hydrolysis Weight Hydrolysis Aliquot	13.77062 g 13.84810 g 0.07748 g 19.825 ml
	lient Sample No: 40535.488-3 Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash	13.72945 g 13.84788 g 0.11843 g 13.83973 g 0.11028 g		J67927BF Hydrolysis Filter PreWeight Filter Post Hydrolysis After Hydrolysis Weight Hydrolysis Aliquot Hydrolysis Adjusted Weight	13.77062 g 13.84810 g 0.07748 g 19.825 ml 0.07816 g
	lient Sample No: 40535.488-3 Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash	13.72945 g 13.84788 g 0.11843 g 13.83973 g 0.11028 g		J67927BF Hydrolysis Filter PreWeight Filter Post Hydrolysis After Hydrolysis Weight Hydrolysis Aliquot Hydrolysis Adjusted Weight Begin Volume	13.77062 g 13.84810 g 0.07748 g 19.825 ml 0.07816 g 20 ml
C	lient Sample No: 40535.488-3 Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics	13.72945 g 13.84788 g 0.11843 g 13.83973 g 0.11028 g 6.88%	Brightfield	J67927BF Hydrolysis Filter PreWeight Filter Post Hydrolysis After Hydrolysis Weight Hydrolysis Adjusted Weight Begin Volume Acid Solubles	13.77062 g 13.84810 g 0.07748 g 19.825 ml 0.07816 g 20 ml

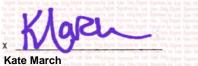


Job I	Number: 220306 SE Client: PBS Engineering +					eport Number: 220306R0 Date Received: 3/28/2022
	Cor Sample No: S7 lient Sample No: 40535.488-	3/25/22-TEM07				
	Container Weight	13.34871 g		Hvdrolvsis F	ilter PreWeight	13.38795 g
	Weight Before Ash	13.66157 g			Post Hydrolysis	13.58074 g
	Orig Sample Weight	0.31286 g			Irolysis Weight	0.19279g
	Weight After Ash	13.63219 g		-	Irolysis Aliquot	19.825 ml
	Particulate After Ash	0.28348 g		•	djusted Weight	0.19449g
	Percent Organics	9.39%			Begin Volume	20 ml
					Acid Solubles	28.44%
Grid	Analyte	Visual Estimate	Elements		Comment	
G4	Actinolite	0.05%	Mg, Al, Si, 0	Ca, Ti, Mn, Fe		
			ItemType	ItemNum	Confirmed	Comment
			Spectra	J67928SP	KM 3/31/2022	
			Diffraction	J67928DF	KM 3/31/2022	0.53nm ROW SPACING
			Brightfield	J67928BF		
G5	Actinolite	0.10%				
	Cor Sample No: S8 lient Sample No: 40535.488-	3/25/22-TEM08				
	lient Sample No: 40535.488- Container Weight	13.84629 g			ilter PreWeight	13.88416g
	Lient Sample No: 40535.488- Container Weight Weight Before Ash	13.84629 g 14.22691 g		Filter P	Post Hydrolysis	14.12280 g
	lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight	13.84629 g 14.22691 g 0.38062 g		Filter F After Hyd	Post Hydrolysis Irolysis Weight	14.12280 g 0.23864 g
	Lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash	13.84629 g 14.22691 g 0.38062 g 14.22454 g		Filter F After Hyd Hyd	Post Hydrolysis Irolysis Weight Irolysis Aliquot	14.12280 g 0.23864 g 19.825 ml
	lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash	13.84629 g 14.22691 g 0.38062 g 14.22454 g 0.37825 g		Filter F After Hyd Hyd	Post Hydrolysis Irolysis Weight Irolysis Aliquot djusted Weight	14.12280 g 0.23864 g 19.825 ml 0.24075 g
	Lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash	13.84629 g 14.22691 g 0.38062 g 14.22454 g		Filter F After Hyd Hyd	Post Hydrolysis Irolysis Weight Irolysis Aliquot djusted Weight Begin Volume	14.12280 g 0.23864 g 19.825 ml 0.24075 g 20 ml
	lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash	13.84629 g 14.22691 g 0.38062 g 14.22454 g 0.37825 g		Filter F After Hyd Hyd	Post Hydrolysis Irolysis Weight Irolysis Aliquot djusted Weight	14.12280 g 0.23864 g 19.825 ml 0.24075 g
	lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash	13.84629 g 14.22691 g 0.38062 g 14.22454 g 0.37825 g	Elements	Filter F After Hyd Hyd	Post Hydrolysis Irolysis Weight Irolysis Aliquot djusted Weight Begin Volume	14.12280 g 0.23864 g 19.825 ml 0.24075 g 20 ml
C	Lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics	13.84629 g 14.22691 g 0.38062 g 14.22454 g 0.37825 g 0.62%	Elements Mg, Si, Ca,	Filter F After Hyd Hyd Hydrolysis Ad	Post Hydrolysis Irolysis Weight Irolysis Aliquot djusted Weight Begin Volume Acid Solubles	14.12280 g 0.23864 g 19.825 ml 0.24075 g 20 ml
C	lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	13.84629 g 14.22691 g 0.38062 g 14.22454 g 0.37825 g 0.62% Visual Estimate	Mg, Si, Ca, ItemType	Filter F After Hyd Hyd Hydrolysis Ad Mn, Fe ItemNum	Post Hydrolysis Irolysis Weight Irolysis Aliquot djusted Weight Begin Volume Acid Solubles Comment	14.12280 g 0.23864 g 19.825 ml 0.24075 g 20 ml
C	lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	13.84629 g 14.22691 g 0.38062 g 14.22454 g 0.37825 g 0.62% Visual Estimate	Mg, Si, Ca, ItemType Spectra	Filter F After Hyd Hyd Hydrolysis Ad Mn, Fe ItemNum J67929SP	Post Hydrolysis Irolysis Weight Irolysis Aliquot djusted Weight Begin Volume Acid Solubles Comment Confirmed KM 3/31/2022	14.12280 g 0.23864 g 19.825 ml 0.24075 g 20 ml 36.13%
C	lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	13.84629 g 14.22691 g 0.38062 g 14.22454 g 0.37825 g 0.62% Visual Estimate	Mg, Si, Ca, ItemType Spectra Diffraction	Filter F After Hyd Hyd Hydrolysis Ad Mn, Fe ItemNum J67929SP J67929DF	Post Hydrolysis Irolysis Weight Irolysis Aliquot djusted Weight Begin Volume Acid Solubles Comment	14.12280 g 0.23864 g 19.825 ml 0.24075 g 20 ml 36.13%
C Grid G4	lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte Actinolite	13.84629 g 14.22691 g 0.38062 g 14.22454 g 0.37825 g 0.62% Visual Estimate 0.30%	Mg, Si, Ca, ItemType Spectra Diffraction Brightfield	Filter F After Hyd Hyd Hydrolysis Ad Mn, Fe ItemNum J67929SP	Post Hydrolysis Irolysis Weight Irolysis Aliquot djusted Weight Begin Volume Acid Solubles Comment Confirmed KM 3/31/2022	14.12280 g 0.23864 g 19.825 ml 0.24075 g 20 ml 36.13%
C Grid G4	lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	13.84629 g 14.22691 g 0.38062 g 14.22454 g 0.37825 g 0.62% Visual Estimate	Mg, Si, Ca, ItemType Spectra Diffraction Brightfield Mg, Si	Filter F After Hyd Hyd Hydrolysis Ad Mn, Fe ItemNum J67929SP J67929BF	Post Hydrolysis Irolysis Weight Irolysis Aliquot djusted Weight Begin Volume Acid Solubles Comment Confirmed KM 3/31/2022 KM 3/31/2022	14.12280 g 0.23864 g 19.825 ml 0.24075 g 20 ml 36.13% Comment 0.53nm ROW SPACING
Grid G4	lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte Actinolite	13.84629 g 14.22691 g 0.38062 g 14.22454 g 0.37825 g 0.62% Visual Estimate 0.30%	Mg, Si, Ca, ItemType Spectra Diffraction Brightfield Mg, Si ItemType	Filter F After Hyd Hyd Hydrolysis Ad Mn, Fe ItemNum J67929SP J67929BF J67929BF	Post Hydrolysis Irolysis Weight Irolysis Aliquot djusted Weight Begin Volume Acid Solubles Comment Confirmed KM 3/31/2022 KM 3/31/2022	14.12280 g 0.23864 g 19.825 ml 0.24075 g 20 ml 36.13%
Grid G4	lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte Actinolite	13.84629 g 14.22691 g 0.38062 g 14.22454 g 0.37825 g 0.62% Visual Estimate 0.30%	Mg, Si, Ca, ItemType Spectra Diffraction Brightfield Mg, Si ItemType Spectra	Filter F After Hyd Hyd Hydrolysis Ad Mn, Fe ItemNum J67929BF J67929BF ItemNum J67930SP	Post Hydrolysis Irolysis Weight Irolysis Aliquot djusted Weight Begin Volume Acid Solubles Comment Confirmed KM 3/31/2022 Confirmed KM 3/31/2022	14.12280 g 0.23864 g 19.825 ml 0.24075 g 20 ml 36.13% Comment 0.53nm ROW SPACING
Grid G4	lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte Actinolite	13.84629 g 14.22691 g 0.38062 g 14.22454 g 0.37825 g 0.62% Visual Estimate 0.30%	Mg, Si, Ca, ItemType Spectra Diffraction Brightfield Mg, Si ItemType	Filter F After Hyd Hyd Hydrolysis Ad Mn, Fe ItemNum J67929SP J67929BF J67929BF	Post Hydrolysis Irolysis Weight Irolysis Aliquot djusted Weight Begin Volume Acid Solubles Comment Confirmed KM 3/31/2022 KM 3/31/2022	14.12280 g 0.23864 g 19.825 ml 0.24075 g 20 ml 36.13% Comment 0.53nm ROW SPACING
Grid G4	Lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte Actinolite	13.84629 g 14.22691 g 0.38062 g 14.22454 g 0.37825 g 0.62% Visual Estimate 0.30%	Mg, Si, Ca, ItemType Spectra Diffraction Brightfield Mg, Si ItemType Spectra Diffraction	Filter F After Hyd Hyd Hydrolysis Ad Mn, Fe ItemNum J67929BF J67929BF ItemNum J67930SP J67930DF	Post Hydrolysis Irolysis Weight Irolysis Aliquot djusted Weight Begin Volume Acid Solubles Comment Confirmed KM 3/31/2022 Confirmed KM 3/31/2022	14.12280 g 0.23864 g 19.825 ml 0.24075 g 20 ml 36.13% Comment 0.53nm ROW SPACING
Grid G4	lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte Actinolite	13.84629 g 14.22691 g 0.38062 g 14.22454 g 0.37825 g 0.62% Visual Estimate 0.30%	Mg, Si, Ca, ItemType Spectra Diffraction Brightfield Mg, Si ItemType Spectra Diffraction	Filter F After Hyd Hyd Hydrolysis Ad Mn, Fe ItemNum J67929BF J67929BF ItemNum J67930SP J67930DF	Post Hydrolysis Irolysis Weight Irolysis Aliquot djusted Weight Begin Volume Acid Solubles Comment Confirmed KM 3/31/2022 Confirmed KM 3/31/2022	14.12280 g 0.23864 g 19.825 ml 0.24075 g 20 ml 36.13% Comment 0.53nm ROW SPACING



Job I	Number: 220306 S Client: PBS Engineering	SEA + Environmental				eport Number: 220306R02 Date Received: 3/28/2022
	Cor Sample No: S9 lient Sample No: 40535.488	8-3/25/22-TEM09				
	Container Weight	13.64717 g		Hydrolysis I	Filter PreWeight	13.68973 g
	Weight Before Ash	14.37511 g		Filter	Post Hydrolysis	14.17537 g
	Orig Sample Weight	0.72794 g		After Hy	drolysis Weight	0.48564 g
	Weight After Ash	14.30525 g		Ну	drolysis Aliquot	19.825 ml
	Particulate After Ash	0.65808 g		Hydrolysis A	djusted Weight	0.48993g
	Percent Organics	9.60%			Begin Volume	20 ml
					Acid Solubles	23.10%
Grid	Analyte	Visual Estimate	Elements		Comment	
G4	Actinolite	0.20%				
			ItemType	ItemNum	Confirmed	Comment
			Spectra	J67931SP	KM 3/31/2022	
			Diffraction	J67931DF	KM 3/31/2022	0.53nm ROW SPACING
			Brightfield	J67931BF		
G4	Chrysotile	0.05%	Mg, Si			
			ItemType	ItemNum	Confirmed	Comment
			Spectra	J67932SP	KM 3/31/2022	
			Diffraction	J67932DF	KM 3/31/2022	0.53nm ROW SPACING
			Brightfield	J67932BF		
G5	Actinolite	0.25%				
G5	Chrysotile	0.05%				

Reviewed by:



Quality Control Officer





LABORATORY CHAIN OF CUSTODY

Project: Pierce College Olym	pic South Abatement & Repairs	Project #: <u>40535.488</u>
Analysis requested: <u>Semi-q</u>	uantitative TEM bulk	Date: 3/25/2022
Relinq'd by/Signature:	int sai	Date/Time: 3125/2027
Received by/Signature:	and the D. W. Aprecini	Date/Time: <u>3/25/252</u> Date/Time: <u>3/26/22</u> 0750
	Email ALL INVOICES to: seattleap@	pbsusa.com
E-mail results to:		
Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	Claire Tsai	
TURN AROUND TIME:		
1 Hour	24 Hours	3 Days
2 Hours	48 Hours	Other
4 Hours		

SAMPLE DATA FORM					
Sample #	Material	Location	Lab		
40535.488-3/25/2022-TEM01	Concrete	LV1 former kitchen steps	Labcor		
40535.488-3/25/2022-TEM02	Concrete	LV1 near previous 165 restroom			
40535.488-3/25/2022-TEM03	Concrete	LV1 northeast area at column near double doors			
40535.488-3/25/2022-TEM04	Concrete	LV2 previous room 284 north floor			
40535.488-3/25/2022-TEM05	Concrete	LV2 previous room 268			
40535.488-3/25/2022-TEM06	Concrete	LV2 previous room 260			
40535.488-3/25/2022-TEM07	Concrete	LV3 previous room 323 lower floor slab			
40535.488-3/25/2022-TEM08	Concrete	LV3 northeast lower slab below room 329			
40535.488-3/25/2022-TEM09	Concrete	LV3 northwest lower slab below room 327			
			1.000		



Report Number: 220360R01

Report Date: 4/8/2022

ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) Report

Job Number: 220360 Client: PBS Engineering + Environmental Address: 214 E Galer Street Seattle, WA 98102 Project Name: Pierce College Olympic South Abatement and Repairs Project No.: 40535.488 PO Number: Sub Project: Reference No.:

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Num.	Client Sample Number	Analysis	Analysis Notes	Date Received:
220360 - S1	40535.488-4/7/2022- TEM01	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)	Dust like material - insufficient amount submitted for standard bulk test.	4/7/2022
220360 - S2	40535.488-4/7/2022- TEM02	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)	Dust like material - insufficient amount submitted for standard bulk test.	4/7/2022

ELAP Item 198.4 - Preparation and analysis of the above sample(s) was conducted in accordance with the ELAP Item 198.4 for the identification of regulated asbestiform minerals in Non-Friable Organically Bound Bulk Samples. Briefly, each sample was taken from at least three randomly selected areas. The sample was then weighed (Original Sample Weight) on an analytical balance (0.01 milligram sensitivity), ashed in a muffle furnace to remove the organic component, and weighed (Particulate After Ash). After a brief hydrolysis period in concentrated hydrochloric acid, the suspension was immediately diluted in 20 ml of laboratory reagent water. Appropriate aliquots were removed from the suspension and filtered onto mixed cellulose ester filters for TEM analysis. The remaining suspension was then filtered onto pre weighed 0.4µm polycarbonate (PC) filter and re-weighed upon completion of drying (Hydrolysis Adjusted Weight). Upon confirmation of the principal mineral type by diffraction and EDS chemistry, a visual estimate of the regulated asbestiform minerals, relative to the non-asbestos, was determined. Fibers, with an aspect ratio of at least 3:1 and with the proper diffraction/ chemistry, were identified as regulated asbestiform mineral types. 'Trace' is reported for those samples whose percent asbestos is below 1.0%. 'Trace' analytes reported with a Weight Percent of 0.01% are reported at the Limit of Detection.

This test report relates only to the items tested in this report. Samples such as soils, sediments or raw ores may require further mineralogical analysis to differentiate mineral species. Interpretation of these results is the sole responsibility of the client. Results are subject to the variation in the layers of the sample, the accuracy of the balance, the visual estimate on the microscope as well as other variations within the procedure.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,

Kate March

Quality Control Officer



Job Number: 220360 SEA

Client: PBS Engineering + Environmental

Project Name: Pierce College Olympic South Abatement and Repairs

Lab/Cor Sample No.: S1

Client Sample No.: 40535.488-4/7/2022-TEM01

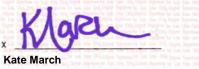
Report Number: 220360R01 Date Received: 4/7/2022

Sample Notes: Dust like material - insufficient amount submitted for standard bulk test.

Total Other Non-Asbestos Percent

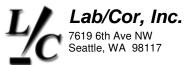
Analyst(s) KM	Analysis Date 4/8/2022	Microscope Hitachi 7000FA	Magnification 20000		
Analyte Des	cription		Weight Percent	Gravimetric Reduction	Weight Percent
Actinolite	9		0.16%	Acid Solubles	3.49%
	Tota	I Asbestos Percen	t 0.16%	Organics	42.51%
				Residue	53.84%
				Total Other Non-Asbestos P	ercent 99.84%
	nple No.: S2 mple No.: 40535.4 Analysis Date	88-4/7/2022-TEM02 Microscope	Magnification	Dust like material - submitted for stand	insufficient amount dard bulk test.
KM	4/8/2022	Hitachi 7000FA	20000		
Analyte Des	cription		Weight Percent	Gravimetric Reduction	Weight Percent
Actinolite	9		0.10%	Acid Solubles	7.58%
	Tota	I Asbestos Percen	t 0.10%	Organics	65.22%
				Residue	27.10%

Reviewed by:



Quality Control Officer

99.90%



	Number: 220360 S Client: PBS Engineering st Name: Pierce College Olym		d Repairs			port Number: 220360R01 ate Received: 4/7/2022
	Cor Sample No: S1 lient Sample No: 40535.48	8-4/7/2022-TEM01			SampleNotes: Dust like material - i for standard bulk tes	nsufficient amount submittec
	Container Weight	13.64369 g		Hydrolysis	s Filter PreWeight	13.68695 g
	Weight Before Ash	13.68283 g		Filte	r Post Hydrolysis	13.70790 g
	Orig Sample Weight	0.03914 g		After H	lydrolysis Weight	0.02095 g
	Weight After Ash	13.66619 g		н	lydrolysis Aliquot	19.825 ml
	Particulate After Ash	0.02250 g		Hydrolysis	Adjusted Weight	0.02113 g
	Percent Organics	42.51%			Begin Volume	20 ml
					Acid Solubles	3.49%
Grid	Analyte	Visual Estimate	Elements		Comment	
G10	Actinolite	0.35%	Mg, Al, Si, C	Ca, Mn, Fe		
			ItemType	ItemNum	Confirmed	Comment
			Spectra	F67993SP	KM 4/8/2022	
			Diffraction	F67993DF	KM 4/8/2022	0.53nm ROW SPACING
			Brightfield	F67993BF		
G11	Actinolite	0.25%				
Lab/0	Cor Sample No: S2				SampleNotes:	
	lient Sample No: 40535.48	8-4/7/2022-TEM02			•	nsufficient amount submittec
	Container Weight	13.75222 g		Hydrolysis	Filter PreWeight	13.79036 g
	Weight Before Ash	13.79788 g		Filte	r Post Hydrolysis	13.80267 g
	Orig Sample Weight	0.04566 g		After H	lydrolysis Weight	0.01231 g
	Weight After Ash	13.76810 g		н	lydrolysis Aliquot	19.825 ml
						0.01242 g
	Particulate After Ash	0.01588 g		Hydrolysis	Adjusted Weight	0.01242 g
	Particulate After Ash Percent Organics	0.01588 g 65.22%		Hydrolysis	Begin Volume	0.01242 g 20 ml
		-		Hydrolysis		0
Grid		-	Elements	Hydrolysis	Begin Volume	20 ml
	Percent Organics	65.22%	Elements	Hydrolysis	Begin Volume Acid Solubles	20 ml
	Percent Organics Analyte	65.22% Visual Estimate	Elements ItemType	Hydrolysis	Begin Volume Acid Solubles	20 ml
Grid G10	Percent Organics Analyte	65.22% Visual Estimate			Begin Volume Acid Solubles Comment	20 ml 7.58%
	Percent Organics Analyte	65.22% Visual Estimate	ItemType Spectra Diffraction	ItemNum F67995SP F67995DF	Begin Volume Acid Solubles Comment	20 ml 7.58%
Grid G10	Percent Organics Analyte	65.22% Visual Estimate	ltemType Spectra	ltemNum F67995SP	Begin Volume Acid Solubles Comment Confirmed KM 4/8/2022	20 ml 7.58% Comment





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LABORATORY CHAIN OF CUSTODY

Project: <u>Pierce College Ol</u>	ympic South Abatement & Repairs	Project #: <u>40535,488</u>
Analysis requested: <u>Sen</u>	ni-quantitative TEM bulk	Date: <u>4/7/2022</u>
Relinq'd by/Signature: <u>Per</u>	er Stensland / Netu Steret	Date/Time: <u>4/7/2022</u>
Received by/Signature:	Meli	Date/Time: 4/7/22 4:46PM
·	Email ALL INVOICES to: seattleap@)pbsusa.com
E-mail results to: Willem Mager Gregg Middaugh Mark Hiley Tim Ogden Ryan Hunter Prudy Stoudt-McRae	 Janet Murphy Kaitlin Soukup Allison Welch Toan Nguyen Peter Stensland Claire Tsai 	 Holly Tuttle Mike Smith Ferman Fletcher Cameron Budnick Michelle Dodson
TURN AROUND TIME: 1 Hour 2 Hours 4 Hours	48 Hours	Days Tother Rush

SAMPLE DATA FORM				
Sample #	Material	Location	Lab	
40535.488-4/7/2022-TEM01	Surface Dust	Black swimming flipper – central shed - ECE	Labcor	
40535.488-4/7/2022-TEM02	Surface Dust	Olympic South covered shed west elevation wood shelf		
		Reviewed by:		
		Results Released:		
		Fax USP3 Email		



ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) Report

Job Number: 220361	Report Number: 220361R01
Client: PBS Engineering + Environmental	Report Date: 4/8/2022
Address: 214 E Galer Street Seattle, WA 98102	
Project Name: Pierce College Olympic South Abatement and Repairs	
Project No.: 40535.488	
PO Number:	
Sub Project:	
Reference No.:	

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Num.	Client Sample Number	Analysis	Analysis Notes	Date Received:
220361 - S1	40535.488-4/7/2022- TEM03	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)	9	4/8/2022
220361 - S2	40535.488-4/7/2022- TEM04	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified))	4/8/2022

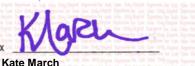
ELAP Item 198.4 - Preparation and analysis of the above sample(s) was conducted in accordance with the ELAP Item 198.4 for the identification TEM - Bulk Semi- of regulated asbestiform minerals in Non-Friable Organically Bound Bulk Samples. Briefly, each sample was taken from at least Quantitative three randomly selected areas. The sample was then weighed (Original Sample Weight) on an analytical balance (0.01 milligram sensitivity), ashed in a muffle furnace to remove the organic component, and weighed (Particulate After Ash). After a (Modified) brief hydrolysis period in concentrated hydrochloric acid, the suspension was immediately diluted in 20 ml of laboratory reagent water. Appropriate aliquots were removed from the suspension and filtered onto mixed cellulose ester filters for TEM analysis. The remaining suspension was then filtered onto pre weighed 0.4µm polycarbonate (PC) filter and re-weighed upon completion of drving (Hydrolysis Adjusted Weight). Upon confirmation of the principal mineral type by diffraction and EDS chemistry, a visual estimate of the regulated asbestiform minerals, relative to the non-asbestos, was determined. Fibers, with an aspect ratio of at least 3:1 and with the proper diffraction/ chemistry, were identified as regulated asbestiform mineral types. 'Trace' is reported for those samples whose percent asbestos is below 1.0%. 'Trace' analytes reported with a Weight Percent of 0.01% are reported at the Limit of Detection.

> This test report relates only to the items tested in this report. Samples such as soils, sediments or raw ores may require further mineralogical analysis to differentiate mineral species. Interpretation of these results is the sole responsibility of the client. Results are subject to the variation in the layers of the sample, the accuracy of the balance, the visual estimate on the microscope as well as other variations within the procedure.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely.



Quality Control Officer



Job Number: 220361 SEA

Client: PBS Engineering + Environmental

Report Number: 220361R01 **Date Received:** 4/8/2022

Project Name: Pierce College Olympic South Abatement and Repairs

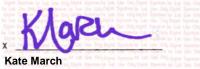
Lab/Cor Sample No.: S1

Client Sample No.: 40535.488-4/7/2022-TEM03

Analyst(s) KM	Analysis Date 4/8/2022	Microscope Hitachi 7000FA	Magnification 20000		
Analyte Des	cription		Weight Percent	Gravimetric Reduction	Weight Percent
Actinolite)		0.40%	Acid Solubles	29.19%
Chrysotil	e		0.10%	Organics	6.31%
	Tota	I Asbestos Percen	nt 0.50%	Residue	64.01%
				Total Other Non-Asbestos Percent	99.50%

Analyst(s)	Analysis Date	Microscope	Magnification		
KM	4/8/2022	Hitachi 7000FA	20000		
Analyte Des	cription		Weight Percent	Gravimetric Reduction	Weight Percent
Chrysotil	e		0.07%	Acid Solubles	27.29%
	Tota	I Asbestos Percent	t 0.07%	Organics	4.75%
				Residue	67.89%
				Total Other Non-Asbestos Percent	99.93%

Reviewed by:



Quality Control Officer



			Final Re	port	, i i i i i i i i i i i i i i i i i i i	
	lumber: 220361 SE Client: PBS Engineering + t Name: Pierce College Olym		d Repairs			Report Number: 220361R01 Date Received: 4/8/2022
	cor Sample No: S1 lient Sample No: 40535.488-	4/7/2022-TEM03				
	Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics	13.67340 g 13.75582 g 0.08242 g 13.75062 g 0.07722 g 6.31%		Filter After Hy Hy	Filter PreWeight Post Hydrolysis drolysis Weight drolysis Aliquot Adjusted Weight Begin Volume Acid Solubles	13.71213 g 13.76483 g 0.05270 g 19.825 ml 0.05317 g 20 ml 29.19%
Grid	Analyte	Visual Estimate	Elements		Comment	
G10	Chrysotile	0.20%	Mg, Si ItemType Spectra Diffraction Brightfield	ltemNum F67997SP F67997DF F67997BF	Confirmed KM 4/8/2022 KM 4/8/2022	
G10	Actinolite	0.50%	Mg, Al, Si, H ItemType Spectra Diffraction Brightfield	K, Ca, Ti, Mn, Fe ItemNum F67998SP F67998DF F67998BF	Confirmed KM 4/8/2022 KM 4/8/2022	
G11	Chrysotile	0.10%				
G11	Actinolite	0.75%				
	cor Sample No: S2 lient Sample No: 40535.488-	-4/7/2022-TEM04				
	Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics	13.76644 g 13.89465 g 0.12821 g 13.88856 g 0.12212 g 4.75%		Filter After Hy Hy	Filter PreWeight Post Hydrolysis drolysis Weight drolysis Aliquot Adjusted Weight Begin Volume Acid Solubles	13.80710 g 13.89347 g 0.08637 g 19.825 ml 0.08713 g 20 ml 27.29%
Grid	Analyte	Visual Estimate	Elements		Comment	
G10	Chrysotile	0.10%	Mg, Si ItemType Diffraction Brightfield Spectra	ltemNum F67999DF F67999BF F67999SP	Confirmed KM 4/8/2022 KM 4/8/2022	
G11	Chrypotilo	0 10%				

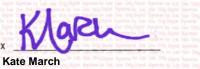
G11 Chrysotile

0.10%



Job Number: 220361 SEA Client: PBS Engineering + Environmental Report Number: 220361R01 Date Received: 4/8/2022

Reviewed by:



Quality Control Officer

LABORATORY CHAIN OF CUSTODY

Analysis teq	South Abatement & Repairs	Project #: <u>40535.488</u> Date: <u>4/7/2022</u> Date/Time: <u>4/7/2022</u> Date/Time: <u>4/8/22 & AM</u>
Relinq'd by/Signature:	Email ALL INVOICES to: seattleap	
E-mail results to: ☐ Willem Mager ⊠ Gregg Middaugh ☐ Mark Hiley ☐ Tim Ogden ☐ Ryan Hunter ☐ Prudy Stoudt-McRae	☐ Janet Murphy ☐ Kaitlin Soukup ☐ Allison Welch ☐ Toan Nguyen ☐ Peter Stensland ☑ Claire Tsai	 Holly Tuttle Mike Smith Ferman Fletcher Cameron Budnick Michelle Dodson
TURN AROUND TIME:	24 Hours 48 Hours	☐ 3 Days ⊠ Other <u>RUSH</u>

SAMPLE DATA FORM						
	Sample # Material Location					
Sample #		East stairwell level 1	Labcor			
40535.488-4/7/2022-TEM03	Concrete					
40535.488-4/7/2022-TEM04	Concrete	East stairwell level 3				
			-			
	-					
		Reviewed by:				
		Results Released:				
		Invoice Released:				
		Fax USPS Email				
		1	C			



EPA 600-R-93-116 - TEM - Bulk Semi-Quantitative Report

Job Number: 220479
Client: PBS Engineering + Environmental
Address: 214 E Galer Street
Seattle, WA 98102
Project Name: Pierce College Olympic South Abatement and Repairs
Project No.: 40535.488
PO Number:
Sub Project:
Reference No.:

Report Number: 220479R01 Report Date: 5/10/2022

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Num.	Client Sample Number	Analysis	Analysis Notes	Date Sampled:	Date Received:
220479 - S1	40535.488-5/5/2022- TEM01	EPA 600-R-93-116 - TEM - Bulk Semi- Quantitative		5/5/2022	5/6/2022
220479 - S2	40535.488-5/5/2022- TEM02	EPA 600-R-93-116 - TEM - Bulk Semi- Quantitative		5/5/2022	5/6/2022
220479 - S3	40535.488-5/5/2022- TEM03	EPA 600-R-93-116 - TEM - Bulk Semi- Quantitative		5/5/2022	5/6/2022
220479 - S4	40535.488-5/5/2022- TEM04	EPA 600-R-93-116 - TEM - Bulk Semi- Quantitative		5/5/2022	5/6/2022
220479 - S5	40535.488-5/5/2022- TEM05	EPA 600-R-93-116 - TEM - Bulk Semi- Quantitative		5/5/2022	5/6/2022
220479 - S6	40535.488-5/5/2022- TEM06	EPA 600-R-93-116 - TEM - Bulk Semi- Quantitative		5/5/2022	5/6/2022



EPA 600-R-93-116 - TEM - Bulk Semi-Quantitative Report

Job Number: 220479

Report Number: 220479R01 Report Date: 5/10/2022

Project Name: Pierce College Olympic South Abatement and Repairs

Client: PBS Engineering + Environmental

EPA 600-R-93- Preparation of the above sample was conducted in accordance with the EPA protocol EPA/600/R 93/116 for the identification of 116 - TEM - Bulk regulated asbestiform minerals in bulk building materials. The Semi-Quantitative designation applies to the TEM analysis; the Semi-Quantitative asbestos weight percent is calculated from the visual asbestos percentage observed during analysis at both high and low magnifications on the transmission electron microscope (TEM).

Briefly, each sample was taken from at least three randomly selected areas. The sample was then weighed (Original Sample Weight) on an analytical balance (0.01 milligram sensitivity), ashed in a muffle furnace to remove the organic component, and weighed (Particulate After Ash). After a brief dissolution in concentrated hydrochloric acid, the suspension was immediately diluted in 20 ml of laboratory reagent water. The suspension was then filtered onto a dry, pre weighed 0.1 micron polycarbonate (PC) filter and a series of 0.22 micron mixed cellulose ester (MCE) filter. After drying, the filter was weighed again (Hydrolysis Adjusted Weight). The sample was coated with a thin film of carbon in a vacuum evaporator. After dissolution of the filter debris in N,N-dimethylformamide and acetone, the sample was placed on a 200 mesh copper TEM grid and examined by TEM microscopy.

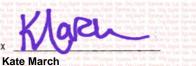
After confirmation of the principal mineral type by diffraction and EDS chemistry, a visual estimate of the concentration of asbestiform regulated minerals relative to the non-asbestos was determined. Fibers with an aspect ratio of at least 3:1 with proper diffraction and chemistry were counted as regulated asbestiform mineral types. "Trace" is reported for those samples whose percent asbestos is below 1.0%.

This test report relates only to the items tested in this report. The scope of this analysis is to differentiate purified regulated asbestiform minerals that have been added to bulk building materials. Samples such as soils, sediments or raw ores may require further mineralogical analysis to differentiate mineral species. Interpretation of these results is the sole responsibility of the client. Results are subject to the variation in the layers of the sample, the accuracy of the balance, the visual estimate on the microscope as well as other variations within the procedure.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,



Quality Control Officer



EPA 600-R-93-116 - TEM - Bulk Semi-Quantitative -Final Report

Job Number: 220479 SEA

Report Number: 220479R01 Date Received: 5/6/2022

Client: PBS Engineering + Environmental Project Name: Pierce College Olympic South Abatement and Repairs

Lab/Cor Sample No.: S1

Client Sample No.: 40535.488-5/5/2022-TEM01

Analyst(s)	Analysis Date	Microscope	Magnification		
SB	5/10/2022	JEOL-Sr 1200	20000		
KM	5/10/2022	JEOL-Sr 1200	20000		
Analyte Des	cription		Weight Percent	Gravimetric Reduction	Weight Percent
Actinolite)		1.34%	Acid Solubles	32.28%
Chrysotil	e		4.55%	Organics	14.13%
Non Asbe	estos Mineral		2.14%	Residue	45.55%
	Tota	I Asbestos Percen	t 5.89%	Total Other Non-Asbestos Percent	91.96%
	nple No.: S2 mple No.: 40535.4	88-5/5/2022-TEM02			
Analyst(s)	Analysis Date	Microscope	Magnification		
KM	5/10/2022	JEOL-Sr 1200	20000		

Analyte Description	Weight Percent	Gravimetric Reduction	Weight Percent
Chrysotile	3.09%	Acid Solubles	27.82%
Non Asbestos Mineral	2.24%	Organics	16.07%
Total Asbestos Perce	nt 3.09%	Residue	50.77%
		Total Other Non-Asbestos Percent	94.67%

Lab/Cor Sample No.: S3

Client Sample No.: 40535.488-5/5/2022-TEM03

Analyst(s)	Analysis Date	Microscope	Magnification		
KM	5/10/2022	JEOL-Sr 1200	20000		
Analyte Des	scription		Weight Percent	Gravimetric Reduction	Weight Percent
Chrysot	ile		2.40%	Acid Solubles	27.41%
Non Ast	estos Mineral		1.72%	Organics	3.97%
	Tot	al Asbestos Percer	nt 2.40%	Residue	64.50%
				Total Other Non-Asbestos Percent	95.88%

Lab/Cor Sample No.: S4

Client Sample No.: 40535.488-5/5/2022-TEM04

Analyst(s)	Analysis Date	Microscope	Magnification		
KM	5/10/2022	JEOL-Sr 1200	20000		
Analyte Des	cription		Weight Percent	Gravimetric Reduction	Weight Percent
Actinolite)		0.96%	Acid Solubles	27.51%
Non Asbe	estos Mineral		3.37%	Organics	5.02%
	Tota	I Asbestos Percer	nt 0.96%	Residue	63.13%
				Total Other Non-Asbestos Percent	95.67%



EPA 600-R-93-116 - TEM - Bulk Semi-Quantitative -Final Report

Client:	220479 S PBS Engineering -	EA ⊦ Environmental		Report Numb Date Receive	er: 220479R01 ed: 5/6/2022
Lab/Cor Sam Client Sar	nple No.: S5 mple No.: 40535.4	88-5/5/2022-TEM0	5		
Analyst(s) KM	Analysis Date 5/10/2022	Microscope JEOL-Sr 1200	Magnification 20000		
Analyte Des	cription		Weight Percent	Gravimetric Reduction	Weight Percent
Actinolite)		0.14%	Acid Solubles	23.52%
	Tota	I Asbestos Perce	nt 0.14%	Organics	4.35%
				Residue	71.99%
				Total Other Non-Asbestos Percent	99.86%
Analyst(s)	Analysis Date	Microscope	Magnification		
Client Sa	mple No.: 40535.4				
Client Sar Analyst(s)	mple No.: 40535.4 Analysis Date 5/10/2022	Microscope	Magnification	Gravimetric Reduction	Weight Percent
Client San Analyst(s) KM	Analysis Date 5/10/2022	Microscope	Magnification 20000	Gravimetric Reduction Acid Solubles	Weight Percent 28.30%
Client Sat Analyst(s) KM Analyte Dest Actinolite	Analysis Date 5/10/2022	Microscope	Magnification 20000 Weight Percent		Weight Percent 28.30% 5.35%
Client Sat Analyst(s) KM Analyte Dest Actinolite	Analysis Date 5/10/2022 cription estos Mineral	Microscope	Magnification 20000 Weight Percent 0.08% 0.33%	Acid Solubles	28.30%

Reviewed by:

x Kate March

Quality Control Officer



EPA 600-R-93-116 - TEM - Bulk Semi-Quantitative -Final Report

Job N	Number: 220479 SE Client: PBS Engineering + I					port Number: 220479R01 ate Received: 5/6/2022
Projec	t Name: Pierce College Olymp	bic South Abatement an	d Repairs			
Lab/C	cor Sample No: S1					
С	lient Sample No: 40535.488-	5/5/2022-TEM01				
	Container Weight	13.79207 g		Hydrolysis Filte	er PreWeight	13.83407 g
	Weight Before Ash	14.08441 g			t Hydrolysis	13.98971 g
	Orig Sample Weight	0.29234 g		After Hydro	lysis Weight	0.15564 g
	Weight After Ash	14.04310 g		Hydro	lysis Aliquot	19.87 ml
	Particulate After Ash	0.25103 g		Hydrolysis Adju	sted Weight	0.15666 g
	Percent Organics	14.13%		B	egin Volume	20 ml
				A	cid Solubles	32.28%
Grid	Analyte	Visual Estimate	Elements		Comment	
G3	Actinolite	2.00%	Mg, Si, Ca Fe			
			ItemType	ItemNum	Confirmed	Comment
			Brightfield Diffraction	J68182BF	CR = 5/40/2022	
			Spectra	J68182DF J68182SP	SB 5/10/2022 SB 5/10/2022	0.53nm ROW SPACING
<u></u>	Chrysotile	7 000/	•		,	
G3	Chrysotile	7.00%	Mg, Si ItemType	ItemNum	Confirmed	Comment
			Brightfield	J68183BF	Commed	Comment
			Diffraction	J68183DF	SB 5/10/2022	0.53nm ROW SPACING
			Spectra	J68183SP	SB 5/10/2022	
G3	Non Asbestos Mineral	3.00%	Si Fibers And	Al, Si Fibers Preser	nt	
G4	Actinolite	3.00%				
G4	Chrysotile	10.00%				
G4	Non Asbestos Mineral	5.00%	Si Fibers And	Al, Si Fibers Preser	nt Chrysotile Loo	k Alike
Lab/C	or Sample No: S2					
C	lient Sample No: 40535.488-	5/5/2022-TEM02				
	Container Weight	13.87545 g		Hydrolysis Filte	er PreWeight	13.91798 g
	Weight Before Ash	14.35297 g			at Hydrolysis	14.18480 g
	Orig Sample Weight	0.47752 g		,	lysis Weight	0.26682g
	Weight After Ash	14.27621 g		•	lysis Aliquot	19.92 ml
	Particulate After Ash	0.40076 g		Hydrolysis Adju	-	0.26789g
	Percent Organics	16.07%			egin Volume	20 ml
				A	cid Solubles	27.82%
Grid	Analyte	Visual Estimate	Elements		Comment	
G5	Chrysotile	5.00%	Mg, Si			
			ItemType Spectra	ItemNum	Confirmed	Comment
			Spectra Diffraction	J68184SP J68184DF	KM 5/10/2022 KM 5/10/2022	0.53nm ROW SPACING
			Brightfield	J68184BF	101 J/10/2022	
G5	Non Asbestos Mineral	3.00%				
G6	Chrysotile	6.00%				
G6	Non Asbestos Mineral	5.00%	AI, Si And Si F	Fibers Present	Chrysotile Loo	k alikes



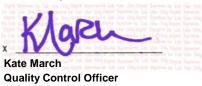
EPA 600-R-93-116 - TEM - Bulk Semi-Quantitative -
Final Report

Job N	Number: 220479 SE Client: PBS Engineering +					eport Number: 220479 Date Received: 5/6/202
Lab/C	Cor Sample No: S3					
С	lient Sample No: 40535.488-	5/5/2022-TEM03				
	Container Weight	13.88681 g		Hydrolysis Filter	PreWeight	13.92843 g
	Weight Before Ash	14.19178 g		Filter Post	-	14.13638 g
	Orig Sample Weight	0.30497 g		After Hydroly		0.20795g
	Weight After Ash	14.17967 g		Hydroly	sis Aliquot	19.875 ml
	Particulate After Ash	0.29286 g		Hydrolysis Adjus	ted Weight	0.20926 g
	Percent Organics	3.97%		Beg	gin Volume	20 ml
				Aci	d Solubles	27.41%
Grid	Analyte	Visual Estimate	Elements		Comment	
G3	Chrysotile	5.00%	Mg, Si			
			ItemType	ItemNum	Confirmed	Comment
			Spectra	J68185SP	KM 5/10/2022	
			Diffraction Brightfield	J68185DF J68185BF	KM 5/10/2022	0.53nm ROW SPACING
G3	Non Asbestos Mineral	3.00%	Si Fibers A	nd AI, Si Fibers Present	Chrysotile Loo	k Alikes
G4	Chrysotile	2.00%				
G4	Non Asbestos Mineral	2.00%	Si Fibers A	nd AI, Si Fibers Present		
	Cor Sample No: S4 lient Sample No: 40535.488-3	5/5/2022-TEM04				
_	Container Weight	13.66978 g		Hydrolysis Filter	PreWeight	13.70991 g
	Weight Before Ash	13.83285 g			Hydrolysis	13.81869 g
	Orig Sample Weight	0.16307 g		After Hydroly		0.10878g
	Weight After Ash	13.82466 g			sis Aliquot	19.775 ml
	Particulate After Ash	0.15488 g		Hydrolysis Adjus	-	0.11002g
	Percent Organics	5.02%		Beg	gin Volume	20 ml
				Aci	d Solubles	27.51%
Grid	Analyte	Visual Estimate	Elements		Comment	
G5	Actinolite	2.00%				
G5	Non Asbestos Mineral	3.00%				
G6	Actinolite	0.85%	Mg, Si, Ca,	Fe		
			ItemType	ItemNum	Confirmed	Comment
			Spectra	J68186SP	KM 5/10/2022	
			Diffraction Brightfield	J68186DF J68186BF	KM 5/10/2022	0.53nm ROW SPACING
G6	Non Asbestos Mineral	7.00%	Al, Si		Chrysotile Loo	k-alike fibers
					•	



EPA 600-R-93-116 - TEM - Bulk Semi-Quantitative -
Final Report

	Number: 220479 SE Client: PBS Engineering +					eport Number: 220479R0 Date Received: 5/6/2022
Lab/0	Cor Sample No: S5					
C	lient Sample No: 40535.488-	5/5/2022-TEM05				
	Container Weight	13.61811 g		Hydrolysis F	ilter PreWeight	13.66143 g
	Weight Before Ash	13.86390 g		Filter	Post Hydrolysis	13.83739 g
	Orig Sample Weight	0.24579 g		After Hy	drolysis Weight	0.17596g
	Weight After Ash	13.85322 g		Hye	drolysis Aliquot	19.85 ml
	Particulate After Ash	0.23511 g		Hydrolysis A	djusted Weight	0.17729g
	Percent Organics	4.35%			Begin Volume	20 ml
					Acid Solubles	23.52%
Grid	Analyte	Visual Estimate	Elements		Comment	
G7	Actinolite	0.25%	Mg, Al, Si, C	Ca, Fe		
			ItemType	ItemNum	Confirmed	Comment
			Spectra	J68192SP	KM 5/10/2022	
			Diffraction Brightfield	J68192DF J68192BF	KM 5/10/2022	0.53nm ROW SPACING
G8	Actinolite	0.15%	Brightheid	00013251		
		0.15%	Brightheid			
Lab/0	Actinolite Cor Sample No: S6 lient Sample No: 40535.488-		Bightneid			
Lab/0	Cor Sample No: S6		Bightneid			13.54269 g
Lab/0	Cor Sample No: S6 lient Sample No: 40535.488-	5/5/2022-TEM06	Bightneid	Hydrolysis F	Filter PreWeight Post Hydrolysis	13.54269 g 13.66907 g
Lab/0	Cor Sample No: S6 lient Sample No: 40535.488- Container Weight	5/5/2022-TEM06 13.50155 g	Dignued	Hydrolysis F Filter	-	-
Lab/0	Cor Sample No: S6 lient Sample No: 40535.488- Container Weight Weight Before Ash	5/5/2022-TEM06 13.50155 g 13.69390 g	Dignitield	Hydrolysis F Filter After Hyd	Post Hydrolysis	13.66907 g
Lab/0	Cor Sample No: S6 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight	5/5/2022-TEM06 13.50155 g 13.69390 g 0.19235 g	Dignued	Hydrolysis F Filter After Hy Hyd	Post Hydrolysis drolysis Weight	13.66907 g 0.12638 g
Lab/0	Cor Sample No: S6 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash	5/5/2022-TEM06 13.50155 g 13.69390 g 0.19235 g 13.68361 g	Digitueio	Hydrolysis F Filter After Hy Hyd	Post Hydrolysis drolysis Weight drolysis Aliquot	13.66907 g 0.12638 g 19.805 ml
Lab/0	Cor Sample No: S6 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash	5/5/2022-TEM06 13.50155 g 13.69390 g 0.19235 g 13.68361 g 0.18206 g	Digitited	Hydrolysis F Filter After Hy Hyd	Post Hydrolysis drolysis Weight drolysis Aliquot djusted Weight	13.66907 g 0.12638 g 19.805 ml 0.12762 g
Lab/0	Cor Sample No: S6 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash	5/5/2022-TEM06 13.50155 g 13.69390 g 0.19235 g 13.68361 g 0.18206 g	Elements	Hydrolysis F Filter After Hy Hyd	Post Hydrolysis drolysis Weight drolysis Aliquot djusted Weight Begin Volume	13.66907 g 0.12638 g 19.805 ml 0.12762 g 20 ml
Lab/(C	Cor Sample No: S6 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics	5/5/2022-TEM06 13.50155 g 13.69390 g 0.19235 g 13.68361 g 0.18206 g 5.35%		Hydrolysis F Filter After Hy Hyd	Post Hydrolysis drolysis Weight drolysis Aliquot djusted Weight Begin Volume Acid Solubles	13.66907 g 0.12638 g 19.805 ml 0.12762 g 20 ml
Lab/(C Grid	Cor Sample No: S6 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	5/5/2022-TEM06 13.50155 g 13.69390 g 0.19235 g 13.68361 g 0.18206 g 5.35% Visual Estimate		Hydrolysis F Filter After Hy Hyd	Post Hydrolysis drolysis Weight drolysis Aliquot djusted Weight Begin Volume Acid Solubles	13.66907 g 0.12638 g 19.805 ml 0.12762 g 20 ml
Lab/(C Grid G7 G7	Cor Sample No: S6 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte Actinolite	5/5/2022-TEM06 13.50155 g 13.69390 g 0.19235 g 13.68361 g 0.18206 g 5.35% Visual Estimate 0.15%	Elements Mg, Si, Ca,	Hydrolysis F Filter After Hy Hydrolysis A	Post Hydrolysis drolysis Weight drolysis Aliquot djusted Weight Begin Volume Acid Solubles	13.66907 g 0.12638 g 19.805 ml 0.12762 g 20 ml
Lab/(C Grid G7 G7	Cor Sample No: S6 lient Sample No: 40535.488-1 Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte Actinolite Non Asbestos Mineral	5/5/2022-TEM06 13.50155 g 13.69390 g 0.19235 g 13.68361 g 0.18206 g 5.35% Visual Estimate 0.15% 0.75%	Elements Mg, Si, Ca, ItemType	Hydrolysis F Filter I After Hy Hydrolysis A	Post Hydrolysis drolysis Weight drolysis Aliquot djusted Weight Begin Volume Acid Solubles Comment	13.66907 g 0.12638 g 19.805 ml 0.12762 g 20 ml
Lab/(C Grid G7 G7	Cor Sample No: S6 lient Sample No: 40535.488-1 Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte Actinolite Non Asbestos Mineral	5/5/2022-TEM06 13.50155 g 13.69390 g 0.19235 g 13.68361 g 0.18206 g 5.35% Visual Estimate 0.15% 0.75%	Elements Mg, Si, Ca, ItemType Spectra	Hydrolysis F Filter Hy After Hy Hydrolysis A Hydrolysis A	Post Hydrolysis drolysis Weight drolysis Aliquot djusted Weight Begin Volume Acid Solubles Comment Confirmed KM 5/10/2022	13.66907 g 0.12638 g 19.805 ml 0.12762 g 20 ml 28.30%
Lab/(C Grid G7 G7	Cor Sample No: S6 lient Sample No: 40535.488-1 Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte Actinolite Non Asbestos Mineral	5/5/2022-TEM06 13.50155 g 13.69390 g 0.19235 g 13.68361 g 0.18206 g 5.35% Visual Estimate 0.15% 0.75%	Elements Mg, Si, Ca, ItemType Spectra Diffraction	Hydrolysis F Filter I After Hy Hydrolysis A Hydrolysis A ItemNum J68193SP J68193DF	Post Hydrolysis drolysis Weight drolysis Aliquot djusted Weight Begin Volume Acid Solubles Comment	13.66907 g 0.12638 g 19.805 ml 0.12762 g 20 ml 28.30%
C	Cor Sample No: S6 lient Sample No: 40535.488-1 Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte Actinolite Non Asbestos Mineral	5/5/2022-TEM06 13.50155 g 13.69390 g 0.19235 g 13.68361 g 0.18206 g 5.35% Visual Estimate 0.15% 0.75%	Elements Mg, Si, Ca, ItemType Spectra	Hydrolysis F Filter Hy After Hy Hydrolysis A Hydrolysis A	Post Hydrolysis drolysis Weight drolysis Aliquot ddjusted Weight Begin Volume Acid Solubles Comment Confirmed KM 5/10/2022 KM 5/10/2022	13.66907 g 0.12638 g 19.805 ml 0.12762 g 20 ml 28.30%





LABORATORY CHAIN OF CUSTODY

Project: Pierce College	Olympic South Abatement & Repairs	Project #: <u>40535.488</u>
Analysis requested:	Semi-quantitative TEM bulk	Date: 5/6/2022
Relinq'd by/Signature:	Peter Stensland / Peter Struch	Date/Time: 5/6/2022
Received by/Signature:	Sun Born	Date/Time: 5/6/22 5:30pm
	Email ALL INVOICES to: seattleap	@pbsusa.com
E-mail results to:		
Willem Mager	Janet Murphy	Holly Tuttle
Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Michelle Dodson
Prudy Stoudt-McRae	Claire Tsai	
TURN AROUND TIME:		
1 Hour	24 Hours - Claure upd	ated In 3 Days
2 Hours	48 Hours 24 hr	Other
4 Hours	24 Hours - Claure upd 48 Hours 24 hr See Roman	1 in folder stid

	S	AMPLE DATA FORM	
Sample #	Material	Location	Lab
0535.488-5/5/2022-TEM01	Marblecrete	Olympic S Level 3 S wall W side	Labcor
0535.488-5/5/2022-TEM02	Marblecrete	Olympic S Level 3 S wall E side	
0535.488-5/5/2022-TEM03	Marblecrete	Olympic S Level 2 Stairwell near doorway	
0535.488-5/5/2022-TEM04	Marblecrete	Olympic S Level 1 Stairwell near N penetration	
0535.488-5/5/2022-TEM05	Marblecrete	Olympic S Exterior S elev. W side	
0535.488-5/5/2022-TEM06	Marblecrete	Olympic S Exterior SE corner E column	
	-		
	1		
		Reviewed by: M 5/10/22	
	1	Results Released:	
	-	Fax Verbals USPS Email Invoice Released:	
		Fax USPS Email	



Contact: Peter Stensland Company: PBS Engineering & Environmental Address: 390 NE Emerson Ave Ste C, Bend, OR 97701

Project / Location: Pierce College Olympic South Abatement and Repairs; 40535.488

PO Number: NA

ALS Work Order: 22050713

NARRATIVE: Analysis performed on FEI Tecnai G2 Spirit TEM equipped with EDAX Octane T Plus Silicon Drift Detector and Z2 Analyzer. Morphology, SAED, and EDXA used to determine fiber species. All sample collection is performed outside ALS and is the sole responsibility of the client. If collection or submission deviates from method requirements then interpretation of results via the method cannot be made. Asbestos reported as a percentage is based on average calibrated visual estimates by area in the final prepared sample. Samples disposed after 60 days. TEM grids archived 3 years. Results apply only to portions of samples analyzed.

METHOD CODES: "EPA 600" refers to samples directly prepared by grinding with mortar and pestle prior to analysis by TEM according to EPA/600/R-93/116 and results are reported in percentage ranges. Materials which cannot be prepared directly may require ashing, acid digestion, or both prior to analysis. "EPA 600 ASH" refers to resinous or flexible samples ashed in a muffle furnace to remove interfering organics. "EPA 600 ACID" refers to cementitious samples treated with acid to dissolve mineral carbonates. And "ELAP 198.4" refers to samples prepared using both ashing and acid treatment prior to TEM analysis due either to the sample type or to client requirements. "ELAP 198.1" refers to samples analyzed by PLM and reported separately. "ELAP 198.6" refers to ND PLM samples requiring TEM confirmation. All gravimetric samples are reported as percent asbestos present after correcting for mass loss due to ashing, acid treatment, or both. "EPA 600/R-04" refers to ND PLM vermiculite fines analyzed by a modified qualitative version of EPA Method 600/R-04/004 and reported as present or absent only. "ENV 004" refers to ND PLM soil fines analyzed by TEM according to ALS SOP ENV 004 which reports the percentage of asbestos present within the total of all materials observed in the final preparation. "7521 QUAL" refers to the qualitative analysis of ND PLM soil fines by ASTM D7521-16 reported as present or absent only. "7521 QUANT%" refers to the quantitative analysis of ND PLM soil fines reported as ACM by the qualitative TEM procedure. These are gravimetrically prepared and analyzed by TEM using visual area estimate (VAE) for percent asbestos by weight. "7521 QUANT" refers to the quantitative analysis of ND PLM soil fines reported as ND by the qualitative TEM procedure. These are also gravimetrically prepared but are analyzed by TEM using the structure count procedure. The analytical sensitivity (AS) for this method is based on the detection of 1 confirmed asbestos structure in the total area analyzed which according to ASTM Method D7521-16 must be >0.2mm² of the final filter. Results for the structure count analysis are reported in structures/µg based on the sub sample weight. Finally, "+STOP" indicates "positive stop analysis" requested by the client and denotes samples not analyzed because a previous sample in a homogeneous series was determined to be ACM (asbestos containing material). NOTE: All clients are advised to test samples for asbestos by both the PLM and TEM methods developed specifically for the matrix type. However, ALS conducts only the analytical methods specifically requested by the client via the COC. Photomicrographs and/or EDXA spectra available upon request for an additional fee. NA=Not Applicable, ND=None Detected, NON-ACM=Weight % of residue <1*, STR=Structure, TRACE=<1% (USA), <0.1% (Canada) *All samples examined regardless of residue Wt% ALS is accredited for NY ELAP Method 198.4 through New York ELAP (Lab#11371).

Pamela M. Hizar

Pamela M. Hizar ALS Microscopy Technical Manager

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513-733-5336 www.alsglobal.com

SAMPLE IDENTIFICATION

SAMPLE IDENTIFICATION					
	40535.488-	40535.488-	40535.488-	40535.488-	40535.488-
	5/5/2022-	5/5/2022-	5/5/2022-	5/5/2022-	5/5/2022-
Client Sample ID:	TEM01QC	TEM02QC	TEM03QC	TEM04QC	TEM05QC
ALS Sample ID:	22050713-01	22050713-02	22050713-03	22050713-04	22050713-05
Analyst:	Pamela Hizar				
Date:	5/25/2022	5/25/2022	5/25/2022	5/25/2022	5/25/2022
Method Code:	EPA 600 ACID				
Reporting Units:	%	%	%	%	%
AS:	0.1%	0.1%	0.1%	0.1%	0.1%
SAMPLE DESCRIPTION					
Homogeneity:	Homogeneous	Homogeneous	Homogeneous	Homogeneous	Homogeneous
Color:	Grey	Grey	Grey	Grey	Grey
Texture:	Compact	Compact	Compact	Compact	Compact
Description:	Cement	Cement	Cement	Cement	Cement
GRAVIMETRIC DATA					
Starting Weight (g):	0.4265	0.5904	0.5307	0.4949	0.6835
Final Weight (g):	0.2388	0.3921	0.3401	0.2848	0.4823
Weight % Residue:	55.9906	66.4126	64.0852	57.5470	70.5633
ASBESTOS					
Chrysotile:	1.81	1.84	1.56	0.00	0.00
Amosite:	0.00	0.00	0.00	0.00	0.00
Crocidolite:	0.00	0.00	0.00	0.00	0.00
Actinolite:	0.00	0.00	0.00	0.00	0.00
Tremolite:	0.00	0.00	0.00	0.00	0.00
Anthophyllite:	0.00	0.00	0.00	0.00	0.00
Total Asbestos:	1.81	1.84	1.56	0.00	0.00

SAMPLE IDENTIFICATION

	40535.488-	
	5/5/2022-	
Client Sample ID:	TEM06QC	
ALS Sample ID:	22050713-06	
Analyst:	Pamela Hizar	
Date:	5/25/2022	
Method Code:	EPA 600 ACID	
Reporting Units:	%	
AS:	0.1%	
SAMPLE DESCRIPTION		
Homogeneity:	Homogeneous	
Color:	Grey	
Texture:	Compact	
Description:	Cement	
GRAVIMETRIC DATA		
Starting Weight (g):	0.6188	
Final Weight (g):	0.3955	
Weight % Residue:	63.9140	
ASBESTOS		
Chrysotile:	0.00	
Amosite:	0.00	
Crocidolite:	0.00	
Actinolite:	0.00	
Tremolite:	0.00	
Anthophyllite:	0.00	
Total Asbestos:	0.00	



S

LABORATORY CHAIN OF CUSTODY 22050713

Project: <u>Pierce College Olym</u>			Project #: <u>40535.488</u>	
	uantitative TEM		Date: 5/17/2022	
Relinq'd by/Signature: <u>Peter</u>	Stensland / Cla	mile fai	Date/Time: 5/17/2022	
Received by/Signature:	1 Spc		Date/Time: 5/ 19/22	1445
	Email ALL INV	OICES to: <u>seattleap@pbsu</u>	sa.com	
E-mail results to:	_			
Willem Mager		et Murphy	Holly Tuttle	
Gregg Middaugh		tlin Soukup	Mike Smith	
Mark Hiley		son Welch	Ferman Fletcher Cameron Budnick	
Tim Ogden		an Nguyen er Stensland	Michelle Dodson	
Ryan Hunter Prudy Stoudt-McRae		ire Tsai		
		ire i sai	2	
TURN AROUND TIME:				
🗍 1 Hour	24	Hours	5 Days	
2 Hours	48	Hours	Results by <u>5/27/22</u>	. <u></u>
4 Hours			Glad Li	
ALS	Environme	utal - Attn:	Stella Hani	5
	SA	MPLE DATA FORM		
Sample #	Material	Loca	tion	Lab
Sample #	Material			
	Marblecrete	Olympic S Level 3 S wall W		ALS
			/ side	ALS
40535.488-5/5/2022-TEM01QC	Marblecrete	Olympic S Level 3 S wall W	/ side side	ALS
 40535.488-5/5/2022-TEM01QC 40535.488-5/5/2022-TEM02QC 	Marblecrete Marblecrete	Olympic S Level 3 S wall W Olympic S Level 3 S wall E	/ side side near doorway	ALS
 40535.488-5/5/2022-TEM01QC 40535.488-5/5/2022-TEM02QC 40535.488-5/5/2022-TEM03QC 40555.488-5/5/2022-TEM04QQ 	Marblecrete Marblecrete Marblecrete	Olympic S Level 3 S wall W Olympic S Level 3 S wall E Olympic S Level 2 Stairwell Olympic S Level 1 Stairwell Olympic S Exterior S elev.	/ side side near doorway near N penetration <i>N</i> side	ALS
 40535.488-5/5/2022-TEM01QC 40535.488-5/5/2022-TEM02QC 40535.488-5/5/2022-TEM03QC 40535.488-5/5/2022-TEM04QC 40535.488-5/5/2022-TEM04QC 	Marblecrete Marblecrete Marblecrete Marblecrete	Olympic S Level 3 S wall W Olympic S Level 3 S wall E Olympic S Level 2 Stairwell Olympic S Level 1 Stairwell	/ side side near doorway near N penetration <i>N</i> side	ALS
 40535.488-5/5/2022-TEM01QC 40535.488-5/5/2022-TEM02QC 40535.488-5/5/2022-TEM03QC 40535.488-5/5/2022-TEM04QC 40535.488-5/5/2022-TEM05QC 	Marblecrete Marblecrete Marblecrete Marblecrete Marblecrete	Olympic S Level 3 S wall W Olympic S Level 3 S wall E Olympic S Level 2 Stairwell Olympic S Level 1 Stairwell Olympic S Exterior S elev.	/ side side near doorway near N penetration <i>N</i> side	ALS
 40535.488-5/5/2022-TEM01QC 40535.488-5/5/2022-TEM02QC 40535.488-5/5/2022-TEM03QC 40535.488-5/5/2022-TEM04QC 40535.488-5/5/2022-TEM05QC 	Marblecrete Marblecrete Marblecrete Marblecrete Marblecrete	Olympic S Level 3 S wall W Olympic S Level 3 S wall E Olympic S Level 2 Stairwell Olympic S Level 1 Stairwell Olympic S Exterior S elev.	/ side side near doorway near N penetration <i>N</i> side	ALS
 40535.488-5/5/2022-TEM01QC 40535.488-5/5/2022-TEM02QC 40535.488-5/5/2022-TEM03QC 40535.488-5/5/2022-TEM04QC 40535.488-5/5/2022-TEM05QC 	Marblecrete Marblecrete Marblecrete Marblecrete Marblecrete	Olympic S Level 3 S wall W Olympic S Level 3 S wall E Olympic S Level 2 Stairwell Olympic S Level 1 Stairwell Olympic S Exterior S elev.	/ side side near doorway near N penetration <i>N</i> side	ALS
 40535.488-5/5/2022-TEM01QC 40535.488-5/5/2022-TEM02QC 40535.488-5/5/2022-TEM03QC 40535.488-5/5/2022-TEM04QC 40535.488-5/5/2022-TEM05QC 	Marblecrete Marblecrete Marblecrete Marblecrete Marblecrete	Olympic S Level 3 S wall W Olympic S Level 3 S wall E Olympic S Level 2 Stairwell Olympic S Level 1 Stairwell Olympic S Exterior S elev.	/ side side near doorway near N penetration <i>N</i> side	ALS
 40535.488-5/5/2022-TEM01QC 40535.488-5/5/2022-TEM02QC 40535.488-5/5/2022-TEM03QC 40535.488-5/5/2022-TEM04QC 40535.488-5/5/2022-TEM05QC 	Marblecrete Marblecrete Marblecrete Marblecrete Marblecrete	Olympic S Level 3 S wall W Olympic S Level 3 S wall E Olympic S Level 2 Stairwell Olympic S Level 1 Stairwell Olympic S Exterior S elev.	/ side side near doorway near N penetration <i>N</i> side	ALS
 40535.488-5/5/2022-TEM01QC 40535.488-5/5/2022-TEM02QC 40535.488-5/5/2022-TEM03QC 40535.488-5/5/2022-TEM04QC 40535.488-5/5/2022-TEM05QC 	Marblecrete Marblecrete Marblecrete Marblecrete Marblecrete	Olympic S Level 3 S wall W Olympic S Level 3 S wall E Olympic S Level 2 Stairwell Olympic S Level 1 Stairwell Olympic S Exterior S elev.	/ side side near doorway near N penetration <i>N</i> side	ALS
 40535.488-5/5/2022-TEM01QC 40535.488-5/5/2022-TEM02QC 40535.488-5/5/2022-TEM03QC 40535.488-5/5/2022-TEM04QC 40535.488-5/5/2022-TEM05QC 	Marblecrete Marblecrete Marblecrete Marblecrete Marblecrete	Olympic S Level 3 S wall W Olympic S Level 3 S wall E Olympic S Level 2 Stairwell Olympic S Level 1 Stairwell Olympic S Exterior S elev.	/ side side near doorway near N penetration <i>N</i> side	ALS
 40535.488-5/5/2022-TEM01QC 40535.488-5/5/2022-TEM02QC 40535.488-5/5/2022-TEM03QC 40535.488-5/5/2022-TEM04QC 40535.488-5/5/2022-TEM05QC 	Marblecrete Marblecrete Marblecrete Marblecrete Marblecrete	Olympic S Level 3 S wall W Olympic S Level 3 S wall E Olympic S Level 2 Stairwell Olympic S Level 1 Stairwell Olympic S Exterior S elev.	/ side side near doorway near N penetration <i>N</i> side	ALS
 40535.488-5/5/2022-TEM01QC 40535.488-5/5/2022-TEM02QC 40535.488-5/5/2022-TEM03QC 40535.488-5/5/2022-TEM04QC 40535.488-5/5/2022-TEM05QC 	Marblecrete Marblecrete Marblecrete Marblecrete Marblecrete	Olympic S Level 3 S wall W Olympic S Level 3 S wall E Olympic S Level 2 Stairwell Olympic S Level 1 Stairwell Olympic S Exterior S elev.	/ side side near doorway near N penetration <i>N</i> side	ALS
 40535.488-5/5/2022-TEM01QC 40535.488-5/5/2022-TEM02QC 40535.488-5/5/2022-TEM03QC 40535.488-5/5/2022-TEM04QC 40535.488-5/5/2022-TEM05QC 	Marblecrete Marblecrete Marblecrete Marblecrete Marblecrete	Olympic S Level 3 S wall W Olympic S Level 3 S wall E Olympic S Level 2 Stairwell Olympic S Level 1 Stairwell Olympic S Exterior S elev.	/ side side near doorway near N penetration <i>N</i> side	ALS

Fedex

214 EAST GALER STREET, SUITE 300, SEATTLE, WA 98102 = 206.233.9639 MAIN = 866.727.0140 FAX = PBSUSA.COM



Job Number: 220481 Client: PBS Engineering + Environmental Address: 214 E Galer Street Seattle, WA 98102 Project Name: Pierce College Olympic South Abatement and Repairs Project No.: 40535.488 PO Number: Sub Project: Reference No.: Report Number: 220481R01 Report Date: 5/10/2022

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Num.	Client Sample Number	Analysis	Analysis Notes	Date Sampled:	Date Received:
220481 - S1	40535.488-5/9/2022- TEM01	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		5/9/2022	5/9/2022
220481 - S2	40535.488-5/9/2022- TEM02	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		5/9/2022	5/9/2022
220481 - S3	40535.488-5/9/2022- TEM03	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)	Acid Soluble Weight Adjusted - No Visible Reaction Observed	5/9/2022	5/9/2022
220481 - S4	40535.488-5/9/2022- TEM04	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		5/9/2022	5/9/2022

ELAP Item 198.4 - Preparation and analysis of the above sample(s) was conducted in accordance with the ELAP Item 198.4 for the identification of regulated asbestiform minerals in Non-Friable Organically Bound Bulk Samples. Briefly, each sample was taken from at least three randomly selected areas. The sample was then weighed (Original Sample Weight) on an analytical balance (0.01 milligram sensitivity), ashed in a muffle furnace to remove the organic component, and weighed (Particulate After Ash). After a brief hydrolysis period in concentrated hydrochloric acid, the suspension was immediately diluted in 20 ml of laboratory reagent water. Appropriate aliquots were removed from the suspension and filtered onto mixed cellulose ester filters for TEM analysis. The remaining suspension was then filtered onto pre weighed 0.4µm polycarbonate (PC) filter and re-weighed upon completion of drying (Hydrolysis Adjusted Weight). Upon confirmation of the principal mineral type by diffraction and EDS chemistry, a visual estimate of the regulated asbestiform minerals, relative to the non-asbestos, was determined. Fibers, with an aspect ratio of at least 3:1 and with the proper diffraction/ chemistry, were identified as regulated asbestiform mineral types. 'Trace' is reported for those samples whose percent asbestos is below 1.0%. 'Trace' analytes reported with a Weight Percent of 0.01% are reported at the Limit of Detection.

This test report relates only to the items tested in this report. Samples such as soils, sediments or raw ores may require further mineralogical analysis to differentiate mineral species. Interpretation of these results is the sole responsibility of the client. Results are subject to the variation in the layers of the sample, the accuracy of the balance, the visual estimate on the microscope as well as other variations within the procedure.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,

Shauna Biornso Analyst



Report Number: 220481R01

Date Received: 5/9/2022

ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) -Final Report

Job Number: 220481 SEA

Client: PBS Engineering + Environmental

Project Name: Pierce College Olympic South Abatement and Repairs

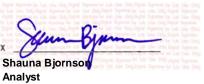
Lab/Cor Sample No.: S1

Client Sample No.: 40535.488-5/9/2022-TEM01

SB	Analysis Date 5/10/2022	Microscope JEOL-Sr 1200	Magnification 20000		
Analyte Des			Weight Percent	Gravimetric Reduction	Weight Percent
Chrysoti			1.83%	Acid Solubles	32.14%
	Tota	Asbestos Percei	nt 1.83%	Organics	6.93%
				Residue	59.10%
				Total Other Non-Asbestos Percent	98.17%
Lab/Cor San	nple No.: S2				
	mple No.: 40535.4	88-5/9/2022-TEM0	2		
Analyst(s)	Analysis Date	Microscope	Magnification		
SB	5/10/2022	JEOL-Sr 1200	20000		
Analyte Des	cription		Weight Percent	Gravimetric Reduction	Weight Percen
Chrysoti	e		4.44%	Acid Solubles	27.72%
	Tota	Asbestos Percei	nt 4.44%	Organics	3.92%
				Residue	63.92%
				Total Other Non-Asbestos Percent	95.56%
	00				
	mple No.: 53 mple No.: 40535.4	88-5/9/2022-TEM0	3	Sample Notes: Acid Soluble Weight Adjust Reaction Observed	ted - No Visible
	•	88-5/9/2022-TEM0 Microscope	3 Magnification	Acid Soluble Weight Adjust	ted - No Visible
Client Sa	mple No.: 40535.4			Acid Soluble Weight Adjust	ted - No Visible
Client Sar Analyst(s)	mple No.: 40535.4 Analysis Date 5/10/2022	Microscope	Magnification	Acid Soluble Weight Adjust	
Client Sat Analyst(s) SB Analyte Des	mple No.: 40535.4 Analysis Date 5/10/2022	Microscope JEOL-Sr 1200	Magnification 20000	Acid Soluble Weight Adjust Reaction Observed	
Client Sat Analyst(s) SB Analyte Des	mple No.: 40535.4 Analysis Date 5/10/2022 cription	Microscope JEOL-Sr 1200	Magnification 20000 Weight Percent	Acid Soluble Weight Adjust Reaction Observed Gravimetric Reduction	Weight Percent
Client Sat Analyst(s) SB Analyte Des	mple No.: 40535.4 Analysis Date 5/10/2022 cription	Microscope JEOL-Sr 1200	Magnification 20000 Weight Percent	Acid Soluble Weight Adjust Reaction Observed Gravimetric Reduction Acid Solubles	Weight Percent
Client Sat Analyst(s) SB Analyte Des	mple No.: 40535.4 Analysis Date 5/10/2022 cription	Microscope JEOL-Sr 1200	Magnification 20000 Weight Percent	Acid Soluble Weight Adjust Reaction Observed Gravimetric Reduction Acid Solubles Organics	Weight Percen 0.32% 9.66%
Client Sar Analyst(s) SB Analyte Des None Der	mple No.: 40535.4 Analysis Date 5/10/2022 cription	Microscope JEOL-Sr 1200	Magnification 20000 Weight Percent 0.00%	Acid Soluble Weight Adjust Reaction Observed Gravimetric Reduction Acid Solubles Organics Residue	Weight Percen 0.32% 9.66% 90.03%
Client Sar Analyst(s) SB Analyte Des None Der	Analysis Date 5/10/2022 cription tect (Regulated As	Microscope JEOL-Sr 1200	Magnification 20000 Weight Percent 0.00%	Acid Soluble Weight Adjust Reaction Observed Gravimetric Reduction Acid Solubles Organics Residue	Weight Percent 0.32% 9.66% 90.03%
Client Sat Analyst(s) SB Analyte Des None Des None Des Client Sat Analyst(s)	Analysis Date 5/10/2022 cription tect (Regulated As pple No.: S4 mple No.: 40535.4 Analysis Date 5/10/2022	Microscope JEOL-Sr 1200 bestos) 88-5/9/2022-TEM0 Microscope	Magnification 20000 Weight Percent 0.00%	Acid Soluble Weight Adjust Reaction Observed Gravimetric Reduction Acid Solubles Organics Residue	Weight Percent 0.32% 9.66% 90.03%
Client Sar Analyst(s) SB Analyte Des None Der Analyte Des Analyst(s) SB Analyte Des	Analysis Date 5/10/2022 cription tect (Regulated As pple No.: S4 mple No.: 40535.4 Analysis Date 5/10/2022	Microscope JEOL-Sr 1200 bestos) 88-5/9/2022-TEM0 Microscope JEOL-Sr 1200	Magnification 20000 Weight Percent 0.00%	Acid Soluble Weight Adjust Reaction Observed Gravimetric Reduction Acid Solubles Organics Residue Total Other Non-Asbestos Percent	Weight Percent 0.32% 9.66% 90.03% 100.00%
Client Sar Analyst(s) SB Analyte Des None Der Analyte Cor San Client Sar Analyst(s) SB Analyte Des	nple No.: 40535.4 Analysis Date 5/10/2022 cription tect (Regulated As nple No.: S4 mple No.: 40535.4 Analysis Date 5/10/2022 cription	Microscope JEOL-Sr 1200 bestos) 88-5/9/2022-TEM0 Microscope JEOL-Sr 1200	Magnification 20000 Weight Percent 0.00%	Acid Soluble Weight Adjust Reaction Observed	Weight Percen 0.32% 9.66% 90.03% 100.00%
Analyst(s) SB Analyte Des None Der Lab/Cor San Client San Analyst(s) SB Analyte Des	nple No.: 40535.4 Analysis Date 5/10/2022 cription tect (Regulated As nple No.: S4 mple No.: 40535.4 Analysis Date 5/10/2022 cription	Microscope JEOL-Sr 1200 bestos) 88-5/9/2022-TEM0 Microscope JEOL-Sr 1200	Magnification 20000 Weight Percent 0.00%	Acid Soluble Weight Adjust Reaction Observed	Weight Percen 0.32% 9.66% 90.03% 100.00% Weight Percen 13.56%



Job Number: 220481 SEA Client: PBS Engineering + Environmental Report Number: 220481R01 Date Received: 5/9/2022





	lumber: 220481 SE Client: PBS Engineering + t Name: Pierce College Olym	Environmental	d Repairs			port Number: 220481R01 ate Received: 5/9/2022
Lab/C	or Sample No: S1					
C	ient Sample No: 40535.488-	5/9/2022-TEM01				
	Container Weight	13.64500 g		Hydrolysis F	ilter PreWeight	13.68725 g
	Weight Before Ash	13.77292 g		Filter I	Post Hydrolysis	13.76373 g
	Orig Sample Weight	0.12792 g		After Hyd	drolysis Weight	0.07648 g
	Weight After Ash	13.76406 g		Hyd	drolysis Aliquot	19.625 ml
	Particulate After Ash	0.11906 g		Hydrolysis A	djusted Weight	0.07794 g
	Percent Organics	6.93%			Begin Volume	20 ml
	-				Acid Solubles	32.14%
Grid	Analyte	Visual Estimate	Elements		Comment	
G3	Chrysotile	2.00%	Mg, Si			
			ItemType	ItemNum	Confirmed	Comment
			Brightfield	J68190BF		
			Diffraction	J68190DF	SB 5/10/2022	0.53nm ROW SPACING
			Spectra	J68190SP	SB 5/10/2022	
G4	Chrysotile	4.00%				
Lab/C	or Sample No: S2					
	ient Sample No: 40535.488-	5/9/2022-TEM02				
	Container Weight	13.69819 g		Hydrolysis F	ilter PreWeight	13.73922 g
	Weight Before Ash	13.81167 g		Filter I	Post Hydrolysis	13.81534 g
	Orig Sample Weight	0.11348 g		After Hyd	drolysis Weight	0.07612 g
	Weight After Ash	13.80722 g		Hyd	drolysis Aliquot	19.625 ml
	Particulate After Ash	0.10903 g		Hydrolysis A	djusted Weight	0.07757 g
	Percent Organics	3.92%			Begin Volume	20 ml
	-				Acid Solubles	27.72%
Grid	Analyte	Visual Estimate	Elements		Comment	
G7	Chrysotile	8.00%	Mg, Si			
			ItemType	ItemNum	Confirmed	Comment
			Brightfield	J68191BF		
			Diffraction	J68191DF	SB 5/10/2022	0.53nm ROW SPACING
			Spectra	J68191SP	SB 5/10/2022	
G8	Chrysotile	5.00%				
	,					



	Number: 220481 SEA Client: PBS Engineering + E	-			Report Number: 220481R01 Date Received: 5/9/2022
Lab/C	or Sample No: S3			SampleNotes:	
С	lient Sample No: 40535.488-5,	/9/2022-TEM03		Acid Soluble Wei Observed	ght Adjusted - No Visible Reaction
	Container Weight	13.85156 g		Hydrolysis Filter PreWeight	13.89361 g
	Weight Before Ash	13.97709 g		Filter Post Hydrolysis	14.00450 g
	Orig Sample Weight	0.12553 g		After Hydrolysis Weight	0.11089 g
	Weight After Ash	13.96497 g		Hydrolysis Aliquot	19.625 ml
	Particulate After Ash	0.11341 g		Hydrolysis Adjusted Weight	0.11301 g
	Percent Organics	9.66%		Begin Volume	20 ml
				Acid Solubles	0.32%
Grid	Analyte	Visual Estimate	Elements	Commen	nt
5	None Detect (Regulated Asbestos)	0.00%			
6	None Detect (Regulated	0.00%			
	Asbestos)				
	Asbestos) Cor Sample No: S4 lient Sample No: 40535.488-5	/9/2022-TEM04			
	Cor Sample No: S4	/9/2022-TEM04 13.58913 g		Hydrolysis Filter PreWeight	13.62935 g
	Cor Sample No: S4 lient Sample No: 40535.488-5			Hydrolysis Filter PreWeight Filter Post Hydrolysis	13.62935 g 13.70475 g
	Cor Sample No: S4 lient Sample No: 40535.488-5, Container Weight	13.58913 g			Ũ
	Cor Sample No: S4 lient Sample No: 40535.488-5, Container Weight Weight Before Ash	13.58913 g 13.68801 g		Filter Post Hydrolysis	13.70475 g
	Cor Sample No: S4 lient Sample No: 40535.488-5, Container Weight Weight Before Ash Orig Sample Weight	13.58913 g 13.68801 g 0.09888 g		Filter Post Hydrolysis After Hydrolysis Weight	13.70475 g 0.07540 g
	Cor Sample No: S4 lient Sample No: 40535.488-5, Container Weight Weight Before Ash Orig Sample Weight Weight After Ash	13.58913 g 13.68801 g 0.09888 g 13.67938 g		Filter Post Hydrolysis After Hydrolysis Weight Hydrolysis Aliquot	13.70475 g 0.07540 g 19.625 ml
	Cor Sample No: S4 lient Sample No: 40535.488-5, Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash	13.58913 g 13.68801 g 0.09888 g 13.67938 g 0.09025 g		Filter Post Hydrolysis After Hydrolysis Weight Hydrolysis Aliquot Hydrolysis Adjusted Weight	13.70475 g 0.07540 g 19.625 ml 0.07684 g
<u> </u>	Cor Sample No: S4 lient Sample No: 40535.488-5, Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash	13.58913 g 13.68801 g 0.09888 g 13.67938 g 0.09025 g	Elements	Filter Post Hydrolysis After Hydrolysis Weight Hydrolysis Aliquot Hydrolysis Adjusted Weight Begin Volume	13.70475 g 0.07540 g 19.625 ml 0.07684 g 20 ml 13.56%
	Cor Sample No: S4 lient Sample No: 40535.488-5, Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics	13.58913 g 13.68801 g 0.09888 g 13.67938 g 0.09025 g 8.73%	Elements	Filter Post Hydrolysis After Hydrolysis Weight Hydrolysis Aliquot Hydrolysis Adjusted Weight Begin Volume Acid Solubles	13.70475 g 0.07540 g 19.625 ml 0.07684 g 20 ml 13.56%

Shauna Bjornson Analyst



4 Hours

Project: Pierce Colle	ge Olympic South Abatement & Repairs	Project #: <u>40535.488</u>
Analysis requested:	Semi-quantitative TEM bulk :: Peter Stensland / Potes Stimut	Date: <u>5/9/2022</u> Date/Time: <u>5/9/2022</u> Date/Time: <u>5/9/2022</u> Date/Time: <u>5/9/2022</u>
E-mail results to: Willem Mager Gregg Middaugh Mark Hiley Tim Ogden Ryan Hunter Prudy Stoudt-McRae	☐ Janet Murphy ☐ Kaitlin Soukup ☐ Allison Welch ☐ Toan Nguyen ⊠ Peter Stensland	 Holly Tuttle Mike Smith Ferman Fletcher Cameron Budnick Michelle Dodson
TURN AROUND TIME:	24 Hours 48 Hours	☐ 3 Days ☑ <u>Other 5/10 EOD</u>

	SAM	IPLE DATA FORM	
Sample #	Material	Location	Lab
40535.488-5/9/2022-TEM01	Plaster / gypsum	Olympic S Exterior NE Soffit bottom of the lid	Labcor
40535.488-5/9/2022-TEM02	Plaster	Olympic S Exterior Bottom of the skybridge W of the columns	
40535.488-5/9/2022-TEM03	EIFS	Olympic S Exterior N Elevation E side	
40535.488-5/9/2022-TEM04	EIFS	Olympic S Exterior N Elevation W side	
1			
		Reviewed by:	
		Results Released:	
		Fax Verbals USPS Email	
		Fax USPS Emcil	



Job Number: 220512 Client: PBS Engineering + Environmental Address: 214 E Galer Street Seattle, WA 98102 Project Name: Pierce College Olympic South Abatement and Repairs Project No.: 40535.488 PO Number: Sub Project: Reference No.: Report Number: 220512R01 Report Date: 5/25/2022

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Num.	Client Sample Number	Analysis	Analysis Notes	Date Sampled:	Date Received:
220512 - S1	40535.488-5/17/2022- TEM01	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		5/17/2022	5/18/2022
220512 - S2	40535.488-5/17/2022- TEM02	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		5/17/2022	5/18/2022
220512 - S3	40535.488-5/17/2022- TEM03	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		5/17/2022	5/18/2022
220512 - S4	40535.488-5/17/2022- TEM04	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		5/17/2022	5/18/2022
220512 - S5	40535.488-5/17/2022- TEM05	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		5/17/2022	5/18/2022
220512 - S6	40535.488-5/17/2022- TEM06	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		5/17/2022	5/18/2022

ELAP Item 198.4 - Preparation and analysis of the above sample(s) was conducted in accordance with the ELAP Item 198.4 for the identification of regulated asbestiform minerals in Non-Friable Organically Bound Bulk Samples. Briefly, each sample was taken from at least three randomly selected areas. The sample was then weighed (Original Sample Weight) on an analytical balance (0.01 milligram sensitivity), ashed in a muffle furnace to remove the organic component, and weighed (Particulate After Ash). After a brief hydrolysis period in concentrated hydrochloric acid, the suspension was immediately diluted in 20 ml of laboratory reagent water. Appropriate aliquots were removed from the suspension and filtered onto mixed cellulose ester filters for TEM analysis. The remaining suspension was then filtered onto pre weighed 0.4µm polycarbonate (PC) filter and re-weighed upon completion of drying (Hydrolysis Adjusted Weight). Upon confirmation of the principal mineral type by diffraction and EDS chemistry, a visual estimate of the regulated asbestiform minerals, relative to the non-asbestos, was determined. Fibers, with an aspect ratio of at least 3:1 and with the proper diffraction/ chemistry, were identified as regulated asbestiform mineral types. Trace' is reported for those samples whose percent asbestos is below 1.0%. 'Trace' analytes reported with a Weight Percent of 0.01% are reported at the Limit of Detection.

This test report relates only to the items tested in this report. Samples such as soils, sediments or raw ores may require further mineralogical analysis to differentiate mineral species. Interpretation of these results is the sole responsibility of the client. Results are subject to the variation in the layers of the sample, the accuracy of the balance, the visual estimate on the microscope as well as other variations within the procedure.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely, Shauna Bjornson Analyst



Report Number: 220512R01

Date Received: 5/18/2022

ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) -Final Report

Job Number: 220512 SEA

Client: PBS Engineering + Environmental

Project Name: Pierce College Olympic South Abatement and Repairs

Lab/Cor Sample No.: S1

Client Sample No.: 40535.488-5/17/2022-TEM01

Analyst(s) SB	Analysis Date 5/25/2022	Microscope JEOL-Sr 1200	Magnification 20000		
Analyte Des	cription		Weight Percent	Gravimetric Reduction	Weight Percent
Actinolite	•		0.49%	Acid Solubles	45.69%
	Tota	I Asbestos Percer	nt 0.49%	Organics	5.14%
				Residue	48.68%
				Total Other Non-Asbestos Percent	99.51%
Lab/Cor Sam Client Sar	nple No.: S2 nple No.: 40535.4	88-5/17/2022-TEM	102		
Analyst(s) SB	Analysis Date 5/25/2022	Microscope JEOL-Sr 1200	Magnification 20000		
Analyte Des	cription		Weight Percent	Gravimetric Reduction	Weight Percent
Tremolite	•		0.65%	Acid Solubles	38.27%
	Tota	I Asbestos Percer	nt 0.65%	Organics	9.79%
				Residue	51.29%
				Residue	51.2570
	-			Total Other Non-Asbestos Percent	99.35%
	ple No.: S3 nple No.: 40535.4 Analysis Date 5/25/2022	88-5/17/2022-TEM Microscope JEOL-Sr 1200	Magnification 20000		
Client Sar Analyst(s) SB Analyte Des	nple No.: 40535.4 Analysis Date 5/25/2022 cription	Microscope	Magnification 20000 Weight Percent	Total Other Non-Asbestos Percent	99.35%
Client Sar Analyst(s) SB	Analysis Date 5/25/2022	Microscope JEOL-Sr 1200	Magnification 20000 Weight Percent 0.48%	Total Other Non-Asbestos Percent Gravimetric Reduction Acid Solubles	99.35% Weight Percent 38.84%
Client Sar Analyst(s) SB Analyte Des	Analysis Date 5/25/2022	Microscope	Magnification 20000 Weight Percent 0.48%	Gravimetric Reduction Acid Solubles Organics	99.35% Weight Percent 38.84% 12.94%
Client Sar Analyst(s) SB Analyte Des	Analysis Date 5/25/2022	Microscope JEOL-Sr 1200	Magnification 20000 Weight Percent 0.48%	Gravimetric Reduction Acid Solubles Organics Residue	99.35% Weight Percent 38.84% 12.94% 47.73%
Client Sar Analyst(s) SB Analyte Desc Tremolite	nple No.: 40535.4 Analysis Date 5/25/2022 cription	Microscope JEOL-Sr 1200	Magnification 20000 Weight Percent 0.48%	Gravimetric Reduction Acid Solubles Organics	99.35% Weight Percent 38.84% 12.94%
Client Sar Analyst(s) SB Analyte Dese Tremolite	nple No.: 40535.4 Analysis Date 5/25/2022 cription	Microscope JEOL-Sr 1200	Magnification 20000 Weight Percent 0.48% nt 0.48%	Gravimetric Reduction Acid Solubles Organics Residue	99.35% Weight Percent 38.84% 12.94% 47.73%
Client Sar Analyst(s) SB Analyte Dese Tremolite	Analysis Date 5/25/2022 cription Tota	Microscope JEOL-Sr 1200	Magnification 20000 Weight Percent 0.48% nt 0.48%	Gravimetric Reduction Acid Solubles Organics Residue	99.35% Weight Percent 38.84% 12.94% 47.73%
Client Sar Analyst(s) SB Analyte Dese Tremolite Lab/Cor Sam Client Sar	Analysis Date 5/25/2022 cription Tota	Microscope JEOL-Sr 1200	Magnification 20000 Weight Percent 0.48% nt 0.48%	Gravimetric Reduction Acid Solubles Organics Residue	99.35% Weight Percent 38.84% 12.94% 47.73%
Client Sar Analyst(s) SB Analyte Dese Tremolite Lab/Cor Sam Client Sar Analyst(s)	Analysis Date 5/25/2022 cription Tota pple No.: S4 nple No.: 40535.4 Analysis Date 5/25/2022	Microscope JEOL-Sr 1200 I Asbestos Percer 88-5/17/2022-TEM Microscope	Magnification 20000 Weight Percent 0.48% nt 0.48%	Gravimetric Reduction Acid Solubles Organics Residue	99.35% Weight Percent 38.84% 12.94% 47.73%
Client Sar Analyst(s) SB Analyte Dese Tremolite Lab/Cor Sam Client Sar Analyst(s) SB	nple No.: 40535.4 Analysis Date 5/25/2022 cription Tota nple No.: S4 nple No.: 40535.4 Analysis Date 5/25/2022 cription	Microscope JEOL-Sr 1200 I Asbestos Percer 88-5/17/2022-TEM Microscope	Magnification 20000 Weight Percent 0.48% nt 0.48%	Gravimetric Reduction Acid Solubles Organics Residue Total Other Non-Asbestos Percent	99.35% Weight Percent 38.84% 12.94% 47.73% 99.52%
Analyst(s) SB Analyte Dese Tremolite Lab/Cor Sam Client Sar Analyst(s) SB Analyte Dese	Analysis Date 5/25/2022 cription ple No.: S4 nple No.: 40535.4 Analysis Date 5/25/2022	Microscope JEOL-Sr 1200 I Asbestos Percer 88-5/17/2022-TEM Microscope	Magnification 20000 Weight Percent 0.48% nt 0.48% 04 Magnification 20000 Weight Percent 1.12%	Gravimetric Reduction Acid Solubles Organics Residue Total Other Non-Asbestos Percent	99.35% Weight Percent 38.84% 12.94% 47.73% 99.52% Weight Percent

Total Other Non-Asbestos Percent 98.88%



ob Number: 220512 SEA				Report Number	er: 220512R01
Client:	PBS Engineering -	+ Environmental		Date Receive	ed: 5/18/2022
	nple No.: S5 mple No.: 40535.4	88-5/17/2022-TEM	05		
Analyst(s) SB	Analysis Date 5/25/2022	Microscope JEOL-Sr 1200	Magnification 20000		
Analyte Des	cription		Weight Percent	Gravimetric Reduction	Weight Percen
Actinolite	e		0.79%	Acid Solubles	30.03%
Tremolite	e		1.11%	Organics	6.57%
	Tota	I Asbestos Percer	nt 1.90%	Residue	61.50%
				Total Other Non-Asbestos Percent	98.10%
	nple No.: S6 mple No.: 40535.4 Analysis Date 5/25/2022	88-5/17/2022-TEM Microscope JEOL-Sr 1200	06 Magnification 20000	Total Other Non-Asbestos Percent	98.10%
Client Sa Analyst(s) SB	Malysis Date 5/25/2022	Microscope	Magnification 20000		
Client Sa Analyst(s) SB Analyte Des	Analysis Date 5/25/2022	Microscope	Magnification 20000 Weight Percent	Gravimetric Reduction	Weight Percen
Client Sa Analyst(s) SB	Analysis Date 5/25/2022	Microscope	Magnification 20000 Weight Percent 0.76%	Gravimetric Reduction Acid Solubles	Weight Percer 33.13%
Client Sa Analyst(s) SB Analyte Des	Analysis Date 5/25/2022	Microscope JEOL-Sr 1200	Magnification 20000 Weight Percent 0.76%	Gravimetric Reduction	Weight Percer

Shauna Bjornson Analyst



ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) -
Final Report

	t Name: Pierce College Olymp	pic South Abatement an	d Repairs			ate Received: 5/18/2022
Lab/C	or Sample No: S1					
C	ient Sample No: 40535.488-	5/17/2022-TEM01				
	Container Weight	13.59199 g		Hydrolysis F	Filter PreWeight	13.63339 g
	Weight Before Ash	13.69109 g		Filter	Post Hydrolysis	13.68121 g
	Orig Sample Weight	0.09910 g		After Hy	drolysis Weight	0.04782 g
	Weight After Ash	13.68600 g		Hy	drolysis Aliquot	19.625 ml
	Particulate After Ash	0.09401 g		Hydrolysis A	djusted Weight	0.04873 g
	Percent Organics	5.14%			Begin Volume	20 ml
					Acid Solubles	45.69%
Grid	Analyte	Visual Estimate	Elements		Comment	
G10	Actinolite	1.00%	Mg, Si, Ca,	Fe	High Si due to	background particulate
			ItemType	ItemNum	Confirmed	Comment
			Brightfield	J68318BF		
			Diffraction	J68318DF	SB 5/25/2022	0.53nm ROW SPACING
			Spectra	J68318SP	SB 5/25/2022	
G11	Actinolite	1.00%				
Lab/C	or Sample No: S2					
С	ient Sample No: 40535.488-	5/17/2022-TEM02				
	Container Weight	13.44240 g		Hydrolysis F	Filter PreWeight	13.48323 g
	Weight Before Ash	13.56885 g		Filter	Post Hydrolysis	13.54768 g
	Orig Sample Weight	0.12645 g		After Hy	drolysis Weight	0.06445 g
	Weight After Ash	13.55647 g		Hy	drolysis Aliquot	19.625 ml
	Particulate After Ash	0.11407 g		Hydrolysis A	djusted Weight	0.06568 g
	Percent Organics	9.79%			Begin Volume	20 ml
	-				Acid Solubles	38.27%
Grid	Analyte	Visual Estimate	Elements		Comment	
G10	Tremolite	1.50%	Mg, Si, Ca,	Fe	High Si due to	background particulate
			ItemType	ItemNum	Confirmed	Comment
			Brightfield	J68319BF		
			Diffraction	J68319DF	SB 5/25/2022	0.53nm ROW SPACING
			Spectra	J68319SP	SB 5/25/2022	



Job I	Number: 220512 SE	EA			Re	port Number: 220512R0
	Client: PBS Engineering +	Environmental			D	ate Received: 5/18/2022
Lab/C	Cor Sample No: S3					
С	lient Sample No: 40535.488-	5/17/2022-TEM03				
	Container Weight	13.59614 g		Hydrolysis	Filter PreWeight	13.63920 g
	Weight Before Ash	13.67733 g			er Post Hydrolysis	13.67761 g
	Orig Sample Weight	0.08119 g		After H	lydrolysis Weight	0.03841 g
	Weight After Ash	13.66682 g		F	lydrolysis Aliquot	19.625 ml
	Particulate After Ash	0.07068 g		Hydrolysis	Adjusted Weight	0.03914 g
	Percent Organics	12.94%			Begin Volume	20 ml
	-				Acid Solubles	38.84%
Grid	Analyte	Visual Estimate	Elements		Comment	
G10	Tremolite	1.00%	Mg, Si, Ca,	Fe	High Si due to	background particulate
			ItemType	ItemNum	Confirmed	Comment
			Brightfield	J68317BF		
			Diffraction	J68317DF	SB 5/25/2022	0.53nm ROW SPACING
			Spectra	J68317SP	SB 5/25/2022	
G11	Tremolite	1.00%	Spectra	J68317SP	SB 5/25/2022	
Lab/C	Tremolite Cor Sample No: S4 lient Sample No: 40535.488-		Spectra	J68317SP	SB 5/25/2022	
Lab/C	Cor Sample No: S4		Spectra		SB 5/25/2022	13.87440 g
Lab/C	Cor Sample No: S4 lient Sample No: 40535.488-	5/17/2022-TEM04	Spectra	Hydrolysis		13.87440 g 13.96183 g
Lab/C	Cor Sample No: S4 lient Sample No: 40535.488 Container Weight	5/17/2022-TEM04 13.83294 g	Spectra	Hydrolysis Filte	s Filter PreWeight	•
Lab/C	Cor Sample No: S4 lient Sample No: 40535.488 Container Weight Weight Before Ash	5/17/2022-TEM04 13.83294 g 13.97242 g	Spectra	Hydrolysis Filte After H	s Filter PreWeight r Post Hydrolysis	13.96183 g
Lab/C	Cor Sample No: S4 lient Sample No: 40535.488 Container Weight Weight Before Ash Orig Sample Weight	5/17/2022-TEM04 13.83294 g 13.97242 g 0.13948 g	Spectra	Hydrolysis Filte After H	s Filter PreWeight r Post Hydrolysis łydrolysis Weight	13.96183 g 0.08743 g
Lab/C	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash	5/17/2022-TEM04 13.83294 g 13.97242 g 0.13948 g 13.96468 g	Spectra	Hydrolysis Filte After H	s Filter PreWeight r Post Hydrolysis łydrolysis Weight łydrolysis Aliquot	13.96183 g 0.08743 g 19.625 ml
Lab/C	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash	5/17/2022-TEM04 13.83294 g 13.97242 g 0.13948 g 13.96468 g 0.13174 g	Spectra	Hydrolysis Filte After H	s Filter PreWeight er Post Hydrolysis łydrolysis Weight łydrolysis Aliquot s Adjusted Weight	13.96183 g 0.08743 g 19.625 ml 0.08910 g
Lab/C C	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash	5/17/2022-TEM04 13.83294 g 13.97242 g 0.13948 g 13.96468 g 0.13174 g	Spectra	Hydrolysis Filte After H	s Filter PreWeight er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot S Adjusted Weight Begin Volume	13.96183 g 0.08743 g 19.625 ml 0.08910 g 20 ml
Lab/C C	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics	5/17/2022-TEM04 13.83294 g 13.97242 g 0.13948 g 13.96468 g 0.13174 g 5.55%		Hydrolysis Filte After H Hydrolysis	s Filter PreWeight er Post Hydrolysis łydrolysis Weight łydrolysis Aliquot s Adjusted Weight Begin Volume Acid Solubles Comment	13.96183 g 0.08743 g 19.625 ml 0.08910 g 20 ml
Lab/C C	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	5/17/2022-TEM04 13.83294 g 13.97242 g 0.13948 g 13.96468 g 0.13174 g 5.55% Visual Estimate	Elements	Hydrolysis Filte After H Hydrolysis	s Filter PreWeight er Post Hydrolysis łydrolysis Weight łydrolysis Aliquot s Adjusted Weight Begin Volume Acid Solubles Comment	13.96183 g 0.08743 g 19.625 ml 0.08910 g 20 ml 30.57%
Lab/C C	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	5/17/2022-TEM04 13.83294 g 13.97242 g 0.13948 g 13.96468 g 0.13174 g 5.55% Visual Estimate	Elements Mg, Si, Ca,	Hydrolysis Filte After H Hydrolysis	s Filter PreWeight er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot s Adjusted Weight Begin Volume Acid Solubles Comment High Si due to	13.96183 g 0.08743 g 19.625 ml 0.08910 g 20 ml 30.57% background particulate
c	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	5/17/2022-TEM04 13.83294 g 13.97242 g 0.13948 g 13.96468 g 0.13174 g 5.55% Visual Estimate	Elements Mg, Si, Ca, ItemType Brightfield Diffraction	Hydrolysis Filte After H Hydrolysis Fe ItemNum J68321BF J68321DF	s Filter PreWeight er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot s Adjusted Weight Begin Volume Acid Solubles <u>Comment</u> High Si due to Confirmed SB 5/25/2022	13.96183 g 0.08743 g 19.625 ml 0.08910 g 20 ml 30.57% background particulate
Lab/C C	Cor Sample No: S4 lient Sample No: 40535.488- Container Weight Weight Before Ash Orig Sample Weight Weight After Ash Particulate After Ash Percent Organics Analyte	5/17/2022-TEM04 13.83294 g 13.97242 g 0.13948 g 13.96468 g 0.13174 g 5.55% Visual Estimate	Elements Mg, Si, Ca, ItemType Brightfield	Hydrolysis Filte After H Hydrolysis Fe ItemNum J68321BF	s Filter PreWeight er Post Hydrolysis Hydrolysis Weight Hydrolysis Aliquot s Adjusted Weight Begin Volume Acid Solubles <u>Comment</u> High Si due to Confirmed	13.96183 g 0.08743 g 19.625 ml 0.08910 g 20 ml 30.57% background particulate Comment

ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) -Final Report

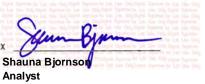


	Client: PBS Engineering +	Environmental				Date Received: 5/18/2022
	Cor Sample No: S5					
C	lient Sample No: 40535.488-	5/17/2022-1EM05				
	Container Weight	13.71042 g			Filter PreWeight	13.75216 g
	Weight Before Ash	13.87712 g			Post Hydrolysis	13.85587 g
	Orig Sample Weight	0.16670 g		After Hy	drolysis Weight	0.10371 g
	Weight After Ash	13.86617 g		Hy	drolysis Aliquot	19.625 ml
	Particulate After Ash	0.15575 g		Hydrolysis A	Adjusted Weight	0.10569 g
	Percent Organics	6.57%			Begin Volume	20 ml
					Acid Solubles	30.03%
Grid	Analyte	Visual Estimate	Elements		Comment	
G10	Tremolite	2.00%	Mg, Si, Ca, F	е	High Si due	to background particulate
			ItemType	ItemNum	Confirmed	Comment
			Brightfield	J68323BF		0
			Diffraction	J68323DF J68323SP	SB 5/25/202 SB 5/25/202	
.	•		Spectra			
G10	Actinolite	1.50%	Mg, Si, Ca, F		•	to background particulate
			ItemType	ItemNum	Confirmed	Comment
			Brightfield Diffraction	J68324BF J68324DF	SB 5/25/202	2 0.53nm ROW SPACING
			Spectra	J68324SP	SB 5/25/202 SB 5/25/202	
G11	Tremolite	1.50%				
G11	Actinolite	1.00%				
	Cor Sample No: S6 lient Sample No: 40535.488-	5/17/2022-TEM06				
	Container Weight	13.73544 g		Hydrolysis I	Filter PreWeight	13.77712 g
	Weight Before Ash	13.84442 g			Post Hydrolysis	13.84252 g
	Orig Sample Weight	0.10898 g		After Hy	drolysis Weight	0.06540 g
	Weight After Ash	13.83820 g		-	drolysis Aliquot	19.625 ml
	weight Alter Ash			-	Adjusted Weight	0.06665 g
	Particulate After Ash	0.10276 g		Hydrolysis A		0
	Particulate After Ash	5		Hydrolysis A	Begin Volume	20 ml
	0	0.10276 g		Hydrolysis A		20 ml 33.13%
Grid	Particulate After Ash	0.10276 g	Elements	nyaroiysis A	Begin Volume	33.13%
	Particulate After Ash Percent Organics	0.10276 g 5.71%	Elements Mg, Si, Ca, F		Begin Volume Acid Solubles Comment	33.13%
	Particulate After Ash Percent Organics Analyte	0.10276 g 5.71% Visual Estimate			Begin Volume Acid Solubles Comment	33.13%
Grid G10	Particulate After Ash Percent Organics Analyte	0.10276 g 5.71% Visual Estimate	Mg, Si, Ca, F	e	Begin Volume Acid Solubles Comment High Si due	33.13% to background particulate
	Particulate After Ash Percent Organics Analyte	0.10276 g 5.71% Visual Estimate	Mg, Si, Ca, F ItemType Brightfield Diffraction	e ItemNum J68325BF J68325DF	Begin Volume Acid Solubles Comment High Si due Confirmed SB 5/25/202	33.13% to background particulate Comment 2 0.53nm ROW SPACING
	Particulate After Ash Percent Organics Analyte	0.10276 g 5.71% Visual Estimate	Mg, Si, Ca, F ItemType Brightfield	e ItemNum J68325BF	Begin Volume Acid Solubles Comment High Si due Confirmed	33.13% to background particulate Comment 2 0.53nm ROW SPACING

ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified) -Final Report



Job Number: 220512 SEA Client: PBS Engineering + Environmental **Report Number:** 220512R01 **Date Received:** 5/18/2022





LABORATORY CHAIN OF CUSTODY

Project:Pierce College Olympic Se	Project #: <u>40535.488</u>		
Analysis requested: <u>Semi-quant</u>	Date:5/17/2022		
Relinq'd by/Signature: Peter Stens	Alasia Lai	Date/Time: <u>5/17/2022</u> Date/Time: <u>3/18/22</u> 14:3	
Received by/Signature:C	ail ALL INVOICES to: seattleap@		
E-mail results to: Willem Mager Gregg Middaugh Mark Hiley Tim Ogden Ryan Hunter Prudy Stoudt-McRae	 Janet Murphy Kaitlin Soukup Allison Welch Toan Nguyen Peter Stensland Claire Tsai 	 Holly Tuttle Mike Smith Ferman Fletcher Cameron Budnick Michelle Dodson 	
TURN AROUND TIME:	24 Hours 48 Hours	Days Other	

4 Hours

SAMPLE DATA FORM				
Sample #	Material	Location	Lab	
40535.488-5/17/2022-TEM01	Plaster	Olympic S Stairwell North Elevation	Labcor	
40535.488-5/17/2022-TEM02	Plaster	Olympic S Stairwell East Elevation	1.12	
40535.488-5/17/2022-TEM03	Plaster	Olympic S Stairwell South Elevation		
40535.488-5/17/2022-TEM04	CMU	Olympic S wall between 283/284		
40535.488-5/17/2022-TEM05	CMU	Olympic S wall between 283/284		
40535.488-5/17/2022-TEM06	CMU	Olympic S wall between 283/284		
	-			
	-			
	-			
	-			
	-			
	-			



Job Number: 220538 Client: PBS Engineering + Environmental Address: 214 E Galer Street Seattle, WA 98102 Project Name: Pierce College Olympic South Abatement and Repairs Project No.: 40535.488 PO Number: Sub Project: Reference No.: Report Number: 220538R01 Report Date: 6/1/2022

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Num.	Client Sample Number	Analysis	Analysis Notes	Date Sampled:	Date Received:
220538 - S1	40535.488-5/26/22- TEM01	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		5/26/2022	5/26/2022
220538 - S2	40535.488-5/26/22- TEM02	ELAP Item 198.4 - TEM - Bulk Semi-Quantitative (Modified)		5/26/2022	5/26/2022

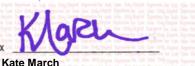
ELAP Item 198.4 - Preparation and analysis of the above sample(s) was conducted in accordance with the ELAP Item 198.4 for the identification of regulated asbestiform minerals in Non-Friable Organically Bound Bulk Samples. Briefly, each sample was taken from at least three randomly selected areas. The sample was then weighed (Original Sample Weight) on an analytical balance (0.01 milligram sensitivity), ashed in a muffle furnace to remove the organic component, and weighed (Particulate After Ash). After a brief hydrolysis period in concentrated hydrochloric acid, the suspension was immediately diluted in 20 ml of laboratory reagent water. Appropriate aliquots were removed from the suspension and filtered onto mixed cellulose ester filters for TEM analysis. The remaining suspension was then filtered onto pre weighed 0.4µm polycarbonate (PC) filter and re-weighed upon completion of drying (Hydrolysis Adjusted Weight). Upon confirmation of the principal mineral type by diffraction and EDS chemistry, a visual estimate of the regulated asbestiform minerals, relative to the non-asbestos, was determined. Fibers, with an aspect ratio of at least 3:1 and with the proper diffraction/ chemistry, were identified as regulated asbestiform mineral types. 'Trace' is reported for those samples whose percent asbestos is below 1.0%. 'Trace' analytes reported with a Weight Percent of 0.01% are reported at the Limit of Detection.

This test report relates only to the items tested in this report. Samples such as soils, sediments or raw ores may require further mineralogical analysis to differentiate mineral species. Interpretation of these results is the sole responsibility of the client. Results are subject to the variation in the layers of the sample, the accuracy of the balance, the visual estimate on the microscope as well as other variations within the procedure.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely,



Quality Control Officer



Job Number: 220538 SEA

Client: PBS Engineering + Environmental

Report Number: 220538R01 Date Received: 5/26/2022

Project Name: Pierce College Olympic South Abatement and Repairs

Lab/Cor Sample No.: S1

Client Sample No.: 40535.488-5/26/22-TEM01

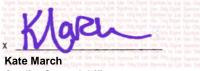
Analyst(s) SB	Analysis Date 6/1/2022	Microscope JEOL-Sr 1200	Magnification 20000		
Analyte Desc	cription		Weight Percent	Gravimetric Reduction	Weight Percent
Chrysotile	e		0.11%	Acid Solubles	1.78%
Tremolite)		0.04%	Organics	6.87%
	Tota	I Asbestos Percen	t 0.15%	Residue	91.20%
				Total Other Non-Asbestos Percent	99.85%

Lab/Cor Sample No.: S2

Client Sample No.: 40535.488-5/26/22-TEM02

Analyst(s)	Analysis Date	Microscope	Magnification		
SB	6/1/2022	JEOL-Sr 1200	20000		
Analyte Desc	cription		Weight Percent	Gravimetric Reduction	Weight Percent
Chrysotile	e		0.01%	Acid Solubles	0.85%
Tremolite	•		0.14%	Organics	7.65%
	Tota	al Asbestos Percer	nt 0.15%	Residue	91.35%
				Total Other Non-Asbestos Percent	99.85%

Reviewed by:



Quality Control Officer

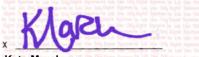


	Number: 220538 SE Client: PBS Engineering + t Name: Pierce College Olympia	Environmental	d Repairs			Report Number: 220538R01 Date Received: 5/26/2022
	cor Sample No: S1 lient Sample No: 40535.488-	5/26/22-TEM01				
	Container Weight	13.56202 g		Hydrolysis	Filter PreWeight	13.60341 g
	Weight Before Ash	13.73929 g		Filte	r Post Hydrolysis	13.76365 g
	Orig Sample Weight	0.17727 g		After H	ydrolysis Weight	0.16024 g
	Weight After Ash	13.72712 g		н	ydrolysis Aliquot	19.79 ml
	Particulate After Ash	0.16510 g		Hydrolysis	Adjusted Weight	0.16194 g
	Percent Organics	6.87%			Begin Volume	20 ml
					Acid Solubles	1.78%
Grid	Analyte	Visual Estimate	Elements		Comment	
37	Chrysotile	0.15%	Mg, Si ItemType Brightfield Diffraction Spectra	ltemNum J68422BF J68422DF J68422SP	Confirmed SB 6/1/2022	Comment 0.53nm ROW SPACING
G7	Tremolite	0.05%	Mg, Si, Ca,	Fe		
			ItemType Brightfield Diffraction	ltemNum J68423BF J68423DF	Confirmed SB 6/1/2022	
			Spectra	J68423SP	SB 6/1/2022	
G8	Chrysotile	0.10%				
G8	Tremolite	0.03%				



Job I	Number: 220538 SE					eport Number: 220538R0 Date Received: 5/26/2022
	Client: PBS Engineering +	Environmentai				Date Received: 5/26/2022
	Cor Sample No: S2	E/06/00 TEM00				
L L	lient Sample No: 40535.488-	5/20/22-1 EIVIU2				
	Container Weight	13.46320 g		Hydrolysis	s Filter PreWeight	13.50304 g
	Weight Before Ash	13.60470 g		Filte	er Post Hydrolysis	13.63079 g
	Orig Sample Weight	0.14150 g		After H	lydrolysis Weight	0.12775 g
	Weight After Ash	13.59387 g		F	lydrolysis Aliquot	19.735 ml
	Particulate After Ash	0.13067 g		Hydrolysis	Adjusted Weight	0.12947 g
	Percent Organics	7.65%			Begin Volume	20 ml
					Acid Solubles	0.85%
Grid	Analyte	Visual Estimate	Elements		Comment	
G7	Tremolite	0.10%	Mg, Si, Ca,	Fe		
			ItemType	ItemNum	Confirmed	Comment
			Brightfield	J68424BF		
			Diffraction	J68424DF	SB 6/1/2022	0.53nm ROW SPACING
			Spectra	J68424SP	SB 6/1/2022	
G7	Chrysotile	0.01%	Mg, Si			
			ItemType	ItemNum	Confirmed	Comment
			Brightfield	J68425BF		
			Diffraction	J68425DF	SB 6/1/2022	0.53nm ROW SPACING
			Spectra	J68425SP	SB 6/1/2022	
G8	Tremolite	0.20%				
G8	Chrysotile	0.01%				

Reviewed by:



Kate March Quality Control Officer



4 Hours

LABORATORY CHAIN OF CUSTODY

Project: Pierce Colle	ge Olympic South Abatement & Repairs	Project #: <u>40535.488</u>		
Analysis requested:	Semi-guantitative TEM bulk	Date: <u>5/26/2022</u>		
Relinq'd by/Signature Received by/Signature	PD	Date/Time: 5/26/2022 Date/Time: 5/27/22 4:30 pm		
	Email ALL INVOICES to: seattlea	p@pbsusa.com		
E-mail results to: Willem Mager Gregg Middaugh Mark Hiley Tim Ogden Ryan Hunter Prudy Stoudt-McRa	e Janet Murphy Kaitlin Soukup Allison Welch Toan Nguyen Peter Stensland Qlaire Tsai	 Holly Tuttle Mike Smith Ferman Fletcher Cameron Budnick Michelle Dodson 		
TURN AROUND TIME: 1 Hour 2 Hours	24 Hours48 Hours	3 Days Cher RUSH		

		SAMPLE DATA FORM	- Andrews
Sample #	Material	Location	Lab
40535.488-5/26/22-TEM01	Soil	East elevation under stairs to mechanical mezzanine	Labco
40535.488-5/26/22-TEM02	Soil	East elevation drive thru near north exterior column	
		Reviewed by:	
		Results Released: Fax Verbals USPS Email	_
	-	Fax Veloased: Invoice Released: Fax USPS Email	
			-



Job Number: 220613 Client: PBS Engineering + Environmental Address: 214 E Galer Street Seattle, WA 98102 Project Name: Pierce College Olympic South Abatement and Repairs Project No.: 40535.488 PO Number: Sub Project: Reference No.: Report Number: 220613R01 Report Date: 6/27/2022

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Num.	Client Sample Number	Analysis	Analysis Notes	Date Sampled:	Date Received:
220613 - S1	40535.488-6/17/22- TEM01	ELAP Item 198.4 - TEM - Bulk Semi-Quantitativ (Modified)	e	6/17/2022	6/21/2022

ELAP Item 198.4 - Preparation and analysis of the above sample(s) was conducted in accordance with the ELAP Item 198.4 for the identification of regulated asbestiform minerals in Non-Friable Organically Bound Bulk Samples. Briefly, each sample was taken from at least three randomly selected areas. The sample was then weighed (Original Sample Weight) on an analytical balance (0.01 milligram sensitivity), ashed in a muffle furnace to remove the organic component, and weighed (Particulate After Ash). After a brief hydrolysis period in concentrated hydrochloric acid, the suspension was immediately diluted in 20 ml of laboratory reagent water. Appropriate aliquots were removed from the suspension and filtered onto mixed cellulose ester filters for TEM analysis. The remaining suspension was then filtered onto pre weighed 0.4µm polycarbonate (PC) filter and re-weighed upon completion of drying (Hydrolysis Adjusted Weight). Upon confirmation of the principal mineral type by diffraction and EDS chemistry, a visual estimate of the regulated asbestiform minerals, relative to the non-asbestos, was determined. Fibers, with an aspect ratio of at least 3:1 and with the proper diffraction/ chemistry, were identified as regulated asbestiform mineral types. 'Trace' is reported for those samples whose percent asbestos is below 1.0%. 'Trace' analytes reported with a Weight Percent of 0.01% are reported at the Limit of Detection.

This test report relates only to the items tested in this report. Samples such as soils, sediments or raw ores may require further mineralogical analysis to differentiate mineral species. Interpretation of these results is the sole responsibility of the client. Results are subject to the variation in the layers of the sample, the accuracy of the balance, the visual estimate on the microscope as well as other variations within the procedure.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Sincerely, Shauna Biornso Analyst



Job Number: 220613 SEA

Client: PBS Engineering + Environmental

Report Number: 220613R01 Date Received: 6/21/2022

Project Name: Pierce College Olympic South Abatement and Repairs

Lab/Cor Sample No.: S1

Client Sample No.: 40535.488-6/17/22-TEM01

Analyst(s) SB	Analysis Date 6/27/2022	Microscope JEOL-Sr 1200	Magnification 20000		
Analyte Dese Actinolite	•		Weight Percent 0.06%	Gravimetric Reduction Acid Solubles	Weight Percent 40.83%
	Tota	al Asbestos Percer	nt 0.06%	Organics	8.22%
				Residue	50.88%
				Total Other Non-Asbestos Percent	99.94%

Shauna Bjornson Analyst



	Number: 220613 SE Client: PBS Engineering + :t Name: Pierce College Olympi	Environmental	d Repairs			eport Number: 220613R0 ate Received: 6/21/2022
	Cor Sample No: S1 lient Sample No: 40535.488-	6/17/22-TEM01				
	Container Weight	13.71572 g		Hydrolysis	Filter PreWeight	13.75562 g
	Weight Before Ash	13.78140 g		Filter	Post Hydrolysis	13.78858 g
	Orig Sample Weight	0.06568 g		After Hy	drolysis Weight	0.03296 g
	Weight After Ash	13.77600 g		Ну	drolysis Aliquot	19.7 ml
	Particulate After Ash	0.06028 g		Hydrolysis /	Adjusted Weight	0.03346 g
	Percent Organics	8.22%			Begin Volume	20 ml
					Acid Solubles	40.83%
Grid	Analyte	Visual Estimate	Elements		Comment	
G10	Actinolite	0.15%	Mg, Al, Si, 0	Ca, Fe		
			ItemType	ItemNum	Confirmed	Comment
			Brightfield	J68690BF		
			Diffraction	J68690DF		0.53nm ROW SPACING
			Spectra	J68690SP	SB 6/27/2022	
G11	Actinolite	0.10%				

Shauna Bjornson Analyst





4 Hours

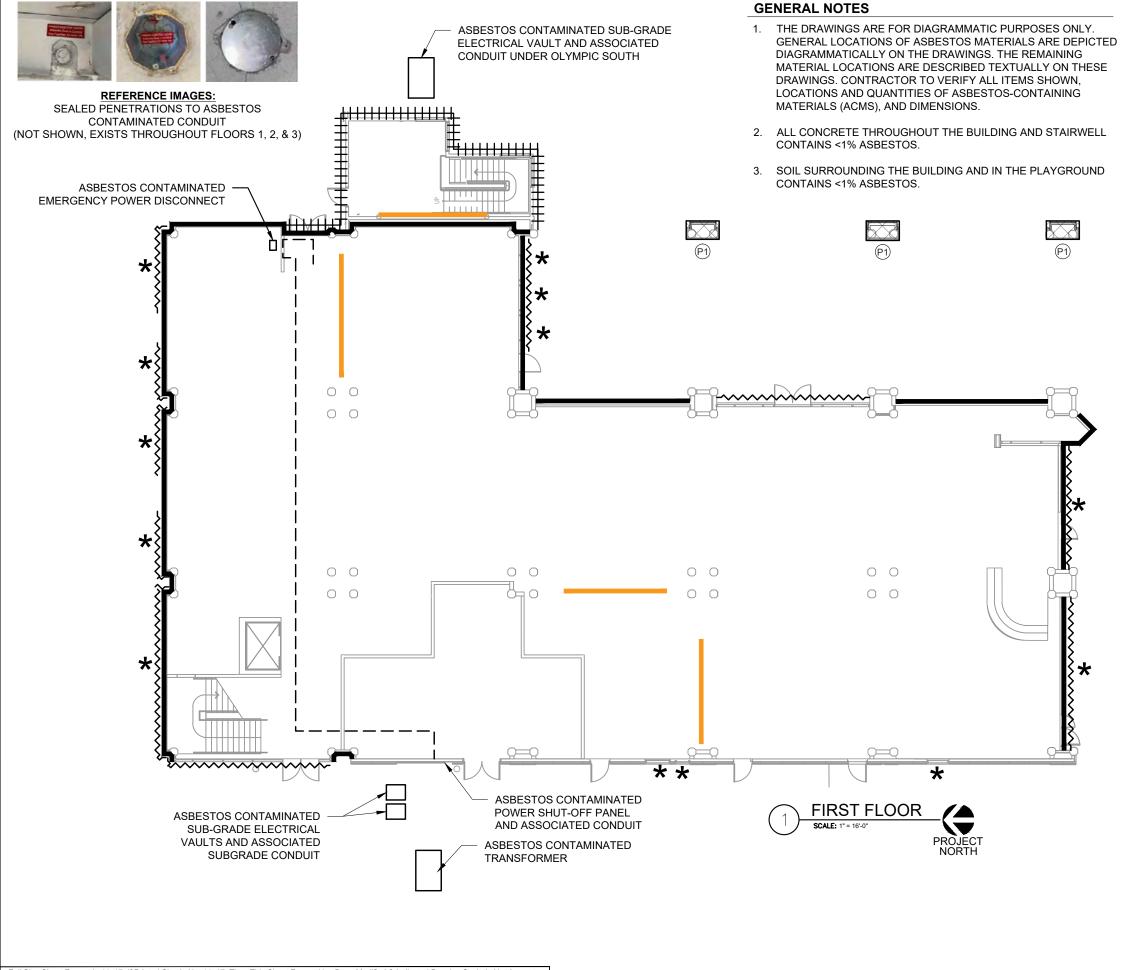
LABORATORY CHAIN OF CUSTODY

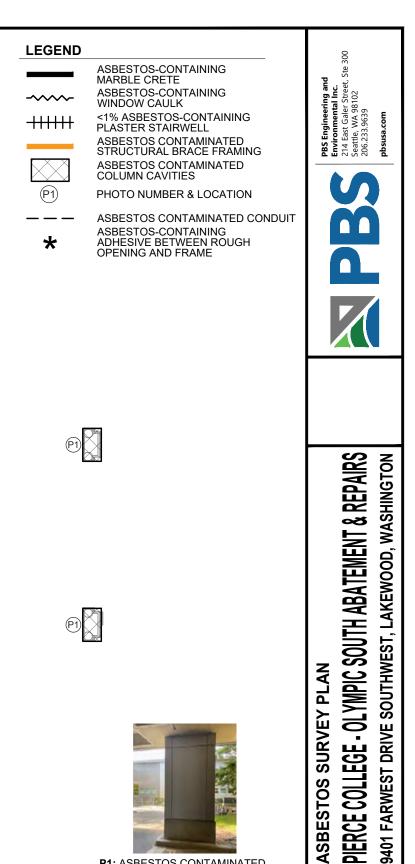
Project: Pierce College O	lympic South Abatement and Repairs	Project #: <u>40535.488</u> Page 1 of 1
Analysis requested:	Semi-quantitative TEM bulk	Date: 6/17/2022
Relinq'd by/Signature:	Claim Joai	Date/Time: <u>6/20/2022</u>
Received by/Signature:	11 apport ele	Date/Time:01311330330
	Email ALL INVOICES to: seattleap@	ppbsusa.com
E-mail results to: Willem Mager Gregg Middaugh Mark Hiley Tim Ogden Ryan Hunter Prudy Stoudt-McRae	 Janet Murphy Kaitlin Soukup Allison Welch Toan Nguyen Peter Stensland Claire Tsai 	 Holly Tuttle Mike Smith Ferman Fletcher Cameron Budnick Kameron DeMonnin
TURN AROUND TIME: 1 Hour 2 Hours	24 Hours 48 Hours	S Days

SAMPLE DATA FORM					
Sample #	Material	Location	Lab		
40535.488-6/17/22-TEM01	Concrete	Level 1 northwest stairs	Labcor		
		Reviewed by:			

APPENDIX E

Asbestos Survey Drawing Post Abatement Asbestos Survey Plan









ASBESTOS SURVEY PLAN

PROJECT

40535.488

DATE

JUL 2022

SHEET ID

SVY1

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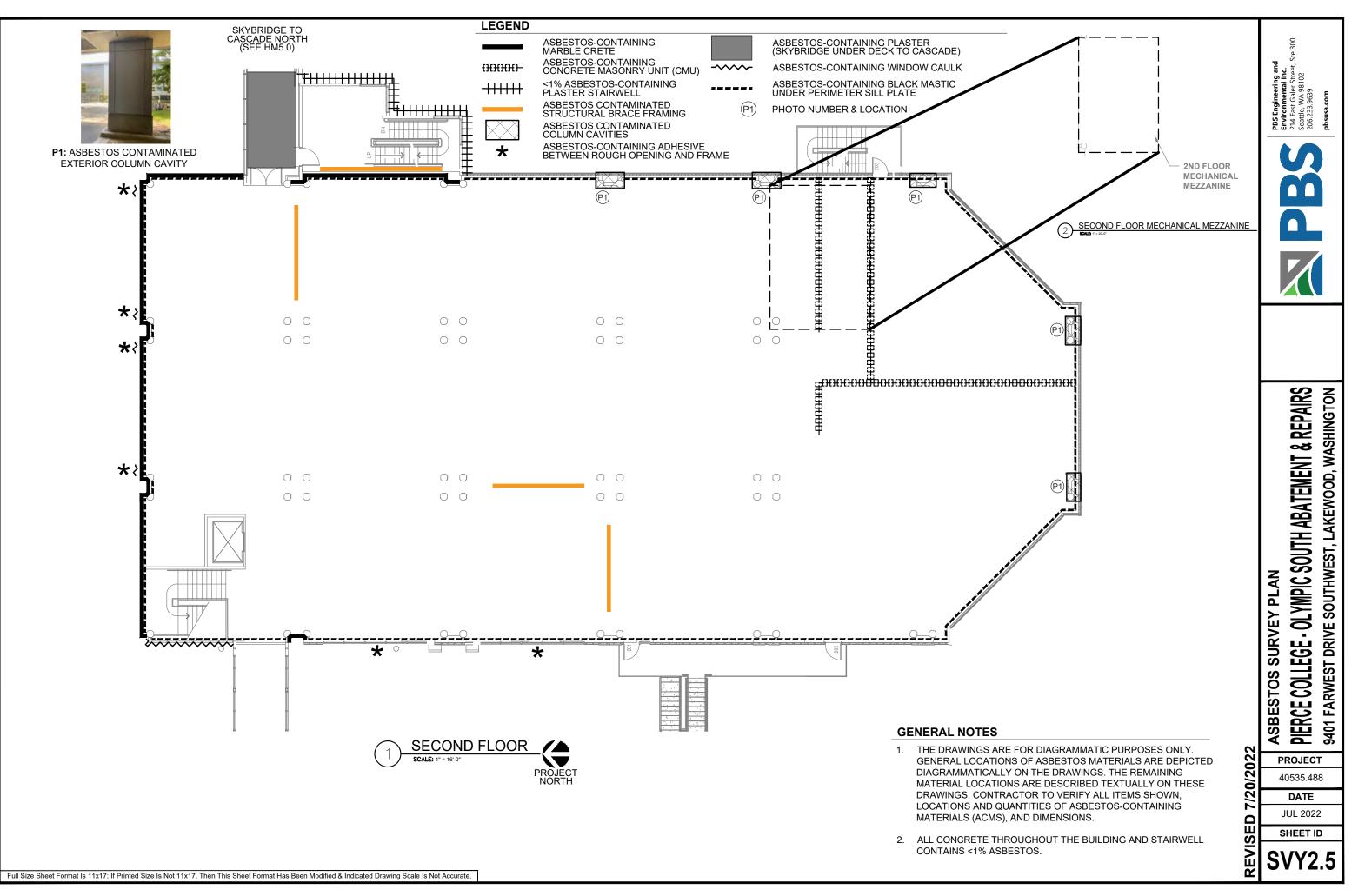
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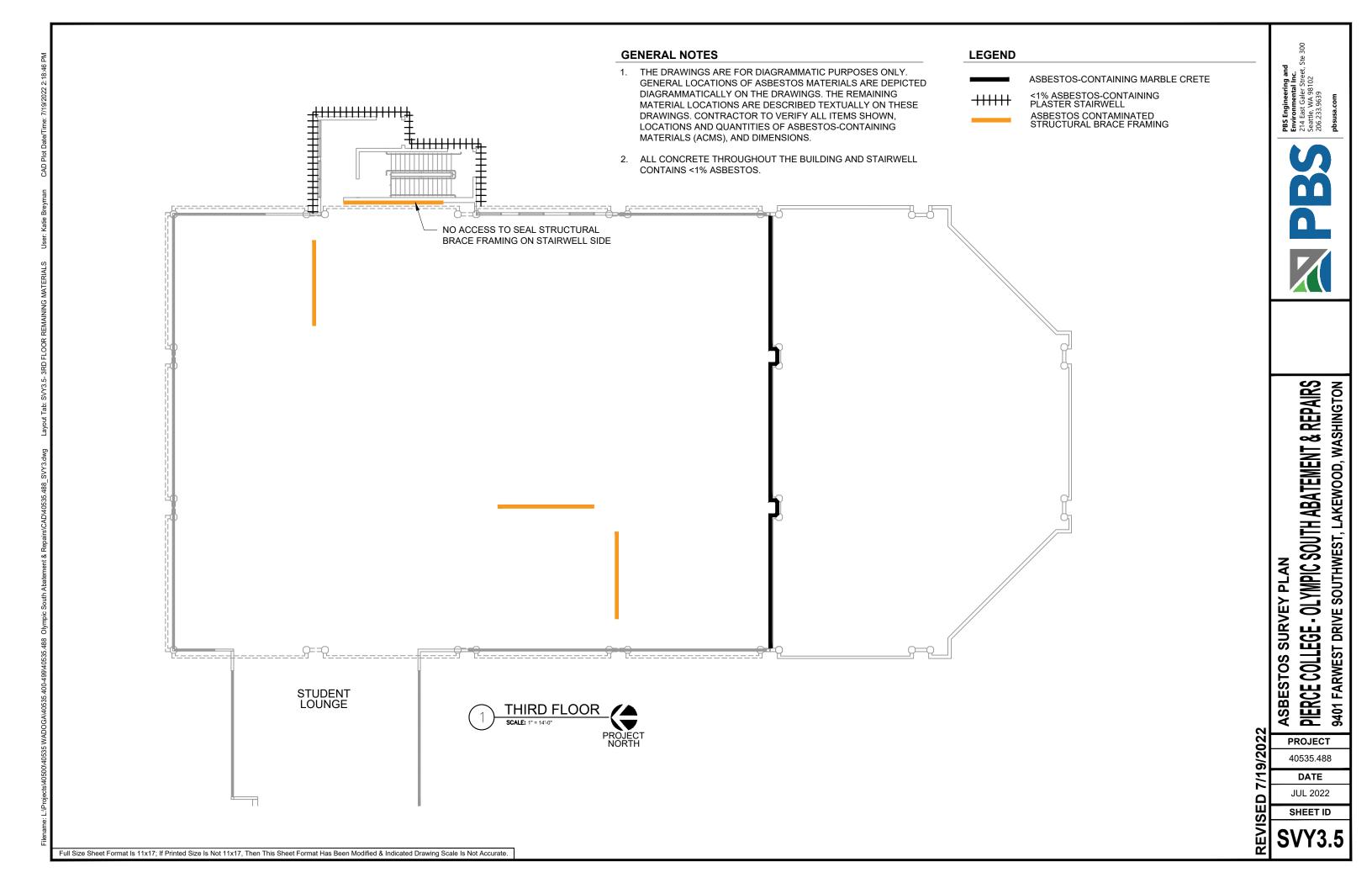
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P1: ASBESTOS CONTAMINATED EXTERIOR COLUMN CAVITY





APPENDIX F

Construction Phase CARB 435 Bulk Sampling Information

CARB Soil Sample Inventory CARB Soil Laboratory Data Sheets CARB Soil Chain of Custody Documentation Pierce College Olympic South Abatement and Repairs Washington Department of Enterprise Services Construction Phase CARB 435 Soil

CARB 435 SAMPLE INVENTORY

PBS Sample #	<u>Material</u>	Sample Location	<u>Weight percent</u>	Structure Count	<u>Lab</u>
40535.488-CARB01	Soil	East Elevation ~20ft from center column	0.0156%	4 Chrysotile 7 Actinolite	Lab Cor
40535.488-CARB02	Soil	South Elevation northeast of Robin's nest	0.690%	4 Chrysotile 7 Actinolite	Lab Cor
40535.488-CARB03	Soil	Southwest Elevation lawn area near tires	0.278%	3 Actinolite	Lab Cor
40535.488-CARB04	Soil	West Elevation east side of mound	0.00351%	1 Chrysotile 2 Actinolite	Lab Cor
40535.488-CARB05	Soil	Southwest elevation fence near pole seating	0.0661%	6 Actinolite	Lab Cor
40535.488-CARB06	Soil	West Elevation north playground fence	0.0464%	1 Libby-Other Amph 7 Actinolite	Lab Cor
40535.488-CARB09	Soil	East Elevation ~20ft from center column depth 6-12"	0.0975%	12 Actinolite	Lab Cor
40535.488-CARB10	Soil	South Elevation northeast of Robin's nest depth 6-12"	0.0138%	7 Actinolite	Lab Cor
40535.488-CARB11	Soil	Southwest Elevation lawn area near tires depth 6-12"	0.0396%	6 Actinolite	Lab Cor
40535.488-CARB12	Soil	West Elevation east side of mound depth 6-12"	0.523%	4 Actinolite 3 Anthophylite 1 Tremolite	Lab Cor
40535.488-CARB13	Soil	Southwest elevation fence near pole seating depth 6-12"	0.202%	8 Actinolite 1 Anthophylite 1 Tremolite	Lab Cor
40535.488-CARB14	Soil	West Elevation north playground fence depth 6-12"	0.00506%	11 Actinolite	Lab Cor



CARB 435 - TEM Final Report

Job Number: 220247 Client: PBS Engineering + Environmental Address: 214 E Galer Street Seattle, WA 98102 Project Name: Pierce College Olympic South Abatement and Repairs Project Num: 40535.488 PO Number: Sub Project: Report Number: 220247R02 Report Date: 3/22/2022

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Num.	Client Sample Number	Analysis	Analysis Notes	Date Received:
220247 - S1	40535.488-CARB01	CARB 435 - TEM		3/10/2022
220247 - S2	40535.488-CARB02	CARB 435 - TEM		3/10/2022
220247 - S3	40535.488-CARB03	CARB 435 - TEM		3/10/2022
220247 - S4	40535.488-CARB04	CARB 435 - TEM		3/10/2022
220247 - S5	40535.488-CARB05	CARB 435 - TEM		3/10/2022
220247 - S6	40535.488-CARB06	CARB 435 - TEM		3/10/2022



CARB 435 - TEM Final Report

Job Number: 220247

Client: PBS Engineering + Environmental

Report Number: 220247R02 Report Date: 3/22/2022

Project Name: Pierce College Olympic South Abatement and Repairs

CARB 435 - TEM - Samples were processed and analyzed following the California Air Resources Board (CARB) method 435 using transmission CARB 435 - TEM electron microscopy (TEM) as an alternative to polarized light microscopy (PLM). All sample preparation was conducted under a negative air ventilation hood with a HEPA filter. Samples were weighed to the nearest 0.2 g prior to and after the every step of the preparation process.

To homogenize the sample particle size to an even sizing, samples were subcontracted to a lab that will grind samples using the CARB 435 method. The samples were then further treated to eliminate interferences may have undergone additional ashing and/or hydrolyzation steps to obtain a gravimetric reduction ratio (GRR - less than 1.0). A reported GRR of 1 indicates that these additional steps were not performed. After collection, the ground sample was weighed. A portion of the material (about 0.2 grams) was suspended in particle-free water and sonicated for three minutes, handshaken for another 30 seconds, and allowed to settle for one minute. A range of aliquots were pipetted into a vacuum filtration system utilizing 25mm MCE filters.

Briefly, the filters were collapsed with a solution of N,N-dimethylformamide and acetic acid, then etched in a low temperature plasma etcher to remove the top surface of the filter and other organics. The samples were carbon coated at high vacuum with a thin layer of carbon, placed on 200 mesh copper grids and allowed to dissolve in N,N-dimethylformamide followed by an acetone bath until cleared of filter debris..

The grid preparations were examined in the TEM at low magnification (about 500-1,000x) to determine the preparation showing optimal particulate loading. Each grid opening was analyzed between 1,000 – 20,000x screen magnification.

Samples were analyzed evenly over 2 grids or until a sensitivity of 0.1% was achieved with a minimum of 4 grid openings analyzed. Initial scanning of each grid was done at the lowest magnification to detect larger fibrous structures that contribute the greatest in weight percent value. A representative number of larger structures to number of available grid openings was determined and used to randomly choose available grid openings for higher magnification analysis.

Structures were identified and classified according to ISO counting rules. In the event that the density of asbestos structures created too many overlapping structures to effectively classify each primary structure individually, a less-dense aliquot was chosen.

TEM analysis was performed using the JEOL 1200EX transmission electron microscope (TEM), or the Hitachi 7000FA TEM. Both microscopes are equipped with Thermo Fisher X ray Spectral analyzers, with a Silicon Drift Detector. The microscopes are also equipped with digital CCD cameras to capture diffraction patterns and brightfield images. An accelerating voltage of 100 KV was applied. Analyzable fibrous structures were greater than or equal to a 3:1 aspect ratio.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Reviewed by:

Kate March

Quality Control Officer

< 18542031.31

1.30E+08

NA*

6.89E-01

CARB 435 - TEM - Final Report

	Engineering + Envir ce College Olympic So		Repairs	Report Number: 22 Date Received: 3/1					
GR	b. : 40535.488-CARB R : 0.94 n : 0.00125	01		Starting Weigh Lab Filter Area (n Grid Openings Anal trage Grid Opening Area (n Area Analyzed (n nalytical Sens. (Weight Perc	nm2): 28 yzed: 4 nm2): 0. nm2): 0.	39.38 0106 0424			
Analyst(s SB) Analysis Date 3/21/2022	Microscope JEOL-Sr 1200	Magnification 20000	Analytical Sens. (stru	.c/g): 9.	91E+06			
	Structure Type		Weight Percent (%)	Concentration (struc/g)		: Count ¹ ry/Total			
	Primary Asbestos	Structures	NA	* 1.09E+08	11				
	Total Asbestos St	ructures	1.56E-02	2 1.09E+08		11			
	Total Chrysotile S	tructures	3.46E-04	4 3.97E+07		4			
Т	otal Libby-Other Amp	oh Structures	NA	NA* < 9912700.865					
	Total Actinolite St	ructures	1.52E-02	2 6.94E+07		7			
GR	o.: 40535.488-CARB R: 0.974 on: 0.00125	02		Starting Weigh Lab Filter Area (n Grid Openings Anal erage Grid Opening Area (n Area Analyzed (n nalytical Sens. (Weight Perc	mm2): 28 yzed: 4 nm2): 0. nm2): 0. nm2): 0. cent): 1.	39.38 0106 0424 11E-06			
Analyst(s SB) Analysis Date 3/21/2022	Microscope JEOL-Sr 1200	Magnification 20000	Analytical Sens. (stru	u c/g): 1.	85E+07			
	Structure Type		Weight Percent (%)	Concentration (struc/g)		: Count ¹ ry/Total			
	Primary Asbestos	Structures	NA	* 2.04E+08	11				
	Total Asbestos St		6.90E-0 ⁷	1 2.04E+08		11			
	Total Chrysotile S	tructures	6.64E-04	4 7.42E+07		4			
	· · · · · · · · · · · · · · · · · · ·								

Total Libby-Other Amph Structures

Total Actinolite Structures

0

7

CARB 435 - TEM - Final Report

Job Number: 22024 Client: PBS Project Name: Pierce Project No.: 40535	Engineering + Envir e College Olympic So		d Repairs	-	•		r: 220247R02 d: 3/10/2022	
GRR Dilution Dilution Factor	: 40535.488-CARB : 0.922 : 0.00125 : 1			-	Starting Weight Lab Filter Area (m Grid Openings Analy e Grid Opening Area (m Area Analyzed (m tical Sens. (Weight Perce Analytical Sens. (strue	m2): 28 zed: 4 m2): 0.0 m2): 0.0 ent): 1.7	9.38 0106 0424 15E-06	
Analyst(s) SB	Analysis Date 3/21/2022	Microscope JEOL-Sr 1200	Magnification 20000		,	37		
36	Structure Type		Weight Perc	ent (%)	Concentration (struc/g)		Count¹ ry/Total	
	Primary Asbestos S	structures		NA*	5.74E+07	3		
	Total Asbestos St	ructures		2.78E-01	5.74E+07		3	
	Total Chrysotile St	ructures		NA*	< 19124415.91		0	
Tot	al Libby-Other Amp	h Structures		NA*	< 19124415.91		0	
	Total Actinolite St	ructures		2.78E-01 5.74E+07				
GRR	: 40535.488-CARB : 0.967 : 0.00125	04 Microscope	Magnification	-	Starting Weight Lab Filter Area (m Grid Openings Analy le Grid Opening Area (m Area Analyzed (m rtical Sens. (Weight Perce Analytical Sens. (strue	m2): 28 zed: 4 m2): 0.0 m2): 0.0 ent): 6.1	9.38 0106 0424 76E-07	
SB	3/21/2022	JEOL-Sr 1200	20000					
	Structure Type		Weight Perc	ent (%)	Concentration (struc/g)		Count ¹ ry/Total	
	Primary Asbestos S	Structures		NA*	3.37E+07	3		
	Total Asbestos St	ructures		3.51E-03	3.37E+07		3	
	Total Chrysotile St	ructures		2.25E-05	1.12E+07		1	
Tot	al Libby-Other Amp	h Structures		NA*	< 11243228.279		0	
	Total Actinolite St	ructures		3.49E-03	2.25E+07		2	

=

CARB 435 - TEM - Final Report

	PBS Engineering + Envir Pierce College Olympic So		d Repairs			t Number: 22024 Received: 3/10/2	
	e No.: 40535.488-CARB GRR: 0.93 ution: 0.00125	05		-	Starting Weight Lab Filter Area (m Grid Openings Analy e Grid Opening Area (m Area Analyzed (m tical Sens. (Weight Perce	 m2): 289.38 zed: 4 m2): 0.0106 m2): 0.0424 ent): 7.14E-07 	
Analy	st(s) Analysis Date	Microscope	Magnification		Analytical Sens. (strue	c/g): 1.19E+07	
SB	3/21/2022	JEOL-Sr 1200	20000				
	Structure Type		Weight Perc	ent (%)	Concentration (struc/g)	Struct Count ¹ Primary/Total	
	Primary Asbestos S	Structures		NA*	7.13E+07	6	
	Total Asbestos St	ructures	(6.61E-02	7.13E+07	6	1
	Total Chrysotile St	ructures		NA*	< 11891524.789	0	
	Total Libby-Other Amp	h Structures		NA*	< 11891524.789	0	
	Total Actinolite St	ructures	6	6.61E-02	7.13E+07	6	
	e No.: S6 e No.: 40535.488-CARB GRR: 0.934 ution: 0.00125	06		Averag	Starting Weight Lab Filter Area (m Grid Openings Analy e Grid Opening Area (m	m2) : 289.38 zed : 4	
Dilution F	actor: 1				Area Analyzed (m	m2) : 0.0424	
Analy SB	st(s) Analysis Date 3/21/2022	Microscope JEOL-Sr 1200	Magnification 20000	Analy	tical Sens. (Weight Perce Analytical Sens. (strue		
	Structure Type		Weight Perc	ent (%)	Concentration (struc/g)	Struct Count ¹ Primary/Total]
	Primary Asbestos S	Structures		NA*	5.79E+07	7	1
	Total Asbestos St	ructures		4.64E-02	5.79E+07	7]
	Total Chrysotile St	ructures		NA*	< 8270178.227	0]
	Total Libby-Other Amp	h Structures		2.34E-04	8.27E+06	1	
	Total Actinolite St	ructures		4.64E-02	5.79E+07	7]

Reviewed by:

X Kate March **Quality Control Officer**

* NA - weight percent is only calculated using total structures, counting categories that are counted using primary structures are not calculated.



Date Received: 3/10/2022

CARB 435 - TEM Raw Data -Final Report

CARB 435 - TEM

Client: PBS Engineering + Environmental

Project Name: Pierce College Olympic South Abatement and Repairs

SEA

Project No.: 40535.488

Job Number: 220247

Lab/Cor Sample No: S1

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G4	1	G34	ADQ	1	1	В	0.75	0.25	3	Actinolite	Mg, Si, Ca Fe	,	TotActS
						Iten	пТуре	ItemNu	ım		Confirm	ned Comme	ent
						Briç	ghtfield	J6786	9BF				
						Diff	raction	J6786	9DF		SB 3/2	21/2022 0.53nm	ROW SPACING
						Spe	ectra	J6786	9SP		SB 3/2	21/2022	
G4	1	G34	AM	2	2	MC 7-0	1.5	0.2	7.5	Actinolite		7/0	TotActS
G4	1	G34	CQ	3	3	F	2.5	0.15	16.7	Chrysotile	Mg, Si		TChrysStr
						Iten	пТуре	ItemNu	ım		Confirm	ned Comme	ent
						Brig	ghtfield	J6787	0BF				
						Spe	ectra	J6787	0SP		SB 3/2	21/2022	
G4	2	G42	AM	4	4	MC 11-0	1	0.25	4	Actinolite		11/0	TotActS
G4	2	G42	AM	5	5	MC 3-0	4	0.4	10	Actinolite		3/0	TotActS
G4	2	G42	CQ	6	6	В	2.25	0.15	15	Chrysotile	Mg, Si		TChrysStr
G5	3	E42	AQ	7	7	F	2	0.5	4	Actinolite	Mg, Si, Ca, Fe	,	TotActS
G5	3	E42	AM	8	8	MC 3-0	2	0.45	4.4	Actinolite		3/0	TotActS
G5	3	E42	CMQ	9	9	В	1	0.15	6.7	Chrysotile			TChrysStr
G5	3	E42	СМ	10	10	MC 3-0	1.5	0.1	15	Chrysotile		3/0	TChrysStr
G5	4	F41	AMQ	11	11	MC 4-0	1	0.2	5	Actinolite		4/0	TotActS



Date Received: 3/10/2022

CARB 435 - TEM Raw Data -Final Report

CARB 435 - TEM

Client: PBS Engineering + Environmental

Project Name: Pierce College Olympic South Abatement and Repairs

SEA

Lab/Cor Sample No: S2

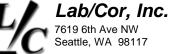
Job Number: 220247

Client Sample No: 40535.488-CARB02

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Element	ts Com	ment	Count Categories
G4	1	F32	CMQ	1	1	F	2.25	0.1	22.5	Chrysotile	Mg, S	Si		TChrysStr
						Iten	пТуре	ItemNu	um		Co	nfirmed	Commer	nt
						Brig	ghtfield	J6787	1BF					
						Spe	ectra	J6787	1SP		SB	3/21/2022		
G4	1	F32	ADQ	2	2	F	1	0.25	4	Actinolite	Mg, Si, Fe			TotActS
						Iten	пТуре	ItemNu	um		Co	nfirmed	Commer	nt
						Brig	ghtfield	J6787	2BF					
						Diff	raction	J6787	2DF		SB	3/21/2022	0.53nm l	ROW SPACING
						Spe	ectra	J6787	2SP		SB	3/21/2022		
G4	2	G31	AMQ	1	1	MC 2-0	2	0.4	5	Actinolite				TotActS
G4	2	G31	CDQ	2	2	F	8.5	0.1	85	Chrysotile	Mg,	Si		TChrysStr
						Iten	пТуре	ItemNu	um		Co	nfirmed	Commer	nt
						Bri	ghtfield	J6787	3BF					
						Diff	raction	J6787	4DF		SB	3/21/2022	0.53nm l	ROW SPACING
						Spe	ectra	J6787	4SP		SB	3/21/2022		
G5	3	E41	AM	3	3	F	6	1	6	Actinolite				TotActS
G5	3	E41	AMQ	4	4	F	11	3	3.7	Actinolite				TotActS
G5	3	E41	AM	5	5	MC 4-0	2	0.25	8	Actinolite			4/0	TotActS
G5	3	E41	CM	6	6	MC 2-0	0.75	0.1	7.5	Chrysotile			2/0	TChrysStr
G5	4	E33	AMQ	7	7	F	8.5	1.25	6.8	Actinolite				TotActS
						Iten	nType	ItemNu	um		Co	nfirmed	Commer	nt
						Diff	raction	J6787	5DF		SB	3/21/2022	0.53nm l	ROW SPACING
G5	4	E33	AM	8	8	MC 3-0	2	0.25	8	Actinolite				TotActS
G5	4	E33	СМ	9	9	В	2.5	0.15	16.7	Chrysotile				TChrysStr

Lab/Cor Sample No: S3

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G4	1	C44	AMQ	1	1	F	7.5	2.5	3	Actinolite	Mg, Si, Ca, Fe		TotActS
						lte	mType	ItemNu	ım		Confirm	ed Cor	nment
						Br	ightfield	J6787	6BF				
						Sp	oectra	J6787	6SP		SB 3/21	1/2022	
G4	2	E43	ADQ	2	2	F	0.8	0.1	8	Actinolite	Mg, Si, Ca, Fe		TotActS
						Ite	mType	ItemNu	ım		Confirm	ed Cor	nment
						Br	ightfield	J6787	7BF				
						Di	ffraction	J6787	7DF		SB 3/2	1/2022 0.53	3nm ROW SPACING
						Sp	pectra	J6787	7SP		SB 3/2	1/2022	
G5	3	F42				NSD							
G5	4	G41	AM	3	3	F	1	0.15	6.7	Actinolite			TotActS



Date Received: 3/10/2022

CARB 435 - TEM Raw Data -Final Report

CARB 435 - TEM

Client: PBS Engineering + Environmental

Project Name: Pierce College Olympic South Abatement and Repairs

SEA

Lab/Cor Sample No: S4

Job Number: 220247

Client Sample No: 40535.488-CARB04

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Element	s Comr	nent	Count Categories
G4	1	G42	CDQ	1	1	F	1	0.1	10	Chrysotile	Mg, S	Si Fa	int DF	TChrysStr
						Iter	пТуре	ItemNu	ım		Cor	firmed	Commen	t
						Bri	ghtfield	J6787	8BF					
						Dif	raction	J6787	BDF		SB	3/21/2022	0.53nm F	ROW SPACING
						Sp	ectra	J6787	BSP		SB	3/21/2022		
G4	2	H41				NSD								
G5	3	F44				NSD								
G5	4	G43	ADQ	2	2	F	3	0.5	6	Actinolite	Mg, Si, Fe	Ca,		TotActS
						Iter	пТуре	ltemNu	ım		Cor	firmed	Commen	t
						Bri	ghtfield	J6787	9BF					
						Dif	raction	J67879	9DF		SB	3/21/2022	0.53nm F	ROW SPACING
						Sp	ectra	J67879	9SP		SB	3/21/2022		
G5	4	G43	AM	3	3	MC 2-0	2	0.25	8	Actinolite				TotActS

Lab/Cor Sample No: S5

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	s Comr	nent	Count Categories
G4	1	F44	ADQ	1		MD 1-0	3.5	3.5	1	Actinolite				
G4	1	F44	ADQ		1	MF	1.6	0.2	8	Actinolite	Mg, Si, (Fe	Ca,		TotActS
						Iter	mType	ItemN	um		Con	firmed	Commer	nt
						Dif	ghtfield fraction ectra	J6788 J6788 J6788	0DF		-	3/21/2022 3/21/2022	0.53nm	ROW SPACING
G4	1	F44	AM	2	2	F	5	1	5	Actinolite				TotActS
G4	2	G43	AM	3	3	F	2	0.5	4	Actinolite				TotActS
G6	3	F42	AM	4	4	F	2.25	0.5	4.5	Actinolite				TotActS
G6	3	F42	AMQ	5	5	F	5	1.5	3.3	Actinolite	Mg, Si, (Fe	Ca,		TotActS
G6	4	G41	AM	6	6	MC 2-0	1.75	0.4	4.4	Actinolite				TotActS



Date Received: 3/10/2022

CARB 435 - TEM Raw Data -Final Report

CARB 435 - TEM

Client: PBS Engineering + Environmental

Project Name: Pierce College Olympic South Abatement and Repairs

SEA

Lab/Cor Sample No: S6

Job Number: 220247

Client Sample No: 40535.488-CARB06

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Com	ment	Count Categories
G4	1	F34	ADQ	1	1	F	1.75	0.75	2.3	Actinolite				TotActS
						lter	nType	ItemNu	ım		Confirme	ed	Comment	
						Bri	ghtfield	J6788	1BF					
						Dif	fraction	J6788	2DF		SB 3/21	/2022	0.53nm RC	W SPACING
						Sp	ectra	J6788	2SP		SB 3/21	/2022		
G4	1	F34	AM	2	2	F	7.5	1.25	6	Actinolite				TotActS
G4	2	G33	ADQ	3	3	F	1.5	0.25	6	Winchite	Na, Mg, Al, Si, Ca, Fe			Tot_Other
						Iter	nType	ltemNu	ım		Confirme	ed	Comment	
						Bri	ghtfield	J6788	3BF					
						Dif	fraction	J6788	3DF		SB 3/21	/2022	0.53nm RC	W SPACING
						Sp	ectra	J6788	BSP		SB 3/21	/2022		
G4	2	G33	AMQ	4	4	F	1.25	0.2	6.2	Actinolite	Mg, Al, Si, Ca, Fe			TotActS
						lter	nType	ltemNu	ım		Confirme	ed	Comment	
						Sp	ectra	J67884	4SP		SB 3/21	/2022		
G4	2	G33	AM	5	5	MC 3-0	1.25	0.25	5	Actinolite			3/0	TotActS
G5	3	F44	AM	6	6	MC 5-0	1.5	0.25	6	Actinolite				TotActS
G5	3	F44	AMQ	7	7	F	4	1	4	Actinolite	Mg, Si, Ca, Fe			TotActS
G5	4	G43	AM	8	8	MC 5-0	2	0.25	8	Actinolite				TotActS
Count	Catego	ories												
PAS		Prima	ry Asbest	os Struc	ctures	TAS	6	Total As	bestos Stru	ictures	TChrysS	Str	Total Chryso	otile Structures
Fot_O	ther	Total L	_ibby-Oth	er Ampl	n Structu	res Tot/	ActS	Total Ac	tinolite Stru	ctures				

Reviewed by:



Quality Control Officer



220 247 LABORATORY CHAIN OF CUSTODY

Project: <u>Pierce College</u>	Olympic South Abatement & Repairs	Project #: <u>40535.488</u>				
Analysis requested:C	ARB 435 soil analysis	Date: <u>3/9/2022</u>				
Relinq'd by/Signature:	unui Aaz	Date/Time: <u>3/9/2022</u>				
Received by/Signature:	Jun By	Date/Time: <u>3141225-3</u> 0PM				
t	Email ALL INVOICES to: seattleap@p	bsusa.com				
E-mail results to:						
🔲 Willem Mager	🔲 Janet Murphy	Holly Tuttle				
Gregg Middaugh	Kaitlin Soukup	🔀 Mike Smith				
Mark Hiley	Allison Welch	Ferman Fletcher				
Tim Ogden	🔲 Toan Nguyen	Cameron Budnick				
Ryan Hunter	Peter Stensland	Michelle Dodson				
Prudy Stoudt-McRae	🔀 Claire Tsai					
TURN AROUND TIME:		· · · · ·				
🔲 1 Hour	24 Hours	🖾 5 Days				
2 Hours	48 Hours	Other				
4 Hours						

SAMPLE DATA FORM								
Sample #	Material	Location	Lab					
40535.488-CARB01	Soil	East Elevation ~20ft from center column	Labcor					
40535.488-CARB02	Soil	South Elevation northeast of Robin's nest						
40535.488-CARB03	Soil	Southwest Elevation lawn area near tires						
40535.488-CARB04	Soil	West Elevation east side of mound						
40535.488-CARB05	Soil	Southwest elevation fence near pole seating						
40535.488-CARB06	Soil	West Elevation north playground fence						

		Reviewed by SB 2121 22 KM 3 22 22 Results Released: Fax Verbals USPS Emfail 1 3/22 / 24						
2°		Invoice Released:						



CARB 435 - TEM Final Report

Job Number: 220343

Report Number: 220343R01 Report Date: 4/14/2022

Client: PBS Engineering + Environmental Address: 214 E Galer Street Seattle, WA 98102 Project Name: Pierce College Olympic South Abatement and Repairs Project Num: 40535.488 PO Number: Sub Project:

All samples had some Mg-Hornblende amphibole structures present. These are similar in chemistry to **Report Note:** actinolite fibers, but have a higher aluminum component and tend to be less fibrous.

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Num.	Client Sample Number	Analysis	Analysis Notes	Date Received:
220343 - S1	40535.488-CARB09	CARB 435 - TEM	Many Mg-Hornblende Fibers Present	4/4/2022
220343 - S2	40535.488-CARB10	CARB 435 - TEM	Many Mg-Hornblende Fibers Present	4/4/2022
220343 - S3	40535.488-CARB11	CARB 435 - TEM		4/4/2022
220343 - S4	40535.488-CARB12	CARB 435 - TEM		4/4/2022
220343 - S5	40535.488-CARB13	CARB 435 - TEM		4/4/2022
220343 - S6	40535.488-CARB14	CARB 435 - TEM		4/4/2022



CARB 435 - TEM Final Report

Job Number: 220343

Client: PBS Engineering + Environmental

Report Number: 220343R01 Report Date: 4/14/2022

Project Name: Pierce College Olympic South Abatement and Repairs

CARB 435 - TEM - Samples were processed and analyzed following the California Air Resources Board (CARB) method 435 using transmission CARB 435 - TEM electron microscopy (TEM) as an alternative to polarized light microscopy (PLM). All sample preparation was conducted under a negative air ventilation hood with a HEPA filter. Samples were weighed to the nearest 0.2 g prior to and after the every step of the preparation process.

To homogenize the sample particle size to an even sizing, samples were subcontracted to a lab that will grind samples using the CARB 435 method. The samples were then further treated to eliminate interferences may have undergone additional ashing and/or hydrolyzation steps to obtain a gravimetric reduction ratio (GRR - less than 1.0). A reported GRR of 1 indicates that these additional steps were not performed. After collection, the ground sample was weighed. A portion of the material (about 0.2 grams) was suspended in particle-free water and sonicated for three minutes, handshaken for another 30 seconds, and allowed to settle for one minute. A range of aliquots were pipetted into a vacuum filtration system utilizing 25mm MCE filters.

Briefly, the filters were collapsed with a solution of N,N-dimethylformamide and acetic acid, then etched in a low temperature plasma etcher to remove the top surface of the filter and other organics. The samples were carbon coated at high vacuum with a thin layer of carbon, placed on 200 mesh copper grids and allowed to dissolve in N,N-dimethylformamide followed by an acetone bath until cleared of filter debris.

The grid preparations were examined in the TEM at low magnification (about 500-1,000x) to determine the preparation showing optimal particulate loading. Each grid opening was analyzed between 1,000 – 20,000x screen magnification.

Samples were analyzed evenly over 2 grids or until a sensitivity of 0.1% was achieved with a minimum of 4 grid openings analyzed. Initial scanning of each grid was done at the lowest magnification to detect larger fibrous structures that contribute the greatest in weight percent value. A representative number of larger structures to number of available grid openings was determined and used to randomly choose available grid openings for higher magnification analysis.

Structures were identified and classified according to ISO counting rules. In the event that the density of particulate created too many overlapping structures to effectively classify each primary structure individually, a less-dense aliquot was chosen. The MC designation was used to group structures of a similar size in one record. MC(2-0) indicates that there were two structures of the recorded length and width in that grid opening and that neither was $>5\mu$ m in length.

TEM analysis was performed using the JEOL 1200EX transmission electron microscope (TEM), or the Hitachi 7000FA TEM. Both microscopes are equipped with Thermo Fisher X ray Spectral analyzers, with a Silicon Drift Detector. The microscopes are also equipped with digital CCD cameras to capture diffraction patterns and brightfield images. An accelerating voltage of 100 KV was applied. Analyzable fibrous structures were greater than or equal to a 3:1 aspect ratio.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor, Inc. the opportunity to provide you with the analytical services.

Reviewed by: Kate March

Quality Control Officer

Analyst(s)

Analysis Date

CARB 435 - TEM - Final Report

G	No.: S1 No.: 40535.488-CARB RR: 0.974 Ion: 0.005	09	-	Starting Weigh Lab Filter Area (m Grid Openings Analy e Grid Opening Area (m Area Analyzed (m tical Sens. (Weight Perc	m2): 288 rzed: 4 m2): 0.0 m2): 0.0	9.38 106 424
Analyst(SB SB	s) Analysis Date 4/12/2022 4/13/2022	Microscope JEOL-Sr 1200 JEOL-Sr 1200	Magnification 20000 20000	Analytical Sens. (stru		
	Structure Type		Weight Percent (%)	Concentration (struc/g)	Struct Primar	
	Primary Asbestos S	Structures	NA*	1.46E+08	12	
	Total Asbestos St	ructures	9.75E-02	1.46E+08		12
	Total Chrysotile S	tructures	NA*	< 1.21E+07		0
	Total Libby-Other Amp	h Structures	NA*	< 1.21E+07		0
	Total Actinolite St	ructures	9.75E-02	1.46E+08		12
	Total Anthophyllite		NA*	< 1.21E+07		0
	Total Tremolite St	ructures	NA*	< 1.21E+07		0

Area Analyzed (mm2): 0.0424

Analytical Sens. (Weight Percent): 1.54E-06

Analytical Sens. (struc/g): 2.56E+07

SB	4/13/2022 JEOL-Sr 1200	20000			
	Structure Type	Weight Percent (%)	Concentration (struc/g)		Count ¹ ry/Total
	Primary Asbestos Structures	NA*	1.79E+08	7	
	Total Asbestos Structures	1.38E-02	1.79E+08		7
	Total Chrysotile Structures	NA*	< 2.56E+07		0
Tot	al Libby-Other Amph Structures	NA*	< 2.56E+07		0
	Total Actinolite Structures	1.38E-02	1.79E+08		7
1	Total Anthophyllite Structures	NA*	< 2.56E+07		0
	Total Tremolite Structures	NA*	< 2.56E+07		0

Magnification

Microscope

7619 6th Ave NW Seattle, WA 98117

Lab/Cor, Inc.

CARB 435 - TEM - Final Report

Job Number: 220343 SEA Client: PBS Engineering + Environmental Project Name: Pierce College Olympic South Abatement and Repairs Project No.: 40535.488

Lab/Cor Sample No. : S3

Client Sample No.: 40535.488-CARB11 **GRR :** 0.975 Dilution : 0.0025

Report Number: 220343R01 Date Received: 4/4/2022

Starting Weight (g): 0.11 Lab Filter Area (mm2): 289.38

Grid Openings Analyzed : 4

Average Grid Opening Area (mm2): 0.0106

Area Analyzed (mm2): 0.0424

Analytical Sens. (Weight Percent): 1.52E-06

Analytical Sens. (struc/g): 2.53E+07

Analyst(s) KM	Analysis Date 4/13/2022	Microscope JEOL-Sr 1200	Magnification 20000		Analytical Sens. (stru	c/g) : 2.t	53E+07
	Structure Type		Weight Percent (%)	Concentration (struc/g)		Count ¹ ry/Total
Р	rimary Asbestos S	Structures	N	A*	1.52E+08	6	
	Total Asbestos St	ructures	3.96E-	02	1.52E+08		6
	Total Chrysotile St	ructures	N	A*	< 2.53E+07		0
Tota	I Libby-Other Amp	h Structures	N	A*	< 2.53E+07		0
	Total Actinolite St	ructures	3.96E-	02	1.52E+08		6
Тс	otal Anthophyllite	Structures	N	A*	< 2.53E+07		0
	Total Tremolite St	ructures	N	A*	< 2.53E+07		0

Lab/Cor Sample No. : S4

Client Sample No.: 40535.488-CARB12 **GRR**: 0.949

Dilution : 0.0025

Starting Weight (g): 0.11

Lab Filter Area (mm2): 289.38

Grid Openings Analyzed : 4

Average Grid Opening Area (mm2): 0.0106

Area Analyzed (mm2): 0.0424

- Analytical Sens. (Weight Percent): 1.40E-06
 - Analytical Sens. (struc/g): 2.33E+07

Analyst(s) SB	Analysis Date 4/14/2022	Microscope JEOL-Sr 1200	Magnification 20000	Analytical Se	ns. (stru	c/g): 2.3	33E+07
	Structure Type		Weight Percent (%)	Concentrat (struc/g)			Count¹ ƴ/Total
F	Primary Asbestos S	Structures	NA	۸* 1.8	6E+08	8	
	Total Asbestos St	ructures	5.23E-0	1.8	6E+08		8
	Total Chrysotile St	ructures	NA	۸* < 2.3	3E+07		0
Tota	al Libby-Other Amp	h Structures	NA	۸* < 2.3	3E+07		0
	Total Actinolite St	ructures	6.03E-0	9.3	2E+07		4
Т	otal Anthophyllite	Structures	5.17E-0	6.9	9E+07		3
	Total Tremolite St	ructures	4.16E-0	2.3	3E+07		1

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Lab/Cor, Inc.

CARB 435 - TEM - Final Report

Job Number: 220343 SEA Client: PBS Engineering + Environmental Project Name: Pierce College Olympic South Abatement and Repairs Project No.: 40535.488

- - -

Lab/Cor Sample No. : S5

Client Sample No.: 40535.488-CARB13 **GRR**: 0.969 Dilution : 0.0025

Report Number: 220343R01 Date Received: 4/4/2022

Starting Weight (g): 0.10 Lab Filter Area (mm2): 289.38

Grid Openings Analyzed : 4

Average Grid Opening Area (mm2): 0.0106

Area Analyzed (mm2): 0.0424

Analytical Sens. (Weight Percent): 1.54E-06

Analytical Sens. (struc/g): 2.56E+07

Analyst(s) SB	Analysis Date 4/14/2022	Microscope JEOL-Sr 1200	Magnification 20000		- 3/	
	Structure Type		Weight Percent (%)	Concentration (struc/g)		Count¹ y/Total
F	Primary Asbestos S	structures	NA*	2.56E+08	10	
	Total Asbestos St	ructures	2.02E-01	2.56E+08		10
	Total Chrysotile St	ructures	NA*	< 2.56E+07		0
Tota	al Libby-Other Amp	h Structures	NA*	< 2.56E+07		0
	Total Actinolite St	ructures	1.89E-01	2.05E+08		8
T	otal Anthophyllite	Structures	1.32E-02	2.56E+07		1
	Total Tremolite St	ructures	1.72E-04	2.56E+07		1

Lab/Cor Sample No. : S6

Client Sample No.: 40535.488-CARB14 **GRR**: 0.932 Dilution : 0.0025

Starting Weight (g): 0.11

Lab Filter Area (mm2): 289.38

Grid Openings Analyzed : 4

Average Grid Opening Area (mm2): 0.0106

Area Analyzed (mm2): 0.0424

Analytical Sens. (Weight Percent): 1.45E-06

Analytical Sens. (struc/g): 2.42E+07

Analyst(s) SB	Analysis Date 4/14/2022	Microscope JEOL-Sr 1200	Magnification 20000	Analytical Sens. (si	ruc/g) : 2.	42E+07
	Structure Type		Weight Percent (%)	Concentration (struc/g)		: Count¹ ry/Total
Р	rimary Asbestos S	Structures	NA	A* 2.66E+08	3 11	
	Total Asbestos St	ructures	5.06E-0	03 2.66E+08	}	11
	Total Chrysotile St	ructures	NA	A* < 2.42E+07	7	0
Tota	I Libby-Other Amp	h Structures	NA	A* < 2.42E+07	7	0
	Total Actinolite St	ructures	5.06E-0	03 2.66E+08	}	11
Тс	otal Anthophyllite	Structures	NA	A* < 2.42E+07	7	0
	Total Tremolite St	ructures	NA	A* < 2.42E+07	7	0

Reviewed by:

Kate March **Quality Control Officer**

* NA - weight percent is only calculated using total structures, counting categories that are counted using primary structures are not calculated.



CARB 435 - TEM Raw Data -Final Report

CARB 435 - TEM

Client: PBS Engineering + Environmental

Project Name: Pierce College Olympic South Abatement and Repairs

SEA

Project No.: 40535.488

Job Number: 220343

Lab/Cor Sample No:S1

Client Sample No: 40535.488-CARB09

Gr	No.	Loc.	ID	Prim	Tot	Class	s Length	Width	Aspect	Analyte	Elements	Com	ment	Count Categories
G10	1	G41	ADQ	1	1	F	2.5	0.7	3.6	Actinolite	Mg, Si, Ca, Fe	1		TotActS
							ltemType	ltemNu	ım		Confirm	ned	Comment	
							Brightfield	J6800						
							Diffraction	J6800				2/2022	0.53nm R0	OW SPACING
							Spectra	J6800	7SP		SB 4/1	2/2022		
G10	1	G41	AM	2	2	F	2.25	0.6	3.7	Actinolite				TotActS
G10	1	G41	AM	3	3	F	2	0.25	8	Actinolite				TotActS
G10	1	G41	NAS	4	4	F	1.5	0.5	3	Non Asbestos Structure		Mg-H	ornblende	
G10	1	G41	NAS	5	5	F	2.5	0.5	5	Non Asbestos Structure		Mg-H	ornblende	
G10	2	G34	AM	6	6	F	1.8	0.25	7.2	Actinolite				TotActS
G10	2	G34	AM	7	7	F	5	2	2.5	Actinolite			n altered e fiber	TotActS
G10	2	G34	AM	8	8	F	1.5	0.4	3.8	Actinolite				TotActS
G11	3	E44	AMQ	9	9	F	7.5	0.5	15	Actinolite	Mg, Si, Ca, Fe			TotActS
							ItemType	ltemNu	ım		Confirm	ned	Comment	
						-	Spectra	J6801)SP		SB 4/1	3/2022		
G11	3	E44	AMQ	10	10	F	1.25	0.15	8.3	Actinolite				TotActS
G11	4	F43	AMQ	11	11	F	2	0.5	4	Actinolite				TotActS
G11	4	F43	AMQ	12	12	F	2.5	0.5	5	Actinolite				TotActS
G11	4	F43	AMQ	13	13	F	1	0.1	10	Actinolite				TotActS
G11	4	F43	AMQ	14	14	F	1.5	0.5	3	Actinolite				TotActS

Report Number: 220343R01 Date Received: 4/4/2022



Date Received: 4/4/2022

CARB 435 - TEM Raw Data -Final Report

CARB 435 - TEM

Client: PBS Engineering + Environmental

Project Name: Pierce College Olympic South Abatement and Repairs

SEA

Lab/Cor Sample No:S2

Job Number: 220343

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Element	s Com	ment	Count Categories
G7	1	E44	NAS	1	1	F	1.5	0.25	6	Non Asbestos Structure	Mg, Al, Ca, F		ornblende	
						Iter	nType	ltemNu	ım		Co	nfirmed	Comment	
						Bri	ghtfield	J6801	BBF					
						Sp	ectra	J6801	BSP		SB	4/13/2022		
G7	1	E44	ADQ	2	2	В	1.5	0.25	6	Actinolite	Mg, Si, Fe	Ca,		TotActS
						Iter	nType	ltemNu	ım		Co	nfirmed	Comment	
						Bri	ghtfield	J68014	1BF					
						Dif	fraction	J68014	4DF		SB	4/13/2022	0.53nm R	OW SPACING
						Sp	ectra	J68014	1SP		SB	4/13/2022		
G7	1	E44	ADQ	3	3	F	1	0.25	4	Actinolite				TotActS
G7	2	F43	ADQ	4	4	В	1	0.25	4	Actinolite				TotActS
G7	2	F43	ADQ	5	5	F	0.75	0.2	3.8	Actinolite				TotActS
G8	3	F52	ADQ	6		MD 1-0	2.5	1.25	2	Actinolite				
G8	3	F52	ADQ		6	MF	0.6	0.15	4	Actinolite				TotActS
G8	4	G42	ADQ	7	7	F	1.15	0.25	4.6	Actinolite				TotActS
G8	4	G42	ADQ	8	8	F	2.5	0.75	3.3	Actinolite				TotActS



CARB 435 - TEM Raw Data -Final Report

CARB 435 - TEM

Client: PBS Engineering + Environmental

Project Name: Pierce College Olympic South Abatement and Repairs

SEA

Report Number: 220343R01 Date Received: 4/4/2022

Lab/Cor Sample No:S3

Job Number: 220343

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G7	1	H33	ADQ	1		MD 1-0	3.4	1.5	2.3	Actinolite			
G7	1	H33	ADQ		1	MF	2.4	0.18	13.3	Actinolite	Mg, Al, Si, Ca, Fe		TotActS
						lten	пТуре	ltemNu	ım		Confirmed	I Com	ment
						Spe	ectra	J68020)SP		KM 4/13/2	2022	
						Diff	raction	J68020	DF		KM 4/13/2	2022 0.53	nm ROW SPACING
						Briç	ghtfield	J68020)BF				
G7	2	C41	ADQ	2	2	F	2.8	0.85	3.3	Actinolite	Mg, Al, Si, Ca, Fe		TotActS
						lten	пТуре	ltemNu	ım		Confirmed	I Com	ment
						Spe	ectra	J6802	ISP		KM 4/13/2	2022	
						Diff	raction	J6802	IDF		KM 4/13/2	2022 0.53	nm ROW SPACING
						Brig	ghtfield	J6802	IBF				
G7	2	C41	NAS	3	3	F	1.8	0.22	8.2	Non Asbestos Structure		Mg- Hornblend High Al	
G8	3	H43	ADQ	4	4	F	1.7	0.2	8.5	Actinolite	Mg, Si, Ca, Fe		TotActS
						Item	пТуре	ltemNu	ım		Confirmed	I Com	ment
						Spe	ectra	J68022	2SP		KM 4/13/2	2022	
						Brig	ghtfield	J68022	2BF				
G8	3	H43	AQ	5		MD 1-0	8	5	1.6	Actinolite			
G8	3	H43	AQ		5	MF	4	0.8	5	Actinolite			TotActS
						Iten	пТуре	ItemNu	ım		Confirmed	I Com	ment
						Spe	ectra	J68023	BSP		KM 4/13/2	2022	
						Briç	ghtfield	J68023	BF				
G8	4	F33	AQ	6	6	F	1.8	0.4	4.5	Actinolite	Mg, Al, Si, Ca, Fe		TotActS
G8	4	F33	AQ	7	7	F	1.6	0.12	13.3	Actinolite			TotActS



Date Received: 4/4/2022

CARB 435 - TEM Raw Data -Final Report

CARB 435 - TEM

Client: PBS Engineering + Environmental

Project Name: Pierce College Olympic South Abatement and Repairs

SEA

Lab/Cor Sample No:S4

Job Number: 220343

Gr	No.	Loc.	ID	Prim	Tot	Class	Length	Width	Aspect	Analyte	Elements	Comment	Count Categories
G7	1	F34	NAS	1	1	F	4.25	0.55	7.7	Non Asbestos Structure	Mg, Al, Si, Ca, Fe	Mg-Hornblend	le
						Iter	пТуре	ltemNu	ım		Confirm	ed Comme	ent
						Bri	ghtfield	J6802	5BF				
						Sp	ectra	J6802	5SP		SB 4/14	4/2022	
G7	1	F34	ADQ	2	2	F	2.3	0.4	5.8	Actinolite	Mg, Si, Ca, Fe		TotActS
						Iter	пТуре	ltemNu	ım		Confirm	ed Comme	ent
							ghtfield	J68026					
							raction ectra	J68026 J68026			SB 4/14 SB 4/14		ROW SPACING
G7	1	F34	AMQ	3	3	F	1	0.5	2	Actinolite			TotActS
G7	1	F34	AMQ	4	4	F	1.25	0.4	3.1	Actinolite			TotActS
G7	2	G33	ADQ	5	5	F	4	1	4	Anthophyllite	e Mg, Si, Mn, Fe		TotAntS
						lter	пТуре	ltemNu	ım		Confirm	ed Comme	ent
						Bri	ghtfield	J6802	7BF				
							raction	J6802			SB 4/14	4/2022 0.53nm	ROW SPACING
						Sp	ectra	J6802	7SP		SB 4/14	4/2022	
G7	2	G33	AMQ	6	6	F	4.25	1.5	2.8	Anthophyllite	e		TotAntS
G7	2	G33	AMQ	7	7	F	0.75	0.15	5	Actinolite			TotActS
G7	2	G33	AMQ	8	8	F	1.5	0.2	7.5	Tremolite	Mg, Si, Ca, Fe		TotTrS
						Iter	пТуре	ltemNu	ım		Confirm	ed Comme	ent
						Bri	ghtfield	J68028	3BF				
						Dif	raction	J68028	3DF		SB 4/14	4/2022 0.53nm	ROW SPACING
						Sp	ectra	J68028	BJSP		SB 4/14	4/2022	
G7	2	G33	ADQ	9	9	F	7.5	2.5	3	Anthophyllite	e Mg, Si, Fe		TotAntS
						Iter	пТуре	ltemNu	Im		Confirm	ed Comme	ent
						Bri	ghtfield	J68029	9BF				
						Dif	raction	J68029	9DF		SB 4/14	4/2022 0.53nm	ROW SPACING
						Sp	ectra	J68029	9SP		SB 4/14	4/2022	
G8	3	F54				NSD							
G8	4	G53				NSD							



Date Received: 4/4/2022

CARB 435 - TEM Raw Data -Final Report

CARB 435 - TEM

Client: PBS Engineering + Environmental

Project Name: Pierce College Olympic South Abatement and Repairs

SEA

Lab/Cor Sample No: S5

Job Number: 220343

Gr	No.	Loc.	ID	Prim	Tot	Class	s Length	Width	Aspect	Analyte	Elements	Comr	nent	Count Categories
G7	1	F44				NSD								
G7	2	G43	ADQ	1	1	F	10	1.5	6.7	Actinolite	Mg, Si, C Fe	Ca,		TotActS
						I	ItemType	ltemNu	ım		Conf	irmed	Commen	t
						-	Brightfield	J68030)BF					
							Diffraction	J68030	DF		SB 4	4/14/2022	0.53nm F	ROW SPACING
						:	Spectra	J68030)SP		SB 4	4/14/2022		
G7	2	G43	AMQ	2	2	F	2	0.2	10	Actinolite				TotActS
G7	2	G43	AMQ	3	3	F	1.2	0.2	6	Actinolite				TotActS
G7	2	G43	AMQ	4	4	F	1	0.25	4	Actinolite				TotActS
G8	3	E32	AMQ	5	5	F	2	0.3	6.7	Actinolite				TotActS
G8	3	E32	AMQ	6	6	F	2.25	0.5	4.5	Actinolite				TotActS
G8	3	E32	ADQ	7	7	F	2.5	0.75	3.3	Anthophyllite	Mg, Al, S Ca, Fe			TotAntS
						I	ItemType	ltemNu	ım		Conf	irmed	Commen	t
						Ī	Brightfield	J6803	1BF					
						I	Diffraction	J6803	IDF		SB 4	4/14/2022	0.53nm F	ROW SPACING
						:	Spectra	J6803	ISP		SB 4	4/14/2022		
G8	3	E32	ADQ	8	8	F	1	0.15	6.7	Tremolite	Mg, Si, C Fe	Ca,		TotTrS
						I	ItemType	ltemNu	ım		Conf	irmed	Commen	t
							Brightfield	J68032	2BF					
							Diffraction	J68032	2DF		SB 4	4/14/2022	0.53nm F	ROW SPACING
						:	Spectra	J68032	2SP		SB 4	4/14/2022		
G8	4	F31	NAS	9	9	F	4.5	2.5	1.8	Non Asbestos Structure	Mg, Al, S Ca, Fe	Si, Mg-Ho Ə	ornblende	
						I	ItemType	ltemNu	ım		Conf	irmed	Commen	t
						-	Brightfield	J6803	3BF					
						:	Spectra	J6803	BSP					
G8	4	F31	AMQ	10	10	F	0.75	0.15	5	Actinolite				TotActS
G8	4	F31	AMQ	11	11	F	1.2	0.5	2.4	Actinolite				TotActS



Date Received: 4/4/2022

CARB 435 - TEM Raw Data -Final Report

CARB 435 - TEM

Client: PBS Engineering + Environmental

Project Name: Pierce College Olympic South Abatement and Repairs

SEA

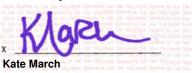
Lab/Cor Sample No:S6

Job Number: 220343

Client Sample No: 40535.488-CARB14

Gr	No.	Loc.	ID	Prim	Tot	Clas	s Length	Width	Aspect	Analyte	Elements	Comm	ent Co	ount Categories
G7	1	E34	ADQ	1	1	F	0.75	0.3	2.5	Actinolite	Mg, Si, Ca, Fe			TotActS
							ItemType	ltemNu	ım		Confirm	ed	Comment	
							Brightfield	J6805						
							Diffraction	J6805				1/2022	0.53nm ROW	SPACING
							Spectra	J6805	7SP		SB 4/14	1/2022		
G7	1	E34	NAS	2	2	F	2	0.4	5	Non Asbestos Structure	Mg, Al, Si, Ca, Fe	Mg-Ho	rnblende	
							ItemType	ltemNu	ım		Confirm	ed	Comment	
							Brightfield	J6805	BBF					
							Spectra	J6805	BSP		SB 4/14	1/2022		
G7	1	E34	AMQ	3	3	F	1	0.35	2.9	Actinolite				TotActS
G7	1	E34	AMQ	4	4	F	0.8	0.2	4	Actinolite				TotActS
G7	2	F33	AMQ	5	5	F	0.8	0.2	4	Actinolite				TotActS
G7	2	F33	AMQ	6	6	F	1	0.5	2	Actinolite				TotActS
G7	2	F33	AMQ	7	7	F	1.2	0.15	8	Actinolite				TotActS
G7	2	F33	AMQ	8	8	F	1	0.15	6.7	Actinolite				TotActS
G7	2	F33	AMQ	9	9	F	1.8	0.2	9	Actinolite				TotActS
G8	3	E44	AMQ	10	10	F	0.5	0.1	5	Actinolite				TotActS
G8	3	E44	AMQ	11	11	F	0.55	0.1	5.5	Actinolite				TotActS
G8	4	F43	AMQ	12	12	F	1	0.2	5	Actinolite				TotActS
Count	Catego	ries												
PAS			y Asbesto				TAS		bestos Stru		TChrysS		Total Chrysotile	
Tot_O				•	Structures		TotActS	Total Ac	tinolite Stru	ctures	TotAntS		Total Anthophyl	lite Structures
TotTr	6	Total T	remolite	Structur	es									

Reviewed by:



Quality Control Officer



220 843 LABORATORY CHAIN OF CUSTODY

Project: Pierce College Olympi	c South Abatement & Repairs	Project #: <u>40535.488</u>
	5 soil analysis	Date: 4/4/2022
Relinq'd by/Signature:	ile Isai	Date/Time: 41412022 Date/Time: 41412022 S: 30 pm
Received by/Signature:	Email ALL INVOICES to: seattleap@	
E-mail results to: Willem Mager Gregg Middaugh Mark Hiley Tim Ogden Ryan Hunter Prudy Stoudt-McRae	 Janet Murphy Kaitlin Soukup Allison Welch Toan Nguyen Peter Stensland Claire Tsai 	 Holly Tuttle Mike Smith Ferman Fletcher Cameron Budnick Michelle Dodson
TURN AROUND TIME: 1 Hour 2 Hours 4 Hours	24 Hours 48 Hours	S Days

SAMPLE DATA FORM						
Sample #	Material	Location	Lab			
40535.488-CARB09	Soil	East Elevation ~20ft from center column depth 6-12"	Labco			
40535.488-CARB10	Soil	South Elevation northeast of Robin's nest depth 6-12"				
40535.488-CARB11	Soil	Southwest Elevation lawn area near tires depth 6-12"				
40535.488-CARB12	Soil	West Elevation east side of mound depth 6-12"				
40535.488-CARB13	Soil	Southwest elevation fence near pole seating depth 6-12"				
40535.488-CARB14	Soil	West Elevation north playground fence depth 6-12"				
			-			

APPENDIX G

Construction Phase PCB Sampling Information

Bulk PCB Sample Inventory Bulk PCB Laboratory Data Sheets Bulk PCB Chain of Custody Documentation

Pierce College Olympic South Abatement and Repairs Washington Department of Enterprise Services

PCB SAMPLE INVENTORY

PBS Sample #	Material	Sample Location	<u>Analyte</u>	Lab Results (mg/kg)	<u>Lab</u>
40525 400 DCD02		to all the all the late	A	.0.00	ND //
40535.488-PCB02	Grey interior caulk	Level 1 north window	Aroclor 1016	<0.90	NVL
			Aroclor 1221	<0.90	
			Aroclor 1232	<0.90	
			Aroclor 1242	<0.90	
			Aroclor 1248	<0.90	
			Aroclor 1254	<0.90	
			Aroclor 1260	<0.90	

June 24, 2022



Mr. Gregg Middaugh

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

Re: NVL Batch 2211270.00

Project Name/Number: 40535.488

Project location: Pierce College Olympic South Abatement and Repairs

Dear Mr. Middaugh,

Enclosed please find test results for samples submitted to our laboratory for analysis. Preparation and analysis of these samples were conducted in accordance with published industry standards and methods specified on the attached analytical report.

The content of this package consists of the following:

-Case Narrative & Definition of Data Qualifiers -Analytical Test Results -Applicable QC Summary -Client Chain-of-Custody (CoC) -NVL Receiving Record

The 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 will be discarded after two weeks.

Thank you for using our laboratory services. If you need further assistance, please contact us at 206-547-0100 or 1-888-NVLLABS.

Sincerely,

Nick Ly, Technical Director

Enclosure: Sample Results



Case Narrative:

The following summarizes samples received on date as shown on the accompanied Chain of custody by NVL Laboratories, Inc. from PBS Environmental - Seattle for Project Number 40535.488. Samples were logged in for PCB analysis per client request using both customer sample ID's and laboratory assigned ID's as listed on the Chain-of-Custody (CoC). All samples as received were processed and analyzed within specified turnaround time without any abnormalities and deviations that may affect the analytical results. All quality control requirements were acceptable unless stated otherwise. The conditions of all samples were acceptable at time of receipt and all samples submitted with this batch were analyzed unless stated otherwise on the CoC.

Test Results are reported in milligram per kilogram (mg/kg) for PCB samples as shown on the analytical reports.



Definition Appendix

Terms

% Rec	Percent recovery.
<	Below Reporting Limit(RL) or Limit of Quantitation(LoQ) of the instrument.
В	Blank contamination. The recorded results is associated with a contaminated blank.
DF	Dilution Factor
J	The reported concentration is an estimated value because something may be present in the sample that interfered with the analysis.
J1	The reported concentration is an estimated value because the laboratory control sample (LCS) is out of control limits.
J2	The reported concentration is an estimated value because the percent recovery for matrix spike is out of control limits.
J3	The reported concentration is an estimated value because the relative percent difference(RPD) for duplicate analysis is out of control limits.
J4	Percent recovery is outside of established control limits.
LCS	Laboratory Control Sample.
LFS	Laboratory Fortified Spike
Limits	The upper and lower control limits for spike recoveries.
LN	Quality control sample is outside of control limits. This analyte was not detected in the sample.
LOQ	Limit of quantitation(same as RL)
mg/kg	Milligrams per kilogram.
ND	Analyte not detected or below the reporting limit of the instrument or methodology



Definition Appendix

Terms

PPM	Parts per Million.
QC Batch Group	Quality Control Batch Group. The entity that links analytical results and supporting quality control results.
R	The data are not reliable due to possible contamination or loss of material during preparation or analysis. Re-sampling and reanalysis are necessary for verification.
RL	Reporting Limit. The minimum concentration that can be quantified under routine operating conditions.
RPD	Relative Percent Difference. The relative difference between duplicate results(matrix spike, blank spike, or samples duplicate) expressed as a percentage.
RPD Limit	The maximum RPD allowed for a set of duplicate measurements(see RPD).
SMI	Surrogate has matrix interference.
Spike Conc.	The measured concentration, in sample basis units, of a spiked sample.
SURR-ND	Surrogate was not detected due to matrix interference or dilution.
ug/m3	Micrograms per cubic meter.
ug/mL	Micrograms per milliliter
mg/Kg	milligram per kilogram

ANALYSIS REPORT



Polychlorinated Biphenyls by Gas Chromatography

Client SDG Number Date Reported Project Number Location	PBS Environmental 2211270.00 06/24/2022 40535.488 Pierce College Olympic South Abatement and Repairs	Samples Recei Analyzed By Samples Analy Analysis Metho Preparation Me	Evelyn Ahuluzed*1od8082A
Sample Numbe	r 40535.488-PCB02	Received	06/21/2022
Lab Sample ID	22369953	Matrix	Material
Initial Sample Siz	e 2.2241 gm	Units of Result	mg/Kg, as received
Analyte		RL	Final Result Analysis Date
Aroclor-1016		0.90	< 0.90 06/23/2022
Aroclor-1221		0.90	< 0.90 06/23/2022
Aroclor-1232		0.90	< 0.90 06/23/2022
Aroclor-1242		0.90	< 0.90 06/23/2022
Aroclor-1248		0.90	< 0.90 06/23/2022
Aroclor-1254		0.90	< 0.90 06/23/2022
Aroclor-1260		0.90	< 0.90 06/23/2022
PCBs, Total		0.90	<0.9



Quality Control Results

Project Number:	40535.488			SDG Nı Project	umber: Manager:		211270 Gregg Mid	daugh		
QC Batch(es): QC Batch Method:	Q1599 3546PR (PCB)			Analysis Analysis Des	s Method:	808 Pol		ad Binl	nenyls by Ga	
Preparation Date:	06/22/2022			Analysis De			omatogra			
Blank: MBLK-22112	70									
A molette	Blank	Linite	55		RL		Control			Qualifiana
Analyte Aroclor-1016	Result	Units	DF		1		Limit 1.0			Qualifiers
Aroclor-1221	ND ND	mg/Kg	1 1		1		1.0			
Aroclor-1221 Aroclor-1232	ND	mg/Kg mg/Kg	1		1		1.0			
Aroclor-1242	ND	mg/Kg	1		1		1.0			
Aroclor-1248	ND	mg/Kg	1		1		1.0			
Aroclor-1254	ND	mg/Kg	1		1		1.0			
Aroclor-1260	ND	mg/Kg	1		1		1.0			
PCBs, Total	ND	mg/Kg	1		1		1.0			
Surrogates:						% Rec				
Tetrachloro-m-xylene			1			103	40-140			
Decachlorobiphenyl			1			125	40-140			
Lab Control Sample:	LCS-1254-22112	70								
	Blank Spike			Spike			% Rec			
Analyte	Result	Units	DF	Conc.		% Rec	Limits			Qualifiers
Aroclor-1254 Surrogates:	18.8	mg/Kg	1	20.0		94	40-140			
Tetrachloro-m-xylene			1			106	40-140			
Decachlorobiphenyl			1			125	40-140			
Lab Control Sample: Lab Control Sample		2211270								
Dup-1016+1260-2211										
	Blank Spike			Spike						
Analyte	Result	Units	DF	Conc.		% Rec	Limits	RPD	RPD Limit	Qualifiers
Aroclor-1016	18	mg/Kg	1	20.0		90	40-140			
Ann - 1 4000	20.1			20.0		101		11.2	50	
Aroclor-1260	20.7 20.2	mg/Kg	1	20.0 20.0		104 101	40-140 40-140	2.7	50	
Surrogates:	20.2			20.0		101		2.1	00	
Tetrachloro-m-xylene			1			122	40-140			
			•			102	40-140			
Decachlorobiphenyl			1			130	40-140			
						125	40-140			



Surrogate Recovery Summary Report

Client	PBS Environmental

Project <u>40535.488</u>

SDG Number 2211270

Customer Sample ID	Lab Sample ID	Analyte	Recovery	Limits
40535.488-PCB02	22369953	Decachlorobiphenyl	62%	40-140
40535.488-PCB02	22369953	Tetrachloro-m-xylene	53%	40-140
LCS Dup-1016+1260-2211270	LCS Dup-1016+1260-2211270	Decachlorobiphenyl	125%	40-140
LCS Dup-1016+1260-2211270	LCS Dup-1016+1260-2211270	Tetrachloro-m-xylene	102%	40-140
LCS-1016+1260-2211270	LCS-1016+1260-2211270	Decachlorobiphenyl	130%	40-140
LCS-1016+1260-2211270	LCS-1016+1260-2211270	Tetrachloro-m-xylene	122%	40-140
LCS-1254-2211270	LCS-1254-2211270	Decachlorobiphenyl	125%	40-140
LCS-1254-2211270	LCS-1254-2211270	Tetrachloro-m-xylene	106%	40-140
MBLK-2211270	MBLK-2211270	Decachlorobiphenyl	125%	40-140
MBLK-2211270	MBLK-2211270	Tetrachloro-m-xylene	103%	40-140

* Recovery outside limits



INITIAL AND CONTINUING CALIBRATION VERIFICATION

SDG No: <u>2211270</u>

Contract: <u>N/A</u>

Determination: 8082 PCB Aroclors <Material>

Run	Sample	Source	Analyzed	Analyte	True	Found	Unit	% Rec	Limits
R001592	CCV1 1016-1260	PCB_2022-1-2	06/23/2022	Aroclor-1016	5	5.105	ug/mL	102	80-120
		PCB_2022-1-2	06/23/2022	Aroclor-1260	5	5.983	ug/mL	120	80-120
	CCV1 1254	PCB_2022-1-3	06/23/2022	Aroclor-1254	5	4.977	ug/mL	100	80-120
	ICV 1016-1254- 1260	PCB_2022-1-4	06/23/2022	Aroclor-1016	5	5.574	ug/mL	111	85-115
		PCB_2022-1-4	06/23/2022	Aroclor-1254	5	4.951	ug/mL	99	85-115
		PCB_2022-1-4	06/23/2022	Aroclor-1260	5	5.625	ug/mL	113	85-115
	CCV2 1016-1260	PCB_2022-1-2	06/23/2022	Aroclor-1016	5	5.009	ug/mL	100	80-120
		PCB_2022-1-2	06/23/2022	Aroclor-1260	5	5.789	ug/mL	116	80-120
	CCV2 1254	PCB_2022-1-3	06/23/2022	Aroclor-1254	5	5.251	ug/mL	105	80-120

Page 8 of 10

* = Percent recovery not within control limits

ORGANICS LABORATORY SERVICES

Company PBS Environmental - Seattle Address 214 E Galer St. Suite. 300 Seattle, WA 98102 Project Manager Mr. Gregg Middaugh

Phone (206) 233-9639 Office: (800) 628-9639

NVL Batch Number 2211270.00 TAT 5 Days AH No Rush TAT Due Date 6/28/2022 Time 8:00 AM Email gregg.middaugh@pbsusa.com_ Fax (866) 727-0140

Project Name/Number: 40535.488

Project Location: Pierce College Olympic South Abatement and Repairs

Subcategory Quantitative analysis

Item Code ORG-05

Method 8082 PCB Aroclors <Bulk>

Total Number of Samples 1

Rush Samples ____

-	Lab ID	Sample ID	Description	A/R
1	22369953	40535.488-PCB02		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Drop Box				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Rachelle Miller		NVL	6/21/22	800
Analyzed by	EvennAh	who today	NVL	6/22/22	16:00
Results Called by				1 - 1 -	
🗌 Faxed 🗌 Emailed					
Special Instructions:					
Entered By: Rachelle Miller	· · · · ·	Date: 6/21/2022	Time: 8:33 AM		1 of 1

4708 Autom Ave North: Seattle, WA 98103 0 106 547 0100 1 206 634 1936 www.nvflabs.com



LABORATORY CHAII

2211270

Project: <u>Pierce College Olympic South Abatement and Repairs</u>		Project #: <u>40535.488</u> Page 1 of 1
Analysis requested:	Bulk PCB (EPA 8082)	Date: 6/17/2022
Relinq'd by/Signature:	lain Tom'	Date/Time: 6/20/2022
Received by/Signature: 🛛	achelle Miller 2	Date/Time: 6/2/100 BambB
Evelyy Alml	Email ALL INVOICES to: seattlean	0@pbsusa.com 6/23/22 16:00
E-mail results to:		
🔲 Willem Mager	🔲 Janet Murphy	Holly Tuttle
🔀 Gregg Middaugh	Kaitlin Soukup	Mike Smith
Mark Hiley	Allison Welch	Ferman Fletcher
Tim Ogden	🔲 Toan Nguyen	Cameron Budnick
Ryan Hunter	Peter Stensland	Kameron DeMonnin
Prudy Stoudt-McRae	🔀 Claire Tsai	
TURN AROUND TIME:		
🗋 1 Hour	24 Hours	🔀 5 Days
2 Hours	48 Hours	Other
4 Hours		

SAMPLE DATA FORM				
Sample #	Material	Location	Lab	
40535.488-PCB02	Grey interior caulk	Level 1 north window	NVL	
	1			

214 EAST GALER STREET, SUITE 300, SEATTLE, WA 98102 • 206.233.9639 MAIN • 866 727.0140 FAX • PBSUSA.COM

APPENDIX H

Certifications

THIS IS TO CERTIFY THAT

CLAIRE TSAI

HAS SUCCESSFULLY COMPLETED THE TRAINING COURSE for ASBESTOS INSPECTOR REFRESHER

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

Course	Date
Course	Date

12/10/2021

Course Location:

Online,

Certificate:

IR-21-7316B

For verification of the authenticity of this certificate contact: PBS Engineering and Environmental Inc. 4412 S Corbett Avenue Portland, Oregon 97239 503.248.1939



CCB #SRA0615 4-Hr Training

4-Hour AHERA Inspector Refresher Training; AHERA is the Asbestos Hazard Emergency Response Act enacting Title II of Toxic Substance Control Act (TSCA)

Expiration Date: 12/10/2022

ander Frilly

Andy Fridley, Instructor

Certificate of Completion

This is to certify that Ferman L. Fletcher

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

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

184489

Certificate Number

A TErracon COMPANY

ARGUS

TRAINING · CONSULT

EPA Provider # 1085

(if applicable) Instructor: Andre Zwanenburg ARGUS PACIFIC, INC / 21905 64th AVE W, SUITE 100 / MOUNTLAKE TERRACE, WASHINGTON 98043 / 206.285.3373 / ARGUSPACIFIC.COM

Apr 5, 2022 Date(s) of Training Expires in 1 year.

Exam Score: N/A (if applicable)

THIS IS TO CERTIFY THAT PETER STENSLAND

HAS SUCCESSFULLY COMPLETED THE TRAINING COURSE for ASBESTOS INSPECTOR INITIAL COURSE

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

Course Date:

6/14/2021 - 6/16/2021

Course Location:

Portland, OR

Certificate:

IN-21-9342B

For verification of the authenticity of this certificate contact: PBS Engineering and Environmental Inc. 4412 S Corbett Avenue Portland, Oregon 97239 503,248,1939



CCB #SRA0614 24-Hr Training

24-Hour AHERA Inspector Training; AHERA is the Asbestos Hazard Emergency Response Act enacting Title II of Toxic Substance Control Act (TSCA)

Expiration Date:

06/16/2022

ander fiely

Andy Fridley, Instructor