

Asbestos Reinspection Report

Yamhill-Carlton Intermediate School

AHERA 3-Year Reinspection

310 E Main Street

Yamhill, OR 97148

Prepared for:

Yamhill-Carlton School District



July 2023

Project No.: 27452.000 Phase No.: 0001 Task No.: 002

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The reinspection process under the AHERA rules states that a school building must be reinspected by an accredited inspector at least every three years. The results of the reinspection are reported in these documents.

LIST OF DOCUMENTS

Material Summary	Page 1.1
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Certifications	Not Numbered

ACTIVITY DATES

10/10/2016 Management Plan Implementation Date*

06/28/2023 Reinspection End Date

06/28/2026 Next Reinspection Due

* Information provided by School District

On June 28, 2023, PBS Engineering and Environmental Inc. (PBS) completed the Asbestos Hazard Emergency Response Act (AHERA) 3-Year Reinspection at the Yamhill-Carlton Middle School. The reinspection was completed in accordance with the requirements of 40 CFR, Part 763, Asbestos-Containing Materials in Schools; Final Rule and Notice.

Asbestos-containing pipe insulation and associated hard fittings were observed in moderate to good condition throughout the attic. Minor damage to pipe insulation was observed in various locations. PBS recommends limiting access to the attic as much as possible.

The asbestos-containing vinyl floor tile and associated black mastic in the gymnasium, adjacent to the stage, and the west hallway custodial closet were observed in poor condition. Vinyl floor tiles were damaged and underlaying mastic was exposed. PBS recommends abatement of this material by a certified asbestos abatement contractor.

The asbestos-containing green and gray vinyl floor tile and associated black mastic in the classrooms was observed in good condition. Continue to monitor the conditions of this material.

The black window glazing compound on the original window assemblies was observed in good condition. Continue to monitor the conditions of this material.

The black exterior window caulk on the original window assemblies was observed in good condition. Continue to monitor the conditions of this material.

All other suspected asbestos-containing materials were observed in good condition. These materials should continue to be maintained in the Yamhill-Carlton School District's AHERA Asbestos Management Plan.

SIGNATURES

Inspector

**Nathan
Carlson**

Digitally signed by
Nathan Carlson
Date: 2023.07.26
10:15:29 -07'00'

Nate Carlson

Accreditation #: IRO-23-1775B

Management Planner

**Nathan
Carlson**

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Nathan Carlson
Date: 2023.07.26
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Nate Carlson

Accreditation #: IRO-23-1775B

Material Summary: June 28, 2023

Known or suspected asbestos-containing building materials are listed below in order of hazard priority. The priorities are established by the Accredited Inspector(s) and Accredited Management Planner(s), and are based on the assessments. A material may be listed more than once if its location varies and if the assessment criteria also dramatically changes.

1. MATERIAL Asbestos Pipe Insulation
LOCATION Attic
CATEGORY Moderate Concern
TSI - Damaged or significantly damaged ACBM
2. MATERIAL Vinyl Floor Tile/Mastic
LOCATION Gymnasium, hallways, classrooms, west custodial office
CATEGORY High to Moderate Concern
Miscellaneous Material - Damaged or significantly damaged friable ACBM
3. MATERIAL Window Glazing Compound
LOCATION Original Windows
CATEGORY AHERA Classification - Non-friable ACBM.
Miscellaneous Non-friable ACBM or Assumed ACBM
4. MATERIAL Window Caulk
LOCATION Original Windows
CATEGORY AHERA Classification - Non-friable ACBM.
Miscellaneous Non-friable ACBM or Assumed ACBM

Material Assessments: June 28, 2023

PRIORITY NO. 1

HOMOGENEOUS AREA Asbestos Pipe Insulation

FUNCTIONAL SPACE Attic

QUANTITY Not measured

DESCRIPTION

A variety of asbestos containing pipe insulation and associated hard insulating cement on fittings. The pipe insulation may be aircell, mag, felt, paper wrap, contaminated fiberglass or similar.

ADDITIONAL SAMPLES TAKEN: None

ASSESSMENT AHERA CLASSIFICATION TSI - Damaged or significantly damaged ACBM

CONCERN CATEGORY Moderate Concern

CURRENT DAMAGE Moderate to None

UNDAMAGED AREA Good

FRIABILITY High to Moderate

ACCESSIBILITY Low Limited access to attic

DAMAGE POTENTIAL Moderate to Low

DAMAGE TYPE

DAMAGE CAUSE

DISCUSSION

AHERA Classification - ACBM with potential for damage.

RESPONSE ACTIONS

Preventative Measures Prior to Abatement

Recommended Abatement Action

Other Options

None suggested.

Material Assessments: June 28, 2023

PRIORITY NO. 2

HOMOGENEOUS AREA Vinyl Floor Tile/Mastic

FUNCTIONAL SPACE Gymnasium, hallways, classrooms, west custodial office

QUANTITY Not measured

DESCRIPTION

Manufactured floor tiles typically 9 inches by 9 inches or 12 inches by 12 inches, composed of a dense vinyl matrix that often contains asbestos and is adhered to the substrate with a mastic that often contains asbestos.

ADDITIONAL SAMPLES TAKEN: None

ASSESSMENT	AHERA CLASSIFICATION	Miscellaneous Material - Damaged or significantly damaged friable ACBM
	CONCERN CATEGORY	High to Moderate Concern
CURRENT DAMAGE	Severe to Moderate	Damaged VAT/M in the gymnasium and west custodial office
UNDAMAGED AREA	Good	
FRIABILITY	Moderate	
ACCESSIBILITY	High	
DAMAGE POTENTIAL	Moderate	Abatement of damaged VAT/M is recommended
DAMAGE TYPE		
DAMAGE CAUSE		

DISCUSSION

AHERA Classification - Damaged or significantly damaged friable miscellaneous ACM.

RESPONSE ACTIONS

Preventative Measures Prior to Abatement

Recommended Abatement Action

Other Options

None suggested.

MATERIAL	Window Glazing Compound
FUNCTIONAL SPACE	Original Windows
DESCRIPTION	
	Manufactured, generally pre-mixed matrix putty compound that may contain asbestos fibers for reinforcement and insulating cement. The material may be utilized to seal, insulate, or stabilize structural or mechanical systems
SAMPLE RESULTS	ASSUMED POSITIVE
ASSESSMENT	AHERA Classification - Non-friable ACBM.
	The material is generally non-friable in a pliable state. Age and exposure may change friability. Before impacting the material by remodeling, demolition, or removal, a qualified inspector should take samples for analysis. If the samples are analyzed as containing asbestos, remove using wet methods, controlled conditions, and proper worker protection.

MATERIAL	Window Caulk
FUNCTIONAL SPACE	Original Windows
DESCRIPTION	
	A silicon or rubberized sealant used in both interior and exterior applications as a seam sealer, filler, or as weatherproofing.
SAMPLE RESULTS	ASSUMED POSITIVE
ASSESSMENT	AHERA Classification - Non-friable ACBM.
	A silicon or rubberized sealant used in both interior and exterior applications as a seam sealer, filler, or as weatherproofing.

<u>Code</u>	<u>Material</u>	<u>Location</u>	<u>Results</u>	<u>Lab</u>
27452.000-0001	Vinyl Floor Tile/Mastic	Intermediate, northwest science classroom; vinyl floor tile, 9"x9", green, mastic, black, on concrete		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	hard vinyl, green	4% Chrysotile	
	Layer 02	mastic, black	2% Chrysotile	
27452.000-0002	Covebase/Mastic	Intermediate, northwest science classroom; covebase, 4", brown, mastic, brown		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	rubbery material, brown	No Asbestos Detected	
	Layer 02	mastic, white with fibrous backing, gray	No Asbestos Detected	
	Layer 03	loose mastic, brown	<1% Anthophyllite	
27452.000-0003	Gypsum Wallboard/Joint Compound	Intermediate, west hallway; gypsum wallboard, joint compound		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	paint, blue with thin powder, white	No Asbestos Detected	
	Layer 02	compact chalky material with paper, white	No Asbestos Detected	
27452.000-0004	Glued-on Ceiling Tile/Mastic	Intermediate, northwest science classroom; glued-on ceiling tile, 12"x12", holes and fissures, mastic, brown		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	coating, white	No Asbestos Detected	
	Layer 02	compressed fibers, brown	No Asbestos Detected	
	Layer 03	textured coating, white	No Asbestos Detected	
	Layer 04	mastic, brown	<1% Anthophyllite	
27452.000-0005	Window Glazing Compound	Intermediate, northwest science classroom; window glazing, black		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 1	mastic, black	4% Chrysotile	
27452.000-0006	Lay-in Ceiling Tile	Intermediate, west hallway; lay-in ceiling tile, 2'x2', scars and pinholes		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	coating, white	No Asbestos Detected	
	Layer 02	compressed fibers, gray	No Asbestos Detected	

<u>Code</u>	<u>Material</u>	<u>Location</u>	<u>Results</u>	<u>Lab</u>
27452.000-0007	Glued-on Ceiling Tile/Mastic	Intermediate, west hallway; glued-on ceiling tile, 12"x12", mixed holes, mastic, brown		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	coating, white	No Asbestos Detected	
	Layer 02	compressed fibers, gray/brown	No Asbestos Detected	
	Layer 03	mastic, brown	<1% Anthophyllite	
27452.000-0008	Vinyl Floor Tile/Mastic	Intermediate, west classroom; vinyl floor tile, 9"x9", green mastic, black, on concrete, under carpet		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	mastic, tan	No Asbestos Detected	
	Layer 02	hard vinyl, green with thin mastic, black	4% Chrysotile	
	Layer 03	hard compact powder, gray	No Asbestos Detected	
27452.000-0009	Mastic	Intermediate, west classroom; counter mastic, yellow		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	formica material, brown	No Asbestos Detected	
	Layer 02	mastic, clear tan	No Asbestos Detected	
27452.000-0010	Sink Undercoating	Intermediate, west classroom; sink undercoating, black		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 1	loose fine powder, black	3% Chrysotile	
27452.000-0011	Vinyl Floor Tile/Mastic	Intermediate, west hallway; vinyl floor tile, gray, mastic, black, on concrete, under carpet		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	foam, black	No Asbestos Detected	
	Layer 02	mastic, white/tan	No Asbestos Detected	
	Layer 03	hard compact powder, gray with thin mastic, black	<1% Chrysotile	
27452.000-0012	Vinyl Floor Tile/Mastic	Intermediate, west hallway; vinyl floor tile, gray, mastic, black, on concrete, under soft vinyl floor		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	mastic, clear/tan	No Asbestos Detected	
	Layer 02	vinyl, black	No Asbestos Detected	
	Layer 03	woven fibers, white	No Asbestos Detected	
	Layer 04	hard compact powder, gray	No Asbestos Detected	
	Layer 05	mastic, black	4% Chrysotile	

<u>Code</u>	<u>Material</u>	<u>Location</u>	<u>Results</u>	<u>Lab</u>
27452.000-0013	Vinyl Floor Tile/Mastic	Intermediate, south classroom; vinyl floor tile, gray, mastic, black, on concrete, under carpet		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	mastic, tan	No Asbestos Detected	
	Layer 02	hard vinyl, gray	3% Chrysotile	
	Layer 03	mastic, black	No Asbestos Detected	
27452.000-0014	Covebase/Mastic	Intermediate, laundry room; covebase, 6", black, mastic, yellow		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	rubbery material, black	No Asbestos Detected	
	Layer 02	mastic, white	No Asbestos Detected	
	Layer 03	coating, tan	No Asbestos Detected	
27452.000-0015	Gypsum Wallboard/Joint Compound	Intermediate, laundry room; gypsum wallboard, joint compound		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	paint, tan with fine compact powder, off-white	<1% Chrysotile	
	Layer 02	compact chalky material with paper, white	No Asbestos Detected	
Comments: TEM Bulk Analysis Total % Asbestos: 1.71%				
27452.000-0016	Vinyl Floor Tile/Mastic	Intermediate, nurses station; vinyl floor tile, 12"x12", white, mastic, black and yellow, on concrete		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	hard vinyl, white	No Asbestos Detected	
	Layer 02	mastic, clear yellow	No Asbestos Detected	
	Layer 03	thin rubbery material, off-white	No Asbestos Detected	
	Layer 04	thin mastic, black	<1% Chrysotile	
27452.000-0017	Leveling Compound	Intermediate, main office; leveling compound, white, under carpet		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	mastic, yellow	No Asbestos Detected	
	Layer 02	compact powder, white	No Asbestos Detected	
	Layer 03	soft compact material, gray	No Asbestos Detected	
	Layer 04	mastic, tan	No Asbestos Detected	
	Layer 05	hard compact powder, white	No Asbestos Detected	

<u>Code</u>	<u>Material</u>	<u>Location</u>	<u>Results</u>	<u>Lab</u>
27452.000-0018	Vinyl Floor Tile/Mastic	Intermediate, gym/stage area; vinyl floor tile, 9"x9", beige speckle, mastic, black, on concrete		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	hard vinyl, tan with coating, brown/blue pattern	3% Chrysotile	
	Layer 02	mastic, black/brown	No Asbestos Detected	
27452.000-0019	Sheet Floor Covering	Intermediate, supply room; sheet floor, tan, on vinyl floor tile and mastic		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	vinyl, gray	No Asbestos Detected	
	Layer 02	fibrous backing, gray	No Asbestos Detected	
	Layer 03	mastic, off-white/yellow on wood	No Asbestos Detected	
27452.000-0020	Vinyl Floor Tile/Mastic	Intermediate, east custodial closet; vinyl floor tile, 9"x9", beige, mastic, black, on concrete		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	hard vinyl, tan	5% Chrysotile	
	Layer 02	mastic, black	3% Chrysotile	
27452.000-0021	Covebase/Mastic	Intermediate, east custodial closet; covebase, 6", black, mastic, brown		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	rubbery material, black with paint, green	No Asbestos Detected	
	Layer 02	mastic, brown	No Asbestos Detected	
27452.000-0022	Wall and Ceiling Plaster	Intermediate, east custodial closet; plaster wall, gray		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 1	loose granular powder, gray with paint, blue	No Asbestos Detected	
27452.000-0023	Gypsum Wallboard/Joint Compound	Intermediate, attic; gypsum wallboard, joint compound		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	granular compact powder, white with paint, blue	No Asbestos Detected	
	Layer 02	compact chalky material with paper, white	No Asbestos Detected	

<u>Code</u>	<u>Material</u>	<u>Location</u>	<u>Results</u>	<u>Lab</u>
27452.000-0024	Mechanical Isolation Cloth	Intermediate, attic; mechanical isolation cloth, tan		Eurofins LabCor PDX
	Layer: Layer 1	Description: woven fibers, off-white	Analysis: No Asbestos Detected	
27452.000-0025	Mechanical Isolation Cloth	Intermediate, attic; mechanical isolation cloth, gray		Eurofins LabCor PDX
	Layer: Layer 1	Description: woven fibers, off-white with paint, gray	Analysis: No Asbestos Detected	
27452.000-0026	Material Debris	Intermediate, attic; roofing debris, black		Eurofins LabCor PDX
	Layer: Layer 1	Description: loose particulate, brown/black	Analysis: No Asbestos Detected	
27452.000-0027	Asbestos Pipe Insulation	Intermediate, attic; asbestos pipe insulation, white		Eurofins LabCor PDX
	Layer: Layer 1	Description: fibrous powder, white	Analysis: 3% Chrysotile, 8% Amosite	
27452.000-0028	Air Cell Pipe Insulation	Intermediate, attic; aircell pipe insulation, white		Eurofins LabCor PDX
	Layer: Layer 1	Description: fibrous material, gray/blue	Analysis: 65% Chrysotile	
27452.000-0029	Hard Fittings/Pipe Insulation	Intermediate, attic; hard fitting, white		Eurofins LabCor PDX
	Layer: Layer 1	Description: fibrous powder, white	Analysis: 4% Chrysotile, 6% Amosite	
27452.000-0030	Sink Undercoating	Intermediate, drama classroom; sink undercoating, gray		Eurofins LabCor PDX
	Layer: Layer 1	Description: soft compact material, gray/silver	Analysis: No Asbestos Detected	
27452.000-0031	Mastic	Intermediate, classroom #12; carpet mastic, yellow, on concrete		Eurofins LabCor PDX
	Layer: Layer 1	Description: loose particulate, tan/brown	Analysis: No Asbestos Detected	

<u>Code</u>	<u>Material</u>	<u>Location</u>	<u>Results</u>	<u>Lab</u>
27452.000-0032	Covebase/Mastic	Intermediate, classroom #12; covebase, 6", black, mastic, brown		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	rubbery particulate, black/white	No Asbestos Detected	
	Layer 02	loose particulate, brown	No Asbestos Detected	
	Layer 03	loose fibers, blue	No Asbestos Detected	
27452.000-0033	Wall and Ceiling Plaster	Intermediate, classroom #13; plaster wall, gray		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 1	granular compact powder with paint, off-white	No Asbestos Detected	
27452.000-0034	Lay-in Ceiling Tile	Intermediate, classroom #14; lay-in ceiling tile, 2'x2', fissures and pinholes		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	coating, white	No Asbestos Detected	
	Layer 02	compressed fibrous material, tan	No Asbestos Detected	
27452.000-0035	Lay-in Ceiling Tile	Intermediate, classroom #14; nailed-in ceiling tile, 12"x24"		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	coating, white	No Asbestos Detected	
	Layer 02	loose fibrous material, tan	No Asbestos Detected	
27452.000-0036	Mastic	Intermediate, north classroom wing; carpet mastic, yellow, on concrete		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	mastic, tan/green	No Asbestos Detected	
	Layer 02	granular compact powder, gray	No Asbestos Detected	
27452.000-0037	Sheet Floor Covering	Intermediate, north classroom wing; sheet floor, blue		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	vinyl, gray	No Asbestos Detected	
	Layer 02	fibrous backing, gray	No Asbestos Detected	
27452.000-0038	Vinyl Floor Tile/Mastic	Intermediate, north classroom wing; vinyl floor tile, 12"x12", blue, mastic, black, on concrete		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	vinyl, blue	No Asbestos Detected	
	Layer 02	mastic, black/tan	No Asbestos Detected	

<u>Code</u>	<u>Material</u>	<u>Location</u>	<u>Results</u>	<u>Lab</u>
27452.000-0039	Covebase/Mastic	Intermediate, north classroom wing; covebase, 4", tan, mastic, brown		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	rubbery material, brown	No Asbestos Detected	
	Layer 02	mastic, off-white/tan, with paper, brown	No Asbestos Detected	
27452.000-0040	Gypsum Wallboard/Joint Compound	Intermediate, north classroom wing; gypsum wallboard, joint compound		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	coating, off-white/green/gray	No Asbestos Detected	
	Layer 02	compact chalky material with paper, white	No Asbestos Detected	
27452.000-0041	Lay-in Ceiling Tile	Intermediate, north classroom wing; lay-in ceiling tile, 2'x4', pinholes		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 01	coating, white	No Asbestos Detected	
	Layer 02	compressed fibrous material, tan/gray	No Asbestos Detected	
27452.000-0042	Caulk	Intermediate, north classroom wing; door caulk, black		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 1	loose particulate, black/off-white	No Asbestos Detected	
27452.000-0043	Caulk	Intermediate, west classroom windows; window caulk, black, on exterior		Eurofins LabCor PDX
	Layer:	Description:	Analysis:	
	Layer 1	particulate, black	3% Chrysotile	

PLM - Visual Estimate Extended Final Report

Job Number: 231733
Client: PBS Engineering and Environmental
**Address: 4412 S Corbett Avenue
Portland, OR 97239**
Project Name:
Project No.: 27452.000 Phase 0001
PO Number:
Sub Project:
Reference No.:
Report Number: 231733R01
Report Date: 7/3/2023

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:
231733 - S1	27452.000-0001 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S2	27452.000-0002 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S3	27452.000-0003 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S4	27452.000-0004 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S5	27452.000-0005 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S6	27452.000-0006 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S7	27452.000-0007 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S8	27452.000-0008 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S9	27452.000-0009 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S10	27452.000-0010 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S11	27452.000-0011 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S12	27452.000-0012 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S13	27452.000-0013 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S14	27452.000-0014 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S15	27452.000-0015 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S16	27452.000-0016 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S17	27452.000-0017 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S18	27452.000-0018 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S19	27452.000-0019 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S20	27452.000-0020 -	PLM - Visual Estimate Extended		6/28/2023
231733 - S21	27452.000-0021 -	PLM - Visual Estimate Extended		6/28/2023



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PLM - Visual Estimate Extended Final Report

Job Number: 231733

Client: PBS Engineering and Environmental

Report Number: 231733R01

Report Date: 7/3/2023

Project Name:

231733 - S22	27452.000-0022 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S23	27452.000-0023 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S24	27452.000-0024 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S25	27452.000-0025 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S26	27452.000-0026 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S27	27452.000-0027 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S28	27452.000-0028 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S29	27452.000-0029 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S30	27452.000-0030 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S31	27452.000-0031 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S32	27452.000-0032 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S33	27452.000-0033 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S34	27452.000-0034 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S35	27452.000-0035 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S36	27452.000-0036 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S37	27452.000-0037 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S38	27452.000-0038 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S39	27452.000-0039 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S40	27452.000-0040 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S41	27452.000-0041 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S42	27452.000-0042 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S43	27452.000-0043 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S44	27452.000-0044 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S45	27452.000-0045 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S46	27452.000-0046 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S47	27452.000-0047 -	PLM - Visual Estimate Extended	6/28/2023



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PLM - Visual Estimate Extended Final Report

Job Number: 231733

Client: PBS Engineering and Environmental

Report Number: 231733R01

Report Date: 7/3/2023

Project Name:

231733 - S48	27452.000-0048 -	PLM - Visual Estimate Extended	6/28/2023
231733 - S49	27452.000-0049 -	PLM - Visual Estimate Extended	6/28/2023

PLM - Visual Estimate Extended The submitted sample(s) were analyzed according to the EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials and EPA - 40CFR App. E to Subpart E of Part 763. The sample(s) were analyzed with a digital microscope in order to determine homogeneity, the presence of fibers, and make a preliminary estimate of any asbestos fibers present in the sample. The sample(s), and any observed layers, were then homogenized through techniques appropriate to that material and prepared for analysis by polarized light microscopy (PLM).

Three slide mount preparations were made from random subsamples of the homogenized material. This material was then mounted in the suitable refractive index liquid needed to perform a full optical characterization of the observed fibers. When necessary, dilute HCl, instead of RI liquids, were used to remove cementitious binders to facilitate analysis. The entirety of the slide mount preparations were then analyzed by PLM. Any observed fibers were reported and their optical characteristics recorded according to the EPA 600-R-93-116 method.

Disclaimer This report, and the data contained therein, cannot be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government. The results found in this report are based only on the submitted sample(s). LabCor has no control over sampling procedures. This report is only valid when signed by an analyst.

NAD is No Asbestos Detected. Asbestos consists of the six following minerals: chrysotile, amosite, crocidolite, anthophyllite, actinolite, and tremolite.

Additional gravimetric, point-count or TEM analysis may be recommended for samples testing at < or = 1% asbestos, or those with material binders that prevent the detection of small diameter fibers.

The following estimate of error for this method by visual estimation of asbestos percent are as follows:

- 1% asbestos: >0-3% error,
- 5% asbestos: 1-9% error,
- 10% asbestos: 5-15% error,
- 20% asbestos: 10-30% error.

Sincerely,



Mia Gaines
Eurofins - LabCor Portland

BULK SAMPLE ASBESTOS ANALYSIS

Client: PBS Engineering and Environmental
4412 S Corbett Avenue
Portland, OR 97239

Report Number: 231733R01
Report Date: 07/03/2023

Job Number: 231733

P.O. No: n/a

Project Name:

Project Number: 27452.000 Phase 0001

Project Notes:

Client Sample ID: 27452.000-0001		Sample ID: S1			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Ryan Talaski-Brown	
Asbestos Mineral Fibers		Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:
Layer 01						
hard vinyl, green		92 %	4 %	-	-	4 %
Layer 02						
mastic, black		8 %	2 %	-	-	2 %
Other Fibers		Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other
Layer 01		-	-	-	-	-
Layer 02		-	-	-	-	-
						Matrix
						96 %
						98 %
Client Sample ID: 27452.000-0002		Sample ID: S2			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Ryan Talaski-Brown	
Asbestos Mineral Fibers		Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:
Layer 01						
rubbery material, brown		90 %	-	-	-	NAD
Layer 02						
mastic, white with fibrous backing, gray		5 %	-	-	-	NAD
Layer 03						
loose mastic, brown		5 %	-	-	-	Anthophyllite- Trace
						< 1 %
Other Fibers		Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other
Layer 01		-	-	-	-	-
Layer 02		-	-	-	-	-
Layer 03		-	-	-	-	-
						Matrix
						100 %
						100 %
						96 %
Client Sample ID: 27452.000-0003		Sample ID: S3			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Ryan Talaski-Brown	
Asbestos Mineral Fibers		Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:
Layer 01						
paint, blue with thin powder, white		20 %	-	-	-	NAD
Layer 02						
compact chalky material with paper, white		80 %	-	-	-	NAD
Other Fibers		Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other
Layer 01		-	-	-	-	-
Layer 02		-	-	-	-	-
						Matrix
						100 %
						100 %

Client: PBS Engineering and Environmental
4412 S Corbett Avenue
Portland, OR 97239

Report Number: 231733R01

Report Date: 07/03/2023

Job Number: 231733

P.O. No: n/a

Project Name:

Project Number: 27452.000 Phase 0001

Project Notes:

Client Sample ID: 27452.000-0004		Sample ID: S4		Date Analyzed: 07/03/2023	
Client Sample Description:				Analyst: Ryan Talaski-Brown	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:
Layer 01					
coating, white	8 %	-	-	-	NAD
Layer 02					
compressed fibers, brown	25 %	-	-	-	NAD
Layer 03					
textured coating, white	7 %	-	-	-	NAD
Layer 04					
mastic, brown	60 %	-	-	-	Anthophyllite- Trace < 1 %
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other
Layer 01	-	-	-	-	-
Layer 02	-	100 %	-	-	-
Layer 03	-	-	-	-	-
Layer 04	-	-	-	-	-
				Talc	3 %
				Wollastonite	Trace
					97 %

Client Sample ID: 27452.000-0005		Sample ID: S5		Date Analyzed: 07/03/2023	
Client Sample Description:				Analyst: Ryan Talaski-Brown	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:
Homogeneous					
mastic, black	100 %	4 %	-	-	4 %
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other
	-	-	-	-	-
					Matrix 96 %

Client Sample ID: 27452.000-0006		Sample ID: S6		Date Analyzed: 07/03/2023	
Client Sample Description:				Analyst: Ryan Talaski-Brown	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:
Layer 01					
coating, white	8 %	-	-	-	NAD
Layer 02					
compressed fibers, gray	92 %	-	-	-	NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other
Layer 01	-	-	-	-	-
Layer 02	8 %	50 %	8 %	-	-
					Matrix 100 % 34 %

Client: PBS Engineering and Environmental
4412 S Corbett Avenue
Portland, OR 97239

Report Number: 231733R01
Report Date: 07/03/2023

Job Number: 231733

P.O. No: n/a

Project Name:

Project Number: 27452.000 Phase 0001

Project Notes:

Client Sample ID: 27452.000-0007		Sample ID: S7			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Ryan Talaski-Brown	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Layer 01						
coating, white	15 %	-	-	-		NAD
Layer 02						
compressed fibers, gray/brown	35 %	-	-	-		NAD
Layer 03						
mastic, brown	50 %	-	-	-	Anthophyllite- Trace	< 1 %
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	100 %
Layer 02	10 %	40 %	10 %	-	-	40 %
Layer 03	-	-	-	-	Talc 4 %	96 %

Client Sample ID: 27452.000-0008		Sample ID: S8			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Ryan Talaski-Brown	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Layer 01						
mastic, tan	25 %	-	-	-		NAD
Layer 02						
hard vinyl, green with thin mastic, black	70 %	4 %	-	-		4 %
Layer 03						
hard compact powder, gray	5 %	-	-	-		NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	100 %
Layer 02	-	-	-	-	-	96 %
Layer 03	-	-	-	-	-	100 %

Comments: Black mastic in layer 02 is too thin for separate analysis.

Client: PBS Engineering and Environmental
4412 S Corbett Avenue
Portland, OR 97239

Report Number: 231733R01

Report Date: 07/03/2023

Job Number: 231733

P.O. No: n/a

Project Name:

Project Number: 27452.000 Phase 0001

Project Notes:

Client Sample ID: 27452.000-0009		Sample ID: S9			Date Analyzed: 07/03/2023
Client Sample Description:					Analyst: Ryan Talaski-Brown
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:
Layer 01					
formica material, brown	95 %	-	-	-	NAD
Layer 02					
mastic, clear tan	5 %	-	-	-	NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other
					Matrix
Layer 01	-	-	-	-	-
Layer 02	-	-	-	-	-

Client Sample ID: 27452.000-0010		Sample ID: S10			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Ryan Talaski-Brown	
<u>Asbestos Mineral Fibers</u>	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:	
Homogeneous						
loose fine powder, black	100 %	3 %	-	-	3 %	
<u>Other Fibers</u>	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
	-	-	-	-	-	97 %

Client Sample ID: 27452.000-0011		Sample ID: S11			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Ryan Talaski-Brown	
<u>Asbestos Mineral Fibers</u>	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:	
Layer 01						
foam, black	12 %	-	-	-	NAD	
Layer 02						
mastic, white/tan	8 %	-	-	-	NAD	
Layer 03						
hard compact powder, gray with thin mastic, black	80 %	Trace	-	-	< 1 %	
<u>Other Fibers</u>	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	100 %
Layer 02	-	-	-	-	-	100 %
Layer 03	-	8 %	-	-	-	92 %

Client: PBS Engineering and Environmental
4412 S Corbett Avenue
Portland, OR 97239

Report Number: 231733R01

Report Date: 07/03/2023

Job Number: 231733

P.O. No: n/a

Project Name:

Project Number: 27452.000 Phase 0001

Project Notes:

Client Sample ID: 27452.000-0012		Sample ID: S12			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Ryan Talaski-Brown	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Layer 01						
mastic, clear/tan	9 %	-	-	-		NAD
Layer 02						
vinyl, black	45 %	-	-	-		NAD
Layer 03						
woven fibers, white	5 %	-	-	-		NAD
Layer 04						
hard compact powder, gray	40 %	-	-	-		NAD
Layer 05						
mastic, black	1 %	4 %	-	-		4 %
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	100 %
Layer 02	-	15 %	-	-	-	85 %
Layer 03	-	-	-	100 %	-	0 %
Layer 04	-	-	-	-	-	100 %
Layer 05	-	-	-	-	-	96 %

Client Sample ID: 27452.000-0013		Sample ID: S13			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Ryan Talaski-Brown	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Layer 01						
mastic, tan	15 %	-	-	-		NAD
Layer 02						
hard vinyl, gray	79 %	3 %	-	-		3 %
Layer 03						
mastic, black	6 %	-	-	-		NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	100 %
Layer 02	-	-	-	-	-	97 %
Layer 03	-	-	-	-	-	100 %

Client: PBS Engineering and Environmental
4412 S Corbett Avenue
Portland, OR 97239

Report Number: 231733R01

Report Date: 07/03/2023

Job Number: 231733

P.O. No: n/a

Project Name:

Project Number: 27452.000 Phase 0001

Project Notes:

Client Sample ID: 27452.000-0014		Sample ID: S14			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Ryan Talaski-Brown	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Layer 01						
rubbery material, black	90 %	-	-	-		NAD
Layer 02						
mastic, white	5 %	-	-	-		NAD
Layer 03						
coating, tan	5 %	-	-	-		NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	100 %
Layer 02	-	-	-	-	-	100 %
Layer 03	-	-	-	-	-	100 %

Client Sample ID: 27452.000-0015		Sample ID: S15			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Ryan Talaski-Brown	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Layer 01						
paint, tan with fine compact powder, off- white	20 %	Trace	-	-		< 1 %
Layer 02						
compact chalky material with paper, white	80 %	-	-	-		NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	100 %
Layer 02	-	-	-	-	-	100 %

Comments: An actionable amount of suspect asbestos fibers is likely present in layer 02. However, confirmation of fiber identity was not possible by PLM. TEM analysis is highly recommended.

Client: PBS Engineering and Environmental
4412 S Corbett Avenue
Portland, OR 97239

Report Number: 231733R01

Report Date: 07/03/2023

Job Number: 231733

P.O. No: n/a

Project Name:

Project Number: 27452.000 Phase 0001

Project Notes:

Client Sample ID: 27452.000-0016		Sample ID: S16			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Ryan Talaski-Brown	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Layer 01						
hard vinyl, white	60 %	-	-	-		NAD
Layer 02						
mastic, clear yellow	4 %	-	-	-		NAD
Layer 03						
thin rubbery material, off-white	35 %	-	-	-		NAD
Layer 04						
thin mastic, black	1 %	Trace	-	-		< 1 %
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	100 %
Layer 02	-	-	-	-	-	100 %
Layer 03	-	-	-	-	-	100 %
Layer 04	-	-	-	-	-	100 %
Client Sample ID: 27452.000-0017		Sample ID: S17			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Mia Gaines	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Layer 01						
mastic, yellow	6 %	-	-	-		NAD
Layer 02						
compact powder, white	4 %	-	-	-		NAD
Layer 03						
soft compact material, gray	25 %	-	-	-		NAD
Layer 04						
mastic, tan	5 %	-	-	-		NAD
Layer 05						
hard compact powder, white	60 %	-	-	-		NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	2 %	-	-	-	98 %
Layer 02	-	1 %	-	1 %	-	98 %
Layer 03	-	1 %	-	2 %	-	97 %
Layer 04	-	1 %	-	Trace	-	99 %
Layer 05	-	2 %	-	-	-	98 %

Client: PBS Engineering and Environmental
4412 S Corbett Avenue
Portland, OR 97239

Report Number: 231733R01

Report Date: 07/03/2023

Job Number: 231733

P.O. No: n/a

Project Name:

Project Number: 27452.000 Phase 0001

Project Notes:

Client Sample ID: 27452.000-0018		Sample ID: S18			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Mia Gaines	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Layer 01						
hard vinyl, tan with coating, brown/blue pattern	97 %	3 %	-	-		3 %
Layer 02						
mastic, black/brown	3 %	-	-	-		NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	97 %
Layer 02	-	Trace	-	Trace	-	100 %
Client Sample ID: 27452.000-0019		Sample ID: S19			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Mia Gaines	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Layer 01						
vinyl, gray	75 %	-	-	-		NAD
Layer 02						
fibrous backing, gray	20 %	-	-	-		NAD
Layer 03						
mastic, off-white/yellow on wood	5 %	-	-	-		NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	100 %
Layer 02	-	30 %	-	20 %	-	50 %
Layer 03	-	Trace	-	1 %	-	99 %
Client Sample ID: 27452.000-0020		Sample ID: S20			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Mia Gaines	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Layer 01						
hard vinyl, tan	95 %	5 %	-	-		5 %
Layer 02						
mastic, black	5 %	3 %	-	-		3 %
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	2 %	-	-	93 %
Layer 02	-	-	-	-	-	97 %

Client: PBS Engineering and Environmental
4412 S Corbett Avenue
Portland, OR 97239

Report Number: 231733R01

Report Date: 07/03/2023

Job Number: 231733

P.O. No: n/a

Project Name:

Project Number: 27452.000 Phase 0001

Project Notes:

Client Sample ID: 27452.000-0021		Sample ID: S21			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Mia Gaines	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:	
Layer 01						
rubbery material, black with paint, green	95 %	-	-	-	NAD	
Layer 02						
mastic, brown	5 %	-	-	-	NAD	
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	100 %
Layer 02	-	Trace	-	1 %	-	99 %
Client Sample ID: 27452.000-0022		Sample ID: S22			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Mia Gaines	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:	
Homogeneous						
loose granular powder, gray with paint, blue	100 %	-	-	-	NAD	
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
	-	-	-	-	-	100 %
Client Sample ID: 27452.000-0023		Sample ID: S23			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Mia Gaines	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:	
Layer 01						
granular compact powder, white with paint, blue	3 %	-	-	-	NAD	
Layer 02						
compact chalky material with paper, white	97 %	-	-	-	NAD	
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	100 %
Layer 02	Trace	2 %	-	-	-	98 %

Client: PBS Engineering and Environmental
4412 S Corbett Avenue
Portland, OR 97239

Report Number: 231733R01

Report Date: 07/03/2023

Job Number: 231733

P.O. No: n/a

Project Name:

Project Number: 27452.000 Phase 0001

Project Notes:

Client Sample ID: 27452.000-0024			Sample ID: S24			Date Analyzed: 07/03/2023	
Client Sample Description:						Analyst: Mia Gaines	
Asbestos Mineral Fibers	Layer					Percent Asbestos:	
	Percent:	Chrysotile	Amosite	Crocidolite			
Homogeneous							
woven fibers, off-white	100 %	-	-	-	NAD		
Other Fibers	Fibrous		Mineral				
	Glass	Cellulose	Wool	Synthetic	Other	Matrix	
	-	-	-	100 %	-	0 %	
Client Sample ID: 27452.000-0025			Sample ID: S25			Date Analyzed: 07/03/2023	
Client Sample Description:						Analyst: Mia Gaines	
Asbestos Mineral Fibers	Layer					Percent Asbestos:	
	Percent:	Chrysotile	Amosite	Crocidolite			
Homogeneous							
woven fibers, off-white with paint, gray	100 %	-	-	-	NAD		
Other Fibers	Fibrous		Mineral				
	Glass	Cellulose	Wool	Synthetic	Other	Matrix	
	-	-	-	100 %	-	0 %	
Client Sample ID: 27452.000-0026			Sample ID: S26			Date Analyzed: 07/03/2023	
Client Sample Description:						Analyst: Mia Gaines	
Asbestos Mineral Fibers	Layer					Percent Asbestos:	
	Percent:	Chrysotile	Amosite	Crocidolite			
Homogeneous							
loose particulate, brown/black	100 %	-	-	-	NAD		
Other Fibers	Fibrous		Mineral				
	Glass	Cellulose	Wool	Synthetic	Other	Matrix	
	-	1 %	-	-	-	99 %	
Client Sample ID: 27452.000-0027			Sample ID: S27			Date Analyzed: 07/03/2023	
Client Sample Description:						Analyst: Mia Gaines	
Asbestos Mineral Fibers	Layer					Percent Asbestos:	
	Percent:	Chrysotile	Amosite	Crocidolite			
Homogeneous							
fibrous powder, white	100 %	3 %	8 %	-	11 %		
Other Fibers	Fibrous		Mineral				
	Glass	Cellulose	Wool	Synthetic	Other	Matrix	
	-	-	-	-	-	89 %	

Client: PBS Engineering and Environmental
4412 S Corbett Avenue
Portland, OR 97239

Report Number: 231733R01

Report Date: 07/03/2023

Job Number: 231733

P.O. No: n/a

Project Name:

Project Number: 27452.000 Phase 0001

Project Notes:

Client Sample ID: 27452.000-0028	Sample ID: S28				Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Mia Gaines	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Homogeneous						
fibrous material, gray/blue	100 %	65 %	-	-		65 %
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
	-	-	-	20 %	-	15 %
Client Sample ID: 27452.000-0029	Sample ID: S29				Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Mia Gaines	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Homogeneous						
fibrous powder, white	100 %	4 %	6 %	-		10 %
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
	-	-	-	-	-	90 %
Client Sample ID: 27452.000-0030	Sample ID: S30				Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Mia Gaines	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Homogeneous						
soft compact material, gray/silver	100 %	-	-	-		NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
	-	-	-	3 %	-	97 %
Client Sample ID: 27452.000-0031	Sample ID: S31				Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Homogeneous						
loose particulate, tan/brown	100 %	-	-	-		NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
	-	8 %	-	-	-	92 %

Client: PBS Engineering and Environmental
4412 S Corbett Avenue
Portland, OR 97239

Report Number: 231733R01

Report Date: 07/03/2023

Job Number: 231733

P.O. No: n/a

Project Name:

Project Number: 27452.000 Phase 0001

Project Notes:

Client Sample ID: 27452.000-0032		Sample ID: S32			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Layer 01						
rubbery particulate, black/white	75 %	-	-	-		NAD
Layer 02						
loose particulate, brown	15 %	-	-	-		NAD
Layer 03						
loose fibers, blue	10 %	-	-	-		NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	100 %
Layer 02	-	-	-	-	-	100 %
Layer 03	-	-	-	100 %	-	0 %
Client Sample ID: 27452.000-0033		Sample ID: S33			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Homogeneous						
granular compact powder with paint, off- white	100 %	-	-	-		NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
	-	Trace	-	-	-	100 %
Client Sample ID: 27452.000-0034		Sample ID: S34			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Layer 01						
coating, white	8 %	-	-	-		NAD
Layer 02						
compressed fibrous material, tan	92 %	-	-	-		NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	100 %
Layer 02	-	45 %	45 %	-	-	10 %

Client: PBS Engineering and Environmental
4412 S Corbett Avenue
Portland, OR 97239

Report Number: 231733R01

Report Date: 07/03/2023

Job Number: 231733

P.O. No: n/a

Project Name:

Project Number: 27452.000 Phase 0001

Project Notes:

Client Sample ID: 27452.000-0035		Sample ID: S35			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:	
Layer 01						
coating, white	10 %	-	-	-	NAD	
Layer 02						
loose fibrous material, tan	90 %	-	-	-	NAD	
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	100 %
Layer 02	-	100 %	-	-	-	0 %

Client Sample ID: 27452.000-0036		Sample ID: S36			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:	
Layer 01						
mastic, tan/green	50 %	-	-	-	NAD	
Layer 02						
granular compact powder, gray	50 %	-	-	-	NAD	
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	Trace	-	Trace	-	100 %
Layer 02	-	-	-	-	-	100 %

Client Sample ID: 27452.000-0037		Sample ID: S37			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:	
Layer 01						
vinyl, gray	80 %	-	-	-	NAD	
Layer 02						
fibrous backing, gray	20 %	-	-	-	NAD	
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	100 %
Layer 02	-	60 %	-	-	-	40 %

Client: PBS Engineering and Environmental
4412 S Corbett Avenue
Portland, OR 97239

Report Number: 231733R01

Report Date: 07/03/2023

Job Number: 231733

P.O. No: n/a

Project Name:

Project Number: 27452.000 Phase 0001

Project Notes:

Client Sample ID: 27452.000-0038		Sample ID: S38		Date Analyzed: 07/03/2023	
Client Sample Description:				Analyst: Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:
Layer 01					
vinyl, blue	80 %	-	-	-	NAD
Layer 02					
mastic, black/tan	20 %	-	-	-	NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other
Layer 01	-	-	-	-	-
Layer 02	-	4 %	-	Trace	-
					Matrix
					100 %
					96 %
Client Sample ID: 27452.000-0039		Sample ID: S39		Date Analyzed: 07/03/2023	
Client Sample Description:				Analyst: Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:
Layer 01					
rubbery material, brown	82 %	-	-	-	NAD
Layer 02					
mastic, off-white/tan, with paper, brown	18 %	-	-	-	NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other
Layer 01	-	2 %	-	-	-
Layer 02	-	5 %	-	-	-
					Matrix
					98 %
					95 %
Client Sample ID: 27452.000-0040		Sample ID: S40		Date Analyzed: 07/03/2023	
Client Sample Description:				Analyst: Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:
Layer 01					
coating, off- white/green/gray	15 %	-	-	-	NAD
Layer 02					
compact chalky material with paper, white	85 %	-	-	-	NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other
Layer 01	-	3 %	-	-	-
Layer 02	-	3 %	-	-	-
					Matrix
					97 %
					97 %

Client: PBS Engineering and Environmental
4412 S Corbett Avenue
Portland, OR 97239

Report Number: 231733R01

Report Date: 07/03/2023

Job Number: 231733

P.O. No: n/a

Project Name:

Project Number: 27452.000 Phase 0001

Project Notes:

Client Sample ID:	27452.000-0041		Sample ID:	S41		Date Analyzed:	07/03/2023	
Client Sample Description:						Analyst:	Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Layer 01								
coating, white	35 %	-	-	-				NAD
Layer 02								
compressed fibrous material, tan/gray	65 %	-	-	-				NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other			Matrix
Layer 01	-	Trace	-	-	-	-	-	100 %
Layer 02	-	45 %	45 %	-	-	-	-	10 %

Client Sample ID:	27452.000-0042		Sample ID:	S42		Date Analyzed:	07/03/2023	
Client Sample Description:						Analyst:	Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Homogeneous								
loose particulate, black/off-white	100 %	-	-	-				NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other			Matrix
	-	8 %	-	-	-	-	-	92 %

Client Sample ID:	27452.000-0043		Sample ID:	S43		Date Analyzed:	07/03/2023	
Client Sample Description:						Analyst:	Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Homogeneous								
particulate, black	100 %	3 %	-	-				3 %
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other			Matrix
	-	-	-	-	-	-	-	97 %

Client: PBS Engineering and Environmental
4412 S Corbett Avenue
Portland, OR 97239

Report Number: 231733R01

Report Date: 07/03/2023

Job Number: 231733

P.O. No: n/a

Project Name:

Project Number: 27452.000 Phase 0001

Project Notes:

Client Sample ID: 27452.000-0044		Sample ID: S44			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:	
Layer 01						
vinyl, off-white/tan	40 %	-	-	-	NAD	
Layer 02						
fibrous material, off-white/gray	60 %	60 %	-	-	60 %	
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	100 %
Layer 02	-	12 %	-	-	-	28 %
Client Sample ID: 27452.000-0045		Sample ID: S45			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:	
Layer 01						
rubbery material, gray	85 %	-	-	-	NAD	
Layer 02						
mastic, off-white, with thin powder, white	15 %	-	-	-	NAD	
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	100 %
Layer 02	-	Trace	-	-	-	100 %
Client Sample ID: 27452.000-0046		Sample ID: S46			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:	
Layer 01						
fine compact powder with paint, off-white/white	40 %	-	-	-	NAD	
Layer 02						
woven fibers, off-white	10 %	-	-	-	NAD	
Layer 03						
loose chalky material with paper, off-white	50 %	-	-	-	NAD	
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	2 %	-	-	-	98 %
Layer 02	100 %	-	-	-	-	0 %
Layer 03	Trace	Trace	-	-	-	100 %

Client: PBS Engineering and Environmental
4412 S Corbett Avenue
Portland, OR 97239

Report Number: 231733R01
Report Date: 07/03/2023

Job Number: 231733

P.O. No: n/a

Project Name:

Project Number: 27452.000 Phase 0001

Project Notes:

Client Sample ID: 27452.000-0047		Sample ID: S47			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Layer 01						
coating, white	10 %	-	-	-		NAD
Layer 02						
compressed fibrous material, tan/gray	30 %	-	-	-		NAD
Layer 03						
mastic, brown	60 %	Trace	-	-		< 1 %
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	Trace	-	-	-	100 %
Layer 02	-	60 %	-	-	-	40 %
Layer 03	-	Trace	-	-	-	100 %

Client Sample ID: 27452.000-0048		Sample ID: S48			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Homogeneous						
loose particulate, black	100 %	2 %	-	-		2 %
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
	-	Trace	-	-	-	98 %

Client Sample ID: 27452.000-0049		Sample ID: S49			Date Analyzed: 07/03/2023	
Client Sample Description:					Analyst: Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Homogeneous						
soft rubbery material, black	100 %	-	-	-		NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
	-	-	-	-	-	100 %

Client: PBS Engineering and Environmental
4412 S Corbett Avenue
Portland, OR 97239

Report Number: 231733R01

Report Date: 07/03/2023

Job Number: 231733

P.O. No: n/a

Project Name:

Project Number: 27452.000 Phase 0001

Project Notes:

This laboratory participates in the National Voluntary Laboratory Accreditation Program (NVLAP). Testing method is per EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials and EPA - 40CFR App. E to Subpart E of Part 763, PLM. This report and the data contained therein cannot be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

- "NAD" is No Asbestos Detected.
- Asbestos consists of the following minerals: chrysotile, amosite, crocidolite, tremolite, actinolite, anthophyllite.
- Material binders, such as those found in vinyl floor tiles, may prevent the detection of small diameter asbestos fibers. A gravimetric preparation and point-count is recommended for such samples.
- Quantitative analysis by PLM point count or TEM may be recommended for samples testing at < or = to 1% asbestos.
- The following estimate of error for this method by visual estimation of asbestos percent are as follows:
1% asbestos: >0-3% error, 5% asbestos: 1-9% error, 10% asbestos: 5-15% error, 20% asbestos: 10-30% error.
- This report pertains only to the samples listed on the report. Report considered valid only when signed by analyst.

Reviewed by:

Mia Gaines

Eurofins - LabCor Portland



PBS

231733

1/3

TRANSMITTAL AND CHAIN OF CUSTODY FOR ASBESTOS BULK SAMPLES

Project No.: 27452.000 Phase 0001

Individuals signing this form warrant that the information provided is correct and complete. The Sender should keep a copy and send the original. The Receiver should complete the form, keep a copy and return the original to the Sender. Receiver shall report damage of package immediately to Sender.

SENDER

Date Sent: June 28, 2023

PBS Engineering and Environmental Inc.
4412 S Corbett Avenue
Portland, OR 97239
503.248.1939, Fax: 866.727.0140

Name

Authorized Signature

Date

Time

RECEIVER

Date Received: 6/28/23

Company: Eurofins LabCor PDX
Address: 4321 S Corbett Avenue
Portland, OR 97239
(503) 224-5055

Name

Authorized Signature

Date

Time

Sender's ID No.

Brief Description

Receiver's ID No.

27452.000-0001

27452.000-0002

27452.000-0003

27452.000-0004

27452.000-0005

27452.000-0006

27452.000-0007

27452.000-0008

27452.000-0009

27452.000-0010

27452.000-0011

27452.000-0012

27452.000-0013

27452.000-0014



PBS

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TRANSMITTAL AND CHAIN OF CUSTODY FOR ASBESTOS BULK SAMPLES

27452.000-0015			
27452.000-0016			
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27452.000-0039			



PBS

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TRANSMITTAL AND CHAIN OF CUSTODY FOR ASBESTOS BULK SAMPLES

27452.000-0040

27452.000-0041

27452.000-0042

27452.000-0043

27452.000-0044

27452.000-0045

27452.000-0046

27452.000-0047

27452.000-0048

27452.000-0049

Please analyze the enclosed 49 sample(s) for asbestos content using PLM with dispersion staining. PBS requests prior notification if samples will be disposed.

Request verbal results by: _____ AM/PM _____ Date.

Please fax and mail the results to the above address.

TURNAROUND DESIRED: 72 Hour

SPECIAL INSTRUCTIONS:

24

EPA 600-R-93-116 - TEM - Bulk Semi-Quantitative Final Report

Job Number: 230631

Client: PBS Engineering + Environmental

**Address: 4412 South Corbett Ave
Portland, OR 97239**

Report Number: 230631R01

Report Date: 7/6/2023

Project Name:

Project No.: 27452.000

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 Sampled:	Date Received:
230631 - S1	27452.000-0015	EPA 600-R-93-116 - TEM - Bulk Semi-Quantitative		6/28/2023	7/5/2023

EPA 600-R-93-116 - TEM - Bulk Semi-Quantitative Preparation of the above sample was conducted in accordance with the EPA protocol EPA/600/R 93/116 for the identification of regulated asbestiform minerals in bulk building materials. The Semi-Quantitative designation applies to the TEM analysis; the 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.

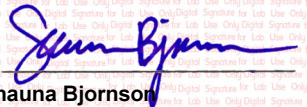
After confirmation of the principal mineral type by diffraction and EDS chemistry, a visual estimate of the concentration of asbestiform regulated minerals relative to the non-asbestos was determined. Fibers with an aspect ratio of at least 3:1 with proper diffraction and chemistry were counted as regulated 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. Each sample was treated as a homogenous sample unless a unique layer was indicated by the customer. If requested, the sample list above will indicate the layer analyzed. 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
Eurofins - LabCor Seattle

EPA 600-R-93-116 - TEM - Bulk Semi-Quantitative - Final Report

Job Number: 230631 SEA
Client: PBS Engineering + Environmental
Project Name:

Report Number: 230631R01
Date Received: 7/5/2023

Lab/Cor Sample No.: S1
Client Sample No.: 27452.000-0015

Analyst(s)	Analysis Date	Microscope	Magnification
SB	7/6/2023	JEOL-Sr 1200	20000

Analyte Description	Weight Percent	Gravimetric Reduction	Weight Percent
Chrysotile	1.71%	Acid Solubles	68.47%
Total Asbestos Percent	1.71%	Organics	17.83%
		Residue	11.99%
		Total Other Non-Asbestos Percent	98.29%

Reviewed by:

(Signature)
Shauna Bjornson
Eurofins - LabCor Seattle

EPA 600-R-93-116 - TEM - Bulk Semi-Quantitative - Final Report

Job Number: 230631 SEA
Client: PBS Engineering + Environmental
Project Name:

Report Number: 230631R01
Date Received: 7/5/2023

Lab/Cor Sample No: S1
Client Sample No: 27452.000-0015

Container Weight	13.70943 g	Hydrolysis Filter PreWeight	13.74627 g
Weight Before Ash	13.80091 g	Filter Post Hydrolysis	13.75855 g
Orig Sample Weight	0.09148 g	After Hydrolysis Weight	0.01228 g
Weight After Ash	13.78460 g	Hydrolysis Aliquot	19.6 ml
Particulate After Ash	0.07517 g	Hydrolysis Adjusted Weight	0.01253 g
Percent Organics	17.83%	Begin Volume	20 ml
		Acid Solubles	68.47%

Grid	Analyte	Visual Estimate	Elements	Comment		
G7	Chrysotile	10.00%	Mg, Si			
			ItemType	ItemNum	Confirmed	Comment
			Brightfield	J70827BF		
			Diffraction	J70827DF	SB 7/6/2023	0.53nm ROW SPACING
			Spectra	J70827SP	SB 7/6/2023	
G8	Chrysotile	15.00%				

Reviewed by:


X **Shauna Bjornson**
Eurofins - LabCor Seattle

CHAIN-OF-CUSTODY RECORD

CLIENT INFORMATION			ANALYSIS REQUESTED		TURN AROUND TIME REQUESTED	
Company Name:	PBS		List the required analysis type with each sample below: Fungal and/or Particulate - (Air, Tape, Bulk or Dust) Micro - (Total/Fecal Coliforms, E. coli, Legionella, MPA) PCM - (NIOSH 7400) PLM - (Bulk) TEM Air - (AHERA, Mod EPA II, NIOSH 7402 or ISO 10312) TEM Bulk - (EPA 600/ELAP 198.4 or Vermiculite) TEM Water - (EPA 100.2/100.1) TEM Dust - (ASTM 5755 or ASTM 6480) XRD - (Silica NIOSH 7500) List other services as needed below		☐ RUSH Rush and 1 day TAT require prior approval	
Client Address:	4412 S Corbett Ave					
City, State:	Portland OR					
Reporting Email:	John.Yohy@PBSUSA.com					
Invoicing Email:	Accounts Payable@PBSUSA.com					
Contact:	John Yohy		☒ 1 day			
Phone:	503.417.7576		TEM Bulk - (EPA 600/ELAP 198.4 or Vermiculite)		☐ 2 days	
Project Identifier/Location:			TEM Water - (EPA 100.2/100.1)		☐ 3 days	
Project Number:	24452.000		TEM Dust - (ASTM 5755 or ASTM 6480)		☐ Standard	
PO#:			XRD - (Silica NIOSH 7500)		☐ QUALITATIVE	
			List other services as needed below		☒ QUANTITATIVE SEMI-QUANTITATIVE	
Client Sample Number	Sample Date / Time	Sample Volume/Area	Analysis Requested		Sample Specific Notes and Descriptors:	
24452.000-0015	6/28/23		TEM Bulk Semi-quant		Analyzed PLM @ CC PRX	
Special Instructions & Comments:						
EPA 100.2 samples >48 hrs past collection will require Ozone/UV Treatment. Proceed if needed and approve additional fee?						
If asbestos in water samples are for compliance, please use the state reporting form on our sample submission forms page.						
Relinquished By:	Date/Time:	Received By:	Is this from a potable source?		☐ Yes ☐ No - Will call lab first	
Relinquished By:	Date/Time:	Received By:				
Laboratory Receipt Comments:						
Reviewer 1/ Date:						
Reviewer 2/ Date:						
Results Sent:						
Invoice Sent:						
Temperature on Receipt:						
Condition on Receipt:						

THIS IS TO CERTIFY THAT

NATHAN CARLSON

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: 01/24/2023

Course Location: Online

Certificate: IRO-23-1775B



CCB #SRA0615 4-Hr Training

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: 01/24/2024

For verification of the authenticity of this certificate contact:
PBS Engineering and Environmental Inc.
4412 S Corbett Avenue
Portland, OR 97239

503-248-1939

A handwritten signature in black ink, appearing to read "Andy Fridley", is written over a horizontal line.

Andy Fridley, Instructor