## Limited Hazardous Building Materials Survey Report

Concord Elementary School 3811 SE Concord Road Milwaukie, OR 97267

Prepared for:

North Clackamas Parks & Rec District

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Laboratory Data Not Numbered
AHERA Certificates Not Numbered



July 2017

Project No.: 21078.051 Phase No.: 0001

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#### **GENERAL INFORMATION**

#### **BUILDING DATA**

Concord Elementary School 3811 SE Concord Road Milwaukie, OR 97267

#### **CLIENT DATA**

North Clackamas Parks & Rec District 150 Beavercreek Road, Suite 414 Oregon City, OR 97045

#### **SURVEY SCOPE**

PBS Engineering and Environmental Inc. (PBS) has performed a limited hazardous building material survey of accessible school building areas in accordance with OSHA in 29 CFR 1910.1001 and compiled a report with the following information:

- Inspection summary
- The type, location, and approximate quantity of suspect asbestos-containing materials
- Bulk sampling of selected suspect building materials
- · Lead paint sampling
- Floor plan diagrams indicating material and sample locations
- · Laboratory analytical data of bulk material sampled
- Suspect polychlorinated biphenyl (PCB) light ballast inspection
- Probable removal cost estimate

With regard to asbestos, PBS endeavored to locate all the suspect asbestos-containing materials in the school; however, suspect asbestos-containing materials may be present and concealed within wall, ceiling, or floor spaces. If suspect materials are uncovered during demolition activities that are not identified in this report, testing should be performed prior to impact.

PBS has conducted a physical inspection of the building, compiled this report consistent with the survey scope, and certifies that the information is correct and accurate within the standards of professional quality and contractual obligations.

Joe Lucas Project Manager

Accreditation #: IR-17-3527B

James Mastanduno Prime Inspector

Accreditation #: IR-17-4993B

07.21.2017

Signature Date

Signature Date

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07.21.2017

DATES	SURVEYED BY	ACTIVITY
6/5/2017	James Mastanduno	<b>Building Survey</b>
7/18/2017	Joe Lucas	Report Preparation

PBS has investigated accessible areas inside of the school to locate suspect asbestos-containing building materials (ACBM). Suspect materials may be present in concealed areas (e.g., behind walls and under carpet). The findings are listed below.

#### **ASBESTOS MATERIALS**

The following materials either tested positive, or, based on the experience of PBS field personnel, were not tested and should be considered asbestos-containing. Materials that had mixed results are considered positive. Materials not sampled may not contain asbestos and should be tested to verify asbestos content prior to impact through demolition, renovation, etc.

(+) Tested Positive, (M) Mixed Results, (P) Presumed Positive, (T) Previously Tested Positive.

<u>Result</u>	Material (type)	<u>Location</u>	Approx. Quantity
(+)	Air cell pipe insulation and mudded fittings	North wing domestic water pipes, art studio south classroom and old locker room	1,600 LF
(+)	Brown paper pipe wrap insulation	North wing pipe stubs above ceilings	30 LF
(+)	White mag pipe insulation	North wing pipe stubs above ceilings, office north of cafeteria above ceiling, attic	730 LF
(+)	9" vinyl floor tile and/or residual black mastic on concrete	Art studio north storerooms under carpet and newer tile, lower hallway lobby near elevator, sprinkler room, electrical room near vault, upper level main hall restrooms (on wood)	12,163 SF
(+)	Brown floor tile with black mastic on concrete	Room 17, hallway outside room 17, under carpet and newer tile	415 SF
(+)	Brown jute-back sheet vinyl flooring	Library storage area	264 SF
(+)	Red, gray, green, brown floor tile and non-asbestos black felt/mastic	North wing upper level hall, rooms 20-26, library, computer lab, office, rooms 28-29, staff workroom and classroom. Under new flooring and OSB underlayment in places, adhered to wood	13,860 SF
(+)	Gray and black sink undercoating	Throughout	12 EA

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(M)	Residual black mastic under non-asbestos covebase and yellow mastic	North wing	1,958 LF
(P)	Fire door	Boiler room	1 EA
(M)	Joint compound associated with gypsum wallboard	Wallboard walls and ceilings throughout (less than 1% asbestos)	NOT QUANTIFIED
(+)	White window glazing compound	Exterior windows at hallway entrances, main hall restrooms (less than 1% asbestos)	657 LF



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#### MATERIALS THAT TESTED NEGATIVE FOR ASBESTOS

The following materials tested negative based on ASHARA sampling minimums and testing by NVLAP participating laboratories. Although no asbestos was detected, it is possible that further sampling could indicate asbestos content. It may be prudent to test prior to impact through demolition, renovation, etc.

Material (type)	<b>Location</b>
12" tan mottled floor tile and yellow mastic	Art studio
12" white fissured ceiling tiles and yellow glue dots	Ceiling areas
12" white vinyl floor tile with cream mastic	Office break room
1'x1' white ceramic tile	Bathroom areas
1'x1' white random hole pattern ceiling tiles	Ceiling areas
2'x2' white hole pattern ceiling tiles	Ceiling areas
2'x4' white stapled ceiling tile	Counseling office
4" beige covebase with yellow mastic	Flooring areas
6" black covebase with yellow and brown mastic	Flooring areas
6" brown brittle covebase and mastic	Main level hall men's restroom
6" tan covebase with cream mastic	Flooring areas
Black sink coating	Metal sinks
Brown felt cloth above ceiling	Sprinkler room
Cream mastic behind corkboard	Cafeteria, hallways
Gray duct sealant	HVAC ductwork
Gray felt under plywood flooring layers	Main wing flooring
Gray leveling compound	Lobby flooring
Gray pebble pattern sheet flooring	North wing classrooms
Gray rubbery window caulk	Exterior window frames
Gray stairwell sheet flooring	Stairwells
Gray vibration cloth	HVAC components
Red brick and mortar	Exterior walls
Ruberry black carpet mastic	Carpeted areas
Stage curtains	Stage
Tan ceramic tile and grout	Art studio former locker rooms
Tar paper under wood flooring	Gym and stage

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Wall and ceiling plaster Ceiling areas

White door frame caulk Exterior metal door frames

White fiberglass end sealant Fiberglass piping
Yellow carpet mastic Carpeted areas

Black backing under classroom Classrooms \*2010 result

backsplashes

Boiler jacket and insulation Boiler room \*2010 result

Corkboard and tackboard mastic Main floor office \*2010 result

Gypsum and plaster ceiling Boiler Room \*2010 result

Nailed-on ceiling tile Cafeteria \*2010 result

Small aggregate pattern sheet flooring Main floor north custodial closet \*2010 result

Yellow mastic behind wainscot Entryway and hallways \*2010 result



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#### **BACKGROUND**

In June 2017, PBS performed a limited hazardous building materials survey of Concord Elementary School, located at 3811 SE Concord Road in Milwaukie, Oregon. The survey was requested by North Clackamas Parks and Recreation District in anticipation of building acquisition.

PBS performed previous inspection work at the facility in September 2010. Select information from historic sampling has been integrated into this report. Note that many of the materials sampled during the 2010 inspection are no longer present in the facility following previous asbestos abatement projects.

The survey was limited to accessible areas of the building and is not guaranteed to identify all hazardous building materials. Unidentified and inaccessible asbestos-containing materials may be present within wall, floor, or ceiling spaces or concealed under surface finishes.

The survey is intended to satisfy Occupational Safety and Health Administration (OSHA) hazard communication requirements as well as requirements by the Department of Environmental Quality (DEQ) to perform an asbestos inspection prior to renovation or demolition activities under Oregon Administrative Rule (OAR) 340-248-0270.

#### **ASBESTOS SUMMARY**

A PBS Asbestos Hazard Emergency Response Act (AHERA) accredited inspector inspected the buildings to determine the presence, location, and approximate quantity of asbestos containing materials (ACM). Fifty-nine bulk samples of building materials, suspected of containing asbestos, were collected and submitted under chain of custody to LabCor Inc. of Portland, Oregon for polarized light microscopy (PLM) analysis. The following materials were found to contain asbestos:

- Air-cell pipe insulation and associated fittings on domestic water lines in the south art classroom studio, old locker room, and throughout the north wing.
- Magnesia (mag) pipe insulation and associated fittings above ceilings in the North Wing, in the office north of the cafeteria, and in the attic. Pipe insulation above ceilings is limited to approximately 2-ft. between the ceiling and the above floor deck.
- Felt paper wrap insulation above ceilings in the north wing.
- Brown jute-back sheet flooring in the library storage area. Flooring is concealed under newer carpeting.
- 9-in. vinyl floor tile and associated residual black mastic in the art studio north storerooms, lower hallway lobby near elevator, sprinkler room, and the electrical room near vault. Tile and/or mastic is concealed under newer flooring materials and adhered to concrete.
- 9-in. vinyl floor tile and associated black mastic in the upper level main hall restrooms. Tile and mastic is adhered to wood.
- Brown vinyl floor tile and associated black mastic in room 17 and the associated hallway outside room 17. Tile and mastic is concealed under newer flooring materials and adhered to concrete.
- Various colors of vinyl floor tile and non-asbestos black mastic and felt in the north wing upper level hall, rooms 20 through 26 and 28 through 29, library, computer lab, office, , and staff workroom and classroom. Tile is present under new flooring and oriented strand board (OSB) underlayment in places, and adhered to wood.
- Residual black mastic under new covebase applications in the north wing.



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- Black undercoating beneath metal counter in the kitchen.
- Gray and black undercoating on metal sinks in the main wing.
- Insulation within the door to the boiler room.
- White window glazing on exterior windows at entrances to the hallway, and with the main hall restrooms.
   This material has been identified as containing less than one percent asbestos.
- Joint compound associated with non-asbestos gypsum wallboard walls in select locations throughout the building. This material has been identified as containing less than one percent asbestos when composited with the associated gypsum wallboard.

Please refer to the asbestos Bulk Sample Inventory for more sample details.

#### **Asbestos Regulations**

Oregon DEQ, Environmental Protection Agency (EPA), and OSHA regulations require proper removal and handling of ACM by licensed and trained asbestos abatement contractors prior to building renovations or demolition.

The EPA, DEQ, and OSHA all define ACM as any material containing more than one percent asbestos. Although materials equal to or less than one percent are not considered by regulatory agencies to be an ACM, they still have some asbestos content, and Oregon OSHA has specific requirements for situations in which workers may encounter, disturb, or remove materials containing any level of asbestos. For the sake of hazard communication, these materials are included in the asbestos-containing materials section of this report.

In 1995, Oregon OSHA adopted 29 Code of Federal Regulations (CFR) Part 1926.1101 governing asbestos under OAR 437-003-1926.1101. The regulation has made significant changes in work procedures and how asbestos materials are managed. OSHA believes that the single biggest risk of asbestos exposure is to workers who unknowingly or improperly disturb ACM. Hazard communication, training, personal protection, work practices, exposure monitoring, and recordkeeping are all major components of the regulation.

DEQ's OAR 340, Division 248 also covers asbestos abatement requirements, removal notifications, licensing, and certifications for contractors.

For more information regarding the removal of asbestos-containing materials, please refer to the following:

- 1. Oregon Occupational Safety and Health Administration, OAR 437-003-1926.1101
- 2. Department of Environmental Quality, OAR-340, Division 248



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#### **LEAD-BASED PAINT**

Paint was sampled for lead content for the sake of hazard communication.

Seven paint chip samples were collected from representative building components from Concord Elementary School and submitted under chain of custody to RJ Lee Group of Monroeville, Pennsylvania, for analysis of lead content via flame atomic absorption (FLAA). The concentration of lead in the samples range from less than 99 parts per million (ppm) to 200,000 ppm.

See the Lead Sample Inventory section for representative building components and corresponding results.

Paint testing for this survey was limited in scope. The report information and testing results are not to be construed as an exhaustive investigation of lead-containing paint on all building surfaces. All paint on painted surfaces not identified in this report should be presumed to contain lead.

PBS identified approximately 25 lead vent pipe covers on the various roofs. All lead vent pipe covers should be carefully handled, packaged, and recycled or disposed of in the appropriate manner.

#### **Lead-Containing Paint Regulations**

The Consumer Product Safety Commission limit for lead in consumer paint products is 0.009 percent or 90 ppm or greater. The Department of Housing and Urban Development (HUD) and the EPA define lead-based paint as that which contains 0.5 percent or 5,000 ppm. Under OSHA, any lead concentration in paint that may become airborne during construction operations triggers requirements in the OSHA Lead in Construction Standard 29 CFR 1926.62 to protect employees impacting the paint.

In 1993, Oregon OSHA adopted the federal OSHA Lead Standard for the Construction Industry Title 29 CFR 1926.62 under Oregon Administrative Rule 437 Division 3 1926.62. This standard outlines worker exposure limits, personal protection requirements, and employer responsibility for exposure assessment, training, housekeeping, and recordkeeping. OSHA's lead standard applies to all work where employees may be exposed to lead in construction, alteration, or repair activities. This includes demolition or renovation of structures where lead-containing materials are present.

#### **Disposal**

According to Oregon DEQ's Hazardous Waste/Toxics Reduction Policy Clarification, disposal of building demolition waste coated with lead-based paint generally will not require a hazardous waste determination (i.e., toxicity characteristic leaching procedures [TCLP] testing) if demolition debris is disposed of at a DEQ-permitted solid waste landfill that meets the current design standards for municipal solid waste disposal facilities of 40 CFR Part 258.

Refer to the DEQ hazardous waste reduction policy and follow all requirements under the Oregon DEQ, Management of Building Demolition Waste, 97-002A for proper disposal of lead-based painted demolition



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#### **PCB/MERCURY VAPOR TUBES**

Florescent light fixtures that utilize mercury-containing lamps and suspect PCB-containing light ballasts are present throughout the school.

Approximately 1,326 four-foot mercury-filled lamps and 140 suspect PCB-containing light ballasts were identified in the facility.

Not all ballasts were examined during the survey. Not all of the ballasts observed were found to be labeled "no PCB", and thus all ballasts should be assumed to contain PCBs prior to examination and disposal.

#### **Mercury-containing Compact Fluorescent Light Tubes**

All mercury-containing compact fluorescent light bulbs should be carefully handled, packaged, and recycled or disposed of in the appropriate manner.

Please refer to the following documents for requirements for removal and disposal of mercury-containing compact fluorescent light tubes:

- 1. US Environmental Protection Agency Toxic Substance Control Act, TSCA, (Code of Federal Regulations Title 40, Part 761).
- 2. US Department of Labor, Occupational Safety and Health Administration (OSHA).
- 3. RCRA, Resource Conservation and Recovery Act, 40 CFR Part 2761, Subpart D., 40 CFR 273.

#### **PCB-containing Ballasts Light Ballasts**

All PCB-containing light ballasts should be carefully handled, packaged, and recycled or disposed of in the appropriate manner.

In addition to the documents referenced above, please refer to the EPA Office of Toxic Substances Guidance Document, Summary of PCB Regulations, Document Number 910-S-94-002 for requirements for removal and disposal of PCB-containing light ballasts.

This report is not suitable as a bid document or an asbestos abatement design. The purpose of this report is risk hazard communication only.

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### North Clackamas Parks & Recreation District Concord Elementary School

PBS Engineering and Environmental Inc.

Hazardous Materials Abatement

**Probable Cost Estimate** 

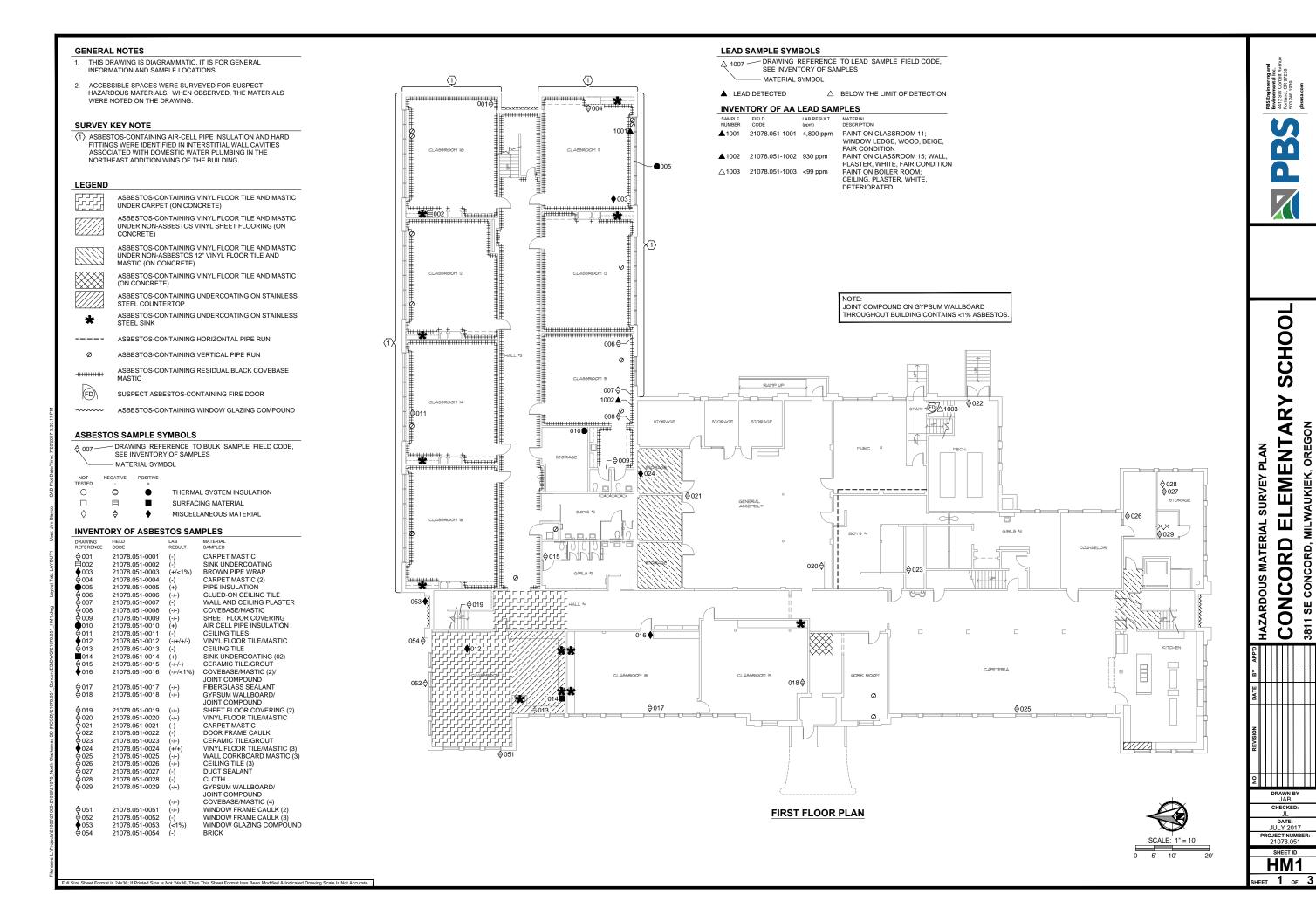
#### Project No. 21078.051, Phase 0001

Prepared by: Joe Lucas Date Prepared: July 17, 2017

		1		1
			<b>Unit Price</b>	Amount
Item	Unit	Quantity	(USD)	(USD)
A. Mobilization, Permits & Fees	EA	1	2,750.00	2,750.00
B. Asbestos-Containing Material Abatement				
Pipe Insulation and Hard Fittings	LF	2,360	20.00	47,200.00
Vinyl Floor Tile/Mastic (on wood)	SF	415	5.00	2,075.00
Vinyl Floor Tile/Mastic (on concrete)	SF	13,860	3.50	48,510.00
Vinyl Floor Tile (on wood)	SF	12,163	5.00	60,815.00
Vinyl Jute Back Sheet Flooring (on wood)	SF	264	5.00	1,320.00
Sinks & Countertops with Asbestos Undercoating	EA	13	50.00	650.00
Residual Black Covebase Mastic	LF	1,958	3.00	5,874.00
Fire Door	EA	1	150.00	150.00
Window Putty (<1%) - Training	EA	1	2,000.00	2,000.00
Joint Compound on Gypsum Walls (<1%) - Training	EA	1	2,000.00	2,000.00
C. Lead-Related Activities				
Contractor Lead Compliance - Training	EA	1	2,000.00	2,000.00
Lead-wrapped Roof Vent Pipes EA		25	12.00	300.00
D. PCB-Containing Light Ballasts				
Light Ballast Removal	EA	140	15.00	2,100.00
E. Mercury-Containing Lamps				
Lamp Removal and Recycling	EA	1,326	1.50	1,989.00
Subtotal Est		\$179,733.00		
	Contin	100/		¢17.072.20
Davis of Caracultin	Contingency - 10% Design/Consulting/Air Monitoring Fees			\$17,973.30
Design/Consultir	ng/Air Mon	itoring Fees		\$0.00
тот		\$197,706.30		

#### Cost Estimate Assumptions:

1) Cost estimate does not include abatement design, monitoring, clearance air sampling or closeout



# GENERAL NOTES 1. THIS DRAWING IS DIAGRAMMATIC. IT IS FOR GENERAL INFORMATION AND SAMPLE LOCATIONS. 2. ACCESSIBLE SPACES WERE SURVEYED FOR SUSPECT HAZARDOUS MATERIALS. WHEN OBSERVED, THE MATERIALS WERE NOTED ON THE DRAWING. SURVEY KEY NOTE (1) ASBESTOS-CONTAINING AIR-CELL PIPE INSULATION AND HARD FITTINGS WERE IDENTIFIED IN INTERSTITIAL WALL CAVITIES ASSOCIATED WITH DOMESTIC WATER PLUMBING IN THE NORTHEAST ADDITION WING OF THE BUILDING. LEGEND ASBESTOS-CONTAINING VINYL FLOOR TILE UNDER CARPET AND OSB BOARD (ON WOOD) WITH NON-ASBESTOS MASTIC ASBESTOS-CONTAINING VINYL FLOOR TILE UNDER CARPET (ON WOOD) WITH NON-ASBESTOS MASTIC

# ASBESTOS-CONTAINING VINYL FLOOR TILE UNDER CARPET AND OSB BOARD (ON WOOD) WITH NON-ASBESTOS MASTIC ASBESTOS-CONTAINING VINYL FLOOR TILE UNDER CARPET (ON WOOD) WITH NON-ASBESTOS MASTIC ASBESTOS-CONTAINING VINYL FLOOR TILE UNDER WOOD FLOOR AND NON-ASBESTOS 12" VINYL FLOOR TILE/OSB BOARD (ON WOOD) WITH NON-ASBESTOS MASTIC ASBESTOS-CONTAINING VINYL FLOOR TILE AND MASTIC (ON WOOD) ASBESTOS-CONTAINING JUTE BACK VINYL SHEET FLOORING UNDER CARPET (ON WOOD) ASBESTOS-CONTAINING VERTICAL PIPE RUN (ABOVE CEILING) ASBESTOS-CONTAINING SINK UNDERCOATING ON STAINLESS STEEL SINK ASBESTOS-CONTAINING RESIDUAL BLACK COVEBASE MASTIC ASBESTOS-CONTAINING WINDOW GLAZING COMPOUND ASBESTOS-CONTAINING WINDOW GLAZING COMPOUND

### DRAWING REFERENCE TO BULK SAMPLE FIELD CODE, SEE INVENTORY OF SAMPLES MATERIAL SYMBOL NOT: NOT: NEGATIVE POSITIVE

| NOIS | POSITIVE | P

#### INVENTORY OF ASBESTOS SAMPLES

DRAWING REFERENCE	FIELD CODE	LAB RESULT	MATERIAL SAMPLED
♦030	21078.051-0030	(-/-)	SHEET FLOOR COVERING (2)
<b>♦</b> 031	21078.051-0031	(-/-)	VINYL FLOOR TILE (3)
♦ 032	21078.051-0032	(-/-/+)	COVEBASE/BLACK MASTIC
♦ 033	21078.051-0033	(+/-)	VINYL FLOOR TILE/MASTIC
<b>♦</b> 035	21078.051-0035	(-/-)	GLUED-ON CEILING TILES
♦ 036	21078.051-0036	(+/-/-)	VINYL FLOOR TILE/MASTIC (4)
♦ 037	21078.051-0037	(-/+/-)	VINYL FLOOR TILE/MASTIC (5)
♦ 038	21078.051-0038	(-/+/-)	SHEET FLOOR COVERING (3)
<b>♦</b> 039	21078.051-0039	(-)	GRAY FELT UNDER PLYWOOD
♦ 040	21078.051-0040	(-)	WALL AND CEILING PLASTER
♦ 041	21078.051-0041	(-/-)	COVEBASE/MASTIC
♦ 042	21078.051-0042	(-/-)	GRAY FELT UNDER PLYWOOD
<b>♦</b> 043	21078.051-0043	(-)	STAGE CURTAIN
♦ 044	21078.051-0044	(-)	STAGE CURTAIN
<b>045</b>	21078.051-0045	(+/-/+/-)	GYPSUM WALLBOARD/
			JOINT COMPOUND
♦ 046	21078.051-0046	(-)	TAR PAPER
♦ 047	21078.051-0047	(-)	TAR PAPER
♦ 048	21078.051-0048	(-/-)	LEVELING COMPOUND
<b>♦</b> 049	21078.051-0049	(-/-)	VINYL FLOOR TILE (5)
♦ 050	21078.051-0050	(-/-)	COVEBASE/MASTIC (4)

#### LEAD SAMPLE SYMBOLS

DRAWING REFERENCE TO LEAD SAMPLE FIELD CODE, SEE INVENTORY OF SAMPLES

MATERIAL SYMBOL

▲ LEAD DETECTED

 $\triangle$  BELOW THE LIMIT OF DETECTION

#### INVENTORY OF AA LEAD SAMPLES

INVENI	URY UF AA L	EAD SAMP	LES
SAMPLE NUMBER	FIELD CODE	LAB RESULT (ppm)	MATERIAL DESCRIPTION
▲1004	21078.051-1004	4,400 ppm	PAINT ON COMPUTER LAB; RADIATOR, METAL, BEIGE, FAIR CONDITION
▲1005	21078.051-1005	460 ppm	PAINT ON GYM; WALL, GYPSUM, WHITE, INTACT
▲1006	21078.051-1006	2,700 ppm	PAINT ON CLASSROOM 28; RADIATOR, METAL, BROWN, DETERIORATED
▲1007	21078.051-1007	200,000 ppm	PAINT ON EXTERIOR; NORTH ENTRANCE, WINDOW LEDGE, WOOD, GREEN, DETERIORATED

JOINT COMPOUND ON GYPSUM WALLBOARD THROUGHOUT BUILDING CONTAINS <1% ASBESTOS.  $\langle 1 \rangle$ -♦039 **SECOND FLOOR PLAN** 

CHOOL

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**ELEMENTARY** 

**SURVEY PLAN** 

HAZARDOUS MATERIAL

CONCORD

JAB CHECKED:

JL
DATE:
JULY 2017
PROJECT NUMBEI
21078.051
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SE CONCORD,

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#### GENERAL NOTES

- THIS DRAWING IS DIAGRAMMATIC. IT IS FOR GENERAL INFORMATION AND SAMPLE LOCATIONS.
- ACCESSIBLE SPACES WERE SURVEYED FOR SUSPECT HAZARDOUS MATERIALS. WHEN OBSERVED, THE MATERIALS WERE NOTED ON THE DRAWING.

#### LEGEND

---- ASBESTOS-CONTAINING HORIZONTAL PIPE RUN

ASBESTOS-CONTAINING VERTICAL PIPE RUN

#### ASBESTOS SAMPLE SYMBOLS

DRAWING REFERENCE TO BULK SAMPLE FIELD CODE, SEE INVENTORY OF SAMPLES — MATERIAL SYMBOL

NOT	NEGATIVE	POSITIVE

0	$\Rightarrow$	•	THERMAL SYSTEM INSULATION
			SURFACING MATERIAL
$\Diamond$	♦	•	MISCELLANEOUS MATERIAL

#### INVENTORY OF ASBESTOS SAMPLES

DRAWING	FIELD	LAB	MATERIAL
REFERENCE	CODE	RESULT	SAMPLED
⊕034	21078.051-0034	(-)	VIBRATION CLOTH BUILT-UP ROOFING BUILT-UP ROOFING BUILT-UP ROOFING BUILT-UP ROOFING BUILT-UP ROOFING
♦055	21078.051-0055	(-/-/-)	
♦056	21078.051-0056	(-)	
♦057	21078.051-0057	(-)	
♦058	21078.051-0058	(-/-/-)	
♦059	21078.051-0059	(-)	



**ATTIC PLAN** 



SCHOOL CONCORD ELEMENTARY 3811 SE CONCORD, MILWAUKIEK, OREGON HAZARDOUS MATERIAL SURVEY PLAN

DRAWN BY JAB CHECKED: JL DATE: JULY 2017

PROJECT NUMBER 21078.051 SHEET ID HM3 неет 3 ог 3

<u>Code</u>	<u>Material</u>		Location	Results	<u>Lab</u>
21078.051-0001	Carpet Mastic	Layer:	Room 10; rubbery black mastic o <b>Description:</b>	n concrete  Analysis:	Lab Cor
		Layer 1	mastic, black/gray	No Asbestos Detected	
21078.051-0002	Sink Undercoating	Layer:	Room 10; black sink undercoating <b>Description:</b>	g Analysis:	Lab Cor
		Layer 1	loose flaky material, black	No Asbestos Detected	
21078.051-0003	Brown Pipe Wrap		Room 11; brown felt pipe wrap		Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	fine compact powder, off- white, with woven fibers, off- white	12% Chrysotile	
		Layer 2	compressed fibers, brown	<1% Chrysotile	
21078.051-0004	Carpet Mastic (2)	Layer:	Room 11; yellow carpet mastic <b>Description:</b>	Analysis:	Lab Cor
		Layer 1	mastic, gray, with paint flakes, green/tan	No Asbestos Detected	
21078.051-0005	Pipe Insulation		Room 11; white mag TSI pipe inst		Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	fibrous powder, off-white	5% Chrysotile, 10% Amosi	te
21078.051-0006	Glued-on Ceiling 1	Γile	Room 15; 12"X12", white fissured yellow glue dots	glued-on ceiling tile with	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	fibrous material, gray, with paint, white	No Asbestos Detected	
		Layer 2	mastic, tan	No Asbestos Detected	
21078.051-0007	Wall and Ceiling P	laster <b>Layer:</b>	Room 15; white wall plaster <b>Description:</b>	Analysis:	Lab Cor
		Layer 1	granular compact powder, off- white	No Asbestos Detected	
21078.051-0008	Covebase/Mastic	Layer:	Room 15; 6" black covebase with <b>Description:</b>	yellow and brown mastic <b>Analysis:</b>	Lab Cor
		-	-	-	
		Layer 1	flexible material, black	No Asbestos Detected	



<u>Code</u>	<u>Material</u>		<u>Location</u>	<u>Results</u>	<u>Lab</u>
21078.051-0009	Sheet Floor Coveri	ing <b>Layer:</b>	Room 15 restroom; gray pebble <b>Description:</b>	pattern, sheet flooring  Analysis:	Lab Cor
		Layer 1	vinyl, gray	No Asbestos Detected	
		Layer 2	fibrous backing, gray, with mastic, tan	No Asbestos Detected	
21078.051-0010	Air Cell Pipe Insula	ation	Lower north storage room; air ce pipes	ll insulation on sink water	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	fibrous material, gray, with woven fibers, tan	45% Chrysotile	
21078.051-0011	Ceiling Tiles	Layer:	Room 14; 2'x2' white hole pattern <b>Description:</b>	n ceiling tile <b>Analysis:</b>	Lab Cor
		Layer 1	compressed fibers, brown, with paint, off-white	No Asbestos Detected	
21078.051-0012	Vinyl Floor Tile/Ma	astic	Room 17; brown floor tile with bl	lack mastic	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	mastic, tan	No Asbestos Detected	
		Layer 2	vinyl, reddish brown	12% Chrysotile	
		Layer 3	mastic, black	5% Chrysotile	
		Layer 4	fine compact powder, gray	No Asbestos Detected	
21078.051-0013	Ceiling Tile		Room 17; 1'x1' white random hol	le pattern nailed ceiling tile	Lab Cor
	J	Layer:	Description:	Analysis:	
		Layer 1	compressed fibers, tan, with paint, off-white	No Asbestos Detected	
21078.051-0014	Sink Undercoating	ı (02)	Room 17; gray sink undercoating	I	Lab Cor
	3	Layer:	Description:	Analysis:	
		Layer 1	loose flaky material, gray/off- white	10% Chrysotile	
21078.051-0015	Ceramic Tile/Grou	t	Girl's north hall restroom; 1'x1' w	hite ceramic tile	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	ceramic tile, tan, with glaze, off- white	No Asbestos Detected	
		Layer 2	cementitious material, gray	No Asbestos Detected	
		Layer 3	woven fibers, white, with fibrous backing, green/brown	No Asbestos Detected	

<b>Code</b> 21078.051-0016	Material Covebase/Mastic		Location  Room 17; 4" beige covebase with	•	<u>Lab</u> Lab Cor
		Layer 1 Layer 2 Layer 3	Description: flexible material, gray mastic, tan fine compact powder, off- white, micaceous	Analysis: No Asbestos Detected No Asbestos Detected <1% Chrysotile	
21078.051-0017	Fiberglass Sealant		Room 17; white fiberglass end se	alant	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	flexible material, white	No Asbestos Detected	
		Layer 2	loose fibrous material, yellow	No Asbestos Detected	
21078.051-0018	Gypsum Wallboar Compound	d/Joint	Room 19; gypsum joint compou	nd	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	fine compact powder, tan, micaceous, with paint, gray, and fibrous backing	No Asbestos Detected	
		Layer 2	chalky material, pink	No Asbestos Detected	
21078.051-0019	Sheet Floor Cover	ing (2) <b>Layer:</b>	Main hall lower level; gray stairw <b>Description:</b>	ell sheet flooring  Analysis:	Lab Cor
		Layer 1	flexible material, tan	No Asbestos Detected	
		Layer 2	mastic, off-white/brown	No Asbestos Detected	
21078.051-0020	Vinyl Floor Tile/M	astic <b>Layer:</b>	Art studio; 12" tan matted vinyl f  Description:	loor tile with yellow mastic  Analysis:	Lab Cor
		Layer 1	vinyl, tan/gray	No Asbestos Detected	
		Layer 2	mastic, orange	No Asbestos Detected	
21078.051-0021	Carpet Mastic	Layer:	Art studio; yellow carpet mastic <b>Description:</b>	Analysis:	Lab Cor
		-	•	-	
		Layer 1	mastic, orange	No Asbestos Detected	
21078.051-0022	Door Frame Caulk		Boiler room; white door frame ca	ulk	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	flexible material, white, with paint, tan	No Asbestos Detected	



<b>Code</b> 21078.051-0023	Material Ceramic Tile/Grou	t	Location  Art studio locker room; tan cerar	Results mic tile and grout	<u>Lab</u> Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	ceramic tile, white, with glaze, tan	No Asbestos Detected	
		Layer 2	cementitious material, gray, with granular material, gray	No Asbestos Detected	
21078.051-0024	Vinyl Floor Tile/Ma	astic (3) <b>Layer:</b>	Art studio south room; 9" vinyl fl Description:	oor tile with black mastic  Analysis:	Lab Cor
		Layer 1	vinyl, tan/brown	8% Chrysotile	
		Layer 2	mastic, black	5% Chrysotile	
21078.051-0025	Wall Corkboard M	astic (3) <b>Layer:</b>	Cafeteria; cream mastic behind v <b>Description:</b>	vall corkboard packing  Analysis:	Lab Cor
		Layer 1	mastic, white, with fine compact powder, off-white	No Asbestos Detected	
		Layer 2	compressed fibers, brown	No Asbestos Detected	
21078.051-0026	Ceiling Tile (3)		Counseling office; 2'x4' white statile	ppled fiberboard ceiling	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	fine compact powder, white, with paint, off-white	No Asbestos Detected	
		Layer 2	compressed fibers, tan	No Asbestos Detected	
21078.051-0027	Duct Sealant		Sprinkler room; gray duct sealan	t	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	flexible material, gray	No Asbestos Detected	
21078.051-0028	Cloth	Layer:	Sprinkler room; brown felt fire cl  Description:	oth above ceiling  Analysis:	Lab Cor
		Layer 1	compressed fibers, gray/brown	No Asbestos Detected	
21078.051-0029	Gypsum Wallboard	d/Joint	Sprinkler room; gypsum joint co	mpound	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	fine compact powder, off- white, micaceous, with paint, off-white, and fibrous backing	No Asbestos Detected	
		Layer 2	chalky material, tan	No Asbestos Detected	



<u>Code</u>	<u>Material</u>		<u>Location</u>	<u>Results</u>	<u>Lab</u>
21078.051-0030	Sheet Floor Cover	ing (2) <b>Layer:</b>	South stairwell; gray stairwell she <b>Description:</b>	eet flooring  Analysis:	Lab Cor
		Layer 1	vinyl, off-white/gray	No Asbestos Detected	
		Layer 2	mastic, gray	No Asbestos Detected	
		•			
21078.051-0031	Vinyl Floor Tile (3)	Layer:	Room 21; gray vinyl fllor tile with <b>Description:</b>	n black mastic  Analysis:	Lab Cor
		Layer 1	vinyl, tan/gray	No Asbestos Detected	
		Layer 2	mastic, black	No Asbestos Detected	
21078.051-0032	Covebase/Black N	Mastic (	Room 22; 6" tan covebase with c	ream mastic and residual	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	rubbery material, tan	No Asbestos Detected	
		Layer 2	mastic, off-white	No Asbestos Detected	
		Layer 3	mastic, black	3% Chrysotile	
24.070.054.0022		. •	B 04 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
210/8.051-0033	Vinyl Floor Tile/M		Room 24; red vinyl floor tile with <b>Description:</b>	black mastic  Analysis:	Lab Cor
		Layer:	•	•	
		Layer 1	hard vinyl, red	3% Chrysotile	
		Layer 2	fibrous backing, black	No Asbestos Detected	
21078.051-0034	Vibration Cloth		North wing attire; dark gray vibra	ation cloth	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	woven fibers, black	No Asbestos Detected	
21078.051-0035	Glued-on Ceiling	Tiles	Computer lab; 12"x12" white fiss yellow glue dots	ured ceiling tile with	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	compressed fibrous material, off-white	No Asbestos Detected	
		Layer 2	mastic, yellow	No Asbestos Detected	
21078.051-0036	Vinyl Floor Tile/M	astic (4)	Computer lab; gray 9" vinyl floor black felt	tile with black mastic over	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	hard vinyl, gray	3% Chrysotile	
		Layer 2	mastic, black	No Asbestos Detected	
		Layer 3	fibrous backing, black	No Asbestos Detected	



<u>Code</u>	<u>Material</u>		<u>Location</u>	<u>Results</u>	<u>Lab</u>
21078.051-0037	Vinyl Floor Tile/M	astic (5)	Library; brown vinyl floor tile with felt	n black mastic over black	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	mastic, yellow	No Asbestos Detected	
		Layer 2	hard vinyl, orange	4% Chrysotile	
		Layer 3	fibrous backing, black	No Asbestos Detected	
21078.051-0038	Sheet Floor Cover	ring (3)	Library storage; brown jute back	sheet vinyl	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	mastic, yellow	No Asbestos Detected	
		Layer 2	vinyl, brown	3% Chrysotile	
		Layer 3	woven fibers, tan	No Asbestos Detected	
21078.051-0039	Gray Felt under Pl	lywood <b>Layer:</b>	Library storage; gray felt under ju <b>Description:</b>	uteback and wood floor  Analysis:	Lab Cor
		Layer 1	fibrous material, brown	No Asbestos Detected	
21078.051-0040	Wall and Ceiling Plaster		Upper level main hall; plaster wa	II	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	compact granular powder, off- white with paint, off-white	No Asbestos Detected	
21078.051-0041	Covebase/Mastic		Upper level; main hall, 6" tan cov and residule black mastic	Lab Cor	
		Layer:	Description:	Analysis:	
		Layer 1	rubbery material, tan	No Asbestos Detected	
		Layer 2	mastic, yellow/black	No Asbestos Detected	
21078.051-0042	Gray Felt under Pl	lywood <b>Layer:</b>	Upper level main hall; gray felt u  Description:	nder plywood and carpet  Analysis:	Lab Cor
		Layer 1	fibrous backing, gray	No Asbestos Detected	
		Layer 2	brittle mastic, dark brown	No Asbestos Detected	
21078.051-0043	Stage Curtain		Stage; blue stage curtain		Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	woven fibers, black	No Asbestos Detected	
21078.051-0044	Stage Curtain		Stage; black stage curtain		Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	woven fibers, blue	No Asbestos Detected	



<u>Code</u>	<u>Material</u>		<u>Location</u>	<u>Results</u>	<u>Lab</u>
21078.051-0045	Gypsum Wallboai Compound	d/Joint	Stage closet; gypsum wallbaord	with joint compound	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	fine compact powder, off-white with paint, off-white	<1% Chrysotile (Composit	te)
		Layer 2	paper backing, off-white	No Asbestos Detected	
		Layer 3	fine compact powder, off-white	<1% Chrysotile (Composit	te)
		Layer 4	compact chalky material with paper, white	No Asbestos Detected	
	Comments:	iRR Point Co	ount: 1% asbestos		
21078.051-0046	Tar Paper	Layer:	Stage closet; black paper under v <b>Description:</b>	wood stage floor  Analysis:	Lab Cor
		Layer 1	fibrous backing, black/brown	No Asbestos Detected	
21078.051-0047	Tar Paper	Layer:	gym; black paper under wood gy  Description:	rm floor <b>Analysis:</b>	Lab Cor
		Layer 1	fibrous backing, black/brown	No Asbestos Detected	
21070.051.0040	l 1: 6				
21078.051-0048	Leveling Compou	nd <b>Layer:</b>	Lobby; gray leveling compound <b>Description:</b>	Analysis:	Lab Cor
		Layer 1	granular material, gray	No Asbestos Detected	
		Layer 2	loose fibers, tan	No Asbestos Detected	
21078.051-0049	Vinyl Floor Tile (5	)	Office break room; 12" white ving	Lab Cor	
		Layer:	Description:	Analysis:	
		Layer 1	hard vinyl, tan	No Asbestos Detected	
		Layer 2	granular material, gray	No Asbestos Detected	
21078.051-0050	Covebase/Mastic	(4)	Main level main hall men's restro	oom; brittle dark brown 6"	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	rubbery material, brown	No Asbestos Detected	
		Layer 2	mastic, tan	No Asbestos Detected	
21078.051-0051	Window Frame Co	aulk (2) <b>Layer:</b>	Exterior of class 17; gray rubbery <b>Description:</b>	window caulk  Analysis:	Lab Cor
		Layer 1	rubbery material, gray	No Asbestos Detected	
		Layer 2	sticky mastic, brown	No Asbestos Detected	



July 2017

<u>Code</u>	<u>Material</u>		<u>Location</u>	<u>Results</u>	<u>Lab</u>
21078.051-0052	Window Frame Ca	aulk (3) <b>Layer:</b>	Exterior of class 17; white rubber <b>Description:</b>	y window caulk  Analysis:	Lab Cor
		Layer 1	rubbery material, white	No Asbestos Detected	
21078.051-0053	Window Glazing (	Compound <b>Layer:</b>	Exterior north entrance from hall <b>Description:</b>	; white window glazing  Analysis:	Lab Cor
		Layer 1	hard compact powder, off- white	<1% Chrysotile	
21078.051-0054	Brick	Layer:	Exterior north entrance from hall Description:	; brick and mortar  Analysis:	Lab Cor
		Layer 1	ceramic, red	No Asbestos Detected	
21078.051-0055	Built-up Roofing		North area; flat roof, built-up asp	phaltic roofing with silver	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	paint, silver	No Asbestos Detected	
		Layer 2	thick rocky fibrous tar, black	No Asbestos Detected	
		Layer 3	compressed fibers, brown	No Asbestos Detected	
21078.051-0056	Built-up Roofing	Layer:	Northwest area; flat roof, rolled a <b>Description:</b>	sphaltic roofing  Analysis:	Lab Cor
		Layer 1	thick rocky fibrous tar, black	No Asbestos Detected	
21078.051-0057	Built-up Roofing	Layer:	Central area; flat roof, rolled asph Description:	naltic roofing  Analysis:	Lab Cor
		Layer 1	thick rocky fibrous tar, black	No Asbestos Detected	
21078.051-0058	Built-up Roofing		Central area; pitched roof; 3-tab paper	asphaltic roof with tar	Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	rocky fibrous tar, black	No Asbestos Detected	
		Layer 2	rocky fibrous tar, black	No Asbestos Detected	
		Layer 3	fibrous tar, black	No Asbestos Detected	
21078.051-0059	Built-up Roofing	1	Southwest area; flat roof, rolled a		Lab Cor
		Layer:	Description:	Analysis:	
		Layer 1	thick rocky fibrous tar, black	No Asbestos Detected	



July 2017

<u>Code</u>	<u>Material</u>	<u>Analysis</u>	<u>Location</u>	<u>Lab</u>
PAINT				
LB21078.051-1001	Paint	4,800 ppm	Classroom 11; window ledge, wood, beige, fair condition	R.J. Lee Group
LB21078.051-1002	Paint	930 ppm	Classroom 15; wall, plaster, white, fair condition	R.J. Lee Group
LB21078.051-1003	Paint	<99 ppm	Boiler room; ceiling, plaster, white, deteriorated	R.J. Lee Group
LB21078.051-1004	Paint	4,400 ppm	Computer lab; radiator, metal, beige, fair condition	R.J. Lee Group
LB21078.051-1005	Paint	460 ppm	Gym; wall, gypsum, white, intact	R.J. Lee Group
LB21078.051-1006	Paint	2,700 ppm	Classroom 28; radiator, metal, brown, deteriorated	R.J. Lee Group
LB21078.051-1007	Paint	200,000 ppm	Exterior; north entrance, window ledge, wood, green, deteriorated	R.J. Lee Group



July 2017

#### LabCor Lab/Cor Portland, Inc. Portland

4321 SW Corbett Ave., Ste A Portland, OR 97239

#### **BULK SAMPLE ASBESTOS ANALYSIS**

Phone: (503) 224-5055 http://www.labcorpdx.net

Asbestos and Environmental Analysis

PBS Engineering and Environmental Client:

> 4412 SW Corbett Avenue Portland, OR 97239

Report Number: 173327R01 Report Date: 06/12/2017 P.O. No: n/a

Job Number: 173327

**Project Name:** 

Inc.

21078.051 Phase 0001 **Project Number:** 

**Project Notes:** 

Client Sample ID: 21078.051-0001 Sample ID: S1 Date Analyzed: 06/10/2017 **Client Sample Description:** 

Analyst: Ellie Brown

**Asbestos Mineral Fibers** Layer

Percent Percent: Chrysotile Amosite Crocidolite Asbestos:

Homogeneous

mastic, black/gray 100 % NAD

**Other Fibers** Fibrous Mineral

Other Glass Wool Cellulose Synthetic

Matrix 2 % 98 %

Client Sample ID: 21078.051-0002 Sample ID: S2 06/10/2017 Date Analyzed:

**Client Sample Description:** Analyst: Ellie Brown

**Asbestos Mineral Fibers** Percent Layer Percent: Chrysotile Amosite Crocidolite Asbestos:

Homogeneous

loose flaky material, 100 % NAD

black

Fibrous Mineral **Other Fibers** Other Glass Cellulose Wool Synthetic

Matrix 100 %

Comments: Suboptimal amount of material provided for analysis. Results may not be representative of the parent material.

#### **BULK SAMPLE ASBESTOS ANALYSIS**

Phone: (503) 224-5055 http://www.labcorpdx.net

Job Number: 17332	27						Re	port Number: Report Date:	
•	21078.05	1-0003		Sample ID:	S3		Date Analyzed:	06/10/2017	
Client Sample Descri	iption:						Analyst:	Ellie Brown	
Asbestos Mineral Fil		Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Layer 01									
fine compact power white, with woven to off-white		20 %	12 %	-	-				12 %
Layer 02									
compressed fibers brown	,	80 %	Trace	-	-				< 1 %
Other Fibers	Fibrous Glass	-	Mineral se Wool	Synthetic		Other			Matrix
Layer 01	_	20 %	_	-		_	-		68 %
Layer 02	Trace	95 %	_	_		_	_		5 %
Client Sample Descri Asbestos Mineral Fil	<u>bers</u>	Layer Percent:	Chrysotile	Amosite	Crocidolite		Analyst:	Ellie Brown	Percent Asbestos:
Homogeneous									
mastic, gray, with properties of the flakes, green/tan	paint	100 %	-	-	-				NAD
Other Fibers	Fibrous	S	Mineral						
	Glass	Cellulos	se Wool	Synthetic		Other			Matrix
	-	5 %	-	-		-	-		95 %
Client Sample ID: 2	21078.05 <sup>-</sup>	1-0005		Sample ID:	S5		Date Analyzed:	06/10/2017	
Client Sample Descri				- 3			Analyst:	Ellie Brown	
Asbestos Mineral Fil	bers	Layer Percent:	Chrysotile	Amosite	Crocidolite		<b>. , </b>		Percent Asbestos:
Homogeneous									
fibrous powder, off	-white	100 %	5 %	10 %	-				15 %
Other Fibers	Fibrous Glass	_	Mineral Se Wool	Synthetic		Other			Matrix
	-	-	-	-		-	-		85 %



Portland, Inc. BULK SAMPLE ASBESTOS ANALYSIS

Phone: (503) 224-5055 http://www.labcorpdx.net

Job Number:	173327	Report Number: 1	173327R01
		Papart Data: (	16/12/2017

Client Sample ID:	21078.051	-0006		Sample ID:	S6		Date Analyzed:	06/10/2017	
Client Sample Des	cription:						Analyst:	Ellie Brown	
<b>Asbestos Mineral</b>		Layer							Percent
	F	Percent:	Chrysotile	Amosite	Crocidolite				Asbestos:
Layer 01									
fibrous material with paint, white		60 %	-	-	-				NAD
Layer 02									
mastic, tan		40 %	-	-	-				NAD
Other Fibers	Fibrous		Mineral						
	Glass	Cellulos	e Wool	Synthetic		Other			Matrix
Layer 01	-	10 %	30 %	-		-	-		60 %
Layer 02	-	Trace	-	-		-	-		100 %

	1078.05	1-0007		Sample ID:	S7		Date Analyzed:	06/10/2017	
Client Sample Descri	ption:						Analyst:	Ellie Brown	
Asbestos Mineral Fib		Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Homogeneous granular compact powder, off-white		100 %	-	-	-				NAD
Other Fibers	Fibrous Glass Trace	-	Mineral se Wool	Synthetic		Other	_		Matrix

Client Sample ID: 21078.051-0008 Client Sample Description:				Sample ID:	S8		Date Analyzed: Analyst:	06/10/2017 Ellie Brown	
Asbestos Mineral	Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		7 <b>, 4</b>		Percent Asbestos:
Layer 01									
flexible material	, black	80 %	-	-	-				NAD
Layer 02									
mastic, tan, with fibers	n wood	20 %	-	-	-				NAD
Other Fibers	Fibrous Glass	Cellulos	Mineral se Wool	Synthetic		Other			Matrix
Layer 01	-	-	-	-		-	-		100 %
Layer 02	-	10 %	-	-		-	-		90 %

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Layer 01

Layer 02

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#### **BULK SAMPLE ASBESTOS ANALYSIS**

Phone: (503) 224-5055 http://www.labcorpdx.net

> 100 % 15 %

Job Number: 173327	•						Re	port Number: Report Date:	
Client Sample ID: 21 Client Sample Descrip	078.051-0 tion:	0009		Sample ID:	S9		Date Analyzed: Analyst:	06/10/2017 Ellie Brown	
Asbestos Mineral Fibe		ayer ercent:	Chrysotile	Amosite	Crocidolite		·		Percent Asbestos:
Layer 01									
vinyl, gray		60 %	-	-	-				NAD
Layer 02									
fibrous backing, gray with mastic, tan	/,	40 %	-	-	-				NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral e Wool	Synthetic		Other			Matrix

Percent: Chrysotile Amosite Crocidolite  Homogeneous fibrous material, gray, 100 % 45 %	
fibrous material, gray, 100 % 45 %	rcent estos:
· • · · · · · · · · · · · · · · · · · ·	
with woven fibers, tan	45 %
Other Fibers     Fibrous     Mineral       Glass     Cellulose     Wool     Synthetic     Other     Matrix       -     55 %     -     -     -     0 %	

Client Sample ID: 21078.051-0011 Client Sample Description:				Sample ID:	S11		Date Analyzed: Analyst:	06/10/2017 Ellie Brown	
Asbestos Mineral Fil	oers	Layer Percent:	Chrysotile	Amosite	Crocidolite		<b>, .</b>		Percent Asbestos:
Homogeneous compressed fibers brown, with paint, white		100 %	-	-	-				NAD
Other Fibers	Fibrous Glass -	Cellulos 98 %	Mineral Se Wool	Synthetic		Other -	-		Matrix 2 %



**BULK SAMPLE ASBESTOS ANALYSIS** 

Phone: (503) 224-5055 http://www.labcorpdx.net

Job Number:	173327	Report Number: 173327R01
		Report Date: 06/12/2017

							ricport Butc.	90/12/2017
	-0012		Sample ID:	S12		Date Analyzed:	06/10/2017	
ers .		Chrysotile	Amosite	Crocidolite		Analyst:	Eille Brown	Percent Asbestos:
	10 %	-	-	-				NAD
	80 %	12 %	-	-				12 %
	8 %	5 %	-	-				5 %
r,	2 %	-	-	-				NAD
Fibrous Glass	Cellulos	Mineral e Wool	Synthetic		Other			Matrix
-	-	-	Trace		-	-		100 %
-	-	-	-		-	-		88 %
-	-	-	-		-	-		95 %
-	Trace	-	-		-	-		100 %
	tion: ers Fibrous Glass	Ers Layer Percent:  10 %  80 %  8 %  er, 2 %  Fibrous Glass Cellulos	### Layer Percent: Chrysotile    10 %	Layer   Percent:   Chrysotile   Amosite	Layer   Percent: Chrysotile   Amosite   Crocidolite	Layer   Percent: Chrysotile   Amosite   Crocidolite	Date Analyzed:   Sample ID:   S12   Date Analyzed:   Analyst:   Analyst:   Sample ID:   S12   Date Analyzed:   Analyst:   Analyst:   S12   Date Analyzed:   Analyst:   Analyst:   S12   Date Analyzed:   Analyst:   An	Company   Comp

Client Sample ID:	21078.05	1-0013		Sample ID:	S13		Date Analyzed:	06/10/2017	
Client Sample Description:							Analyst:	Ellie Brown	
Asbestos Mineral I	<u>Fibers</u>	Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Homogeneous									
compressed fibe with paint, off-wh	, ,	100 %	-	-	-				NAD
Other Fibers	Fibrou Glass	-	Mineral e Wool	Synthetic		Other			Matrix
	-	95 %	-	-		-	-		5 %

**BULK SAMPLE ASBESTOS ANALYSIS** 

Phone: (503) 224-5055 http://www.labcorpdx.net

Job Number:	173327	Report Number: 1	73327R01
		Domant Date: 0	6/10/0017

								Report Date:	06/12/2017
Client Sample ID: 2	21078.05 <sup>-</sup>	1-0014		Sample ID:	S14		Date Analyzed:	06/10/2017	
Client Sample Descri	iption:						Analyst:	Ellie Brown	
Asbestos Mineral Fil		Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Homogeneous									
loose flaky materia gray/off-white	al,	100 %	10 %	-	-				10 %
Other Fibers	Fibrous Glass	s Cellulos	Mineral Se Wool	Synthetic		Other			Matrix
	-	-	-	-		-	-		90 %

Client Sample ID: 21078.051-0015 Client Sample Description:		-0015		Sample ID:	S15		Date Analyzed: Analyst:	06/10/2017 Ellie Brown	
<u>Asbestos Mineral Fiber</u>		Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Layer 01									
ceramic tile, tan, with glaze, off-white		70 %	-	-	-				NAD
Layer 02									
cementitious material gray	Ι,	20 %	-	-	-				NAD
Layer 03									
woven fibers, white, w fibrous backing, green/brown	vith	10 %	-	-	-				NAD
Other Fibers	ibrous		Mineral						
	Glass	Cellulos	se Wool	Synthetic		Other		Ma	atrix
Layer 01	-	-	-	-		-	-	10	00 %
Layer 02	-	Trace	-	-		-	-	10	00 %
Layer 03	40 %	60 %	-	-		-	-	(	0 %



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**BULK SAMPLE ASBESTOS ANALYSIS** 

Phone: (503) 224-5055 http://www.labcorpdx.net

Asbestos and Environmental Analysis

Job Number: 173327 Report Number: 173327R01 Report Date: 06/12/2017

								Report Date: 0	10/12/2017
Client Sample ID:	21078.05	1-0016		Sample ID:	S16		Date Analyzed:	06/10/2017	
Client Sample Desc	ription:						Analyst:	Ellie Brown	
Asbestos Mineral F		Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Layer 01									
flexible material,	gray	70 %	-	-	-				NAD
Layer 02									
mastic, tan		25 %	-	-	-				NAD
Layer 03									
fine compact pov white, micaceous		5 %	Trace	-	-				< 1 %
Other Fibers	Fibrou	s	Mineral						
	Glass	Cellulos	se Wool	Synthetic		Other			Matrix
Layer 01	-	-	-	-		-	-		100 %
Layer 02	-	-	-	-		-	-		100 %
Layer 03	-	Trace	-	-		-	-		100 %

	Client Sample ID: 21078.051-0017 Client Sample Description:  Asbestos Mineral Fibers Percent:			Sample ID:	S17		Date Analyzed:	06/10/2017 Ellie Brown	
			Chrysotile	Amosite	Crocidolite		Analyst:	Lille Blown	Percent Asbestos:
Layer 01		0.00	o,ooo	Annosito	Oroolaonic				ASSESTED.
flexible material, v	vhite	90 %	-	-	-				NAD
Layer 02									
loose fibrous mate yellow	erial,	10 %	-	-	-				NAD
Other Fibers	Fibrous	;	Mineral						
	Glass	Cellulos	e Wool	Synthetic		Other		N	//atrix
Layer 01	-	-	5 %	-		-	-		95 %
Layer 02	-	-	100 %	-		-	-		0 %



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Inc

Layer 01 Layer 02 **BULK SAMPLE ASBESTOS ANALYSIS** 

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> Matrix 100 %

> > 95 %

4321 SW Corbett Ave., Ste A Portland, OR 97239

Glass Cellulose Wool

2 %

3 %

Asbestos and Environmental Analysis

Other

Job Number: 17332	27					port Number: Report Date:	
Client Sample ID: 2 Client Sample Descri	21078.051-0018 ption:		Sample ID:	S18	Date Analyzed: Analyst:	06/10/2017 Ellie Brown	
Asbestos Mineral Fib	-	Chrysotile	Amosite	Crocidolite	·		Percent Asbestos:
Layer 01							
fine compact powd tan, micaceous, wi paint, gray, and fib backing	th	-	-	-			NAD
Layer 02							
chalky material, pir	nk 65 %	-	-	-			NAD
Other Fibers	Fibrous	Mineral					

Synthetic

Client Sample ID: 21	078.051	-0019		Sample ID:	S19		Date Analyzed:	06/10/2017	
Client Sample Descrip	tion:						Analyst:	Ellie Brown	
Asbestos Mineral Fibe		Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Layer 01									
flexible material, tan		96 %	-	-	-				NAD
Layer 02									
mastic, off-white/bro	wn	4 %	-	-	-				NAD
Other Fibers	Fibrous Glass	Cellulos	Mineral e Wool	Synthetic		Other			Matrix
Layer 01	-	-	-	-		-	-		100 %
Layer 02	-	10 %	-	-		-	-		90 %

#### **BULK SAMPLE ASBESTOS ANALYSIS**

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Asbestos and Environmental Analysis

ob Number: 1733	327						ort Number: Report Date:	
Client Sample ID: Client Sample Desc	ription:		Sample ID:	S20		Date Analyzed: Analyst:	06/10/2017 Ellie Brown	_
Asbestos Mineral F	<u>ibers</u> Layer Percent	: Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Layer 01								
vinyl, tan/gray	98 %	-	-	-				NAI
ayer 02								
mastic, orange	2 %	-	-	-				NAI
Other Fibers	Fibrous Glass Cellu	Mineral ose Wool	Synthetic		Other			Matrix
Layer 01		-	-		-	-		100 %
Layer 02	- 2%	, 6 -	-		-	-		98 %
Client Sample Desc Asbestos Mineral F	ibers Layer	: Chrysotile	Sample ID:	S21 Crocidolite		Date Analyzed: Analyst:	06/10/2017 Ellie Brown	Percent Asbestos
Homogeneous 	100.0/							
mastic, orange	100 %	- Minanal	-	-				NAI
Other Fibers	Fibrous Glass Cellu	Mineral lose Wool	Synthetic		Other			Maduli
		-	Trace		-	-		Matrix 100 %
Client Sample ID: Client Sample Desc			Sample ID:	S22		Date Analyzed: Analyst:	06/10/2017 Ellie Brown	
Asbestos Mineral F		: Chrysotile	Amosite	Crocidolite		•		Percent Asbestos
Homogeneous flexible material, with paint, tan	white, 100 %	-	-	-				NAI
Other Fibers	Fibrous Glass Cellu	Mineral ose Wool	Synthetic		Other			Matrix



100 %

**BULK SAMPLE ASBESTOS ANALYSIS** 

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Job Number:	173327	Report Number: 173327F	R01
		Report Date: 06/12/20:	17

								neport Date: 0	0/12/2017
Client Sample ID:	21078.051	-0023		Sample ID:	S23		Date Analyzed:	06/10/2017	
Client Sample Desc	ription:						Analyst:	Ellie Brown	
Asbestos Mineral F		Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Layer 01									
ceramic tile, whit glaze, tan	e, with	75 %	-	-	-				NAD
Layer 02									
cementitious mat gray, with granula material, gray	,	25 %	-	-	-				NAD
Other Fibers	Fibrous		Mineral						
	Glass	Cellulo	se Wool	Synthetic		Other		ı	Matrix
Layer 01	-	-	-	-		-	-		100 %
Layer 02	-	-	-	-		-	-		100 %

Client Sample ID:	21078.051	-0024		Sample ID:	S24		Date Analyzed:	06/10/2017	_
Client Sample Desc	cription:						Analyst:	Ellie Brown	
Asbestos Mineral F		Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Layer 01									
vinyl, tan/brown		98 %	8 %	-	-				8 %
Layer 02									
mastic, black		2 %	5 %	-	-				5 %
Other Fibers	Fibrous Glass	Cellulos	Mineral e Wool	Synthetic		Other			Matrix
Layer 01	-	-	-	-		-	-		92 %
Layer 02	-	-	-	-		-	-		95 %



**BULK SAMPLE ASBESTOS ANALYSIS** 

Phone: (503) 224-5055 http://www.labcorpdx.net

Job Number:	173327	Report Number: 173327R01
		Report Date: 06/12/2017

								Report Date: 0	0/12/2017
Client Sample ID: 2	1078.05	1-0025		Sample ID:	S25		Date Analyzed:	06/10/2017	
Client Sample Descri	ption:						Analyst:	Ellie Brown	
Asbestos Mineral Fib		Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Layer 01									
mastic, white, with compact powder, o white		60 %	-	-	-				NAD
Layer 02									
compressed fibers, brown	,	40 %	-	-	-				NAD
Other Fibers	Fibrou Glass	_	Mineral se Wool	Synthetic		Other		1	Matrix
Layer 01	-	-	-	-		-	-		100 %
Layer 02	-	100 %	-	-		-	-		0 %

Client Sample ID: Client Sample Descri	21078.051	-0026		Sample ID:	S26		Date Analyzed: Analyst:	06/10/2017 Ellie Brown	
Asbestos Mineral Fi	ibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Analyst.	Line Brown	Percent Asbestos:
Layer 01									
fine compact pow white, with paint, of white		45 %	-	-	-				NAD
Layer 02									
compressed fibers	s, tan	55 %	-	-	-				NAD
Other Fibers	Fibrous Glass	s Cellulo	Mineral se Wool	Synthetic		Other			Matrix
Layer 01	-	-	-	-		-	-		100 %
Layer 02	-	100 %	-	-		-	-		0 %

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#### **BULK SAMPLE ASBESTOS ANALYSIS**

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Asbestos and Environmental Analysis

Job Number: 173327 Report Number: 173327R01

Report Date: 06/12/2017

Client Sample ID: 21078.051-0027 Sample ID: S27 Date Analyzed: 06/10/2017

**Client Sample Description:** Analyst: Ellie Brown

**Asbestos Mineral Fibers** Layer Percent Percent: Chrysotile Crocidolite Asbestos: Amosite

100 %

Homogeneous

flexible material, gray NAD

Mineral **Other Fibers** Fibrous

Glass Cellulose Wool Other Synthetic Matrix 100 %

Client Sample ID: 21078.051-0028 Sample ID: S28 Date Analyzed: 06/10/2017

Ellie Brown **Client Sample Description:** Analyst:

Percent **Asbestos Mineral Fibers** Layer Percent: Chrysotile Amosite Crocidolite Asbestos:

Homogeneous

compressed fibers, 100 % NAD gray/brown

**Other Fibers Fibrous** Mineral

Other Glass Wool Cellulose Synthetic Matrix

100 % 0 %

Client Sample ID: 21078.051-0029 06/10/2017 Sample ID: S29 Date Analyzed: Ellie Brown **Client Sample Description:** Analyst:

**Asbestos Mineral Fibers** Layer Percent Percent: Chrysotile Amosite Crocidolite Asbestos:

Layer 01 25 % fine compact powder, off-NAD

white, micaceous, with paint, off-white, and fibrous backing

Layer 02

chalky material, tan 75 % NAD

**Other Fibers Fibrous** Mineral

Other Glass Cellulose Wool Synthetic Matrix Trace 100 % Layer 01 Layer 02 2 % Trace 98 %

**BULK SAMPLE ASBESTOS ANALYSIS** 

Phone: (503) 224-5055 http://www.labcorpdx.net

Job Number:	173327	Report Number: 173327R01
		Report Date: 06/12/2017

								Report Date:	00/12/2017
Client Sample ID: 2	21078.051	1-0030		Sample ID:	S30		Date Analyzed:	06/10/2017	_
Client Sample Descr	iption:						Analyst:	Ellie Brown	
Asbestos Mineral Fil		Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Layer 01									
vinyl, off-white/gra	у	95 %	-	-	-				NAD
Layer 02									
mastic, gray		5 %	-	-	-				NAD
Other Fibers	Fibrous Glass	S Cellulos	Mineral se Wool	Synthetic		Other			Matrix
Layer 01	-	-	-	-		-	-		100 %
Layer 02	-	5 %	-	-		-	-		95 %

Client Sample ID: Client Sample Desc	21078.05	1-0031		Sample ID:	S31		Date Analyzed: Analyst:	06/10/2017 Ellie Brown	
Asbestos Mineral F	ibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		<b>, .</b>		Percent Asbestos:
Layer 01									
vinyl, tan/gray		94 %	-	-	-				NAD
Layer 02									
mastic, black		6 %	-	-	-				NAD
Other Fibers	Fibrous Glass	_	Mineral se Wool	Synthetic		Other		ı	Matrix
Layer 01	-	-	-	-		-	-		100 %
Layer 02	-	Trace	-	-		-	-		100 %

rtland. Inc. BULK SAMPLE ASBESTOS ANALYSIS

Phone: (503) 224-5055 http://www.labcorpdx.net

Asbestos and Environmental Analysis

 Job Number:
 173327

 Report Number:
 173327R01

 Report Date:
 06/12/2017

								ricport Date: 00/12/2017
Client Sample ID:	21078.05	1-0032		Sample ID:	S32		Date Analyzed:	06/12/2017
Client Sample Desc	cription:						Analyst:	Stephanie Golden
Asbestos Mineral I	<u>Fibers</u>	Layer Percent:	Chrysotile	Amosite	Crocidolite			Percent Asbestos:
Layer 01								
rubbery material	, tan	85 %	-	-	-			NAD
Layer 02								
mastic, off-white	<b>;</b>	9 %	-	-	-			NAD
Layer 03								
mastic, black		6 %	3 %	-	-			3 %
Other Fibers	Fibrou Glass	-	Mineral se Wool	Synthetic		Other		Matrix
Layer 01	-	-	-	-		-	-	100 %
Layer 02	-	-	-	-		-	-	100 %
Layer 03	-	-	-	-		-	-	97 %

Client Sample ID:	21078.051	1-0033		Sample ID:	S33		Date Analyzed:	06/12/2017	
Client Sample Des	cription:						Analyst:	Stephanie Golden	
Asbestos Mineral		Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Layer 01									
hard vinyl, red		70 %	3 %	-	-				3 %
Layer 02									
fibrous backing,	black	30 %	-	-	-				NAD
Other Fibers	Fibrous Glass	S Cellulos	Mineral se Wool	Synthetic		Other		Matri	×
Layer 01	-	-	-	-		-	-	97	%
Layer 02	-	75 %	-	-		-	-	25	%

Client Sample ID: 2	1078.05	1-0034		Sample ID:	S34		Date Analyzed:	06/12/2017	
Client Sample Descri	ption:						Analyst:	Stephanie Golden	
Asbestos Mineral Fil	<u>oers</u>	Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Homogeneous woven fibers, black	<	100 %	-	-	-				NAD
Other Fibers	Fibrou Glass	-		Synthetic		Other	-	Matr 0	



**BULK SAMPLE ASBESTOS ANALYSIS** 

Phone: (503) 224-5055 http://www.labcorpdx.net

Job Number:	173327	Report Number: 1	173327R01
		Report Date: (	16/12/2017

								neport bate: our ins	
Client Sample ID: 21	1078.05 <sup>-</sup>	1-0035		Sample ID:	S35		Date Analyzed:	06/12/2017	
Client Sample Descrip	otion:						Analyst:	Stephanie Golden	
Asbestos Mineral Fib		Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Layer 01									
compressed fibrous material, off-white	5	60 %	-	=	-				NAD
Layer 02									
mastic, yellow		40 %	-	-	-				NAD
Other Fibers	Fibrous Glass		Mineral se Wool	Synthetic		Other		Matrix	(
Layer 01	-	-	80 %	-		-	-	20 9	%
Layer 02	-	-	5 %	-		-	-	95 9	%

	Client Sample Description:			Sample ID:	S36		Date Analyzed: Analyst:	06/12/2017 Stephanie Golden	
= -	<u>oers</u>	Layer Percent:	Chrysotile	Amosite	Crocidolite		·		Percent Asbestos:
Layer 01									
hard vinyl, gray		50 %	3 %	-	-				3 %
Layer 02									
mastic, black		3 %	-	-	-				NAD
Layer 03									
fibrous backing, bla	ack	47 %	-	-	-				NAD
Other Fibers	Fibrous Glass	Cellulos	Mineral se Wool	Synthetic		Other		Matrix	<b>(</b>
Layer 01	-	-	-	-		-	-	97 9	%
Layer 02	-	2 %	-	-		-	-	98 9	%
Layer 03	-	75 %	-	-		-	-	25 9	%



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Asbestos and Environmental Analysis

Job Number: 173327

Report Number: 173327R01

Report Date: 06/12/2017

							Report Date: 06/12/2017
Client Sample ID: 21076 Client Sample Descriptio			Sample ID:	S37		Date Analyzed: Analyst:	06/12/2017 Stephanie Golden
Asbestos Mineral Fibers		t: Chrysotile	Amosite	Crocidolite		·	Percent Asbestos:
Layer 01							
mastic, yellow	3 %	-	-	-			NAC
Layer 02							
hard vinyl, orange	70 %	4 %	-	-			4 %
Layer 03							
fibrous backing, black	27 %	-	-	-			NAC
	orous ilass Cellu	Mineral Ilose Wool	Synthetic		Other		Matrix
Layer 01		-	-		-	-	100 %
Layer 02		-	-		-	-	96 %
Layer 03	- 65	% -	-		-	-	35 %

Client Sample ID: Client Sample Descr	21078.051 iption:	-0038	Sample ID: S38				Date Analyzed: Analyst:	•		
Asbestos Mineral Fi		Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:	
Layer 01										
mastic, yellow		2 %	-	-	-				NAD	
Layer 02										
vinyl, brown		70 %	3 %	-	-				3 %	
Layer 03										
woven fibers, tan		28 %	-	-	-				NAD	
Other Fibers	Fibrous Glass	Cellulos	Mineral se Wool	Synthetic		Other		Matri	x	
Layer 01	-	-	-	2 %		-	-	98	%	
Layer 02	-	-	-	-		-	-	97	%	
Layer 03	-	100 %	-	-		-	-	0 9	%	

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**BULK SAMPLE ASBESTOS ANALYSIS** 

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Asbestos and Environmental Analysis

Job Number: 173327 Report Number: 173327R01 Report Date: 06/12/2017

Client Sample ID: 21078.051-0039 Sample ID: S39 Date Analyzed: 06/12/2017

**Client Sample Description:** Analyst: Stephanie Golden

**Asbestos Mineral Fibers** Layer Percent

Percent: Chrysotile Crocidolite Asbestos: Amosite Homogeneous

fibrous material, brown 100 % NAD

**Other Fibers** Fibrous Mineral Glass Cellulose Wool Other Synthetic Matrix

90 % 10 %

Client Sample ID: 21078.051-0040 Sample ID: S40 Date Analyzed: 06/12/2017

**Client Sample Description:** Analyst: Stephanie Golden

Percent **Asbestos Mineral Fibers** Layer

Percent: Chrysotile Amosite Crocidolite Asbestos: Homogeneous

compact granular 100 % NAD powder, off-white with

paint, off-white **Other Fibers Fibrous** Mineral

Glass Wool Other Cellulose Synthetic Matrix 100 %

Client Sample ID: 21078.051-0041 Sample ID: S41 Date Analyzed: 06/10/2017 **Client Sample Description:** Stephanie Golden Analyst: **Asbestos Mineral Fibers** Layer Percent Percent: Chrysotile Amosite Crocidolite Asbestos: Layer 01 95 % NAD rubbery material, tan Layer 02 mastic, yellow/black 5% NAD Fibrous **Other Fibers** Mineral Glass Wool Synthetic Other Cellulose Matrix Layer 01 100 % 100 % Layer 02

b/Cor Portland, Inc. BULK SAMPLE ASBESTOS ANALYSIS

Phone: (503) 224-5055 http://www.labcorpdx.net

Job Number:	173327	Report Number: 1	173327R01
		Papart Data: (	16/12/2017

Client Sample ID:	21078.051	-0042		Sample ID:	S42		Date Analyzed:	06/10/2017
Client Sample Descr	iption:						Analyst:	Stephanie Golden
<u>Asbestos Mineral Fi</u>		Layer Percent:	Chrysotile	Amosite	Crocidolite			Percent Asbestos:
Layer 01								
fibrous backing, g	ray	95 %	-	-	-			NAD
Layer 02								
brittle mastic, dark	brown	5 %	-	-	-			NAD
Other Fibers	Fibrous		Mineral			0.1		
	Glass	Cellulos	e Wool	Synthetic		Other		Matrix
Layer 01	-	100 %	-	-		-	-	0 %
Layer 02	-	3 %	-	-		-	-	97 %

Client Sample ID: 2	21078.05°	1-0043		Sample ID: S43			Date Analyzed:	06/10/2017	
Client Sample Descr	iption:						Analyst:	Stephanie Golden	
Asbestos Mineral Fil		Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Homogeneous									
woven fibers, blac	k	100 %	-	-	-				NAD
Other Fibers	Fibrous Glass	Cellulos		Synthetic		Other		Matri	x
	-	100 %	-	-		-	-	0 9	%

Client Sample ID:	21078.05	1-0044		Sample ID: S44			Date Analyzed:	06/10/2017	
Client Sample Descr	iption:						Analyst:	Stephanie Golden	
Asbestos Mineral Fi	sbestos Mineral Fibers Layer Percent:		Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Homogeneous woven fibers, blue		100 %	-	-	-				NAD
Other Fibers	Fibrous Glass	_		Synthetic		Other	-	Matr 0 °	

**BULK SAMPLE ASBESTOS ANALYSIS** 

Phone: (503) 224-5055 http://www.labcorpdx.net

Job Number:	173327	Report Number: 1	173327R01
		Papart Data: (	16/12/2017

								neport Date. 00/12/2017
Client Sample ID: 2	1078.051	1-0045		Sample ID:	S45		Date Analyzed:	06/10/2017
Client Sample Descri	ption:						Analyst:	Stephanie Golden
Asbestos Mineral Fib		Layer Percent:	Chrysotile	Amosite	Crocidolite			Percent Asbestos:
Layer 01								
fine compact powd white with paint, of		15 %	3 %	-	-			3 %
Layer 02								
paper backing, off-	white	8 %	-	-	-			NAD
Layer 03								
fine compact powd white	ler, off-	10 %	3 %	-	-			3 %
Layer 04								
compact chalky ma with paper, white	aterial	67 %	-	-	-			NAD
Other Fibers	Fibrous	3	Mineral					
	Glass	Cellulos	e Wool	Synthetic		Other		Matrix
Layer 01	-	-	-	-		-	-	97 %
Layer 02	-	100 %	-	-		-	-	0 %
Layer 03	-	-	-	-		-	-	97 %
Layer 04	-	5 %	-	-		-	-	95 %

Client Sample ID:	21078.051	1-0046		Sample ID:	S46		Date Analyzed:	06/10/2017	
Client Sample Desci	ription:						Analyst:	Stephanie Golden	1
Asbestos Mineral Fi		Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Homogeneous fibrous backing, black/brown		100 %	-	-	-				NAD
Other Fibers	Fibrous Glass -	Cellulos 85 %	Mineral Se Wool	Synthetic		Other -	-	Matr 15	rix %

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85 %

5 %

100 %

Layer 01

Layer 02

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**BULK SAMPLE ASBESTOS ANALYSIS** 

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15%

95 %

0 %

Asbestos and Environmental Analysis

Job Number: 173327 Report Number: 173327R01 Report Date: 06/12/2017

Client Sample ID: 21078.051-0047 Sample ID: S47 Date Analyzed: 06/10/2017

**Client Sample Description:** Analyst: Stephanie Golden

**Asbestos Mineral Fibers** Layer Percent Asbestos:

Percent: Chrysotile Crocidolite Amosite

Homogeneous fibrous backing, 100 % NAD

black/brown

Fibrous **Other Fibers** Mineral Glass Wool Other Cellulose Synthetic Matrix

06/10/2017 Client Sample ID: 21078.051-0048 Sample ID: S48 Date Analyzed: Client Sample Description: Analyst: Stephanie Golden **Asbestos Mineral Fibers** Laver Percent Percent: Chrysotile Amosite Crocidolite Asbestos: Layer 01 granular material, gray 60 % NAD Layer 02 loose fibers, tan 40 % NAD **Fibrous** Other Fibers Mineral Glass Other Wool Cellulose Synthetic Matrix

Client Sample ID: 21078.051-0049 Sample ID: S49 Date Analyzed: 06/10/2017 **Client Sample Description:** Analyst: Stephanie Golden Percent **Asbestos Mineral Fibers** Layer Percent: Chrysotile Amosite Crocidolite Asbestos: Layer 01 98 % hard vinyl, tan NAD Layer 02 2 % granular material, gray NAD Mineral **Other Fibers** Fibrous Glass Wool Synthetic Other Cellulose Matrix Layer 01 100 % Layer 02 100 %

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### **BULK SAMPLE ASBESTOS ANALYSIS**

Phone: (503) 224-5055 http://www.labcorpdx.net

Job Number: 17332	7						-	ort Number: 173327R01 Report Date: 06/12/2017
Client Sample ID: 2. Client Sample Descrip	1078.05 <sup>-</sup> otion:	1-0050		Sample ID:	S50		Date Analyzed: Analyst:	06/10/2017 Stephanie Golden
Asbestos Mineral Fib		Layer Percent:	Chrysotile	Amosite	Crocidolite		•	Percent Asbestos:
Layer 01								
rubbery material, br	rown	99 %	-	-	-			NAD
Layer 02								
mastic, tan		1 %	-	-	-			NAD
Other Fibers	Fibrous Glass	_	Mineral se Wool	Synthetic		Other		Matrix
Layer 01	-	-	-	-		-	-	100 %
Laver 02	-	2 %	_	_		_	_	98 %

Client Sample ID:		-0051		Sample ID:	S51		Date Analyzed: Analyst:	06/10/2017 Stephanie Golden
Asbestos Mineral Fi		Layer Percent:	Chrysotile	Amosite	Crocidolite			Percent Asbestos:
Layer 01								
rubbery material, g	gray	90 %	-	-	-			NAD
Layer 02								
sticky mastic, brow	wn	10 %	-	-	-			NAD
Other Fibers	Fibrous Glass	Cellulos	Mineral e Wool	Synthetic		Other		Matrix
Layer 01	-	-	-	-		-	-	100 %
Layer 02	-	-	-	-		-	-	100 %

Client Sample ID:	21078.05	1-0052		Sample ID:	S52		Date Analyzed:	06/10/2017	
Client Sample Desc	cription:						Analyst:	Stephanie Golden	1
Asbestos Mineral I	<u>Fibers</u>	Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Homogeneous rubbery material	, white	100 %	-	-	-				NAD
Other Fibers	Fibrou Glass	-	Mineral se Wool	Synthetic		Other -	-	Matr 100	ix ) %

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### **BULK SAMPLE ASBESTOS ANALYSIS**

Phone: (503) 224-5055 http://www.labcorpdx.net

Asbestos and Environmental Analysis

Job Number: 173327 Report Number: 173327R01 Report Date: 06/12/2017

Client Sample ID: 21078.051-0053 Sample ID: S53 06/10/2017 Date Analyzed:

**Client Sample Description:** Analyst: Stephanie Golden

**Asbestos Mineral Fibers** Layer Percent

Percent: Chrysotile Amosite Crocidolite Asbestos:

Homogeneous hard compact powder, 100 % Trace < 1 %

off-white Mineral **Other Fibers Fibrous** 

Glass Cellulose Other Wool Synthetic Matrix 100 %

06/10/2017 Client Sample ID: 21078.051-0054 Sample ID: S54 Date Analyzed:

Client Sample Description: Analyst: Stephanie Golden

**Asbestos Mineral Fibers** Laver Percent

Percent: Chrysotile Amosite Crocidolite Asbestos: Homogeneous

ceramic, red 100 %

NAD

**Other Fibers Fibrous** Mineral

Glass Other Wool Cellulose Synthetic Matrix 100 %

This laboratory participates in the National Voluntary Laboratory Accreditation Program (NVLAP). Testing method is per 40 CFR 763 Subpart F, Appendix A, 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:

Stephanie Golden **Technical Manager** 

Page 22 of 8



**IPBS** 

6 Lot 2

### TRANSMITTAL AND CHAIN OF CUSTODY FOR ASBESTOS BULK SAMPLES

	rrant that the information provided is amplete the form, keep a copy and retu			
SENDER		RECEIVER		
Date Sent: June 07, 20	017	Date Receiv	ved: 6-7-17	
PBS Engineering and Envi	ronmental Inc.	Company:	Lab Cor	٨
Portland, OR 97239		Address:	4321 SW Corbett Ave Ste	A
503.248.1939, Fax: 866.72	7.0140		Portland, OR 97239 503-224-5055	
	eades	<u>Jillian</u> Name	Lambert	
NEDMEADLY Authorized Signature	<u>U17</u> 2:21P Date Time	Aillian) Authorized	Signature Date	7:75PM Time
Sender's ID No.	<b>Brief Description</b>	ı	Receiver's ID No.	
21078.051-0001		_		_
21078.051-0002		_		<b>→</b>
21078.051-0003		-		<del>_</del>
21078.051-0004		-		<b></b>
21078.051-0005	·	_		_
21078.051-0006		_		_
21078.051-0007		<del>-</del>		_
21078.051-0008		_		# 
21078.051-0009		-		_
21078.051-0010		_		_
21078.051-0011		_		_
21078.051-0012		_		_
21078.051-0013		_		_

21078.051-0014

Project No.:

21078.051

Phase 0001

1,422 C. 4



### TRANSMITTAL AND CHAIN OF CUSTODY FOR ASBESTOS BULK SAMPLES 21078.051-0015 21078.051-0016 21078.051-0017 21078.051-0018 21078.051-0019 21078.051-0020 21078.051-0021 . 21078.051-0022 21078,051-0023 21078.051-0024 21078.051-0025 21078.051-0026 21078.051-0027 21078.051-0028 21078.051-0029 21078.051-0030 21078.051-0031 21078.051-0032 21078.051-0033 21078.051-0034 21078.051-0035 21078.051-0036 21078.051-0037 21078.051-0038 21078.051-0039



173327 p3 of 3

### TRANSMITTAL AND CHAIN OF CUSTODY FOR ASBESTOS BULK SAMPLES 21078.051-0040 21078.051-0041 21078.051-0042 21078.051-0043 21078,051-0044 21078.051-0045 21078.051-0046 21078.051-0047 21078.051-0048 21078.051-0049 21078.051-0050 21078.051-0051 21078.051-0052 21078.051-0053 21078.051-0054 Please analyze the enclosed 54 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: 48 Hour SPECIAL INSTRUCTIONS:

### LabCor Lab/Cor Portland, Inc.

**BULK SAMPLE ASBESTOS ANALYSIS** 

Phone: (503) 224-5055 http://www.labcorpdx.net

4321 SW Corbett Ave., Ste A
Portland, OR 97239

Asbestos and Environmental Analysis

**<u>Client:</u>** PBS Engineering and Environmental

4412 SW Corbett Avenue Portland, OR 97239 **Report Number:** 174217R01 **Report Date:** 07/13/2017

**P.O. No:** n/a

Job Number: 174217

**Project Name:** 

Inc

Project Number: 21078.051 Phase 0001

**Project Notes:** 

Client Sample ID: 2	1078.051	-0055		Sample ID:	S1		Date Analyzed:	07/13/2017	
Client Sample Descrip	otion:						Analyst:	Stephanie Golden	
Asbestos Mineral Fib		Layer Percent:	Chrysotile	Amosite	Crocidolite			Percen Asbesto	-
Layer 01									
paint, silver		2 %	-	-	-			NA	AD
Layer 02									
thick rocky fibrous t black	ar,	80 %	-	-	-			N/	AD
Layer 03									
compressed fibers, brown		18 %	-	-	-			N/	AD
Other Fibers	Fibrous		Mineral						
	Glass	Cellulos	se Wool	Synthetic		Other		Matrix	
Layer 01	-	-	-	-		-	-	100 %	
Layer 02	-	-	-	10 %		-	-	90 %	
Layer 03	-	100 %	-	-		-	-	0 %	

Client Sample ID:	21078.05	1-0056		Sample ID:	S2		Date Analyzed:	07/13/2017	
Client Sample Desc	ription:						Analyst:	Stephanie Golden	
Asbestos Mineral F	<u>ibers</u>	Layer Percent:	Chrysotile	Amosite	Crocidolite				Percent Asbestos:
Homogeneous									
thick rocky fibrous black	s tar,	100 %	-	-	-				NAD
Other Fibers	Fibrou Glass	-	Mineral se Wool	Synthetic		Other		Matri	×
	5 %	2 %	-	-		-	-	93	%



### LabCor Portland, Inc. 4321 SW Corbett Ave., Ste A

5 %

2 %

**BULK SAMPLE ASBESTOS ANALYSIS** 

Phone: (503) 224-5055 http://www.labcorpdx.net

93 %

Portland, OR 97239

Asbestos and Environmental Analysis

 Job Number:
 174217

 Report Number:
 174217R01

 Report Date:
 07/13/2017

<u>Client Sample ID:</u> **21078.051-0057** Sample ID: S3 Date Analyzed: 07/13/2017

Client Sample Description: Analyst: Stephanie Golden

Asbestos Mineral Fibers Layer Percent: Chrysotile Amosite Crocidolite Asbestos:

Percent: Chrysotile Amosite Crocidolite

Homogeneous

thick rocky fibrous tar, 100 % - - - NAD

black

 Other Fibers
 Fibrous
 Mineral

 Glass
 Cellulose
 Wool
 Synthetic
 Other
 Matrix

07/13/2017 Client Sample ID: 21078.051-0058 Sample ID: S4 Date Analyzed: **Client Sample Description:** Analyst: Stephanie Golden **Asbestos Mineral Fibers** Laver Percent Percent: Chrysotile Amosite Crocidolite Asbestos: Layer 01 rocky fibrous tar, black 35 % NAD Layer 02 rocky fibrous tar, black 35 % NAD Layer 03 30 % NAD fibrous tar, black

Other Fibers **Fibrous** Mineral Other Glass Wool Cellulose Synthetic Matrix Layer 01 18 % 82 % Layer 02 18 % 82 % Layer 03 10 % 25 % 65 %

Client Sample Description: Analyst: Stephanie Golden

Asbestos Mineral Fibers Layer Percent

Percent: Chrysotile Amosite Crocidolite Asbestos:

Homogeneous

thick rocky fibrous tar, 100 % - - - NAD

black

<u>Other Fibers</u> Fibrous Mineral

Glass Cellulose Wool Synthetic Other Matrix

10 % 5 % - - - - - 85 %



#### LabCor Lab/Cor Portland, Inc. Portland 4321 SW Corbett Ave., Ste A Inc

Portland, OR 97239

#### **BULK SAMPLE ASBESTOS ANALYSIS**

Phone: (503) 224-5055 http://www.labcorpdx.net

Asbestos and Environmental Analysis

Job Number: 174217 Report Number: 174217R01 **Report Date:** 07/13/2017

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- · 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:

Stephanie Golden

**Technical Manager** 



### TRANSMITTAL AND CHAIN OF CUSTODY FOR ASBESTOS BULK SAMPLES

Individuals signing this form warrant that the information provided is correct and complete. The Sender should keep a copy and send the

immediately to S		чесе те јоти, кеер и сору ина тегин				
SENDER			RECEIVER			
Date Sent:	July 12, 2017		Date Receiv	ved: <u>ユーノて</u>	14	<del></del>
_	ng and Enviror	nmental Inc.	Company:	Lab Cor		
4412 SW Corb			Address:	4321 SW Corbe		
Portland, OR 9				Portland, OR 9	7239	
503.248.1939,	Fax: 866.727.0	P		503-224-5055		
Harle	<u>1 Edm</u>	eados	Villia	n Lambe	<del></del>	
Name	) ^		Name	_		
Authorized Sig	ady-	7 12  :13 Date Time	Authorized	<u>Nounford</u> Signature	7-17 Date	1:79 PN Time
Sender's ID No	D.	Brief Description		Receiver's ID No	•	
21078.051-005	5	· 		· 		
21078.051-005	6					
21078.051-005	7					
21078,051-005	8				•	
21078.051-005	9					
notification if s	the enclosed 5 : amples will be o results by:	•	using PLM with	dispersion stainir	ı <b>g. PB</b> S reqi	uests prior
•	-	to the above address?				
TURNAROUNI	D DESIRED:	24 Hour				
SPECIAL INST	RUCTIONS:					

Project No.:

21078.051

Phase 0001



#### LABORATORY REPORT

PBS Engineering & Environmental 4412 Southwest Corbett Ave. Portland, OR 97239

Attn: Hailey Edmeades Phone: 503-417-7594

Email: hailey.edmeades@pbsenv.com

RJ Lee Group Job No.: PA090620170005 Samples Received: June 9, 2017 Report Date: June 16, 2017

Client Project: 21078.051 Phase 0001

Purchase Order No.: N/A Matrix: Solid

Prep/Analysis: EPA 3050B / EPA 7000B-Paint

				Sample Co	oncentration	Minimum R	eporting Limit		
Client Sample ID	RJ Lee Group ID	Sampling Date	Analyte	Weight Percent (%)	Parts per Million (PPM) - mg/kg	Weight Percent (%)	Parts per Million (PPM) - mg/kg	Analysis Date	Q
LB21078.051-1001	PA090620170005-001	NP	Lead	0.48	4800	0.017	170	06/16/2017	AN
LB21078.051-1002	PA090620170005-002	NP	Lead	0.093	930	0.0099	99	06/16/2017	AN
LB21078.051-1003	PA090620170005-003	NP	Lead	< 0.0099	< 99	0.0099	99	06/16/2017	AN
LB21078.051-1004	PA090620170005-004	NP	Lead	0.44	4400	0.0099	99	06/16/2017	AN
LB21078.051-1005	PA090620170005-005	NP	Lead	0.046	460	0.011	110	06/16/2017	AN
LB21078.051-1006	PA090620170005-006	NP	Lead	0.27	2700	0.014	140	06/16/2017	AN
LB21078.051-1007	PA090620170005-007	NP	Lead	20	200000	0.010	100	06/16/2017	AN

#### Comments:

Report Qualifiers (Q).

P: PA-DEP Accredited (PA DEP Lab ID 02-00396, NELAP)

N: NY ELAP Accredited (NY ELAP Lab Code 10884)

C: CA ELAP Accredited (CA ELAP Certificate 1970)

A: AIHA-LAP, LLC Accredited (Lab ID 100364)

E = Value above highest calibration standard

*J* = Value below lowest calibration standard but above MDL (Method Detection Limit)

L = LCS (Laboratory Control Standard)/SRM (Standard Reference Material) recovery

outside accepted recovery limits

H = Holding times for preparation or analysis exceeded

- : Test (analyte-matrix-preparation-analysis) is performed under RJLG's General Quality System requirements and is not part to any of the above scopes of accredidations

B = Analyte detected in the associated Method Blank

S = Spike Recovery outside accepted limits

R = RPD (relative percent difference) outside accepted limits

D = RL (reporting limit verification) outside accepted limits

NP = Not Provided

These results are submitted pursuant to RI Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted. Unless notified in writing to return the samples covered by this report, RJ Lee Group will store the samples for a period of thirty (30) days before discarding. A shipping and handling fee will be assessed for the return of any samples.

This laboratory operates in accord with ISO 17025:2005 guidelines, and holds a limited scope of accreditations under different accrediting agencies; refer to http://www.rjlg.com/about-us/accreditations/ for more information and current status. Unless it is specifically stated otherwise (under the Q column using the appropriate accrediting agency qualifier(s)) the work contained in this report is performed under RILG's General Quality System requirements and is not part of any scope of accreditations. This report may not be used to claim product endorsement by any laboratory accrediting agency. The results contained in this report relate only to the items tested or to the sample(s) as received by the laboratory. Any reproduction of this document must be in full for the report to be valid.

Unless otherwise noted (either in the comments section of the report and/or with the appropriate qualifiers under the report qualifiers (Q) column) the following apply: (a) Samples were received in good condition, (b) All QC samples are within acceptable established limits, (c) All samples designated as NELAP meet the requirements of the NELAC standard; if not applicable qualifiers will be used to designate the non-compliance and (d) Results have not been blank corrected. Quality Control data is available upon request.

> Philip Servicelle
> Philip Grindle Laboratory Supervisor





Phase 0001

### TRANSMITTAL AND CHAIN OF CUSTODY FOR LEAD BULK SAMPLES

Individuals signing this form warrant that the information provided i original. The Receiver should complete the form, keep a copy and ret package immediately to Sender.		
SENDER	RECEIVER	
<b>Date Sent:</b> June 07, 2017	Date Received: Supplied 10000	
PBS Engineering and Environmental Inc.	Company: R.J. Lee Group	
4412 SW Corbett Avenue	Address: 350 Hochberg Road	
Portland, OR 97239	Monroeville, PA 15146 724-325-1776	
503.248.1939, Fax: 866.727.0140  Harley Edme ades  Name	Name 724-325-1776	
JEDMEROLL 1017	11 double	Medab
Authorized Signature Date	Authorized Signature	Date
Sender's ID No. Brief Description  LB21078.051-1001	Receiver's ID No.	
LB21078.051-1002		
LB21078.051-1003		
LB21078.051-1004		
LB21078.051-1005	10-	
LB21078.051-1006		
LB21078.051-1007		
	nclosed 7 sample(s) for LEAD content using Atomic Absorp otification if samples will be disposed.	otion Method.
☐ Soil/Misc.	the results to the above address.	
☐ Air TURNAROUND	DESIRED:	
☐ TCLP 5 Day		
SPECIAL INSTRUCTIONS:	ρ. [	æ

**Project No.:** 

21078.051

# THIS IS TO CERTIFY THAT JOE LUCAS

# 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:

01/20/2017

Course Location:

Portland, OR

Certificate:

IR-17-3527B



Engineering + Environmental Refresher Training Held Online

**Expiration Date:** 

01/20/2018

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

Greg Baker, Instructor

### THIS IS TO CERTIFY THAT

### **JAMES MASTANDUNO**

# 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:

01/05/2017

Course Location:

Portland, OR

Certificate:

IR-17-4993B



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

Expiration Date:\_\_\_

01/05/2018

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

Greg Baker, Instructor