

April 22, 2021

City of Wilson, Inspections Department
P.O. Box 10
Wilson, NC 27894-0010

CLIENT PROJECT: 901 Raleigh
CEI LAB CODE: A214702

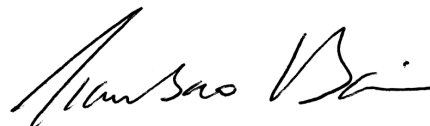
Dear Customer:

Enclosed are asbestos analysis results for PLM Bulk samples received at our laboratory on April 19, 2021. The samples were analyzed for asbestos using polarizing light microscopy (PLM) per the EPA 600 Method.

Sample results containing >1% asbestos are considered asbestos-containing materials (ACMs) per EPA regulatory requirements. The detection limit for the EPA 600 Method is <1% asbestos by weight as determined by visual estimation.

Thank you for your business and we look forward to continuing good relations.

Kind Regards,



Tianbao Bai, Ph.D., CIH
Laboratory Director



CEI

ASBESTOS ANALYTICAL REPORT

By: Polarized Light Microscopy

Prepared for

City of Wilson, Inspections Department

CLIENT PROJECT: 901 Raleigh

LAB CODE: A214702

TEST METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORT DATE: 04/22/21

TOTAL SAMPLES ANALYZED: 22

SAMPLES >1% ASBESTOS: 2



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Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: 901 Raleigh

LAB CODE: A214702

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
#1		A68032	White,Tan	Ceiling Tile	None Detected
#2		A68033	White	Insulation	None Detected
#3		A68034	Red	Carpet	None Detected
#4		A68035	White	Drywall	None Detected
#5		A68036	White	Wall Stucco	None Detected
#6		A68037	Gray	Insulation	None Detected
#7		A68038	Red-Tan	Carpet Roll	None Detected
#8		A68039	White	Ceiling Board / Mud	None Detected
#9	Layer 1	A68040	Cream	Wall Plaster Skim Coat	None Detected
	Layer 2	A68040	Beige	Wall Plaster Base Coat	None Detected
#10	Layer 1	A68041	Tan	Ceramic Tile Mastic	None Detected
	Layer 2	A68041	Cream	Leveling Compound	None Detected
#11		A68042A	Black	Floor Tile	None Detected
	Layer 1	A68042B	Brown	Mastic	None Detected
	Layer 2	A68042B	Black	Backing Material	None Detected
#12		A68043	White	Pipe Insulation	Chrysotile 65%
#13		A68044	White	Pipe Elbow Insulation	Chrysotile 65%
#14	Layer 1	A68045	White	Wall Plaster Skim Coat	None Detected
	Layer 2	A68045	Beige	Wall Plaster Base Coat	None Detected
#15		A68046	Beige	Ceiling Plaster	None Detected
#16	Layer 1	A68047	White	Wall Plaster Surfacing	None Detected
	Layer 2	A68047	Cream	Wall Plaster Skim Coat	None Detected
	Layer 3	A68047	Beige	Wall Plaster Base Coat	None Detected
#17		A68048	White	Ceiling Plaster	None Detected
#18		A68049	White	Shell	None Detected
#19	Layer 1	A68050	Cream	Wall Plaster Skim Coat	None Detected
	Layer 2	A68050	Beige	Wall Plaster Base Coat	None Detected
#20		A68051	White,Gray	Window Glazing	None Detected
#21		A68052	Gray	Roof Shingle	None Detected
#22		A68053	Black	Roof Paper	None Detected



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ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

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Lab Code: A214702
Date Received: 04-19-21
Date Analyzed: 04-22-21
Date Reported: 04-22-21

Project: 901 Raleigh

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous	Non-Fibrous			
#1 A68032	Ceiling Tile	Heterogeneous White, Tan Fibrous Loosely Bound	95%	Cellulose	5%	Paint	None Detected
#2 A68033	Insulation	Homogeneous White Fibrous Loose	98% 2%	Fiberglass Mineral Wool			None Detected
#3 A68034	Carpet	Heterogeneous Red Fibrous Bound	10% 75%	Fiberglass Synthetic Fiber	15%	Binder	None Detected
#4 A68035	Drywall	Heterogeneous White Fibrous Bound	10%	Cellulose	90%	Gypsum	None Detected
#5 A68036	Wall Stucco	Homogeneous White Fibrous Bound	<1% <1%	Cellulose Hair	60% 40%	Binder Silicates	None Detected
#6 A68037	Insulation	Homogeneous Gray Fibrous Loose	98% 2%	Fiberglass Mineral Wool			None Detected
#7 A68038	Carpet Roll	Heterogeneous Red-Tan Fibrous Loosely Bound	100%	Cellulose			None Detected



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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
#8 A68039	Ceiling Board / Mud	Heterogeneous	10%	Cellulose	15%	Calc Carb	None Detected
		White			10%	Binder	
		Fibrous			65%	Gypsum	
		Bound					
#9 Layer 1 A68040	Wall Plaster Skim Coat	Heterogeneous	2%	Cellulose	3%	Paint	None Detected
		Cream			95%	Binder	
		Fibrous					
		Bound					
Layer 2 A68040	Wall Plaster Base Coat	Homogeneous	<1%	Cellulose	60%	Binder	None Detected
		Beige			40%	Silicates	
		Fibrous					
		Bound					
#10 Layer 1 A68041	Ceramic Tile Mastic	Homogeneous	2%	Cellulose	60%	Mastic	None Detected
		Tan			38%	Calc Carb	
		Fibrous					
		Bound					
Layer 2 A68041	Leveling Compound	Homogeneous	<1%	Cellulose	60%	Binder	None Detected
		Cream			40%	Silicates	
		Fibrous					
		Bound					
#11 A68042A	Floor Tile	Homogeneous	2%	Cellulose	60%	Vinyl	None Detected
		Black			38%	Calc Carb	
		Fibrous					
		Bound					
Layer 1 A68042B	Mastic	Homogeneous	2%	Cellulose	60%	Mastic	None Detected
		Brown			38%	Calc Carb	
		Fibrous					
		Bound					

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
Layer 2 A68042B	Backing Material	Homogeneous Black Fibrous Bound	65%	Cellulose	35%	Tar	None Detected
#12 A68043	Pipe Insulation	Heterogeneous White Fibrous Loosely Bound	15%	Cellulose	20%	Binder	65% Chrysotile
#13 A68044	Pipe Elbow Insulation	Homogeneous White Fibrous Loosely Bound	15%	Cellulose	20%	Binder	65% Chrysotile
#14 Layer 1 A68045	Wall Plaster Skim Coat	Homogeneous White Fibrous Bound	2%	Cellulose	98%	Binder	None Detected
Layer 2 A68045	Wall Plaster Base Coat	Homogeneous Beige Fibrous Bound	<1% <1%	Cellulose Hair	60% 40%	Binder Silicates	None Detected
#15 A68046	Ceiling Plaster	Homogeneous Beige Fibrous Bound	<1% <1%	Cellulose Hair	60% 40%	Binder Silicates	None Detected
#16 Layer 1 A68047	Wall Plaster Surfacing	Homogeneous White Fibrous Bound	2%	Cellulose	80% 18%	Calc Carb Binder	None Detected



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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
Layer 2 A68047	Wall Plaster Skim Coat	Heterogeneous Cream Fibrous Bound	2%	Cellulose	3%	Paint Binder	None Detected
Layer 3 A68047	Wall Plaster Base Coat	Homogeneous Beige Fibrous Bound	<1%	Cellulose	60%	Binder Silicates	None Detected
#17 A68048	Ceiling Plaster	Homogeneous White Fibrous Bound	2%	Cellulose	98%	Binder	None Detected
#18 A68049	Shell	Heterogeneous White Fibrous Bound	2%	Cellulose	3%	Paint Binder	None Detected
#19 Layer 1 A68050	Wall Plaster Skim Coat	Homogeneous Cream Fibrous Bound	2%	Cellulose	98%	Binder	None Detected
Layer 2 A68050	Wall Plaster Base Coat	Homogeneous Beige Fibrous Bound	<1%	Cellulose	60%	Binder Silicates	None Detected
#20 A68051	Window Glazing	Heterogeneous White, Gray Fibrous Bound	3%	Talc	2%	Paint Binder	None Detected



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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
#21 A68052	Roof Shingle	Heterogeneous Gray Fibrous Bound	25%	Fiberglass	10%	Gravel Tar	None Detected
#22 A68053	Roof Paper	Homogeneous Black Fibrous Bound	60%	Cellulose	40%	Tar	None Detected

LEGEND: Non-Anth = Non-Asbestiform Anthophyllite
 Non-Trem = Non-Asbestiform Tremolite
 Calc Carb = Calcium Carbonate

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORTING LIMIT: <1% by visual estimation

REPORTING LIMIT FOR POINT COUNTS: 0.25% by 400 Points or 0.1% by 1,000 Points

REGULATORY LIMIT: >1% by weight

Due to the limitations of the EPA 600 method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles can be difficult to analyze via polarized light microscopy (PLM). EPA recommends that all NOBs analyzed by PLM, and found not to contain asbestos, be further analyzed by Transmission Electron Microscopy (TEM). Please note that PLM analysis of dust and soil samples for asbestos is not covered under NVLAP accreditation. *Estimated measurement of uncertainty is available on request.*


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Information provided by customer includes customer sample ID and sample description.

ANALYST:


Shilpa Ladekar

APPROVED BY:


Tianbao Bai, Ph.D., CIH
Laboratory Director



CEI

CHAIN OF CUSTODY

730 SE Maynard Road, Cary, NC 27511
 Tel: 866-481-1412; Fax: 919-481-1442

LAB USE ONLY:

CEI Lab Code: A214702

CEI Lab I.D. Range: A68032-A68053

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COMPANY INFORMATION	PROJECT INFORMATION
CEI CLIENT #:	Job Contact: <u>Brooks Wadsworth</u>
Company: <u>City of Wilson</u>	Email / Tel: <u>bwadsworth@wilsonnc.org</u>
Address: <u>PO Box 10</u>	Project Name: <u>901 Raleigh</u>
<u>Wilson, NC 27894</u>	Project ID#:
Email:	PO #:
Tel: <u>(252)399-2240</u> Fax:	STATE SAMPLES COLLECTED IN:

IF TAT IS NOT MARKED STANDARD 3 DAY TAT APPLIES.

ASBESTOS	METHOD	TURN AROUND TIME					
		4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY
PLM BULK	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PLM POINT COUNT (400)	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM POINT COUNT (1000)	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM GRAV w POINT COUNT	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM BULK	CARB 435	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PCM AIR	NIOSH 7400	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	EPA AHERA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	NIOSH 7402	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR (PCME)	ISO 10312	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	ASTM 6281-15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM BULK	CHATFIELD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM DUST WIPE	ASTM D6480-05 (2010)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM DUST MICROVAC	ASTM D5755-09 (2014)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM SOIL	ASTM D7521-16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM VERMICULITE	CINCINNATI METHOD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM QUALITATIVE	IN-HOUSE METHOD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OTHER:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

REMARKS / SPECIAL INSTRUCTIONS:

Accept Samples

Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
<u>[Signature]</u>	<u>4/15/2021 4:15 pm</u>	<u>JB</u>	<u>4/19 8:00</u>

Samples will be disposed of 30 days after analysis



SAMPLING FORM

CEI

COMPANY CONTACT INFORMATION	
Company: <i>City of Wilson</i>	Job Contact: <i>Brooks Wadsworth</i>
Project Name: <i>901 Raleigh</i>	
Project ID #:	Tel: <i>(252) 359-2240</i>

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST			
			PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#1	Ceiling Tile Rm A		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#2	Insulation Rm A		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#3	Carpet Rm A		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#4	Wall Rm A		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#5	Wall Stucco Rm A		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#6	Insulation (Gray) Rm A		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#7	Carpet Roll Rm A		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#8	Ceiling Board Rm A		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#9	Wall Plaster Rm B		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#10	Mastick Rm B		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#11	Floor Tile Rm C		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#12	Pipe Insulation Rm D		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#13	Pipe Elbow Insulation Rm D		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#14	Wall Plaster Rm E		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#15	Ceiling Rm F		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#16	Plaster Wall-repair Rm F		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#17	Ceiling Plaster Rm G		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#18	Shell Rm G		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#19	Wall Plaster Rm G		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
#20	Window Glazing		PLM	<input checked="" type="checkbox"/>	TEM	<input type="checkbox"/>
#21	Roof Shingle		PLM	<input checked="" type="checkbox"/>	TEM	<input type="checkbox"/>
#22	Roof Paper		PLM	<input checked="" type="checkbox"/>	TEM	<input type="checkbox"/>
			PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
			PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
			PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
			PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
			PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
			PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>