

CHEROKEE NATION
Environmental Programs



Asbestos Sampling Report

PARTICIPANT: #13464

PREPARED BY: Chris Cochran _____ **DATE:** 7/16/2026

Christopher Cochran, Environmental Specialist II

REQUESTED BY: Housing Authority of the Cherokee Nation, Jamie Walters

TABLE OF CONTENTS

- I. SITE INSPECTION/DESCRIPTION
- II. BACKGROUND
- III. FIELD PROCEDURES AND ANALYTICAL METHODS
- IV. SUMMARY OF FINDINGS
- V. CONCLUSIONS

APPENDIX A: PROJECT SCOPE OF WORK

APPENDIX B: LABORATORY REPORT & CHAIN OF CUSTODY

I. Site Inspection/Description

Cherokee Nation Environmental Programs (CNEP) has conducted asbestos sampling for the presence of asbestos containing materials (ACM) for the following site:

Site Name:

Address: 1663 W Ash St Westville, OK 74965

Phone 918-575-9383

Lat/Long 35.9886, -94.549

The sampling was performed to determine the presence of all ACM from within the affected parts of the structure for EPA's National Emissions of Hazardous Air Pollutants (NESHAP) compliance as well as OSHA worker protection.

The inspector responsible for this project was: Christopher Cochran AHERA Inspector.

The sampling was conducted on 6/1/2026, at the request of the Housing Authority of the Cherokee Nation.

The site is a single-family home built in 1945. Sampling was limited to areas that would be affected by the project scope of work (Appendix A) provided by the rehabilitation department.

ACM **WAS** found at the last visit to the home.

II. BACKGROUND

The Oklahoma Department of Environmental Quality (ODEQ) has adopted EPA's NESHAP regulation under OAC252:100, 41-15 and has been delegated authority in the state of Oklahoma for its enforcement. Section 61.145(a) of Federal EPA regulation states that before commencement of the demolition or renovation of a facility a thorough inspection of the affected part or parts of a facility is required to determine the presence of all asbestos, including Category I and Category II non-friable, and friable ACM. ACM is defined by EPA and OSHA as any material that contains greater than 1% asbestos.

III. FIELD PROCEDURES AND ANALYTICAL METHODS

During the on-site inspection, we visually assessed the physical characteristics of suspect asbestos-containing materials (SACM) based on homogeneous areas. Homogeneous areas are areas of asbestos similar in color, texture, and construction, date of application, and in general appearance. For purposes of renovation and demolition, homogeneous areas of SACM can be further classified according to NESHAPs rules by whether the material is friable, Category I non-friable, or Category II non-friable.

Friable ACM is defined by NESHAPs rules as any material containing more than 1% asbestos as determined by Polarized Light Microscopy (PLM), that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure.

Category I Non-friable ACM is defined by NESHAPs rules as any asbestos-containing packings, gaskets, construction mastics, resilient floor covering (i.e. floor tiles, roll sheet flooring) or asphalt roofing products that contain more than 1% asbestos as determined by PLM.

Category II Non-friable ACM is defined by NESHAPs rules as any material, excluding Category I non-friable ACM, containing more than 1% asbestos as determined by PLM, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Typically, non-friable materials, such as transite (cementitious products) and vinyl floor tiles are not regulated by the State of Oklahoma provided they do not become friable. General deterioration, machine grinding, drilling, sanding, and dry-buffing are all ways of causing non-friable materials to become classified as Regulated Asbestos Containing Materials (RACM). All friable materials are classified RACM. Please note that the following materials, even though classified as non-friable are fully regulated by Oklahoma Department of Labor for removal purposes as friable material: ceiling tiles, roll sheet flooring (linoleum), and joint wall compound when deemed friable

In addition to classification of suspect material into friable and non-friable materials, a determination of current condition was conducted as part of the physical assessment. The condition noted is the representative of the material at the time of inspection. Conditions of materials can change very quickly when disturbed. All suspect material was placed in one of the following categories of condition.

Significantly damaged: Material that is damaged, blistered, deteriorated, water stained over at least 10% of its total area.

Damaged: Material that is damaged, blistered, deteriorated, water stained less than 10% of its total area.

Good: Material that has no visible damage or deterioration.

Guidelines used for the number of samples collected per homogeneous area were determined using the Asbestos Hazard Emergency Response Act (AHERA) protocol promulgated in 40 CFR 763, Appendix E as follows:

Surfacing materials – material that is sprayed or troweled on wall, ceilings, or support columns for fireproofing, acoustical, or even decorative purpose.

- Less than 1000 ft² – Minimum 3 samples
- From 1000-5000 ft² – Minimum 5 samples
- Greater than 5000 ft² – Minimum 7 samples

Thermal System Insulation(TSI) materials – thermal system insulation material applied to tanks, boiler, pipes or other structural component for an insulating purpose.

- May omit areas of fibrous glass, foam glass, rubber, and Styrofoam from sampling. Areas that have mastic on seams or outer jacketing will be sampled.
- At least three samples must be collected from each homogeneous area of TSI.
- Plus an additional sample from each patched area of less than 6 linear feet.
- Fittings require a sufficient amount to determine positive or negative nature.
- Inspector will first collect samples from damaged areas, exposed ends, or areas missing jacketing first.

Miscellaneous materials – all other material that are not thermal system insulation or surfacing materials. This includes gaskets, packings, joint wall compound, cementitious asbestos materials, ceiling tiles resilient flooring materials, construction mastics, etc.,

- May assume and document as such
- A sufficient amount of samples to determine negative or positive nature. A minimum or one per suspect homogeneous area.
- Collect samples from inconspicuous locations.
- Material such as cementitious asbestos or vibration dampening cloths should not be sampled and will be assumed ACM unless instructed by client to collect these samples.

Bulk samples of suspect ACM were analyzed by Polarized Light Microscopy (PLM) in accordance with EPA Methods 600R-93/116. All samples were sent to a NVLAP accredited laboratory for analysis. Pace Laboratories (NVLAP # 101959-0) in Oklahoma City, OK analyzed the samples. A copy of the full laboratory report and chain of custody can be found in Appendix B.

IV. SUMMARY OF FINDINGS

A total of 24 samples were analyzed from 9 homogeneous area due to multi-layers of material within some homogeneous sample areas. Pink and yellow insulation were not sampled at the site based on the inspector's visual assessment which deemed it to be fiberglass. All accessible and observable areas within the renovation area were sampled for ACM. Samples were not taken of suspect materials that may have placed the inspector at risk of injury (i.e. electrical panel boxes). Any suspect ACM that have not been tested and/or found positive for asbestos must be assumed ACM until they are analyzed. Upon review of laboratory analysis, the following asbestos containing materials can be found in Table 1. All suspect ACM samples that were analyzed and did not contain asbestos can be found in Table 2.

Table 1. Asbestos Containing Materials					
Sample #	Material Description	Locations	Friability (Friable, NF Cat I NF Cat II)	Condition	Sample Results (% Asbestos)
07-01	Green Roll Sheet Flooring/Mastic	Back Porch	NF CAT I	Damaged	12 % Chrysotile
Sample #	Click or tap here to enter text.	Click or tap here to enter text.	Choose an item.	Choose an item.	Click or tap here to enter text.
Sample #	Click or tap here to enter text.	Click or tap here to enter text.	Choose an item.	Choose an item.	Click or tap here to enter text.
Sample #	Click or tap here to enter text.	Click or tap here to enter text.	Choose an item.	Choose an item.	Click or tap here to enter text.
Sample #	Click or tap here to enter text.	Click or tap here to enter text.	Choose an item.	Choose an item.	Click or tap here to enter text.
Sample #	Click or tap here to enter text.	Click or tap here to enter text.	Choose an item.	Choose an item.	Click or tap here to enter text.
Sample #	Click or tap here to enter text.	Click or tap here to enter text.	Choose an item.	Choose an item.	Click or tap here to enter text.
Sample #	Click or tap here to enter text.	Click or tap here to enter text.	Choose an item.	Choose an item.	Click or tap here to enter text.

Table 2. Non – Asbestos Containing Materials				
Sample #	Material Description	Locations	Condition	Sample Results (% Asbestos)
01-01	Gray Shingle Roof	Toof	Choose an item.	None Detected
02-01	White Plaster Wall Texter	Through Out	Damaged	None Detected
03-01	Concrete wall	Inside exterior walls	Damaged	Less than 1 %
04-01	Dry eall ceiling	Through out	Damaged	None Detected
05-01	Brown Roll Sheet Flooring/Mastic	Bath Room	Damaged	None Detected
06-01	Yellow Floor Tile	Kitchen	Damaged	None Detected
08-01	Brown Roll Sheet Flooring / Mastic	Back Porch	Choose an item.	Click or tap here to enter text.
09-01	White Ceiling Tile	Back Porch	Damaged	None Detected
Sample #	Click or tap here to enter text.	Click or tap here to enter text.	Damaged	None Detected

Sample #	Click or tap here to enter text.	Click or tap here to enter text.	Choose an item.	Click or tap here to enter text.
----------	----------------------------------	----------------------------------	-----------------	----------------------------------

V. CONCLUSIONS

Asbestos is not always an immediate hazard. Intact and undisturbed ACM does not pose a health risk. They may, however, become a health hazard if they are damaged, disturbed, or deteriorate over time and release fibers into the air. There are no federal, state, or Tribal laws mandating asbestos removal. It is only when the material can no longer be maintained in good condition and/or airborne concentrations of asbestos are measured and found to be above a permissible exposure limit (PEL), or when the building is to be demolished or renovated, that removal may become necessary. Any renovation/demolition work which may impact these positive materials should be conducted in accordance with all applicable Federal, state, and local regulations.



Polarized Light Microscopy Asbestos Analysis Report

Pace Set ID: 504929		Client: Cherokee Nation Environmental Programs
Account Number: 69-000183		PO Box 948
Date Received: 06/03/2026		Tahlequah, OK 74464
Received By: Amanda Bass		
Date Analyzed: 06/04/2026	Project:	
Analyzed By: Tanner Smith	Project Location: West Ville	
Methodology: EPA/600/R-93/116	Project Number: N/A	

Pace Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
001	01-01	Homogeneous	Gray Shingle	Asbestos Not Present	Glass Fiber	15 Tar CaCO ₃ Sand
002	02-01	Layered	White/Tan Texture	Asbestos Not Present	NA	CaCO ₃ Paint
002a		Layered	Gray Plaster	Asbestos Not Present	NA	Gypsum Sand
003	03-01	Layered	White Caulk	Asbestos Not Present	NA	Glue Paint
003a		Layered	White Texture	Asbestos Not Present	NA	CaCO ₃ Paint
003b		Layered	White Texture	Asbestos Present Chrysotile <1	NA	CaCO ₃ Paint
003c		Layered	Gray Plaster	Asbestos Not Present	Cellulose Hair	2 Gypsum <1 Sand

Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis. Pace Analytical is a NVLAP accredited Testing PLM laboratory (Lab Code: 101959-0). This report relates only to the specific items tested. NVLAP accreditation applies only to analysis performed utilizing EPA—40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; and EPA/600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials. This report may not be used to claim product endorsement by NVLAP or any agency of the US Government. This report may not be reproduced except in full, without the written approval of the laboratory. If submitted samples are inhomogeneous in nature, then subsamples of the components will be analyzed separately. Samples determined to contain asbestos fibers, will have the following acceptable error ranges (1% = 0-3%, 5% = 1-9%, 10% = 5-15%, 20% = 10-30%, 50% = 40-60%, etc.) as specified per EPA Method 600/R-93/116, Table 2-1.



Polarized Light Microscopy Asbestos Analysis Report

Pace Set ID	504929	Client:	Cherokee Nation Environmental Programs
Account Number:	69-000183		PO Box 948
Date Received:	06/03/2026		Tahlequah, OK 74464
Received By:	Amanda Bass		
Date Analyzed:	06/04/2026	Project	
Analyzed By:	Tanner Smith	Project Location:	West Ville
Methodology:	EPA/600/R-93/116	Project Number:	N/A

Pace Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
004	04-01	Homogeneous	White Drywall	Asbestos Not Present	Cellulose 10	Gypsum Paint
005	05-01	Layered	Brown/White Flooring	Asbestos Not Present	NA	CaCO3 Vinyl
005a		Layered	Tan Mastic	Asbestos Not Present	NA	Glue
006	06-01	Layered	Yellow/White Floor Tile	Asbestos Not Present	NA	CaCO3 Vinyl
006a		Layered	Tan Mastic	Asbestos Not Present	NA	Glue
007	07-01	Homogeneous	Green Flooring	Asbestos Present Chrysotile 12	Cellulose 5	Vinyl Binder CaCO3
008	08-01	Layered	Brown/Gray Flooring	Asbestos Not Present	Glass Fiber 5	Vinyl CaCO3

Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis. Pace Analytical is a NVLAP accredited Testing PLM laboratory (Lab Code: 101959-0). This report relates only to the specific items tested. NVLAP accreditation applies only to analysis performed utilizing EPA—40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; and EPA/600/R-93/116. Method for the Determination of Asbestos in Bulk Building Materials. This report may not be used to claim product endorsement by NVLAP or any agency of the US Government. This report may not be reproduced except in full, without the written approval of the laboratory. If submitted samples are inhomogeneous in nature, then subsamples of the components will be analyzed separately. Samples determined to contain asbestos fibers, will have the following acceptable error ranges (1% = 0-3%, 5% = 1-9%, 10% = 5-15%, 20% = 10-30%, 50% = 40-60%, etc.) as specified per EPA Method 600/R-93/116, Table 2-1.



Polarized Light Microscopy Asbestos Analysis Report

Pace Set ID: 504929
Account Number: 69-000183
Date Received: 06/03/2026
Received By: Amanda Bass
Date Analyzed: 06/04/2026
Analyzed By: Tanner Smith
Methodology: EPA/600/R-93/116

Client: Cherokee Nation Environmental Programs
PO Box 948
Tahlequah, OK 74464

Project

Project Location: West Ville
Project Number: N/A

Pace Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
008a		Layered	Gray Mastic	Asbestos Not Present	NA	Glue
009	09-01	Homogeneous	White Ceiling Tile	Asbestos Not Present	Cellulose Glass Fiber	50 Perlite 30 Paint
010	02-02	Layered	White/Tan Texture	Asbestos Not Present	NA	CaCO3 Paint
010a		Layered	Gray Plaster	Asbestos Not Present	NA	Gypsum Sand
011	02-03	Layered	White/Tan Texture	Asbestos Not Present	NA	CaCO3 Paint
011a		Layered	Gray Plaster	Asbestos Not Present	Hair	<1 Gypsum Sand
012	02-04	Layered	White/Tan Texture	Asbestos Not Present	NA	CaCO3 Paint

Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis. Pace Analytical is a NVLAP accredited Testing PLM laboratory (Lab Code: 101959-0). This report relates only to the specific items tested. NVLAP accreditation applies only to analysis performed utilizing EPA—40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; and EPA/600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials. This report may not be used to claim product endorsement by NVLAP or any agency of the US Government. This report may not be reproduced except in full, without the written approval of the laboratory. If submitted samples are inhomogeneous in nature, then subsamples of the components will be analyzed separately. Samples determined to contain asbestos fibers, will have the following acceptable error ranges (1% = 0-3%, 5% = 1-9%, 10% = 5-15%, 20% = 10-30%, 50% = 40-60%, etc.) as specified per EPA Method 600/R-93/116, Table 2-1.



Polarized Light Microscopy Asbestos Analysis Report

Pace Set ID: 504929
Account Number: 69-000183
Date Received: 06/03/2026
Received By: Amanda Bass
Date Analyzed: 06/04/2026
Analyzed By: Tanner Smith
Methodology: EPA/600/R-93/116

Client: Cherokee Nation Environmental Programs
PO Box 948
Tahlequah, OK 74464

Project:

Project Location: West Ville

Project Number: N/A

Pace Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
012a		Layered	Gray Plaster	Asbestos Not Present	Hair <1	Gypsum Sand
013	02-05	Layered	White/Tan Texture	Asbestos Not Present	NA	CaCO ₃ Paint
013a		Layered	Gray Plaster	Asbestos Not Present	Cellulose Hair <1	Gypsum Sand

Tanner Smith, Laboratory Analyst

6/5/2026

Date of Report

Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis. Pace Analytical is a NVLAP accredited Testing PLM laboratory (Lab Code: 101959-0). This report relates only to the specific items tested. NVLAP accreditation applies only to analysis performed utilizing EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; and EPA/600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials. This report may not be used to claim product endorsement by NVLAP or any agency of the US Government. This report may not be reproduced except in full, without the written approval of the laboratory. If submitted samples are inhomogeneous in nature, then subsamples of the components will be analyzed separately. Samples determined to contain asbestos fibers, will have the following acceptable error ranges (1% = 0-3%, 5% = 1-9%, 10% = 5-15%, 20% = 10-30%, 50% = 40-60%, etc.) as specified per EPA Method 600/R-93/116, Table 2-1.



ASBESTOS CHAIN OF CUSTODY

7021 W Wilshire Blvd., Suite B, Oklahoma City, OK 73132
(800) 822-1650 • (405) 755-7272

Page 1 of 1

For Lab Use Only

Lab No. 504929
☒ Accept ☐ Reject

Report Results (☒ one box)
☐ Quantem Website
☒ Email christopher-cochran@quantem.org
☐ Other

LEGAL DOCUMENT - PLEASE PRINT LEGIBLY

Contact Information		Project Information	
Company: Cherokee Nation Environmental Programs	Phone: (918) 453-6140	Project Name:	
Contact: christopher cochran	Cell Phone: (918) 772-8346	Project Location: West Ville	
Account #: 69-000183	E-mail: christopher-cochran@cherokee.org	Project ID:	
SAMPLED BY: Name: Christopher Cochran	Date: 6-01-2026	P.O. Number: 916621	

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
		Fed Ex	<i>[Signature]</i>	6/3/26 9:30

REQUESTED SERVICES (Please ☒ the Appropriate Boxes)

PLM		PLM		TEM		TEM		TURNAROUND TIME	
☒ Bulk Analysis	☐ 400 Point Count	☐ Vermiculite Attic Insulation (EPA 600/R-04/004)	☐ Other	☐ Air-AHERA	☐ Air-NIOSH 7402	☐ Air-ISO 10312	☐ Drinking Water- EPA 100.2	☐ Bulk- Presence / Absence EPA600/R-93/116	☐ Rush
☐ Gravimetric Preparation	☐ Particle ID	PCM		☐ NIOSH 7400	☐ Waste Water- EPA 600/4-83-043			☐ Bulk- Quantitative (weight%) - Chatfield	☐ Same Day
								☐ Dust- Presence / Absence	☐ 24 - Hour
								☐ Dust- Quantitative (fibers/sq.cm) - ASTM D5755	☒ 3 - Day
								☐ Other	☐ 5 - Day

No.	Sample ID (10 Characters Max)	To Be Analyzed ☒	Description	Volume / Area (as applicable)	Comments / Notes
1	01-01	☒	Gray shingle		roof
2	02-01	☒	white plaster wall texture		Throught Out
3	03-01	☒	White concrete wall texture		inside of exterior walls
4	04-01	☒	white drywall ceiling		through out 1
5	05-01	☒	brown Roll sheet Flooring		bathroom
6	06-01	☒	yellow Floor Tile		Kitchen
7	07-01	☒	green roll sheet flooring		back porch
8	08-01	☒	Brown Roll sheet Flooring		Back Poruch
9	09-01	☒	white ceiling tile		bedroom back poruch
10		☐			

SATURDAY FEDEX SAMPLE DELIVERY - CALL TO SCHEDULE • Use this address for Saturday Delivery only: 4220 N. Santa Fe Ave., Oklahoma City, OK 73105-8517 • Mark Package "Hold for Saturday Pickup" Please Note - UPS and USPS are NOT available for Saturday **PLM Bulk Analysis (EPA 40-CFR Appendix E to Subpart E of Part 763 and EPA 600/R-93/116 Methods)

Per Logan Givty - Add Samples 02-02, 02-03, 02-04 & 02-05 to End of Coc - AB 6/3/26 12:48 PM