

**CHEROKEE NATION**  
**Environmental Programs**



**Asbestos Sampling Report**

Unit #12405

PREPARED BY: Tyler Moore DATE: 9/25/2024  
TYLER MOORE, ENVIRONMENTAL SPECIALIST I

REQUESTED BY: Housing Authority of the Cherokee Nation

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## I. Site Inspection/Description

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

918-332-0222  
325 NE Katherine Ave.  
Bartlesville, OK 74006  
Coordinates: 36.76178, -95.393925

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:

Tyler Moore EPA AHERA Inspector

The sampling was conducted on September 10, 2024, at the request of the Housing Authority of the Cherokee Nation.

The site is a single-family residential structure built in 1942 Sampling was limited to areas that would be affected by the project scope of work (Appendix A) provided by the Housing Authority of the Cherokee Nation.

**ACM was found at this site. See Section IV for locations.**

## II. BACKGROUND

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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 prior to 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

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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 ft<sup>2</sup> – Minimum 3 samples
- From 1000-5000 ft<sup>2</sup> – Minimum 5 samples
- Greater than 5000 ft<sup>2</sup> – 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 form 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. QuanTEM Laboratories, LLC (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**

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A total of 13 samples were analyzed from 7 homogeneous area due to multi-layers of material within some homogeneous sample areas. 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 has 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)
03-01 Thru 03-03	Tan Ceiling Texture	Kitchen	Friable	Damaged	2% Chrysotile

**Table 2. Non -- Asbestos Containing Materials**

Sample #	Material Description	Locations	Condition	Sample Results (% Asbestos)
01-01	Drywall	Throughout	Damaged	None
02-01 Thru 02-03	White Ceiling Texture	Living Room	Damaged	None
04-01 Thru 04-03	White Ceiling Texture	Bathroom	Damaged	None
05-01	White Vinyl Flooring	Bathroom	Damaged	None
06-01	Shower Board	Bathroom	Damaged	None
07-01	Black Shingle	Roof	Damaged	None

## 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.



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### Polarized Light Microscopy Asbestos Analysis Report

QuanTEM Lab No. 372434

Client: Cherokee Nation Environmental Programs  
Tyler Moore

Account Number: C162

Date Received: 09/12/2024

Received By: Courtney Holman

Date Analyzed: 09/13/2024

Project: #12465

Analyzed By: Benjamin Hill

Project Location: Bartlesville, OK

Methodology: EPA/600/R-93/116

Project Number: N/A

QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
001	01-01	Homogeneous	White Drywall	Asbestos Not Present	Cellulose 15	Gypsum
002	02-01	Homogeneous	White Ceiling Texture	Asbestos Not Present	NA	CaCO <sub>3</sub> Foam
003	02-02	Layered	White Ceiling Texture	Asbestos Not Present	NA	CaCO <sub>3</sub> Foam
003a		Layered	White Ceiling Texture	Asbestos Not Present	NA	Gypsum Paint
004	02-03	Homogeneous	White Ceiling Texture	Asbestos Not Present	NA	CaCO <sub>3</sub> Foam
005	03-01	Homogeneous	Tan Ceiling Texture	Asbestos Present Chrysotile 2	NA	CaCO <sub>3</sub> Paint
006	03-02	Homogeneous	Tan Ceiling Texture	Asbestos Present Chrysotile 2	NA	CaCO <sub>3</sub> Paint

Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.

QuanTEM 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 and EPA/600/R-93/116 methods.

This report may not be used to claim product endorsement by NVLAP or any agency of the US Government.

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Project Number: N/A

QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
007	03-03	Homogeneous	Tan Ceiling Texture	Asbestos Present Chrysotile 2	NA	CaCO3 Paint
008	04-01	Homogeneous	White Ceiling Texture	Asbestos Not Present	NA	Paint CaCO3
009	04-02	Homogeneous	White Ceiling Texture	Asbestos Not Present	NA	Paint CaCO3
010	04-03	Homogeneous	White Ceiling Texture	Asbestos Not Present	NA	Paint CaCO3
011	05-01	Homogeneous	White Flooring	Asbestos Not Present	Cellulose 30 Synthetic 10	Vinyl CaCO3
012	06-01	Homogeneous	White Shower Board	Asbestos Not Present	Cellulose 90	Paint Binder

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Methodology: EPA/600/R-93/116

Project Number: N/A

QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
013	07-01	Layered	Gray/Black Shingle	Asbestos Not Present	Glass Fiber	25 Tar Sand
013a		Layered	Black Tar	Asbestos Not Present	NA	Tar

*Benjamin Hill*

Benjamin Hill, Assistant Laboratory Manager

9/13/2024

Date of Report

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## ASBESTOS CHAIN OF CUSTODY

2033 Heritage Park Drive, Oklahoma City, OK 73120-7502  
(800) 822-1650 • (405) 755-7272 • Fax: (405) 755-2058

## LEGAL DOCUMENT - PLEASE PRINT LEGIBLY

### Contact Information

Company:	Cherokee Nation Environmental Programs	Phone:	(918) 453-7607
Contact:	Tyler Moore	Cell Phone:	(918) 772-8709
Account #:	C 162	E-mail:	tyler.moore@cherokee.org
SAMPLED BY:	Name: Tyler Moore	Date:	9/10/24

### Project Information

Project Name:	# 12465
Project Location:	Bartlesville, OK
Project ID:	
P.O. Number:	874812

### RELINQUISHED BY

DATE & TIME	VIA	RECEIVED BY	DATE & TIME
9/10/2024	FedEx	<i>9/12/24 2:30 PM</i>	<i>9/12/24 @ 9:30</i>

### REQUESTED SERVICES (Please the Appropriate Boxes)

PLM	PLM	TEM	TEM	TURNAROUND TIME
<input checked="" type="checkbox"/> Bulk Analysis (EPA 600/R-93/116)	<input type="checkbox"/> Vermiculite Attic Insulation (EPA 600/R-04/004)	<input type="checkbox"/> Air-AHERA	<input type="checkbox"/> Bulk- Presence / Absence EPA600/R-93/116	<input type="checkbox"/> Rush
<input type="checkbox"/> 400 Point Count	<input type="checkbox"/> Other	<input type="checkbox"/> Air-NIOSH 7402	<input type="checkbox"/> Bulk- Quantitative [weight%]- Chatfield	<input type="checkbox"/> Same Day
<input type="checkbox"/> 1000 Point Count		<input type="checkbox"/> Air- ISO 10312	<input type="checkbox"/> Dust- Presence / Absence	<input checked="" type="checkbox"/> 24 - Hour
<input type="checkbox"/> Gravimetric Preparation		<input type="checkbox"/> PCM	<input type="checkbox"/> Drinking Water- EPA 100.2	<input type="checkbox"/> 3 - Day
<input type="checkbox"/> Particle ID	<input type="checkbox"/> NIOSH 7400		<input type="checkbox"/> Waste Water- EPA 500/4-83-043	<input type="checkbox"/> Other
				<input type="checkbox"/> 5 - Day

No.	Sample ID (10 Characters Max)	<input checked="" type="checkbox"/> To Be Analyzed	Color	Description	Volume / Area (as applicable)	Comments / Notes
1	01-01	<input checked="" type="checkbox"/>	White	Drywall		
2	02-01	<input checked="" type="checkbox"/>	White	Ceiling Texture Living/Dining		
3	02-02	<input checked="" type="checkbox"/>	White	Ceiling Texture Living/Dining		
4	02-03	<input checked="" type="checkbox"/>	White	Ceiling Texture Living/Dining		
5	03-01	<input checked="" type="checkbox"/>	White	Ceiling Texture Kitchen		
6	03-02	<input checked="" type="checkbox"/>	White	Ceiling Texture Kitchen		
7	03-03	<input checked="" type="checkbox"/>	White	Ceiling Texture Kitchen		
8	04-01	<input checked="" type="checkbox"/>	White	Ceiling Texture Bath		
9	04-02	<input checked="" type="checkbox"/>	White	Ceiling Texture Bath		
10	04-03	<input checked="" type="checkbox"/>	White	Ceiling Texture Bath		

**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 Delivery



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Page 2 of 1

For Lab Use Only
Lab No. <u>372434</u>
Accept <input checked="" type="checkbox"/> Reject <input type="checkbox"/>

### Project Information

Company: Cherokee Nation Environmental Programs Project Name: #121405

No.	Sample ID (10 Characters Max)	<input checked="" type="checkbox"/> To Be Analyzed	Color	Description	Volume / Area (as applicable)	Comments / Notes
11	05-01	<input checked="" type="checkbox"/>	White	Vinyl Flooring Bath		
12	06-01	<input checked="" type="checkbox"/>	White	Shower Board		
13	07-01	<input checked="" type="checkbox"/>	Black	Shingle from Roof		
14		<input type="checkbox"/>				
15		<input type="checkbox"/>				
16		<input type="checkbox"/>				
17		<input type="checkbox"/>				
18		<input type="checkbox"/>				
19		<input type="checkbox"/>				
20		<input type="checkbox"/>				
21		<input type="checkbox"/>				
22		<input type="checkbox"/>				
23		<input type="checkbox"/>				
24		<input type="checkbox"/>				
25		<input type="checkbox"/>				
26		<input type="checkbox"/>				
27		<input type="checkbox"/>				
28		<input type="checkbox"/>				
29		<input type="checkbox"/>				
30		<input type="checkbox"/>				

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