

CHEROKEE NATION
Environmental Programs



Asbestos Sampling Report

SITE: Johnson, Teresa

PREPARED BY: Tyler Moore **DATE:** 2/9/2024

TYLER MOORE, ENVIRONMENTAL SPECIALIST I

REQUESTED BY: Housing Authority of the Cherokee Nation

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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:

Teresa Johnson
2601 E. 54th St. North
Tulsa, OK 74130

Coordinates: 36.2318,-95.95427

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:

Logan Girty EPA AHERA Inspector
Tyler Moore EPA AHERA Inspector

The sampling was conducted on January 30th, 2024, at the request of the Housing Authority of the Cherokee Nation.

The site is a single-family residential structure built in 1950. 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

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

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 of 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

A total of 11 samples were analyzed from 7 homogeneous areas due to multi-layers of material within some homogeneous sample areas. Photographs of all ACM can be found in Appendix C. 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)
01-01	Ceiling Texture	Throughout	Friable	Damaged	3% Chrysotile
01-02	Ceiling Texture	Throughout	Friable	Damaged	3% Chrysotile
01-03	Ceiling Texture	Throughout	Friable	Damaged	3% Chrysotile
01-04	Ceiling Texture	Throughout	Friable	Damaged	3% Chrysotile
01-05	Ceiling Texture	Throughout	Friable	Damaged	3% Chrysotile

Table 2. Non – Asbestos Containing Materials

Sample #	Material Description	Locations	Condition	Sample Results (% Asbestos)
02-01	Black Floor Tile	Entry	Good	None Detected
03-01	Brown Floor Tile	Kitchen & Bathroom	Good	None Detected
04-01	White Countertop	Kitchen	Good	None Detected
05-01	White Wall Tile	Bathroom	Good	None Detected
06-01	Brown Shingle	Roof	Good	None Detected
07-01	Gray Cinderblock & Mortar	Foundation	Good	None Detected

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. 366021

Account Number: C162

Client: Cherokee Nation Environmental Programs
Tyler Moore

Date Received: 02/01/2024

Received By: Baylie Longstreth

Date Analyzed: 02/08/2024

Analyzed By: Cassie Sanborn

Methodology: EPA/600/R-93/116

Project: Teresa Johnson

Project Location: Tulsa

Project Number: N/A

Quantem Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
001	01-01	Homogeneous	Tan Ceiling Texture	Asbestos Present Chrysotile 2	NA	CaCO3 Paint
002	01-02	Homogeneous	White Ceiling Texture	Asbestos Not Present	NA	Paint
003	01-03	Homogeneous	Tan Ceiling Texture	Asbestos Present Chrysotile 2	NA	CaCO3 Paint
004	01-04	Homogeneous	Tan Ceiling Texture	Asbestos Present Chrysotile 3	NA	CaCO3 Paint
005	01-05	Homogeneous	Tan Ceiling Texture	Asbestos Present Chrysotile 3	NA	CaCO3 Paint
006	02-01	Layered	Black Floor Tile	Asbestos Not Present	NA	CaCO3 Vinyl
006a		Layered	Clear Mastic	Asbestos Not Present	NA	Glue

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. This report may not be reproduced except in full, without the written approval of the laboratory.



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Analyzed By: Cassie Sanborn	Project Location: Tulsa
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
007	03-01	Layered	Brown Floor Tile	Asbestos Not Present	NA	CaCO3 Vinyl
007a		Layered	Clear Mastic	Asbestos Not Present	NA	Glue
008	04-01	Layered	White Counter Top	Asbestos Not Present	Cellulose 80	Binder
008a		Layered	Yellow Mastic	Asbestos Not Present	NA	Glue
009	05-01	Layered	White Wall Tile	Asbestos Not Present	NA	Clay Sand
009a		Layered	Tan Mastic	Asbestos Not Present	NA	Glue CaCO3

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Polarized Light Microscopy Asbestos Analysis Report

Quantem Lab No. 366021

Client: Cherokee Nation Environmental Programs
Tyler Moore

Account Number: C162

Date Received: 02/01/2024

Received By: Baylie Longstreth

Date Analyzed: 02/08/2024

Project: Teresa Johnson

Analyzed By: Cassie Sanborn

Project Location: Tulsa

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
010	06-01	Layered	Brown Shingle	Asbestos Not Present	Glass Fiber 25	Tar Sand
010a		Layered	Black Tar Paper	Asbestos Not Present	Cellulose 60	Tar
011	07-01	Layered	Gray Cinder Block	Asbestos Not Present	NA	CaCO3 Sand
011a		Layered	Gray Mortar	Asbestos Not Present	NA	CaCO3 Sand

Cassie Sanborn

Cassie Sanborn, Laboratory Analyst

2/8/2024

Date of Report

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

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ASBESTOS CHAIN OF CUSTODY

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LEGAL DOCUMENT - PLEASE PRINT LEGIBLY

For Lab Use Only
 Lab No. 366021
 Accept Reject

Contact Information		Project Information	
Company:	Cherokee Nation Environmental Programs	Project Name:	Teresa Johnson
Contact:	Tyler Moore	Project Location:	Tulsa
Account #:	C 162	Project ID:	
SAMPLED BY:	Name: Logan Girty & Tyler Moore	PO Number:	874812
	Phone: (918) 453-7607		
	Cell Phone: (918) 772-8709		
	E-mail: tyler-moore@cherokee.org		
	Date: 01/30/2024		

RELINQUISHED BY	VIA	RECEIVED BY	DATE & TIME
<i>[Signature]</i>	FedEx	<i>[Signature]</i>	2/1/24 9:30

REQUESTED SERVICES (Please check the Appropriate Boxes)

	PLM		PLM		TEM		TEM		TURNAROUND TIME							
	Bulk Analysis (EPA 600/R-93/116)	400 Point Count	Vermiculite Attic Insulation (EPA 600/R-04/004)	Other	Air-AHERA	Air-NIOSH 7402	Air-ISO 10312	Bulk-Presence / Absence EPA600/R-93/116	Bulk-Quantitative [weight%]- Chatfield	Dust-Presence / Absence	Dust-Quantitative [fibers/sq.cm]- ASTM D5755	Rush	Same Day	24 - Hour	3 - Day	5 - Day
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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No.	Sample ID (10 Characters Max)	To Be Analyzed	Color	Description	Volume / Area (as applicable)	Comments / Notes
1	01-01	<input checked="" type="checkbox"/>	white	ceiling texture		
2	01-02	<input checked="" type="checkbox"/>	white	ceiling texture		
3	01-03	<input checked="" type="checkbox"/>	white	ceiling texture		
4	01-04	<input checked="" type="checkbox"/>	white	ceiling texture		
5	01-05	<input checked="" type="checkbox"/>	white	ceiling texture		
6	02-01	<input checked="" type="checkbox"/>	black	entry flooring tile		
7	03-01	<input checked="" type="checkbox"/>	wood grain	kitchen and bathroom flooring tile		
8	04-01	<input checked="" type="checkbox"/>	white	kitchen counter-top		
9	05-01	<input checked="" type="checkbox"/>	white	bathroom wall tile		
10	06-01	<input checked="" type="checkbox"/>	brown	roofing shingle		



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Project Information		Company: Cherokee Nation Environmental Programs	Project Name: Teresa Johnson	Project Location: Tulsa	
No.	Sample ID (10 Characters Max)	Color	Description	Volume / Area (as applicable)	Comments / Notes
11	07-01	grey	cinder block and mortar		
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
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