

CHEROKEE NATION
Environmental Programs



Asbestos Sampling Report

SITE: Hughes, Steven

PREPARED BY: Tyler Moore **DATE:** 8/9/2024

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:

Steven Hughes
479-233-1559
52016 S. 636 Rd.
Colcord, OK 74338
Coordinates: 36.26360, -94.76117

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 August 5, 2024, at the request of the Housing Authority of the Cherokee Nation.

The site is a single-family residential structure built in 1945. 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 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

A total of 13 samples were analyzed from 9 homogeneous areas 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)
01-01	Green Siding	Under Vinyl Siding on the outside of the entire home.	NF Cat I	Intact	20% Chrysotile
04-01	Tan/Brown Sheet Vinyl	Dining Room Floor	NF Cat I	Damaged	15% Chrysotile

Table 2. Non – Asbestos Containing Materials				
Sample #	Material Description	Locations	Condition	Sample Results (% Asbestos)
02-01	Gray Mortar	Foundation	Damaged	None
03-01	Gray/Black Shingle	Roof	Damaged	None
05-01	Tan Sheet Vinyl	Living Room Floor	Damaged	None
06-01	White Tile	Bathroom Floor	Damaged	None
07-01 Thru 07-03	White Ceiling Texture & Drywall	Bathroom & Bedroom 2	Damaged	None
08-01 Thru 08-03	White Ceiling Texture & Joint Compound	Bedroom 1	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. 371420	Client: Cherokee Nation Environmental Programs
Account Number: C162	Tyler Moore
Date Received: 08/06/2024	
Received By: Courtney Holman	
Date Analyzed: 08/08/2024	Project: Steven Hughes
Analyzed By: Cassie Sanborn	Project Location: Colcord, 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	Green Siding	Asbestos Present Chrysotile 20	NA	CaCO3 Sand Paint
002	02-01	Homogeneous	Gray Mortar	Asbestos Not Present	NA	CaCO3 Sand
003	03-01	Layered	Gray Shingle	Asbestos Not Present	Cellulose 30	Tar Sand
003a		Layered	Black Shingle	Asbestos Not Present	Glass Fiber 20	Tar Sand CaCO3
004	04-01	Homogeneous	Tan/Brown Sheet Vinyl	Asbestos Present Chrysotile 15	Cellulose 5	CaCO3 Vinyl
005	05-01	Homogeneous	Tan Sheet Vinyl	Asbestos Not Present	Cellulose 35	CaCO3 Vinyl Tar

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: Colcord, 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
006	06-01	Layered	Yellow Mastic	Asbestos Not Present	NA	Glue
006a		Layered	White Tile	Asbestos Not Present	NA	CaCO3 Vinyl
006b		Layered	Yellow Mastic	Asbestos Not Present	NA	Glue
007	07-01	Layered	White Ceiling Texture	Asbestos Not Present	NA	CaCO3 Paint
007a		Layered	White Drywall	Asbestos Not Present	Cellulose 10	Gypsum
008	07-02	Layered	White Ceiling Texture	Asbestos Not Present	NA	CaCO3 Paint
008a		Layered	White Drywall	Asbestos Not Present	Cellulose 10	Gypsum

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Date Analyzed: 08/08/2024	Project: Steven Hughes
Analyzed By: Cassie Sanborn	Project Location: Colcord, 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
009	07-03	Layered	White Ceiling Texture	Asbestos Not Present	NA	CaCO3 Paint
009a		Layered	White Drywall	Asbestos Not Present	Cellulose 10	Gypsum
010	08-01	Layered	White Ceiling Texture	Asbestos Not Present	NA	CaCO3 Paint
010a		Layered	White Joint Compound	Asbestos Not Present	NA	CaCO3
011	08-01	Layered	White Ceiling Texture	Asbestos Not Present	NA	CaCO3 Paint
011a		Layered	White Joint Compound	Asbestos Not Present	NA	CaCO3

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Polarized Light Microscopy Asbestos Analysis Report

Quantem Lab No. 371420

Account Number: C162

Client: Cherokee Nation Environmental Programs
Tyler Moore

Date Received: 08/06/2024

Received By: Courtney Holman

Date Analyzed: 08/08/2024

Analyzed By: Cassie Sanborn

Methodology: EPA/600/R-93/116

Project: Steven Hughes

Project Location: Colcord, OK

Project Number: N/A

Quantem Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
012	08-01	Layered	White Ceiling Texture	Asbestos Not Present	NA	CaCO3 Paint
012a		Layered	White Joint Compound	Asbestos Not Present	NA	CaCO3
013	09-01	Homogeneous	White Drywall	Asbestos Not Present	Cellulose 10	Gypsum Paint

Cassie Sanborn

Cassie Sanborn, Laboratory Analyst

8/8/2024

Date of Report

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

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Accept Reject

Report Results (one box)

Quantem Website

Email tyler-moore@cherokee.org

Other _____

Contact Information		Project Information	
Company: Cherokee Nation Environmental Programs	Phone: (918) 453-7607	Project Name: Steven Hughes	
Contact: Tyler Moore	Cell Phone: (918) 772-8709	Project Location: Colcord, OK	
Account #: C 162	E-mail: tyler-moore@cherokee.org	Project ID:	
SAMPLED BY: Name: Tyler Moore	Date: 8/5/24	P.O. Number: 874812	

RELINQUISHED BY	VIA	RECEIVED BY	DATE & TIME
<i>Tom</i>	FedEx	<i>Greg M. Hale</i>	8/6/24 @ 10:30

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- AHRA	<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 type="checkbox"/> 24 - Hour
<input type="checkbox"/> Gravimetric Preparation	<input type="checkbox"/> PCM	<input type="checkbox"/> Drinking Water- EPA 100.2	<input type="checkbox"/> Dust- Quantitative [fibers/sq.cm]- ASTM D5755	<input checked="" type="checkbox"/> 3 - Day
<input type="checkbox"/> Particle ID	<input type="checkbox"/> NIOSH 7400	<input type="checkbox"/> Waste Water- EPA 600/4-83-043	<input type="checkbox"/> Other	<input type="checkbox"/> 5 - Day

No.	Sample ID (10 Characters Max)	To Be Analyzed <input checked="" type="checkbox"/>	Color	Description	Volume / Area (as applicable)	Comments / Notes
1	01-01	<input checked="" type="checkbox"/>	Green	Exterior siding board		under vinyl siding
2	02-01	<input checked="" type="checkbox"/>	Grey	Mortar from Foundation		
3	03-01	<input checked="" type="checkbox"/>	Black	Roof Shingles		
4	04-01	<input checked="" type="checkbox"/>	Tan & Brown	Vinyl Flooring Dining Room		
5	05-01	<input checked="" type="checkbox"/>	Tan	Vinyl Flooring Living Room		under the carpet
6	06-01	<input checked="" type="checkbox"/>	White	Tile in the Bath		
7	07-01	<input checked="" type="checkbox"/>	White	Ceiling Texture and Drywall Bath and Bed 2		
8	07-02	<input checked="" type="checkbox"/>	White	Ceiling Texture in Bath and Bed 2		
9	07-03	<input checked="" type="checkbox"/>	White	Ceiling Texture in Bath and Bed 2		
10	08-01	<input checked="" type="checkbox"/>	White	Ceiling Texture Bed 1		



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Accept <input checked="" type="checkbox"/> Reject <input type="checkbox"/>

Project Information		Project Name: Steven Hughes	Project Location: Colcord, OK			
No.	Sample ID (10 Characters Max)	To Be Analyzed <input checked="" type="checkbox"/>	Color	Description	Volume / Area (as applicable)	Comments / Notes
11	08-01	<input checked="" type="checkbox"/>	White	Ceiling Texture Bed 1		
12	08-01	<input checked="" type="checkbox"/>	White	Ceiling Texture Bed 1		
13	09-01	<input checked="" type="checkbox"/>	White	Drywall Throughout		Original behind the wood paneling
14		<input type="checkbox"/>				
15		<input type="checkbox"/>				
16		<input type="checkbox"/>				
17		<input type="checkbox"/>				
18		<input type="checkbox"/>				
19		<input type="checkbox"/>				
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