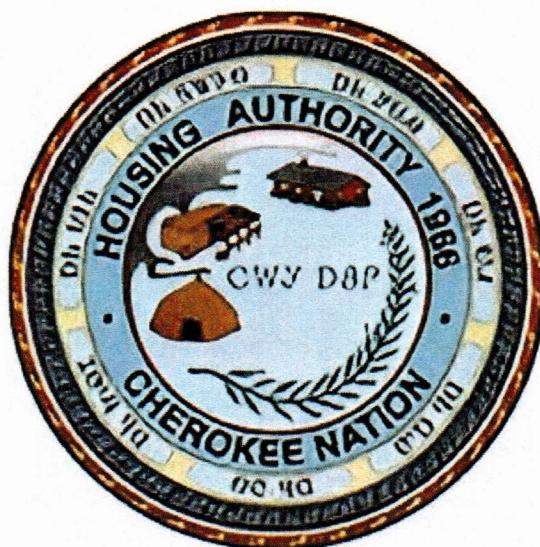


HOUSING AUTHORITY OF THE CHEROKEE NATION

Environmental Programs



ASBESTOS REPORT

PARTICIPANT: #11705

PREPARED BY: TIMOTHY MILLER, ENVIRONMENTAL SPECIALIST IV

REQUESTED BY: HOUSING AUTHORITY OF THE CHEROKEE NATION

- JAMIE WALTERS

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I. Site Inspection/Description

The Housing Authority of the Cherokee Nation Environmental Program has conducted asbestos sampling for the presence of asbestos containing materials (ACM) for the following site:

111 W. Osage Ave. Marble City, OK 74945

918-315-3839

Coordinates: 35.58196, -94.82161

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:

Timothy Miller, AHERA Inspector

The sampling was conducted on **September 03, 2026** at the request of the Cherokee Nation Housing Rehabilitation Department.

The site is a single family home built in **1973**. Sampling was limited to areas that would be affected by the project scope of work (Appendix A) provided by the housing rehabilitation department.

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. Pace Analytical (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 29 samples were analyzed from 10 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 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)
01-01/ 01-05	Ceiling Texture	Throughout	Friable	Damaged	5
02-01/ 02-05	Wall Texture	Throughout	Friable	Damaged	3
04-01	White Tile	Throughout	NF Cat 1	Damaged	4

Table 2. Non – Asbestos Containing Materials

Sample #	Material Description	Locations	Condition	Sample Results (% Asbestos)
03-01	Caulk	Kitchen Countertop	Damaged	Asbestos Not Present
05-01	White Caulk	Baseboard Throughout	Damaged	Asbestos Not Present
06-01	Caulk	Water Heater Closet	Damaged	Asbestos Not Present
07-01	White Formica	Kitchen Countertop	Damaged	Asbestos Not Present
08-01	Wainscot Caulk	Exterior Throughout	Damaged	Asbestos Not Present
09-01	Window and Siding Caulk	Exterior	Damaged	Asbestos Not Present
10-01	Gray Brick Mortar	Exterior Throughout	Good	Asbestos Not Present

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.



Pace© Analytical Services, LLC
7021 W Wilshire Blvd, Ste B
Oklahoma City, OK 73132

Polarized Light Microscopy Asbestos Analysis Report

Pace Set ID	508005	Client:	Housing Authority of the Cherokee Nation of OK
Account Number:	69-000533		1500 Hensley Drive
Date Received:	09/21/2026		Tahlequah, OK 74464
Received By:	Charlie Johnson	Project:	
Date Analyzed:	09/22/2026	Project Location:	Marble City
Analyzed By:	Cassie Sanborn	Project Number:	NA
Methodology:	EPA/600/R-93/116		

Pace Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
001	01-01	Homogeneous	Tan Ceiling Texture	Asbestos Present Chrysotile 5	NA	CaCO3 Foam Paint
002	01-02	Layered	Tan Ceiling Texture	Asbestos Present Chrysotile 5	NA	CaCO3 Foam Paint
002a		Layered	White Drywall	Asbestos Not Present	Cellulose 10	Gypsum
003	01-03	Layered	White Ceiling Texture	Asbestos Present Chrysotile 5	NA	CaCO3 Foam Paint
003a		Layered	White Joint Compound	Asbestos Present Chrysotile 3	NA	CaCO3
004	01-04	Homogeneous	White Ceiling Texture	Asbestos Present Chrysotile 5	NA	CaCO3 Foam Paint
005	01-05	Homogeneous	Tan Ceiling Texture	Asbestos Present Chrysotile 5	NA	CaCO3 Foam Paint

- The results detailed in this report pertain solely to the samples tested and as they were received by the laboratory. This report shall not be reproduced, except in full, without the written consent of Pace© Analytical Services, LLC.
- Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.
- Pace© Analytical Services, LLC 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 the 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 U.S. Government.
- If submitted samples are inhomogeneous in nature, then subsamples of the components will be analyzed separately.



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Date Analyzed:	09/22/2026	Project Location:	Marble City
Analyzed By:	Cassie Sanborn	Project Number:	NA
Methodology:	EPA/600/R-93/116		

Pace Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
006	02-01	Layered	White Wall Texture	Asbestos Present Chrysotile 3	NA	CaCO3 Paint
006a		Layered	White Drywall	Asbestos Not Present	Cellulose 10	Gypsum
007	02-02	Layered	White Wall Texture	Asbestos Present Chrysotile 3	NA	CaCO3 Paint
007a		Layered	White Drywall	Asbestos Not Present	Cellulose 10	Gypsum
008	02-03	Layered	Tan Wall Texture	Asbestos Present Chrysotile 3	NA	CaCO3 Paint
008a		Layered	White Drywall	Asbestos Not Present	Cellulose 10	Gypsum
009	02-04	Layered	Tan Wall Texture	Asbestos Present Chrysotile 3	NA	CaCO3 Paint
009a		Layered	White Drywall	Asbestos Not Present	Cellulose 10	Gypsum

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Date Analyzed:	09/22/2026	Project Location:	Marble City
Analyzed By:	Cassie Sanborn	Project Number:	NA
Methodology:	EPA/600/R-93/116		

Pace Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
010	02-05	Layered	White Wall Texture	Asbestos Present Chrysotile 3	NA	CaCO3 Paint
010a		Layered	White Joint Compound	Asbestos Present Chrysotile 3	NA	CaCO3
010b		Layered	White Drywall	Asbestos Not Present	Cellulose 10	Gypsum
011	03-01	Homogeneous	White Caulk	Asbestos Not Present	NA	Silicone
012	04-01	Layered	White Tile	Asbestos Present Chrysotile 4	NA	CaCO3 Vinyl
012a		Layered	Brown Mastic	Asbestos Present Chrysotile <1	NA	Glue Tar
013	05-01	Homogeneous	White Caulk	Asbestos Not Present	NA	CaCO3 Binder

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Methodology:	EPA/600/R-93/116		

Pace Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
014	06-01	Homogeneous	White Caulk	Asbestos Not Present	NA	CaCO3 Binder
015	07-01	Layered	White Counter Top	Asbestos Not Present	Cellulose 80	Binder
015a		Layered	Brown Mastic	Asbestos Not Present	NA	Glue
016	08-01	Homogeneous	White Caulk	Asbestos Not Present	NA	CaCO3 Binder
017	09-01	Layered	White Caulk	Asbestos Not Present	NA	CaCO3 Binder
017a		Layered	Tan Caulk	Asbestos Not Present	NA	CaCO3 Binder
018	10-01	Homogeneous	Gray Mortar	Asbestos Not Present	NA	CaCO3 Sand

Cassie Sanborn

Cassie Sanborn, Laboratory Analyst

9/22/2026

Date of Report

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ASBESTOS CHAIN OF CUSTODY

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Lab No. <u>508005</u>	Accept ☒ Reject ☐

Report Results (☒ one box)	
☐ QuanTEM Website	☒ Email <u>timothy.miller@haen.org</u>
☐ Other _____	

Contact Information		Project Information	
Company: Housing Authority of the Cherokee Nation Environmental Programs	Phone: _____	Project Name: _____	Project ID: _____
Contact: Timothy Miller	Cell Phone: (918) 570-9545	Project Location: Marble City	PQ Number: _____
Account #: _____	E-mail: <u>timothy.miller@haen.org</u>		
SAMPLED BY: Name: Timothy Miller	Date: 09/03/2026		

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Timothy Miller	09/04/2026@4PM	Fedex		9/9/26 1020

REQUESTED SERVICES (Please ☒ the Appropriate Boxes)

No.	Sample ID (10 Characters Max)	To Be Analyzed	Color	Description	Volume / Area (as applicable)	Comments / Notes	PLM		TEM		TURNAROUND TIME	
							☒ Bulk Analysis (EPA 600/R-93/116) ☐ 400 Point Count ☐ 1000 Point Count ☐ Gravimetric Preparation ☐ Particle ID	☐ Vermiculite Attic Insulation (EPA 600/R-04/004) ☐ Other	☐ Air- AHRA ☐ Air- NIOSH 7402 ☐ Air- ISO 10312 ☐ Drinking Water- EPA 100.2 ☐ Waste Water- EPA 600/4-83-043	☐ Bulk- Presence / Absence EPA 600/R-93/116 ☐ Bulk- Quantitative (weight%) - Chatfield ☐ Dust- Presence / Absence ☐ Dust- Quantitative (fibers/sq.cm) - ASTM D5755 ☐ Other	☐ Rush ☐ Same Day ☒ 24 - Hour ☐ 3 - Day ☐ 5 - Day	
1-5	01-01/05	☒	White	Ceiling Texture		Throughout	☐	☐	☐	☐	☐	☐
6-10	02-01/05	☒	White	Wall Texture		Throughout	☐	☐	☐	☐	☐	☐
11	03-01	☒	White	Countertop Caulk		Kitchen	☐	☐	☐	☐	☐	☐
12	04-01	☒	White	VCT-Tile		Throughout	☐	☐	☐	☐	☐	☐
13	05-01	☒	White	Baas board Caulk		Throughout	☐	☐	☐	☐	☐	☐
14	06-01	☒	White	Water Heater Wall Caulk		Closet	☐	☐	☐	☐	☐	☐
15	07-01	☒	White	Formica Countertop		Kitchen	☐	☐	☐	☐	☐	☐
16	08-01	☒	White	Wainscot Caulk		Exterior	☐	☐	☐	☐	☐	☐
17	09-01	☒	White	Exterior Window and Siding Caulk		Throughout	☐	☐	☐	☐	☐	☐
18	10-01	☒	Gray	Brick Mortar		Throughout	☐	☐	☐	☐	☐	☐