

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



**Asbestos Sampling Report**

**PARTICIPANT:** DARWIN, CLARISSA

**PREPARED BY:** Nick Clark **DATE:** 8-25-21  
NICK CLARK, ENVIRONMENTAL SPECIALIST IV

**REQUESTED BY:** HACN HOUSING REHABILITATION – JAMIE WALTERS

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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:

Site Name: Clarissa Darwin

Address: 3367 North Garrison Ave. Tulsa, OK 74106

Phone 918-428-2772

Lat./Long. 36.205120 -95.985443

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:

Nick Clark ODOL, AHERA Inspector, License No: OK401243

The sampling was conducted on August 17, 2021 at the request of the Cherokee Nation Housing Rehabilitation Department.

The site is a single family home built in 1954. 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**

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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 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 (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 4 samples were analyzed from 4 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 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.

<b>Table 1. Asbestos Containing Materials</b>					
Sample #	Material Description	Locations	Friability (Friable, NF Cat I NF Cat II)	Condition	Sample Results (% Asbestos)
01-01	Drywall	Throughout	Friable	Damaged	3
03-01	Rollsheet Flooring 1 <sup>st</sup> layer	Utility Room	NF Cat I	Damaged	15

<b>Table 2. Non – Asbestos Containing Materials</b>				
Sample #	Material Description	Locations	Condition	Sample Results (% Asbestos)
02-01	Rollsheet Flooring 2nd layer	Utility Room	Good	None Detected
04-01	Concrete	Exterior Blocks	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. 338401	Client: Cherokee Nation Environmental Programs
Account Number: C162	Carlton N Clark
Date Received: 08/20/2021	PO Box 948
Received By: Courtney Holman	Tahlequah, OK 74464
Date Analyzed: 08/24/2021	Project: Clarissa Darwin
Analyzed By: Benjamin Hill	Project Location: Tulsa
Methodology: EPA/600/R-93/116	Project Number: 260137

QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
001	01-01	Layered	White Mastic	Asbestos Not Present	NA	Glue CaCO3
001a		Layered	White Texture	Asbestos Not Present	NA	CaCO3 Paint
001b		Layered	Tan Joint Compound	Asbestos Present Chrysotile 3	NA	CaCO3
001c		Layered	White Sheetrock	Asbestos Not Present	Cellulose 10	Gypsum
002	02-01	Homogeneous	White/Yellow Flooring	Asbestos Not Present	Cellulose 25 Synthetic 10	Vinyl CaCO3 Tar
003	03-01	Homogeneous	Beige Sheet Vinyl	Asbestos Present Chrysotile 15	Cellulose 5	Vinyl CaCO3
004	04-01	Homogeneous	Gray Concrete	Asbestos Not Present	NA	CaCO3 Sand

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/600/M4-82-020 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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Client: Cherokee Nation Environmental Programs

Carlton N Clark

PO Box 948

Tahlequah, OK 74464

Project: Clarissa Darwin

Project Location: Tulsa

Project Number: 260137

Quantem Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
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*Benjamin Hill*

Benjamin Hill, Assistant Laboratory Manager

8/24/2021

Date of Report

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## LEGAL DOCUMENT - PLEASE PRINT LEGIBLY

For Lab Use Only	
Lab No. <b>338401</b>	<input checked="" type="radio"/> Accept <input type="radio"/> Reject
Report Results ( <input checked="" type="checkbox"/> one box)	
<input type="checkbox"/> QuanTEM Website	
<input checked="" type="checkbox"/> Email <u>carlton-clark@cherokee.org</u>	
<input type="checkbox"/> Other _____	

Contact Information		Project Information	
Company: Cherokee Nation Environmental Programs	Phone: (918) 453-5000	Project Name: Clarissa Darwin	
Contact: C. Nicolas Clark	Cell Phone: (918) 316-7451	Project Location: Tulsa	
Account #: C162	E-mail: <u>carlton-clark@cherokee.org</u>	Project ID:	
SAMPLED BY: Name: C. Nicolas Clark	Date: 8/17/2021	P.O. Number: 260137	

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
<u>C. Nicolas Clark</u>	<u>8-18-21</u>	<u>FedEx</u>	<u>Anthony M. Holen</u>	<u>8/20/21 @ 9:40</u>

### REQUESTED SERVICES (Please ☒ the Appropriate Boxes)

	PLM		PLM		TEM		TEM		TURNAROUND TIME	
	Bulk Analysis (EPA 600/R-93/116)	Vermiculite Attic Insulation (EPA 600/R-04/004)	Air- AHERA	Air- NIOSH 7402	Bulk- Presence / Absence EPA600/R-93/116	Bulk- Quantitative (weight%) - Chatfield	Dust- Presence / Absence	Dust- Quantitative (fibers/sq.cm) - ASTM D5755	<input type="checkbox"/> Rush	<input type="checkbox"/> Same Day
<input type="checkbox"/> 400 Point Count		<input type="checkbox"/> Other								
<input type="checkbox"/> 1000 Point Count										
<input type="checkbox"/> Gravimetric Preparation		PCM							<input checked="" type="checkbox"/> 3 - Day	
<input type="checkbox"/> Particle ID		NIOSH 7400							<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"/>		Drywall		Throughout
2	02-01	<input checked="" type="checkbox"/>		Rollsheet Flooring		Utility Rm layer 2
3	03-01	<input checked="" type="checkbox"/>		Rollsheet Flooring		Utility Rm 1st layer
4	04-01	<input checked="" type="checkbox"/>		Concrete		Exterior Blocks
5		<input type="checkbox"/>				
6		<input type="checkbox"/>				
7		<input type="checkbox"/>				
8		<input type="checkbox"/>				
9		<input type="checkbox"/>				
10		<input type="checkbox"/>				