

**CHEROKEE NATION
Environmental Programs**



Asbestos Sampling Report

SITE : 17798 S Muskogee Ave, Tahlequah, OK 74464

PREPARED BY: *Ashley Wagner* **DATE:** 12/1/2021
ASHLEY WAGNON, MANAGER

REQUESTED BY: CHEROKEE NATION REAL ESTATE SERVICES –
MARSHEA HALTERMAN

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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:

Site Address: 17798 S Muskogee Ave, Tahlequah, OK 74464

Lat/Long: 35.855395 N, -94.989027 W

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, AHERA Inspector

Ashley Wagnon, AHERA Inspector

The sampling was conducted on November 24, 2021 at the request of Marshea Halterman of Cherokee Nation Real Estate Services.

The site consisted of a vacant single family dwelling in poor condition. 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 NESHAP's 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 Laboratory (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 43 samples were analyzed from 8 homogeneous area 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 structure 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, ACM was found during the inspection and is listed 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 01-02 01-03 01-04 01-05 01-06 01-07	Wall & Ceiling Texture	Throughout	NF Cat II	Sig. damaged	3% Chrysotile
05-01	Red Siding	Exterior/Enclosed Porch	NF Cat II	Sig. damaged	20% Chrysotile
06-01	Gray 9x9 Floor Tiles	Lower Level	NF Cat I	Damaged	4% Chrysotile

Table 2. Samples that did not contain ACM

Sample #	Material Description	Locations	Sample Results (% Asbestos)
01-01 01-03 01-04 01-05 01-06 01-07	Drywall	Throughout	None Detected
02-01	Gray roll sheet flooring/Mastic	Kitchen/Bath	None Detected
03-01	White Ceiling Tile	Bedrooms/Bath/Hallway	None Detected
04-01	Gray Laminate/Mastic	Kitchen/Bath Countertops	None Detected
06-01	Black Mastic	Lower Level	None Detected
07-01	Gray Shingle	Exterior	None Detected
08-01	Black Felt Paper	Exterior	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.

APPENDIX A.

SITE MAP

094° 59' 41.1357" W
035° 51' 44.1097" N

(TAHLEQUAH SW, OK)

094° 58' 57.3475" W
035° 51' 44.1097" N



(ZEB NE, OK)

(PARK HILL NE,
OK)

035° 50' 53.8338" N
094° 59' 41.1357" W

(PARK HILL SW, OK)
SCALE 1:7200

(PARK HILL SE,
OK)
035° 50' 53.8338" N
094° 58' 57.3475" W
Printed: Wed Dec 01, 2021

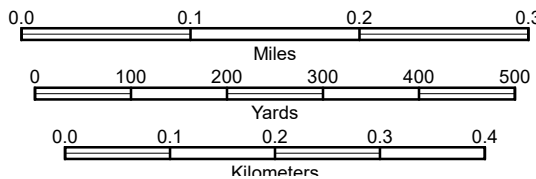
(ZEB SE, OK)

Produced by Trimble Terrain Navigator Pro
Topography based on USGS 1:12,000
Maps

North American 1983 Datum (NAD83)

To place on the predicted North American
1927 move the projection lines 10M N and
21M W

Declination



CONTOUR INTERVAL UNKNOWN FT

17798 S Muskogee Ave,
Tahlequah, OK 74464
35.855395 N, -94.989027 W

APPENDIX B.

LABORATORY RESULTS & CHAIN OF CUSTODY



2033 HERITAGE PARK DR, OKLAHOMA CITY, OK 73120 | 1.800.822.1650

Polarized Light Microscopy Asbestos Analysis Report

Quantem Lab No. 341506	Client: Cherokee Nation Environmental Programs
Account Number: C162	PO Box 948
Date Received: 11/29/2021	Tahlequah, OK 74464
Received By: Cyonne Harrod	
Date Analyzed: 11/30/2021	Project: 17798 Muskogee Ave
Analyzed By: Cassie Sanborn	Project Location: Cherokee
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	Layered	Tan Texture	Asbestos Present Chrysotile 3	NA	CaCO3 Paint
001a		Layered	White Drywall	Asbestos Not Present	Cellulose 10	Gypsum
002	01-02	Homogeneous	Tan Texture	Asbestos Present Chrysotile 3	NA	CaCO3 Paint
003	01-03	Layered	Tan Texture	Asbestos Present Chrysotile 3	NA	CaCO3 Paint
003a		Layered	White Drywall	Asbestos Not Present	Cellulose 10	Gypsum
004	01-04	Layered	Tan Texture	Asbestos Present Chrysotile 3	NA	CaCO3 Paint
004a		Layered	White Drywall	Asbestos Not Present	Cellulose 10	Gypsum

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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Analyzed By: Cassie Sanborn	Project Location: Cherokee
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
005	01-05	Layered	Tan Texture	Asbestos Present Chrysotile 3	NA	CaCO3 Paint
005a		Layered	White Drywall	Asbestos Not Present	Cellulose 10	Gypsum
006	01-06	Layered	Tan Texture	Asbestos Not Present	NA	Paint
006a		Layered	White Drywall	Asbestos Not Present	Cellulose 10	Gypsum
007	01-07	Layered	Tan Texture	Asbestos Present Chrysotile 3	NA	CaCO3 Paint
007a		Layered	White Drywall	Asbestos Not Present	Cellulose 10	Gypsum

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Polarized Light Microscopy Asbestos Analysis Report

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Date Analyzed: 11/30/2021	Project: 17798 Muskogee Ave
Analyzed By: Cassie Sanborn	Project Location: Cherokee
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
008	02-01	Layered	Gray Flooring	Asbestos Not Present	Cellulose 20	CaCO3 Vinyl
008a		Layered	Yellow/Black Mastic	Asbestos Not Present	NA	Glue Tar
009	03-01	Homogeneous	White Ceiling Tile	Asbestos Not Present	Cellulose 90	Paint
010	04-01	Layered	Gray Laminate	Asbestos Not Present	Cellulose 35	CaCO3 Vinyl Tar
010a		Layered	Brown Mastic	Asbestos Not Present	NA	Glue
011	05-01	Homogeneous	Red Siding	Asbestos Present Chrysotile 20	NA	CaCO3 Paint
012	06-01	Layered	Gray Flooring	Asbestos Present Chrysotile 4	NA	CaCO3 Vinyl

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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
012a		Layered	Black Mastic	Asbestos Not Present	NA	Tar
013	07-01	Homogeneous	Gray Shingle	Asbestos Not Present	Cellulose 30	Tar Sand
014	08-01	Homogeneous	Black Felt	Asbestos Not Present	Cellulose 60	Tar

Cassie Sanborn

Cassie Sanborn, Laboratory Analyst

11/30/2021

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

For Lab Use Only
Lab No. <u>341506</u>
<input checked="" type="radio"/> Accept <input type="radio"/> Reject

Contact Information		Project Information	
Company: Cherokee Nation	Phone: (918) 453-5009	Project Name: 17798 Muskogee Ave	Report Results (<input checked="" type="checkbox"/> one box)
Contact: Ashley Wagnon	Cell Phone:	Project Location: Cherokee	<input type="checkbox"/> QuanTEM Website
Account #: C162	E-mail: ashley-wagnon@cherokee.org	Project ID:	<input checked="" type="checkbox"/> Email ashley.wagnon@cherokee.org
SAMPLED BY: Name: Ashley Wagnon/Logan Girt	Date: 11/24/21	P.O. Number: 272279	<input type="checkbox"/> Other

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Ashley Wagnon	11/24/21 12PM	Fed Ex	cdm	11/29/21c 9:50

REQUESTED SERVICES (Please <input checked="" type="checkbox"/> the Appropriate Boxes)					
	PLM	PLM	TEM		TURNAROUND TIME
			Air- AHERA	Bulk- Presence / Absence EPA600/R-93/116	
<input checked="" type="checkbox"/>	Bulk Analysis (EPA 600/R-93/116)	Vermiculite Attic Insulation (EPA 600/R-04/004)	<input type="checkbox"/>	<input type="checkbox"/>	Rush
<input type="checkbox"/>	400 Point Count	Other	<input type="checkbox"/>	<input type="checkbox"/>	Same Day
<input type="checkbox"/>	1000 Point Count		<input type="checkbox"/>	<input type="checkbox"/>	24 - Hour
<input type="checkbox"/>	Gravimetric Preparation	PCM	<input type="checkbox"/>	<input type="checkbox"/>	3 - Day
<input type="checkbox"/>	Particle ID	NIOSH 7400	<input type="checkbox"/>	<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"/>	white	wall/ceiling texture drywall		throughout home
2	01-02	<input checked="" type="checkbox"/>	white	wall/ceiling texture		throughout home
3	01-03	<input checked="" type="checkbox"/>	white	wall/ceiling texture		throughout home
4	01-04	<input checked="" type="checkbox"/>	white	wall/ceiling texture		throughout home
5	01-05	<input checked="" type="checkbox"/>	white	wall/ceiling texture		throughout home
6	01-06	<input checked="" type="checkbox"/>	white	wall/ceiling texture		throughout home
7	01-07	<input checked="" type="checkbox"/>	white	wall/ceiling texture		throughout home
8	02-01	<input checked="" type="checkbox"/>	gray	vinyl flooring		kitchen/bathroom
9	03-01	<input checked="" type="checkbox"/>	white	ceiling tile		bedrooms/ bath/ hallway
10	04-01	<input checked="" type="checkbox"/>	gray/black	laminated/adhesive		kitchen cabinets/backsplash

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



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

For Lab Use Only
Lab No. <u>341506</u>
<input checked="" type="radio"/> Accept <input type="radio"/> Reject

Project Information		Project Name: 17798 Muskogee Ave	Project Location: Cherokee			
No.	Sample ID (10 Characters Max)	To Be Analyzed <input checked="" type="checkbox"/>	Color	Description	Volume / Area (as applicable)	Comments / Notes
11	05-01	<input checked="" type="checkbox"/>	red	siding		exterior
12	06-01	<input checked="" type="checkbox"/>	gray	9x9 flooring		basement
13	07-01	<input checked="" type="checkbox"/>	gray	shingles		exterior
14	08-01	<input checked="" type="checkbox"/>	black	felt paper		exterior
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"/>				

APPENDIX C.

PHOTOGRAPHS OF ASBESTOS CONTAINING MATERIALS



Photograph 1: Wall and Ceiling Texture 3% Chrysotile Asbestos



Photograph 2: 9x9 Floor Tiles below carpet on lower level, 4% Chrysotile Asbestos



Photograph 3: Exterior Siding 20% Chrysotile Asbestos