

CHEROKEE NATION
Environmental Programs



Asbestos Sampling Report

PARTICIPANT: Iron, Pamela

PREPARED BY: *Christopher Cochran* **DATE:** 9-14-23
CHRISTOPHER COCHRAN ENVIRONMENTAL TECHNICIAN

REQUESTED BY: CHEROKEE NATION HOUSING REHABILITATION (HUD) –
GEORGE HUBBARD

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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 Name: Pamela Iron
Address: 23272 HWY 82 Park Hill, OK 74451
Phone 918-822-5232
Lat/Long N35.83529, W094.96721

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: Christopher Cochran ODOL, AHERA Inspector, License No: 401244

The sampling was conducted on August 22nd, 2023 at the request of the Cherokee Nation Housing Rehabilitation Department.

The site is a single family home built in 1975. Sampling was limited to areas that would be affected by the project scope of work (Appendix A) provided by the rehabilitation department.

ACM was found at the last visit to the home.

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 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

A total of 36 samples were analyzed from 10 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 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)
03-01 03-02 03-03	White Ceiling Texture/Joint Wall Compound	Den	Friable	Damaged	3% Chrysotile
05-01 05-02 05-03	Tan Joint Wall Compound	Kitchen	Friable	Damaged	3% Chrysotile
07-01 07-02 07-03 07-04 07-05	Tan Joint Wall Compound	Through Out	Friable	Damaged	3% Chrysotile

Table 2. Non – Asbestos Containing Materials

Sample #	Material Description	Locations	Condition	Sample Results (% Asbestos)
01-01	Gray Shingle	Roof	Damaged	Not Present
02-01	Gray Concert	House	Damaged	Not Present
04-01	Tan Roll Sheet Flooring/Mastic	Den/Kitchen	Damaged	Not Present
06-01	Gray Roll Sheet Flooring/Mastic	Doorway	Damaged	Not Present
08-01	Tan Roll Sheet Flooring/Mastic	Bath Room 1	Damaged	Not Present
09-01	Cream Roll Sheet Flooring/Mastic	Bath Room 2	Damaged	Not Present
10-01	Ceiling Tile	Doorway	Damaged	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.



2033 HERITAGE PARK DR, OKLAHOMA CITY, OK 73120 1.800.822.1650

Polarized Light Microscopy Asbestos Analysis Report

QuanTEM Lab No. 361842
 Account Number: C162
 Date Received: 08/28/2023
 Received By: Baylie Longstreth
 Date Analyzed: 08/29/2023
 Analyzed By: Cassie Sanborn
 Methodology: EPA/600/R-93/116

Client: Cherokee Nation Environmental Programs
 PO Box 948
 Tahlequah, OK 74464

Project: Pamela Iron
 Project Location: Park Hill
 Project Number: N/A

QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
001	01-01	Layered	Gray Shingle	Asbestos Not Present	Glass Fiber 25	Tar Sand CaCO3
001a		Layered	Black Tar	Asbestos Not Present	NA	Tar
001b		Layered	Black Tar Paper	Asbestos Not Present	Cellulose 70	Tar
002	02-01	Homogeneous	Gray Concrete	Asbestos Not Present	NA	CaCO3 Sand Paint
003	03-01	Homogeneous	White Texture	Asbestos Present Chrysotile 4	NA	CaCO3 Foam Paint
004	03-02	Homogeneous	White Texture	Asbestos Present Chrysotile 4	NA	CaCO3 Foam Paint

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.
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Polarized Light Microscopy Asbestos Analysis Report

Quantem Lab No. 361842	Client: Cherokee Nation Environmental Programs
Account Number: C162	PO Box 948
Date Received: 08/28/2023	Tahlequah, OK 74464
Received By: Baylie Longstreth	
Date Analyzed: 08/29/2023	Project: Pamela Iron
Analyzed By: Cassie Sanborn	Project Location: Park Hill
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	03-03	Homogeneous	White Texture	Asbestos Present Chrysotile 4	NA	CaCO3 Foam Paint
006	04-01	Layered	Tan Sheet Vinyl	Asbestos Not Present	Cellulose 15 Glass Fiber 5	CaCO3 Vinyl
006a		Layered	Yellow Mastic	Asbestos Not Present	NA	Glue
007	05-01	Layered	White Texture	Asbestos Not Present	NA	CaCO3 Paint
007a		Layered	White Joint Compound	Asbestos Not Present	NA	CaCO3
008	05-02	Layered	White Texture	Asbestos Not Present	NA	CaCO3 Paint
008a		Layered	Tan Joint Compound	Asbestos Present Chrysotile 3	NA	CaCO3

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 PO Box 948
 Tahlequah, OK 74464

Project: Pamela Iron
 Project Location: Park Hill
 Project Number: N/A

QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
009	05-03	Layered	Tan Texture	Asbestos Present Chrysotile 3	NA	CaCO3 Paint
009a		Layered	Tan Joint Compound	Asbestos Present Chrysotile 3	NA	CaCO3
010	06-01	Layered	Gray Sheet Vinyl	Asbestos Not Present	Cellulose 20	CaCO3 Vinyl
010a		Layered	Yellow Mastic	Asbestos Not Present	NA	Glue
010b		Layered	Gray Leveling Compound	Asbestos Not Present	Cellulose 5	CaCO3 Sand
011	07-01	Homogeneous	White Texture	Asbestos Not Present	NA	CaCO3 Paint

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Analyzed By: Cassie Sanborn	Project Location: Park Hill
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
012	07-02	Layered	White Texture	Asbestos Not Present	NA	CaCO3 Paint
012a		Layered	Tan Joint Compound	Asbestos Present Chrysotile 3	NA	CaCO3
012b		Layered	White Sheetrock	Asbestos Not Present	Cellulose 10	Gypsum
013	07-03	Layered	White Texture	Asbestos Not Present	NA	CaCO3 Paint
013a		Layered	White Sheetrock	Asbestos Not Present	Cellulose 10	Gypsum
014	07-04	Layered	White Texture	Asbestos Not Present	NA	CaCO3 Paint
014a		Layered	White Sheetrock	Asbestos Not Present	Cellulose 10	Gypsum

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 Project Number: N/A

QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
015	07-05	Layered	White Texture	Asbestos Not Present	NA	CaCO3 Paint
015a		Layered	White Sheetrock	Asbestos Not Present	Cellulose 10	Gypsum
016	08-01	Layered	Tan Sheet Vinyl	Asbestos Not Present	Cellulose 20	CaCO3 Vinyl
016a		Layered	Yellow Mastic	Asbestos Not Present	NA	Glue
016b		Layered	Tan Leveling Compound	Asbestos Not Present	NA	CaCO3
017	09-01	Layered	Cream Sheet Vinyl	Asbestos Not Present	Cellulose 20	CaCO3 Vinyl

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Project Location: Park Hill

Project Number: N/A

Quantem Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
017a		Layered	Yellow Mastic	Asbestos Not Present	NA	Glue
017b		Layered	White Sheet Vinyl	Asbestos Not Present	Cellulose 20	CaCO3 Vinyl
017c		Layered	Yellow Mastic	Asbestos Not Present	NA	Glue
018	10-01	Homogeneous	White Ceiling Tile	Asbestos Not Present	Cellulose 50 Glass Fiber 30	Perlite Paint

Cassie Sanborn

Cassie Sanborn, Laboratory Analyst

8/29/2023

Date of Report

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LEGAL DOCUMENT - PLEASE PRINT LEGIBLY

Contact Information		Project Information	
Company: Cherokee Nation	Phone: (918) 453-5009	Project Name: Pamela Iron	Report Results (<input checked="" type="checkbox"/> one box)
Contact: Ashley Wagnon	Cell Phone:	Project Location: Park Hill	
Account #: C162	Email: christopher-cochran@cherokee.org	Project ID:	<input checked="" type="checkbox"/> Email christopher-cochran@cherokee.org
SAMPLED BY: Name: Christopher Cochran	Date: 8/22/2023	P.O. Number: 260137	<input type="checkbox"/> Other _____

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Christopher Cochran	8/25/2023	Fedex	<i>[Signature]</i>	8/28/23 10:10

REQUESTED SERVICES (Please <input checked="" type="checkbox"/> the Appropriate Boxes)										
No.	Sample ID (10 Characters Max)	<input checked="" type="checkbox"/> To Be Analyzed	Color	Description	Volume / Area (as applicable)	Comments / Notes	PLM	TEM	TEM	TURNAROUND TIME
1	01-01	<input checked="" type="checkbox"/>	Gray	Shingle	Roof		<input checked="" type="checkbox"/> Bulk Analysis (EPA 600/R-93/116)	<input type="checkbox"/> Air-AHEHA	<input type="checkbox"/> Bulk Presence / Absence EPA600/R-93/116	<input type="checkbox"/> Rush
2	02-01	<input checked="" type="checkbox"/>	Gray	Concert	House		<input type="checkbox"/> 400 Point Count	<input type="checkbox"/> Air-NIOSH 7402	<input type="checkbox"/> Bulk- Quantitative (weight%) - Charfield	<input type="checkbox"/> Same Day
3	03-01-03-04-3	<input checked="" type="checkbox"/>	White	Ceiling Texture/Joint Wall Compound	Den		<input type="checkbox"/> 1000 Point Count	<input type="checkbox"/> Air-ISO 10312	<input checked="" type="checkbox"/> Dust- Presence / Absence	<input checked="" type="checkbox"/> 24 - Hour
4	04-01	<input checked="" type="checkbox"/>	Tan	Roll Sheet Flooring /Mastic	Den/Kitchen		<input type="checkbox"/> Gravimetric Preparation	<input type="checkbox"/> Drinking Water- EPA 100.2	<input type="checkbox"/> Dust- Quantitative (fibers/sq.cm) - ASTM D5755	<input type="checkbox"/> 3 - Day
5	05-01-05-03	<input checked="" type="checkbox"/>	White	Wall & Ceiling Texture/Joint Wall Compound	Kitchen		<input type="checkbox"/> Particle ID	<input type="checkbox"/> Waste Water- EPA 600/4-83-043	<input type="checkbox"/> Other	<input type="checkbox"/> 5 - Day
6	06-01	<input checked="" type="checkbox"/>	Gray	Roll Sheet Flooring/Mastic	Door Way					
7	07-01 -07-05	<input checked="" type="checkbox"/>	White	Wall Texture/Joint Wall Compound	Through Out					
8	08-01	<input checked="" type="checkbox"/>	Tan	Roll Sheet Flooring/Mastic	Bath Room 1					
9	09-01	<input checked="" type="checkbox"/>	Cream	Roll Sheet Flooring/Mastic	Bath Room 2					
10	10-01	<input checked="" type="checkbox"/>	White	Ceiling Tile	Door Way					

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