

CHEROKEE NATION
Environmental Programs



Asbestos Sampling Report

ORIGINAL

PARTICIPANT: BRYANT, IDA RUTH

PREPARED BY: *Nick Clark* **DATE:** 11/5/15
NICK CLARK, ENVIRONMENTAL SPECIALIST I

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

TABLE OF CONTENTS

- I. SITE INSPECTION/DESCRIPTION
- II. BACKGROUND
- III. FIELD PROCEDURES AND ANALYTICAL METHODS
- IV. SUMMARY OF FINDINGS
- V. CONCLUSIONS

APPENDIX A: PROJECT SCOPE OF WORK

APPENDIX B: LABORATORY REPORT & CHAIN OF CUSTODY

APPENDIX C: SITE PHOTOGRAPHS

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: Ida Ruth Bryant
Address: 508 W. Carver St. Jay, OK 74346
Phone 918-510-7504 or 918-884-9387
Lat/Long 36.42413 -94.79782

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 October 29, 2015 at the request of the Cherokee Nation Housing Rehabilitation Department.

The site is a single family home built in 1955. 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 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. EMSL Analytical Inc. (NVLAP # 200742-0) in Saint Louis, MO 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 11 samples were analyzed from 7 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.

Sample #	Material Description	Locations	Friability (Friable, NF Cat I NF Cat II)	Condition	Sample Results (% Asbestos)
02-03	Vinyl Flooring	Bathroom	NF Cat I	Damaged	2% Chrysotile

Sample #	Material Description	Locations	Condition	Sample Results (% Asbestos)
01-01	Shingles	Roof	Good	None Detected
02-01 02-02	Wall Texture	Bathroom	Good	<1 % Chrysotile
03-01 03-02 03-03	Ceiling Texture	Kitchen	Good	None Detected
04-01	Vinyl Flooring	Bathroom	Good	None Detected
05-01	Vinyl Flooring	Kitchen	Good	None Detected
06-01	Vinyl Flooring	Hall & Bathl Floor	Good	None Detected
07-01	Vinyl Tiles	Shower Backsplash	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.

APPENDIX B.
LABORATORY RESULTS
&
CHAIN OF CUSTODY



EMSL Analytical, Inc.

3029 S. Jefferson Saint Louis, MO 63118
Tel/Fax: (314) 577-0150 / (314) 776-3313
<http://www.EMSL.com> / saintlouislabs@emsl.com

EMSL Order: 391510153
Customer ID: CHER25
Customer PO: 179354
Project ID:

Attention: C. Nick Clark
Cherokee Nation Environmental Programs
206 East Allen Road
Tahlequah, OK 74464
Phone: (918) 453-5370
Fax:
Received Date: 11/ 4/2015 8:05 AM
Analysis Date: 11/ 4/2015
Collected Date:
Project: IDA RUTH BRYANT

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos % Type
			% Fibrous	% Non-Fibrous	
01-01 391510153-0001		Various Non-Fibrous Heterogeneous	30% Glass	70% Non-fibrous (Other)	None Detected
02-01-Texture 391510153-0002		Various Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	<1% Chrysotile
02-01-Wall 391510153-0002A		Tan Fibrous Homogeneous	100% Cellulose		None Detected
02-02 391510153-0003		Various Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	<1% Chrysotile
02-03 391510153-0004		White Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
<i>Sample does not match sample description. Sample appears to be texture.</i>					
03-01-Flooring 391510153-0005		Various Non-Fibrous Heterogeneous	8% Wollastonite	92% Non-fibrous (Other)	None Detected
<i>Sample description does not match sample type. Sample resembles texture.</i>					
03-01-Floor 391510153-0005A		Tan Fibrous Homogeneous	100% Cellulose		None Detected
<i>Sample description does not match sample type. Sample resembles drywall paper.</i>					
03-02-Flooring 391510153-0006		Various Non-Fibrous Heterogeneous	9% Wollastonite	91% Non-fibrous (Other)	None Detected
<i>Sample description does not match sample type. Sample resembles texture.</i>					
03-02-Floor 391510153-0006A		Tan Fibrous Homogeneous	100% Cellulose		None Detected
<i>Sample description does not match sample type. Sample resembles drywall paper.</i>					
03-03-Tiles 391510153-0007		White Non-Fibrous Homogeneous	8% Wollastonite	92% Non-fibrous (Other)	None Detected
<i>Sample description does not match sample type. Sample resembles texture.</i>					
03-03-Floor 391510153-0007A		Brown Fibrous Homogeneous	100% Cellulose		None Detected
<i>Sample description does not match sample type. Sample resembles paper.</i>					
04-01-Flooring 391510153-0008		Various Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
04-01-Adhesive 391510153-0008A		Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
04-01-Flooring 391510153-0008B		Various Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 11/04/2015 10:47:48



EMSL Analytical, Inc.

3029 S. Jefferson Saint Louis, MO 63118
Tel/Fax: (314) 577-0150 / (314) 776-3313
http://www.EMSL.com / saintlouislab@emsl.com

EMSL Order: 391510153
Customer ID: CHER25
Customer PO: 179354
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
04-01-Adhesive 391510153-0008C		White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
05-01-Flooring 391510153-0009		Various Non-Fibrous Heterogeneous	11% Cellulose	89% Non-fibrous (Other)	None Detected
05-01-Adhesive 391510153-0009A		Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
<i>Limited sample submitted, result cannot be verified.</i>					
06-01-Flooring 391510153-0010		Various Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
06-01-Adhesive 391510153-0010A		Clear Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
06-01-Flooring 391510153-0010B		Various Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
06-01-Adhesive 391510153-0010C		Clear Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07-01-Flooring 391510153-0011		Various Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
07-01-Adhesive 391510153-0011A		Clear Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Analyst(s) _____

Donald Schmidt (3)
Sue Ferrario (20)

Jeff Sina, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Saint Louis, MO NVLAP Lab Code 200742-0

Initial report from: 11/04/2015 10:47:48



**Asbestos Bulk Building Material
Chain of Custody**

EMSL Order Number (Lab Use Only):

391510153

St. Louis, MO 63118
PHONE: (314)-577-0150
FAX: (314)-776-3313

Company: Cherokee Nation Environmental Programs		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>	
Street: 208 E. Allen Rd.		<i>Third Party Billing requires written authorization from third party</i>	
City: Tahlequah	State/Province: OK	Zip/Postal Code: 74464	Country: United States
Report To (Name): C. Nick Clark		Telephone #: 918-316-7451	
Email Address: carlton-clark@cherokee.org		Fax #: 918-453-2904	Purchase Order: 179354
Project Name/Number: IDA RUTH BRYANT		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail	
U.S. State Samples Taken: OK		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hour <input type="checkbox"/> 6 Hour <input checked="" type="checkbox"/> 24 Hour <input type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week			
<small>*For TEM Air 3 hr through 6 hr, please call ahead to schedule. There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide</small>			
PLM - Bulk (reporting limit)		TEM - Bulk	
<input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) <input type="checkbox"/> NIOSH 9002 (<1%) <input type="checkbox"/> NY ELAP Method 198.1 (frable in NY) <input type="checkbox"/> NY ELAP Method 198.6 NOB (non-frable-NY) <input type="checkbox"/> OSHA ID-191 Modified <input type="checkbox"/> Standard Addition Method		<input type="checkbox"/> TEM EPA NOB - EPA 600/R-93/116 Section 2.5.5.1 <input type="checkbox"/> NY ELAP Method 198.4 (TEM) <input type="checkbox"/> Chatfield Protocol (semi-quantitative) <input type="checkbox"/> TEM % by Mass - EPA 600/R-93/116 Section 2.5.5.2 <input type="checkbox"/> TEM Qualitative via Filtration Prep Technique <input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique	
		<u>Other</u>	
		<input type="checkbox"/>	
<input type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group		Date Sampled: 10/29/15	
Samplers Name: Nick Clark		Samplers Signature: <i>C. Nick Clark</i>	
Sample #	HA #	Sample Location	Material Description
01-01	1	ROOF	SHINGLES
02-01	2	BATHROOM	WALL TEXTURE
02-02	2	BATHROOM	CEILING TEXTURE
02-03	2	BATHROOM	VINYL FLOORING
03-01	3	KITCHEN	VINYL FLOORING
03-02	3	KITCHEN	VINYL FLOORING
03-03	3	KITCHEN	VINYL TILES
04-01	4	BATHROOM	VINYL FLOORING
05-01	5	KITCHEN	VINYL FLOORING
06-01	6	HALL & BATH FLOOR	VINYL FLOORING
Client Sample # (s): 01-01 - 07-01		Total # of Samples: 11	
Relinquished (Client): Nick Clark		Date: 10/30/15	Time: 8:40 AM
Received (Lab): <i>Form Lab</i>		Date: 11-4-15	Time: 8:05 P
Comments/Special Instructions:			
<u>80922823038</u>			

OrderID: 391510153



Asbestos Bulk Building Material Chain of Custody EMSL Order Number (Lab Use Only)

10153

EMSL Analytical, Inc. 3029 S. Jefferson

St. Louis, MO 63118 OGNMD9 (314)-577-0150 E@E (314)-776-3313

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Table with 4 columns: Sample #, HA #, Sample Location, Material Description. Row 1: 07-01, 7, SHOWER BACKSPLASH BATHROOM, VINYL TILES. Includes a comments section at the bottom.

Of d 2 ne 2 o'f dr

APPENDIX C.

SITE PHOTOGRAPHS

