

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



**Asbestos Sampling Report**

**PARTICIPANT:** DUGGER, BEVERLY

**PREPARED BY:**

*Michael Miley*  
MICHAEL MILEY, ENVIRONMENTAL SPECIALIST

**DATE:**

8/27/12

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

**ORIGINAL**

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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:

Name: Beverly Dugger

Phone Number: 918-696-6847

Address: 605 Allison Ave. Stilwell, OK 74960

Year of home construction: 1970

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:

Michael Miley ODOL, AHERA Inspector, License No: OK159910

The sampling was conducted on 9/4/2012 at the request of the Cherokee Nation Housing Rehabilitation Department.

The site is a single family home built in 1970. 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 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 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. 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

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A total of 17 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.

### Table 2. Materials

[illegible]



## V. CONCLUSIONS

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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

Phone/Fax: (314) 577-0150 / (314) 776-3313

saintlouislab@emsl.com

EMSL Order: 391208089

CustomerID: CHER25

CustomerPO: 114068

ProjectID:

Attn: **Michael Miley**  
**Cherokee Nation Environmental Programs**  
**206 East Allen Road**  
**Tahlequah, OK 74464**

Phone: (918) 453-5370

Fax:

Received: 09/10/12 11:00 AM

Analysis Date: 9/12/2012

Collected:

Project: Beverly Dugger

**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA  
600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos	
			% Fibrous	% Non-Fibrous	% Type	
01-01-Texture 391208089-0001		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)		None Detected
01-01-Joint Compound 391208089-0001A		Gray Non-Fibrous Heterogeneous		94% Non-fibrous (other) 4% Mica		2% Chrysotile
01-01-Drywall 391208089-0001B		Various Non-Fibrous Heterogeneous	49% Cellulose	51% Non-fibrous (other)		None Detected
01-02-Texture 391208089-0002		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)		None Detected
01-02-Drywall 391208089-0002A		Various Non-Fibrous Heterogeneous	39% Cellulose	61% Non-fibrous (other)		None Detected
01-03-Texture 391208089-0003		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)		None Detected
01-03-Drywall 391208089-0003A		Various Non-Fibrous Heterogeneous	49% Cellulose	51% Non-fibrous (other)		None Detected
02-01 391208089-0004		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)		None Detected

Analyst(s)

Sue Ferrario (17)

Jeff Siria, 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 09/12/2012 12:10:56

Test Report PLM-7 16.0 Printed: 9/12/2012 12:10:56 PM

**EMSL Analytical, Inc.**

3029 S. Jefferson, Saint Louis, MO 63118

Phone/Fax: (314) 577-0150 / (314) 776-3313

[saintlouislab@emsl.com](mailto:saintlouislab@emsl.com)

EMSL Order: 391208089

CustomerID: CHER25

CustomerPO: 114068

ProjectID:

Attn: **Michael Miley**  
**Cherokee Nation Environmental Programs**  
**206 East Allen Road**  
**Tahlequah, OK 74464**

Phone: (918) 453-5370

Fax:

Received: 09/10/12 11:00 AM

Analysis Date: 9/12/2012

Collected:

Project: Beverly Dugger

**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA  
600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
02-02 391208089-0005		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
03-01-Paint 391208089-0006		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
03-01-Caulk 391208089-0006A		Cream Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
04-01-Rocks 391208089-0007		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
04-01-Tar 391208089-0007A		Black Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
04-01-Felt 391208089-0007B		Brown Non-Fibrous Heterogeneous	29% Cellulose	71% Non-fibrous (other)	None Detected
04-01-Rocks 391208089-0007C		White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
04-01-Tar 391208089-0007D		Black Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

Sue Ferraro (17)

Jeff Siria, 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 260742-0

Initial report from 09/12/2012 12:10:56

Test Report PLM-7.16.0 Printed: 9/12/2012 12:10:56 PM



**EMSL Analytical, Inc.**

3029 S. Jefferson, Saint Louis, MO 63118

Phone/Fax: (314) 577-0150 / (314) 776-3313

[saintlouislab@emsl.com](mailto:saintlouislab@emsl.com)

EMSL Order: 391208089  
CustomerID: CHER25  
CustomerPO: 114068  
ProjectID:

Attn: **Michael Miley**  
**Cherokee Nation Environmental Programs**  
**206 East Allen Road**  
**Tahlequah, OK 74464**

Phone: (918) 453-5370  
Fax:  
Received: 09/10/12 11:00 AM  
Analysis Date: 9/12/2012  
Collected:

Project: **Beverly Dugger**

**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA  
600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos	
			% Fibrous	% Non-Fibrous	% Type	
04-01-Felt		Brown	29% Cellulose	71% Non-fibrous (other)		None Detected
391208089-0007E		Non-Fibrous Heterogeneous				

Analyst(s)

Sue Ferraro (17)

Jeff Siria, 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-finite 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-D

Initial report from 09/12/2012 12:10:56

391208089



## Asbestos Lab Services Chain of Custody

EMSL Order Number (Lab Use Only):

St. Louis, MO  
3025-3029 S. Jefferson  
St. Louis, MO 63118  
PHONE (314)-577-0150  
FAX (314)-776-3313

Company: Cherokee Nation Environmental Programs		EMSL-Bill to: <input type="checkbox"/> Same <input checked="" type="checkbox"/> Different If Bill to a Different rule instructions in Comments Third Party Billing requires written authorization from third party	
Street: 206 E. Allen Rd.			
City/State/Zip: Tahlequah, OK 74464			
Report To (Name): Michael Miley		Fax:	
Telephone: 918-457-8414		Email Address: michael-miley@cherokee.org	
Project Name/Number: Beverly Dugger			
Please Provide Results: Email		Purchase Order: 114068	
		State Samples Taken: OK	
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hour <input type="checkbox"/> 6 Hour <input type="checkbox"/> 24 Hour <input checked="" type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week			
*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.			
<b>PCM - Air</b> <input type="checkbox"/> Check if samples are from NY <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA <b>PLM - Bulk (reporting limit)</b> <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"/> NYS 198.1 (friable in NY) <input type="checkbox"/> NYS 198.6 NOB (non-friable-NY) <input type="checkbox"/> NIOSH 9002 (<1%)		<b>TEM - Air</b> <input type="checkbox"/> 4-4.5hr TAT (AHERA only) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312 <b>TEM - Bulk</b> <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (non-friable-NY) <input type="checkbox"/> Chatfield SOP <input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5 <b>TEM - Water: EPA 100.2</b> Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	
		<b>TEM - Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167) <b>Soil/Rock/Vermiculite</b> <input type="checkbox"/> PLM CARB 435 - A (0.25% sensitivity) <input type="checkbox"/> PLM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - C (0.01% sensitivity) <input type="checkbox"/> EPA Protocol (Semi-Quantitative) <input type="checkbox"/> EPA Protocol (Quantitative) <b>Other:</b> <input type="checkbox"/>	
<input type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group		Filter Pore Size (Air Samples): <input type="checkbox"/> 0.8µm <input type="checkbox"/> 0.45µm	
Samplers Name: Michael Miley		Samplers Signature: [Signature]	
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
01-01	Wall texture Bathroom		9/9/12
01-02	Wall texture Bathroom		1
01-03	Wall texture Bathroom		1
02-01	Floor tile Kitchen (throughout)		1
02-02	Floor tile Kitchen		1
03-01	Caulking exterior Door		1
04-01	Shingle roof		1
Client Sample # (s):		Total # of Samples:	
Relinquished (Client): [Signature]		Date: 9/6/12	Time: 11:00
Received (Lab): [Signature]		Date: 9/10/12	Time: 10:50
Comments/Special Instructions: Bill To: Cherokee Nation Environmental Programs, 206 E. Allen Rd., Tahlequah, OK 74464 Attention: Ashley Wagoner Phone: 918-453-5370 Email: ashley.wagoner@cherokee.org Purchase Order: 114068			

Controlled Document - Asbestos Lab Services COC - 812 - 11/23/2009

Page 1 of 1 Pages



## **APPENDIX C.**

### **SITE PHOTOGRAPHS**





# Asbestos Sampling Report

For the dwelling located at:

Beverly Dugger  
605 Allison Ave.  
Stilwell, OK 74960  
Built- 1980  
918-696-6847

Prepared For:

**Cherokee Nation Housing Rehab**  
Using ODEQ, EPA and CN Work Practice Standards  
Established in 40 CFR 763.85, 40 CFR 763.86, and 40 CFR 763.87

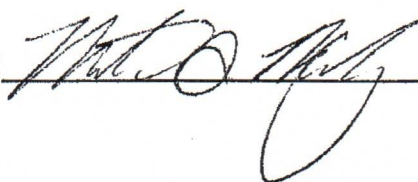
**Lab Analysis by Quantem Labs**  
NVLAP 101959-0  
2033 Heritage Park Drive  
Oklahoma City, OK 73120  
(405) 755-7272

By:

**Michael Miley**  
**EPA Accredited Asbestos Inspector**  
**License Number: 159910**  
Expiration: March 1, 2012

**Cherokee Nation Environmental Programs**  
P.O. Box 948  
Tahlequah, OK 74465  
(918) 453-5370

Signature: \_\_\_\_\_



Date: \_\_\_\_\_

8/11/2011

## Section I – Introduction

This report is an abbreviated National Emission Standard for Hazardous Air Pollutants (NESHAP) inspection based on the scope of work determined by Cherokee Nation Housing Rehab. Although not necessary for this type of report, the AHERA guidelines for asbestos sampling are followed. See Attachment A for scope of work to be performed.

'Friable' is used to describe asbestos that can be reduced to dust by hand pressure. 'Non-friable' means asbestos that is too hard to be reduced to dust by hand. Typical 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 or can be classified as Regulated Asbestos Containing Materials (RACM). Machine grinding, drilling, sanding, and dry-buffing are all ways of causing non-friable materials to become RACM.

In addition, asbestos is not always an immediate hazard. 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 the 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.

### Definitions:

Friable Asbestos Containing Material (ACM) is defined by NESHAPS rules as any material containing more than one percent (1%) asbestos as determined by Polarized Light Microscopy 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 or asphalt roofing products that contain more than one percent (1%) asbestos as determined by Polarized Light Microscopy. Resilient floor covering includes floor tiles and roll sheet flooring.

Category II Non-friable ACM is defined by NESHAPS rules as any material, excluding Category I non-friable ACM, containing more than one percent (1%) asbestos as determined by Polarized Light Microscopy, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

In addition to classification of suspect materials into friable and non-friable materials, a determination of current condition was conducted as part of the physical assessment. Please note that the classification of condition by the inspector is representative of the material as viewed only during the on-site inspection. The condition of said materials can change very quickly when disturbed by contact, air erosion, or vibration damage after said inspection has been completed. All suspect material was placed in one of the following three categories of condition:

Significantly damaged: Material damaged, blistered, deteriorated, water stained over at least one tenth (10%) of its total area.



Damaged: Material is damaged blistered, deteriorated, water stained less than one tenth (10%) of its total area.

Good: No visible damage or deterioration.

### **Sampling Protocol:**

The number of samples collected per suspect homogeneous area was determined using the AHERA protocol promulgated in 40 CFR 763, Appendix E as follows:

Surfacing materials - material that is sprayed or troweled on walls, ceilings, or support columns for fireproofing, acoustical, or even decorative purpose.

- Less than 1000 ft<sup>2</sup> = Minimum 3
- From 1000-5000 ft<sup>2</sup> = Minimum 5
- Greater than 5000 ft<sup>2</sup> = Minimum 7

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 materials 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.
- Materials such as cementitious asbestos or vibration dampening cloths should not be sampled and will be assumed asbestos containing materials unless instructed by client to collect these samples.

## **SECTION II – INSPECTION DESCRIPTION**

This inspection was performed at the property known as (Patsy Morgan ) at the request of the Cherokee Nation Housing Services. The site consists of a single-family . Suspect asbestos materials that were sampled include (list materials-for example, ceiling tile, sheetrock, flooring, etc.). A total of (9) were collected for analysis, and of these, (0) are asbestos containing materials (ACM). See the Summary of Results for sampling locations and material conditions (Good, Damaged, or Significantly Damaged).

**Participant Information:**

Beverly Dugger  
605 Allison Ave.  
Stilwell, OK 74960  
Built- 1980  
918-696-6847

**Date of Sampling:**

8/5/2011

**Sampled by:**

Michael Miley

**Section III – Sampling Results**

Samples were collected from each homogeneous area according to protocol listed in section I. All samples were analyzed using Polarized Light Microscopy (PLM) in accordance with EPA Method 600R-93/116. If the presence of asbestos was confirmed, the percentage of asbestos containing material versus non-asbestos containing material was visually estimated by a combination of Polarized Light and Stereo Microscopy.

See Attachment B for photographs of homogeneous areas containing asbestos.

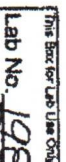
See Attachment C for Chain of Custody.

See Attachment D for Laboratory Results.

See Attachment E for Summary of Results.



**Attachment C.**  
Chain of Custody



Lab No. 198552

## Beverly Dugger

**Project Number:**

Revision: May 2006



---

**Attachment D.**  
Laboratory Results



2033 Heritage Park Drive / Oklahoma City, OK 73120 / (405) 755-7272 / Fax (405) 755-2058

### Polarized Light Microscopy Asbestos Analysis Report

Quantem Lab No. 198552

Account Number: B191

Date Received: 08/09/2011

Received By: Sherrie Leftwich

Date Analyzed: 08/10/2011

Analyzed By: Gayle Ooten

Methodology: EPA/600/R-93/116

Client: Cherokee Nation

P.O. Box 948

Tahlequah, OK 74465

Project: Beverly Dugger

Project Location: Stilwell, OK

Project Number: N/A

Quantem Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
001	01-01	Homogeneous	Yellow Insulation	Asbestos Not Present	Glass Fiber 95	Binder
002	02-01	Homogeneous	Brown Insulation	Asbestos Not Present	Glass Fiber 95	Binder
003	03-01	Homogeneous	White Sheetrock	Asbestos Not Present	Cellulose 25	Gypsum Paint
004	03-02	Homogeneous	White Sheetrock	Asbestos Not Present	Cellulose 25	Gypsum Paint
005	03-03	Homogeneous	White Sheetrock	Asbestos Not Present	Cellulose 20	Gypsum Paint
006	04-01	Homogeneous	Brown Insulation	Asbestos Not Present	Cellulose 20 Glass Fiber 65	Binder

Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.

Quantem is a NVLAP accredited TEM and 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 other agency of the US Government. This report may not be reproduced except in full, without the written approval of the laboratory.





2033 Heritage Park Drive / Oklahoma City, OK 73120 / (405) 755-7272 / Fax (405) 755-2058

### Polarized Light Microscopy Asbestos Analysis Report

Quantem Lab No. 198552

Account Number: B191

Date Received: 08/09/2011

Received By: Sherrie Leftwich

Date Analyzed: 08/10/2011

Analyzed By: Gayle Ooten

Methodology: EPA/600/R-93/116

Client: Cherokee Nation

P.O. Box 948

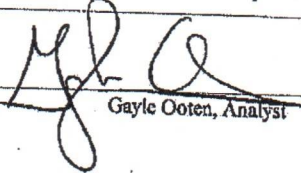
Tahlequah, OK 74465

Project: Beverly Dugger

Project Location: Stilwell, OK

Project Number: N/A

Quantem Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)	Non Fibrous
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Gayle Ooten, Analyst

8/10/2011

Date of Report

Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.

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**Attachment E.**  
Summary of Results



