



**SIERRA** ENVIRONMENTAL GROUP, INC.

November 21, 2013

Mr. Dennis Zimmer  
**City of Dayton**  
Department of Building Services/Division of Housing Inspection  
P.O. Box 22  
371 West 2<sup>nd</sup> Street  
Dayton, OH 45402

**Re:** Comprehensive Pre-Demolition Asbestos Inspection  
Vacant Residence  
828 Mia Avenue  
Dayton, Ohio  
Sierra Project Number: CD.029

Dear Mr. Zimmer:

On November 14, 2013, Mr. Chris Kuetner (Ohio Department of Health Certified Asbestos Hazard Evaluation Specialist #ES33689) of Sierra Environmental Group, Inc. (Sierra) visited the vacant residence located at 828 Mia Avenue in Dayton, Ohio. The purpose of this visit was to conduct a comprehensive asbestos inspection of the specified residence scheduled for demolition. This inspection process includes a visual inspection, as well as, the collection and analyses of samples from suspect asbestos-containing materials.

During the survey, the samples were collected utilizing sampling methods outlined in current EPA Guidance Documents. Each sample was collected and placed in a clean, sealable container and labeled with a unique sample identification number. Pertinent information was recorded on a Bulk Sample Log Sheet, including sample identification number, date of inspection, name of inspector, building name, a brief description and location of the sample, and the type of material sampled (e.g., thermal insulation, fireproofing, acoustical plaster). The samples were submitted to an analytical laboratory and analyzed for asbestos content by polarized-light microscopy (PLM) and dispersion staining (Method Reference: EPA-600/R-93/116). This analytical method, which the EPA currently recommends for the determination of asbestos in bulk samples of suspect materials, can be used for qualitative identification of six morphologically different types of asbestos fibers: chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite asbestos.

The method specifies that the asbestos content in a bulk sample shall be estimated and reported as a finite percentage (rounded to the nearest percentage) within the range of 0 to 100. The result of the bulk sample analysis is reported in a standard written laboratory report. This report includes the client's name, the project number, the laboratory identification number, the sample number assigned to the bulk sample upon receipt at the laboratory, and the field number assigned to the bulk sample upon collection on site. If the bulk sample contains more than one distinct layer of material, each layer is analyzed separately. The composition of the bulk sample is reported in percentages of asbestos (i.e., chrysotile, amosite, or other) and non-asbestos (i.e., cellulose, fiberglass, or other) components. The results of the sample analyses can be found on the laboratory report enclosed and Table I.

Sierra collected samples from wall and ceiling systems, flooring materials, roofing materials, window caulk and window glaze. Eight (8) asbestos-containing materials were identified within this residence scheduled for demolition. The cost to remove the RACM and Category II asbestos-containing materials from this residence prior to demolition would be \$11,300.00. The cost to remove the Category I asbestos-containing materials from this residence prior to demolition would be \$1,500.00.

Sierra made every effort to locate suspect asbestos-containing materials that may be concealed; however, suspect asbestos-containing materials which may be located behind hard plaster walls or ceilings, hard walled chases, under flooring or sub-flooring, etc., were not assessed or quantified. If through demolition suspect materials are discovered; they should be documented and handled accordingly.

This report is prepared to assist the City of Dayton, construction managers and asbestos abatement contractors in locating asbestos-containing materials. This report is not intended as a bidding document or project specifications.

Enclosed are the following Sierra documents: 1) Table 1-Bulk Sample Data Summary; 2) Table 2-Asbestos Inventory; 3) Laboratory Report and 4) Inspector's Certification. If we can be of further assistance on this or any other project, do not hesitate to call us at (513) 542-5323.

Sincerely,

**SIERRA ENVIRONMENTAL GROUP, INC.**



Todd Taylor  
Operations Manager

Attachments



TABLE 1: BULK SAMPLE DATA SUMMARY

SAMPLE DESCRIPTION (Material Type)	SAMPLE LOCATION	HOMO AREA #	SAMPLE I.D. NO.	ASBESTOS CONTENT	FRIABLE/ NONFRIABLE
The following samples were collected from the vacant residence located at 828 Mia Avenue, Dayton, Ohio.					
Window caulk (Miscellaneous)	Exterior	1	1-1	*2.3% Chrysotile	Friable
Window caulk (Miscellaneous)	Exterior	1	1-2	Stopped Analysis	Friable
Black paper under asphalt roof shingle (Miscellaneous)	Exterior	2	2-1	None Detected	Nonfriable
Black paper under asphalt roof shingle (Miscellaneous)	Exterior	2	2-2	None Detected	Nonfriable
Black asphalt roof shingle (Miscellaneous)	Exterior	3	3-1	None Detected	Nonfriable
Black asphalt roof shingle (Miscellaneous)	Exterior	3	3-2	None Detected	Nonfriable
Window glaze (Miscellaneous)	Garage	4	4-1	*1.3% Chrysotile	Friable
Window glaze (Miscellaneous)	Garage	4	4-2	Stopped Analysis	Friable
Green asphalt roof shingle (Miscellaneous)	Garage	5	5-1	None Detected	Nonfriable
Green asphalt roof shingle (Miscellaneous)	Garage	5	5-2	None Detected	Nonfriable
Drywall (Miscellaneous)	Living room	6	6-1	None Detected	Nonfriable
Drywall (Miscellaneous)	Hallway	6	6-2	None Detected	Nonfriable
Joint compound (Miscellaneous)	Living room	7	7-1	*2.5% Chrysotile	Nonfriable
Joint compound (Miscellaneous)	Hallway	7	7-2	Stopped Analysis	Nonfriable
Green linoleum (Miscellaneous)	Living room	8	8-1	None Detected	Nonfriable
Green linoleum (Miscellaneous)	Living room	8	8-2	None Detected	Nonfriable
Tan linoleum (Miscellaneous)	Living room	9	9-1	None Detected	Nonfriable

Table 1-1

**TABLE 1: BULK SAMPLE DATA SUMMARY**

<b>SAMPLE DESCRIPTION (Material Type)</b>	<b>SAMPLE LOCATION</b>	<b>HOMO AREA #</b>	<b>SAMPLE I.D. NO.</b>	<b>ASBESTOS CONTENT</b>	<b>FRIABLE/ NONFRIABLE</b>
Tan linoleum (Miscellaneous)	Living room	9	9-2	None Detected	Nonfriable
Textured wall (Surfacing)	Living room	10	10-1	*1.2% Chrysotile	Nonfriable
Textured wall (Surfacing)	Living room	10	10-2	Stopped Analysis	Nonfriable
Textured wall (Surfacing)	Living room	10	10-3	Stopped Analysis	Nonfriable
Textured wall (Surfacing)	Living room	10	10-4	Stopped Analysis	Nonfriable
Textured wall (Surfacing)	Living room	10	10-5	Stopped Analysis	Nonfriable
12"x12" Green floor tile (Miscellaneous)	Hallway	11	11-1	*1.2% Chrysotile	Nonfriable
12"x12" Green floor tile (Miscellaneous)	Hallway	11	11-2	Stopped Analysis	Nonfriable
Brown mastic associated with 12" green floor tile (Miscellaneous)	Hallway	12	12-1	Stopped Analysis	Nonfriable
Brown mastic associated with 12" green floor tile (Miscellaneous)	Hallway	12	12-2	Stopped Analysis	Nonfriable
12"x12" Red floor tile (Miscellaneous)	Mechanical room	13	13-1	*2.1% Chrysotile	Nonfriable
12"x12" Red floor tile (Miscellaneous)	Mechanical room	13	13-2	Stopped Analysis	Nonfriable
Black mastic associated with 12" red floor tile (Miscellaneous)	Mechanical room	14	14-1	*1.8% Chrysotile	Nonfriable
Black mastic associated with 12" red floor tile (Miscellaneous)	Mechanical room	14	14-2	Stopped Analysis	Nonfriable
Yellow linoleum (Miscellaneous)	Kitchen	15	15-1	None Detected	Nonfriable
Yellow linoleum (Miscellaneous)	Kitchen	15	15-2	None Detected	Nonfriable

Table 1-2

**TABLE 1: BULK SAMPLE DATA SUMMARY**

<b>SAMPLE DESCRIPTION (Material Type)</b>	<b>SAMPLE LOCATION</b>	<b>HOMO AREA #</b>	<b>SAMPLE I.D. NO.</b>	<b>ASBESTOS CONTENT</b>	<b>FRIABLE/ NONFRIABLE</b>
Textured ceiling, swirl (Surfacing)	Kitchen	16	16-1	*0.5% Chrysotile	Nonfriable
Textured ceiling, swirl (Surfacing)	Kitchen	16	16-2	*0.75% Chrysotile	Nonfriable
Textured ceiling, swirl (Surfacing)	Kitchen	16	16-3	*1.2% Chrysotile	Nonfriable
Red linoleum (Miscellaneous)	Bedroom #1	17	17-1	None Detected	Nonfriable
Red linoleum (Miscellaneous)	Bedroom #1	17	17-2	None Detected	Nonfriable

\*Quantified By PLM Point Count Method

Table 1-3.

**TABLE 2 - ASBESTOS INVENTORY**

Location	Type ACM	Material Description	Amt. of Material (approx.)
<b>The following asbestos-containing materials are located in the vacant residence located at 828 Mia Avenue, Dayton, Ohio.</b>			
Garage	II	Window glaze	4 windows
Living room	II	Drywall and associated joint compound	430 sf
Living room	RACM	Textured wall and ceiling	430 sf
Mechanical room	II	Drywall and associated joint compound	310 sf
Mechanical room	I	12"x12" Red floor tile	72 sf
Mechanical room	I	Black mastic associated with 12" red floor tile	72 sf
Hallway	II	Drywall and associated joint compound	335 sf
Hallway	I	12"x12" Green floor tile	81 sf
Kitchen	II	Drywall and associated joint compound	430 sf
Kitchen	RACM	Textured ceiling	120 sf
Bedroom #1	II	Drywall and associated joint compound	480 sf
Bathroom	II	Drywall and associated joint compound	380 sf
Bathroom	I	12"x12" Green floor tile	95 sf
Bedroom #2	II	Drywall and associated joint compound	535 sf
Bedroom #2	RACM	Textured ceiling	170 sf
Exterior	II	Window caulk	8 windows

Table 2-1

**CERTIFICATE OF ANALYSIS**

**Client:** Sierra Environmental Group Inc  
1041 Straight Street  
Cincinnati OH 45214

**Report Date:** 11/19/2013  
**Report No.:** 319304  
**Project:** 828 Mia Ave  
**Project No.:** CD 029

**BULK SAMPLE ANALYSIS SUMMARY**

<b>Lab No.:</b> 5170793	<b>Description / Location:</b> Black Shingle
<b>Client No.:</b> 3-1	
<u>% Asbestos</u>	<u>Type</u>
None Detected	None Detected
<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
20	Cellulose
<u>% Non-Fibrous Material</u>	
	80

<b>Lab No.:</b> 5170794	<b>Description / Location:</b> Black Shingle
<b>Client No.:</b> 3-2	
<u>% Asbestos</u>	<u>Type</u>
None Detected	None Detected
<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
15	Cellulose
<u>% Non-Fibrous Material</u>	
	85

<b>Lab No.:</b> 5170795	<b>Description / Location:</b> White Glazing
<b>Client No.:</b> 4-1	
<u>% Asbestos</u>	<u>Type</u>
PC 1.3	Chrysotile
<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected
<u>% Non-Fibrous Material</u>	
	PC 98.7

<b>Lab No.:</b> 5170796	<b>Description / Location:</b> Sample Not Analyzed
<b>Client No.:</b> 4-2	
<u>% Asbestos</u>	<u>Type</u>
	Sample Not Analyzed
<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
	Sample Not Analyzed
<u>% Non-Fibrous Material</u>	

**Accreditations:** NIST-NVLAP No. 101165-0 NY-DOH No. 11021 AIHA-LAP, LLC No. 100188

*This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government  
This report shall not be reproduced except in full, without written approval of the laboratory.*

**Analytical Method:** EPA 600/R-93/116, by Polarized Light Microscopy

**Comments:** Quantification at <0.25% by volume is possible with this method. (PC) Indicates Stratified Point Count Method performed. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed (ex. analyze until positive instructions). Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, PLM is not consistently reliable in detecting asbestos in non-friable organically bound (NOB) materials. Quantitative transmission electron microscopy (TEM) is currently the only method that can pronounce materials as non-asbestos containing.

**Analysis Performed By:** E. Smith

**Date:** 11/19/2013

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**Project No.:** CD 029

### BULK SAMPLE ANALYSIS SUMMARY

<b>Lab No.:</b> 5170789	<b>Description / Location:</b> Lt Tan Floor Tile			
<b>Client No.:</b> 1-1				
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
PC 2.3	Chrysotile	None Detected	None Detected	PC 97.7

<b>Lab No.:</b> 5170790	<b>Description / Location:</b> Sample Not Analyzed			
<b>Client No.:</b> 1-2				
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
	Sample Not Analyzed		Sample Not Analyzed	

<b>Lab No.:</b> 5170791	<b>Description / Location:</b> Black Felt			
<b>Client No.:</b> 2-1				
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	70	Cellulose	30

<b>Lab No.:</b> 5170792	<b>Description / Location:</b> Black Felt			
<b>Client No.:</b> 2-2				
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	70	Cellulose	30

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**Analysis Performed By:** E. Smith

**Approved By:** 

**Date:** 11/19/2013

Frank E. Ehrenfeld, III  
Laboratory Director



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**Report Date:** 11/19/2013  
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**Project No.:** CD 029

### BULK SAMPLE ANALYSIS SUMMARY

<b>Lab No.:</b> 5170797	<b>Description / Location:</b> Black Shingle			
<b>Client No.:</b> 5-1				
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	10	Fibrous Glass	90

<b>Lab No.:</b> 5170798	<b>Description / Location:</b> Black Shingle			
<b>Client No.:</b> 5-2				
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	10	Fibrous Glass	90

<b>Lab No.:</b> 5170799	<b>Description / Location:</b> Lt Tan Sheetrock			
<b>Client No.:</b> 6-1				
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	10	Cellulose	90

<b>Lab No.:</b> 5170800	<b>Description / Location:</b> Lt Tan Sheetrock			
<b>Client No.:</b> 6-2				
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	10	Cellulose	90

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**Date:** 11/19/2013

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### BULK SAMPLE ANALYSIS SUMMARY

<b>Lab No.:</b> 5170801	<b>Description / Location:</b> Off-White Joint Compound			
<b>Client No.:</b> 7-1				
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
PC 2.5	Chrysotile	None Detected	None Detected	PC 97.5

<b>Lab No.:</b> 5170802	<b>Description / Location:</b> Sample Not Analyzed			
<b>Client No.:</b> 7-2				
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
	Sample Not Analyzed		Sample Not Analyzed	

<b>Lab No.:</b> 5170803	<b>Description / Location:</b> Tan/Red/Brown Vinyl Sheet Flooring			
<b>Client No.:</b> 8-1				
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	65	Cellulose	35

<b>Lab No.:</b> 5170804	<b>Description / Location:</b> Tan/Red/Brown Vinyl Sheet Flooring			
<b>Client No.:</b> 8-2				
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	65	Cellulose	35

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