



## Environmental Resources Group

28003 Center Oaks Court • Suite 106 • Wixom, MI • 48393  
Phone: 248-773-7986 • Fax: 248-924-3108

August 8, 2013

Mr. Richard Higgins  
Norstar Development USA, L.P.  
733 Broadway  
Albany, New York 12207

**Re: Asbestos Containing Material Survey  
Maple Meadows  
800-890 S. Maple, Ann Arbor, Michigan  
ERG Project 1129.002**

Dear Mr. Higgins,

Environmental Resources Group, LLC (ERG) has completed the pre-renovation asbestos containing material survey (ACM Survey) for the referenced property in Ann Arbor, Michigan.

ERG contracted American Environmental Consultants (AEC) to perform the survey. The asbestos survey was performed on May 30 and June 3, 2013 by an accredited Asbestos Inspector in general accordance with NESHAP Guidelines, with the focus on satisfying the regulatory ACM information requirements for building renovation activities. The pre-renovation ACM survey targeted readily accessible building materials and included the collection and analysis of bulk samples. Samples were analyzed by the polarized light microscopy (PLM) and/or Point Count methods.

The results of the pre-renovation ACM survey indicated that two materials (joint compound and heat shield) were found to contain asbestos and are deemed ACMs. In addition, two materials (lower layers of floor tile and roofing material) were not sampled and are therefore assumed to be ACMs.

Please refer to the attached AEC report for survey details and analytical results.

Thank you for the opportunity to provide this service to you. If you have any questions, please contact us at 248-773-7986.

Sincerely,  
**ENVIRONMENTAL RESOURCES GROUP, LLC**

Andrew J. Foerg, CPG  
Senior Project Manager

Enclosures

# ASBESTOS CONTAINING MATERIALS SURVEY

**FOR THE PROPERTY AT:**  
S. Maple Meadows



**PREPARED FOR:**  
ERG

**PERFORMED BY:**  
American Environmental Consultants, LLC  
12838 Gavel  
Detroit, Michigan 48227  
Ph: (313) 491-2600  
Fax: (313) 491-2601  
[www.aecmi.net](http://www.aecmi.net)

**DATE:**  
5/30 & 6/3/2013

**PROJECT NUMBER:**  
1459-13010

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## **Executive Summary**

American Environmental Consultants, LLC (AEC) was contracted by ERG to perform an Asbestos Containing Materials (ACM) Survey at S. Maple Meadows in Ann Arbor, MI. The survey was completed on May 30 & June 3, 2013.

The following is a summary of the asbestos containing materials identified in the building which will require special handling during any renovation or demolition activities.

- *100,000SF of Joint Compound-Throughout*
- *190 SF of Asbestos Board-Basements*
- *Suspected ACM in Multi Layer Flooring-Throughout*
- *Suspected ACM in Roof Material-Throughout*

## **Introduction**

Jef Fox (Inspector #A26737) of AEC, gained access to the property on May 30 & June 3, 2013. AEC was to complete an asbestos containing materials survey of accessible areas of the subject property. The subject property is scheduled for renovation. AEC visually identified and sampled suspect asbestos containing materials.

AEC was allowed access to interior/exterior areas of the building. AEC attempted to inspect for hidden asbestos containing materials without disturbing the structure or integrity of the subject property. The roof was not inspected during inspection.

## **Observations**

AEC inspected all of the areas of the subject property. The interior finishing components were drywall, (12x12) floor tile, linoleum, caulk, and ceiling tile. The subject property was built of wood frame construction. AEC has attached site pictures in Appendix C depicting the site conditions.

## **Methodology**

The survey was completed in accordance with the regulations stated in the Asbestos Hazard Emergency Response Act (AHERA) and the National Emission Standards For Hazardous Air Pollutants (NESHAP). A modified triplicate random sampling method of homogeneous area materials was utilized for the sampling procedure. The modified sampling procedure performed was 3-7 samples for surfacing materials, 3 samples for thermal systems insulation, and 3 samples for miscellaneous materials. The samples were collected in a manner to prevent release of fibers while sampling the suspect asbestos containing materials (SACM). Utensils were cleaned after

each sample was collected to prevent cross contamination of samples. AEC personnel took personal protective measures. The individual samples were placed into airtight leak proof labeled containers to be transported to the laboratory.

The samples were submitted under chain of custody to EMSL Analytical, Inc. in Ann Arbor, Michigan for bulk sample analysis. The laboratory is an American Industrial Hygiene Association (AIHA) accredited laboratory. A standard turn-around time was indicated on the Chains of Custody.

The bulk samples were analyzed by EMSL in general accordance with the protocols described in the EPA 600/R-93/116 Method for bulk sample analysis. This method utilizes polarized light microscopy (PLM) for the detection of asbestos fibers. Asbestos cannot accurately be detected with this method if the materials contain less than 10% asbestos and the EPA recommends that the samples be re-analyzed by the EPA Point Count Method. All 1% or less asbestos containing samples will be deemed non-asbestos containing for the purposes of this survey.

## **Results**

Samples were collected of 21 visible suspect asbestos containing material homogeneous sampling areas. Based on appearances and type of materials, suspect ACMs were grouped into homogeneous sampling areas (HA) and representative bulk samples were collected. For example: ceiling tile located in different functional spaces (i.e., living room and bedrooms) found to be uniform in texture, color and appeared similar in every other aspect was considered one HA. AEC attempted to collect at least three samples of the various homogeneous materials where possible and practical or as necessary.

The laboratory analyzed a total of 69 samples including layers. The laboratory can separate individual samples into homogeneous layers at their discretion. AAHC requested the positive joint compounds be point counted. The following table displays the homogeneous area materials sampled:

**Table 1  
S. Maple Meadows  
5/30 & 6/3/2013  
Sampled ACM and Laboratory Results**

Sample Number	Material Description and General Location	Homogeneous Area	Quantity*	Friable(F)/Non Friable(NF) and Condition	Asbestos Present (Y/N)- % Type
1-DS-830, 826, 824, 840, 846, 848, 868, 866, 868, 880, 884, 890, 800, 804, 810	Drywall Systems	HA-1	100,000 SF	F- Good	Drywall-N  Y- Joint Compound  Units- 830, 824, 840, 848, 868, 866, 868, 800, 804, 810  1.25% Chrysotile
	830, 826, 828, 824, 822, 820, 840, 844 846, 848, 842, 850, 860, 862, 866, 868, 870, 880, 882, 884, 886, 888, 890, 800, 802, 804, 806, 810				
2-LN-830, 840, 860	Linoleum Flooring- Grey Splotch	HA-2	6,950 SF	NF-Good	N
	830, 828, 824, 822, 820, 840, 844, 846, 842, 848, 850, 860, 862, 866, 868, 870, 884, 886, 888, 890, 800, 802, 804, 806, 810				
3-AB-830, 840	Asbestos Board	HA-3	190 SF	NF- Good	Y- 20% Chrysotile
	830, 828, 822, 820, 840, 844, 846, 842, 848, 850, 860, 868, 870, 880, 882, 888, 800, 802, 810				
4-LN-830	Linoleum Under Layer	HA-4	250 SF	NF- Good	N
	830				

Sample Number	Material Description and General Location	Homogeneous Area	Quantity*	Friable(F)/Non Friable(NF) and Condition	Asbestos Present (Y/N)- % Type
5-FT-830, 840, 860	12" x 12" Floor Tile- Grey with Light Green and Beige Splotch	HA-5	7,300 SF	NF-Good	N
	830, 824, 822, 820, 840, 844, 846, 842, 848, 850, 860, 862, 866, 870, 880, 884, 886, 888, 800, 802, 804, 806, 810				
6-C-830, 840, 862, 880, 804	Exterior Caulk	HA-6	1,000 LF	NF- Good	N
	830, 840, 862, 880, 804				
7-FT-826	12" x 12" Floor tile- White with Light Blue Splotch	HA-7	250 SF	F-Good	N
	826				
8-FT-826	12" x 12" Floor Tile- White with Light Grey Streaks	HA-8	400 SF	NF- Good	N
	826				
9-FT-828, 868, 882	12" x 12" Floor Tile- Tan Splotch	HA-9	1,400 SF	NF-Good	N
	828, 822, 844, 868, 882, 890				
10-SG-828, 842, 860	Sink Glazing- Textured	HA-10	110 SF	NF- Good	N
	828, 822, 844, 846, 842, 850, 860, 862, 868, 870				
11-SG-820, 866, 880	Sink Glazing- Smooth	HA-11	130 SF	NF-Good	N
	820, 840, 866, 880, 882, 884, 886, 888, 800, 802, 804, 806, 810				
12-LN-820	Linoleum Flooring- White/ Blue	HA-12	150 SF	NF- Good	N
	820 & 886				

Sample Number	Material Description and General Location	Homogeneous Area	Quantity*	Friable(F)/Non Friable(NF) and Condition	Asbestos Present (Y/N)- % Type
13-LN-860	Linoleum- Rock Pattern	HA-13	50 SF	NF-Good	N
	860				
14-FT-870	12" x 12" Floor Tile-Tan Block Pattern	HA-14	50 SF	NF- Good	N
	870				
15-FT-880	12" x 12" Floor Tile- White with Black Specs	HA-15	800 SF	NF-Good	N
	880				
16-FT-880	12" x 12" Floor Tile- Tan with Black spec	HA-16	350 SF	NF- Good	N
	880				
17-BB-880	4" Baseboard- Tan	HA-17	200 SF	NF-Good	N
	880				
18-FT-880	Floor Tile- Under Lay	HA-18	400 SF	NF-Good	N
	880				
19-FT-890	12" x 12" Floor Tile- Tan with White and Brown Streak	HA-18	400 SF	NF-Good	N
20-LN-802	Linoleum Flooring- Under Lay	HA-20	350 LF	NF-Good	N
	802				
21-SID-804	Siding Under Windows	HA-20	1,500 SF	NF-Good	N
	Exterior				

\*Quantities are estimated

The laboratory Certificates of Analysis and Chain of Custodies are located in Appendix B for further review.

The friable and non-friable classification in the table describes how easily the material can be broken apart. A friable material is a material that can be crushed/ pulverized by human pressure. A non-friable material is a material that cannot be crushed/ pulverized by human pressure. The condition is a classification of the physical state that the material is in at the time of the sampling. There are three physical condition assessments that are applied to the condition of the material: good condition, damaged condition, and severely damaged condition. A material in good condition has no visible damage or deterioration. A material in a damaged condition has damage or deterioration on less than ten percent of the surface. A material that is severely damaged has damage or deterioration on ten percent or more of the surface area.

### Asbestos Containing Materials

The following table describes the ACM that was identified as a result of the sampling.

**Table 2  
S. Maple Meadows  
Asbestos Containing Materials**

Asbestos Containing Material	Locations	Quantity*
Joint Compound	830, 826, 828, 824, 822, 820, 840, 844 846, 848, 842, 850, 860, 862, 866, 868, 870, 880, 882, 884, 886, 888, 890, 800, 802, 804, 806, 810	100,000 SF
Asbestos Board	830, 828, 822, 820, 840, 844, 846, 842, 848, 850, 860, 868, 870, 880, 882, 888, 800, 802, 810	190 SF
Suspect-Roof Material	Exterior	20,000 SF
Suspect-Multi Layer Flooring	Units	Unknown

\*Quantities are estimated

The joint compounds along with the asbestos board were both found to contain asbestos and are deemed asbestos containing materials. AEC also observed multiple layers of flooring that were unable to be sampled. AEC thinks that it is a high probability that these flooring materials contain asbestos. The roof materials are also suspected to contain asbestos.

## **Removal Options, Recommendations**

### *Joint Compound*

*If the joint compound is disturbed during renovation activities then, joint compound shall be removed in properly constructed negative pressure containment with personnel wearing proper PPE.*

### *Asbestos Board*

*If the asbestos board is disturbed during renovation activities then, asbestos board shall be removed in properly constructed negative pressure containment with personnel wearing proper PPE.*

### *Floor Tile*

*If the floor tile is disturbed during renovation activities then, floor tile shall be removed in properly constructed negative pressure containment with personnel wearing proper PPE.*

### *Roof Materials*

*If the roof materials are disturbed during renovation activities then, roof materials shall be removed intact with wetting, drop cloths with personnel wearing proper PPE.*

## **Conclusion**

Asbestos containing materials were identified at the subject property and will require special handling and disposal if disturbed during renovation activities. The drywall systems as well as the asbestos board were found to contain asbestos. AEC suspects the multi layer flooring along with the roof materials are assumed to be an ACM. Proper precautions and abatement must be used if disturbed.

## **Limitations**

AEC was unable to access units 864 and 808 during the onsite visit. The information and opinions obtained in this report are for the exclusive use of AEC's Client. No distribution to or reliance by other parties may occur without the express written permission of AEC. AEC will not distribute this report without your written consent or as required by law or Court order. The information and opinions that are contained in this report are given in light of that assignment.

The report must be reviewed and relied upon only in conjunction with the terms and conditions expressly agreed upon by the parties and as limited therein. Any third parties who have been extended the right to rely on the contents of this report by AEC (which is expressly required prior to any third party release), expressly agrees to be bound by the original terms and conditions entered into by AEC and Client.

Subject to the above terms and conditions, AEC accepts responsibility for the competent performance of its duties in executing the assignment and preparing reports in accordance with the normal standards of the profession, but disclaims any responsibility for consequential damages. Although AEC believes that the results contained herein are reliable, AEC cannot warrant or guarantee that the information provided is exhaustive or that the information provided by Client or third parties is complete or accurate.

AEC appreciates the opportunity to be of service to your organization and looks forward to working with you on future projects. If you have any questions regarding this report please feel free to contact us at our office at 313-491-2600.

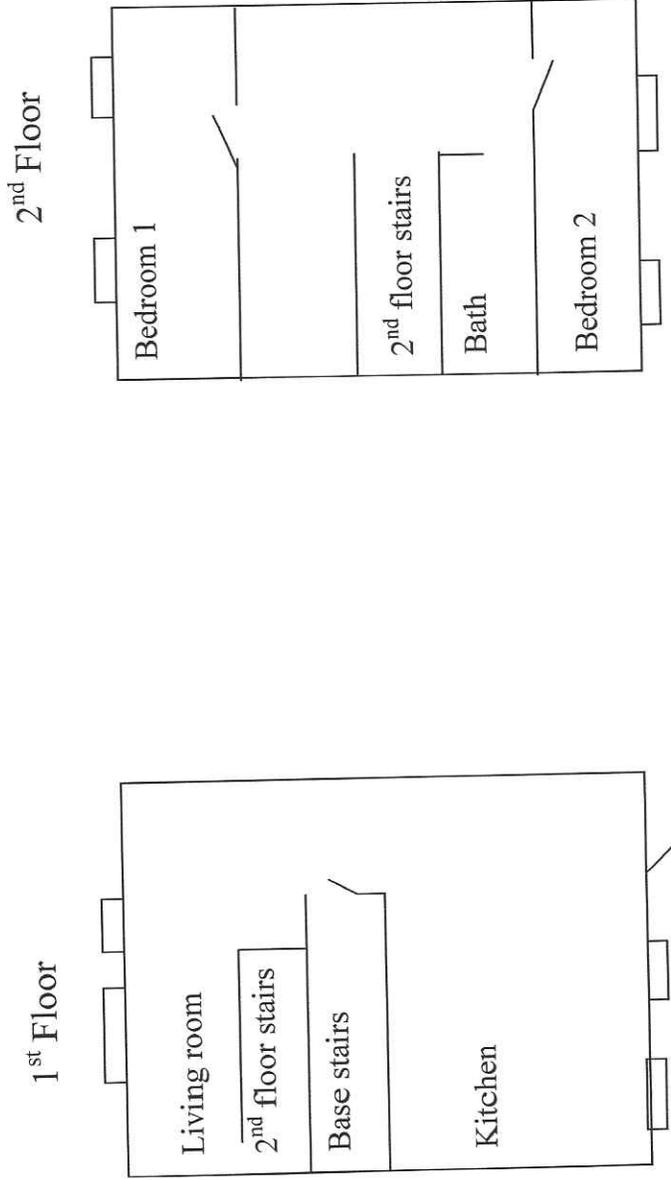
Sincerely,  
**American Environmental Consultants, LLC**



Jeffrey A. Fox  
Project Manager

## **Appendix A Site Maps**

# Typical 2 Bedroom



NOT TO  
SCALE

**FIGURE #:** 1

**DRAWN BY:** Jef Fox

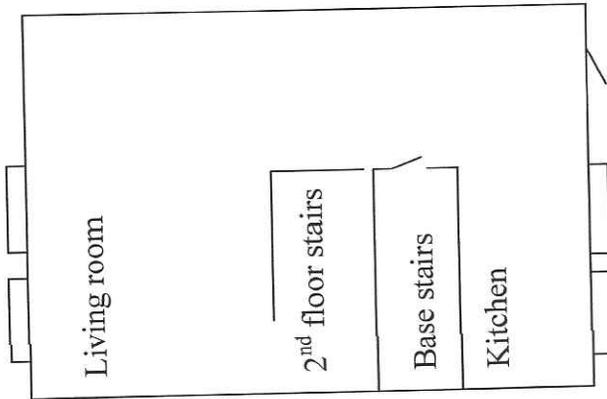


**AMERICAN ENVIRONMENTAL CONSULTANTS, L.L.C.**  
 12838 Gavel, Detroit, MI 48227  
 Ph: 313-491-2600 Fax: 313-491-

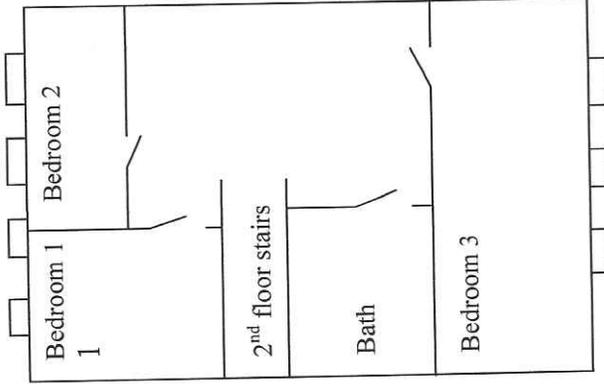
**MAP DESCRIPTION:** 800-890 S. Maple Ann Arbor, MI Ann Arbor, MI Typical 2 BR

**PROJECT NO:** 1459-13010  
**DATE:** 5/30 & 6/3/2013

1<sup>st</sup> Floor



2<sup>nd</sup> Floor



Typical 3 Bedroom

NOT TO SCALE



AMERICAN ENVIRONMENTAL CONSULTANTS, L.L.C.

12838 Gavel, Detroit, MI 48227  
 Ph: 313-491-2600 Fax: 313-491-2601

FIGURE #: 2

PROJECT NO: 1459-13010

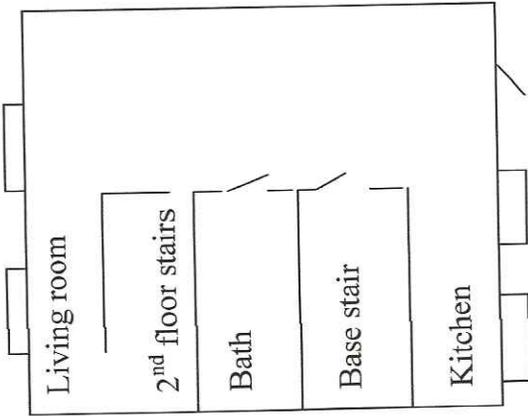
DRAWN BY: Jef Fox

MAP DESCRIPTION: 800-890 S. Maple Ann Arbor, MI Ann Arbor, MI Typical 3 BR

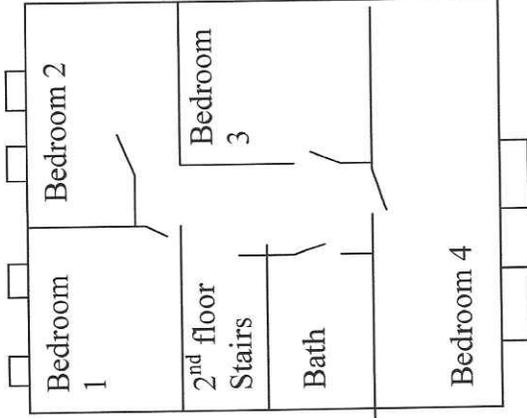
DATE: 5/30-6/3/2013

# Typical 4 Bedroom unit

1<sup>st</sup> floor



2<sup>nd</sup> floor



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PROJECT NO: 1459-13010

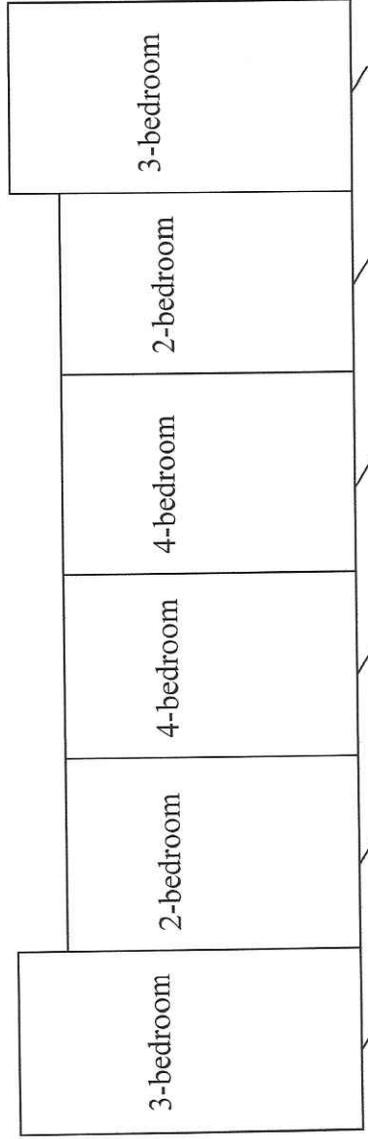
FIGURE #: 3

DRAWN BY: Jef Fox

MAP DESCRIPTION: 800-890 S. Maple Ann Arbor, MI Ann Arbor, MI Typical 4 BR

DATE: 5/30-6/3/2013

# Typical Building Layout



NOT TO  
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ENVIRONMENTAL  
CONSULTANTS, L.L.C.**

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Ph: 313-491-2600 Fax: 313-491-2601

**PROJECT NO:** 1459-13010

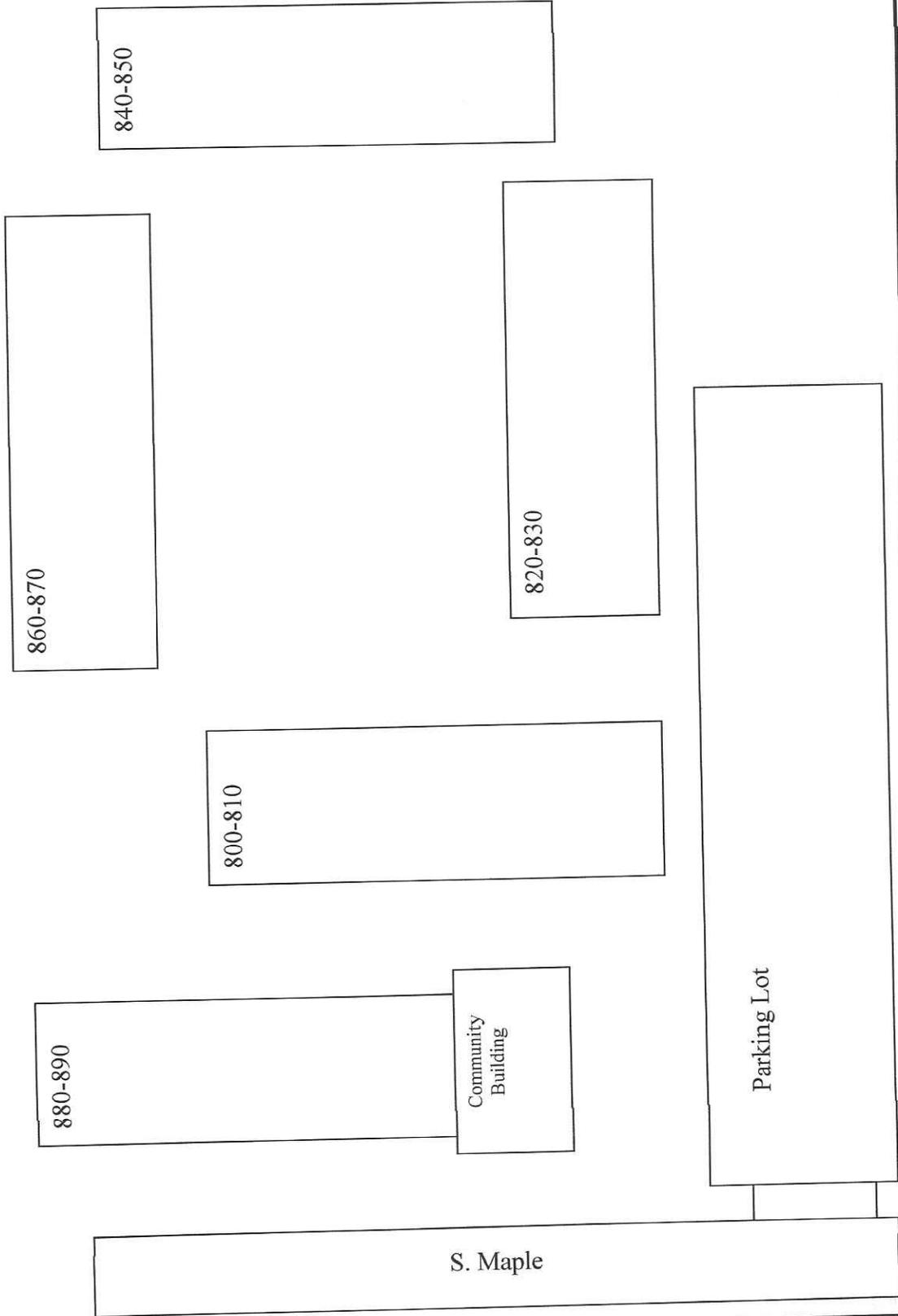
**FIGURE #:** 4

**DRAWN BY:** Jef Fox

**MAP DESCRIPTION:** 800-890 S. Maple Ann Arbor, MI Typical Building Layout

**DATE:** 5/30-6/3/2013

# Property Map



NOT TO  
SCALE

<p><b>FIGURE #:</b> 5</p>	 <p>AMERICAN ENVIRONMENTAL CONSULTANTS, L.L.C.</p>	<p>12838 Gavel, Detroit, MI 48227  <i>Ph:</i> 313-491-2600 <i>Fax:</i> 313-491-2601</p>	<p><b>PROJECT NO:</b> 1459-13010</p>
<p><b>DRAWN BY:</b> Jef Fox</p>	<p><b>MAP DESCRIPTION:</b> 800-890 S. Maple Ann Arbor, MI Property Map</p>	<p><b>DATE:</b> 5/30-6/3/2013</p>	

## **Appendix B Certificates of Analysis**



# EMSL Analytical, Inc.

212 South Wagner Road, Ann Arbor, MI 48103  
Phone/Fax: (734) 668-6810 / (734) 668-8532  
<http://www.emsl.com> [annarborlab@emsl.com](mailto:annarborlab@emsl.com)

EMSL Order: 081301462  
CustomerID: AECL77  
CustomerPO:  
ProjectID:

Attn: **Jef Fox**  
**American Environmental Consultants**  
**P.O. Box 32865**  
**12838 Gavel**  
**Detroit, MI 48227**

Phone: (313) 491-2600  
Fax: (313) 491-2601  
Received: 06/06/13 12:15 PM  
Analysis Date: 6/11/2013  
Collected:

Project: **S. Maple Meadows**

## 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
1-DS-830 <i>081301462-0001</i>	Joint Compound	White Fibrous Homogeneous	5% Cellulose	93% Non-fibrous (other)	2% Chrysotile
1-DS-830 <i>081301462-0001A</i>	Drywall	Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
1-DS-826 <i>081301462-0002</i>	Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1-DS-826 <i>081301462-0002A</i>	Drywall	Gray Fibrous Heterogeneous	8% Cellulose	92% Non-fibrous (other)	None Detected
1-DS-824 <i>081301462-0003</i>	Joint Compound	Gray/White Fibrous Homogeneous	5% Cellulose	92% Non-fibrous (other)	3% Chrysotile
1-DS-824 <i>081301462-0003A</i>	Drywall	Gray Fibrous Homogeneous	12% Cellulose	88% Non-fibrous (other)	None Detected
1-DS-840 <i>081301462-0004</i>	Joint Compound	White Fibrous Homogeneous	6% Cellulose	91% Non-fibrous (other)	3% Chrysotile
1-DS-840 <i>081301462-0004A</i>	Drywall	Gray Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected

### Analyst(s)

Jamie Laginess (19)  
Orlando J. Ivey II (41)

Ryan Shannon (9)

Chris Dojliko, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Ann Arbor, MI NVLAP Lab Code 101048-4

Initial report from 06/11/2013 11:38:52

**EMSL Analytical, Inc.**

212 South Wagner Road, Ann Arbor, MI 48103  
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<http://www.emsl.com> [annarborlab@emsl.com](mailto:annarborlab@emsl.com)

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Project: **S. Maple Meadows**

**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
1-DS-846 081301462-0005	Drywall Systems	Gray/White Fibrous Homogeneous		100% Non-fibrous (other)	<1% Chrysotile
No Drywall Submitted					
1-DS-848 081301462-0006	Joint Compound	Gray/White Fibrous Homogeneous	2% Cellulose	94% Non-fibrous (other)	4% Chrysotile
1-DS-848 081301462-0006A	Drywall	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (other)	None Detected
1-DS-862 081301462-0007	Joint Compound	White Fibrous Homogeneous	<1% Cellulose	97% Non-fibrous (other)	3% Chrysotile
1-DS-862 081301462-0007A	Drywall	Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
1-DS-866 081301462-0008	Joint Compound	Gray/Tan/White Fibrous Homogeneous	<1% Cellulose	97% Non-fibrous (other)	3% Chrysotile
1-DS-866 081301462-0008A	Drywall	White Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (other)	None Detected
1-DS-868 081301462-0009	Joint Compound	White Fibrous Homogeneous		97% Non-fibrous (other)	3% Chrysotile

Analyst(s)  
 Jamie Laginess (19) Ryan Shannon (9)  
 Orlando J. Ivey II (41)

*Chris Dojlidko*  
 Chris Dojlidko, Laboratory Manager  
 or other approved signatory

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 Samples analyzed by EMSL Analytical, Inc. Ann Arbor, MI NVLAP Lab Code 101048-4

Initial report from 06/11/2013 11:38:52



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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-DS-868 <i>081301462-0009A</i>	Drywall	Gray Fibrous Homogeneous	9% Cellulose	91% Non-fibrous (other)	None Detected
1-DS-880 <i>081301462-0010</i>	Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1-DS-880 <i>081301462-0010A</i>	Drywall	Gray Fibrous Homogeneous	<1% Cellulose <1% Glass	100% Non-fibrous (other)	None Detected
1-DS-884 <i>081301462-0011</i>	Joint Compound	Tan Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1-DS-884 <i>081301462-0011A</i>	Drywall	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (other)	None Detected
1-DS-890 <i>081301462-0012</i>	Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	<1% Chrysotile
1-DS-890 <i>081301462-0012A</i>	Drywall	White Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected
1-DS-800 <i>081301462-0013</i>	Joint Compound	Tan Non-Fibrous Homogeneous		97% Non-fibrous (other)	3% Chrysotile

**Analyst(s)**

Jamie Laginess (19)  
Orlando J. Ivey II (41)

Ryan Shannon (9)

Chris Dojlidko, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Ann Arbor, MI NVLAP Lab Code 101048-4

Initial report from 06/11/2013 11:38:52



# EMSL Analytical, Inc.

212 South Wagner Road, Ann Arbor, MI 48103  
Phone/Fax: (734) 668-6810 / (734) 668-8532  
<http://www.emsl.com> [annarborlab@emsl.com](mailto:annarborlab@emsl.com)

EMSL Order: 081301462  
CustomerID: AECL77  
CustomerPO:  
ProjectID:

Attn: **Jef Fox**  
**American Environmental Consultants**  
**P.O. Box 32865**  
**12838 Gavel**  
**Detroit, MI 48227**

Phone: (313) 491-2600  
Fax: (313) 491-2601  
Received: 06/06/13 12:15 PM  
Analysis Date: 6/11/2013  
Collected:

Project: **S. Maple Meadows**

## 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
1-DS-800 081301462-0013A	Drywall	Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
1-DS-804 081301462-0014	Joint Compound	Beige Non-Fibrous Homogeneous		98% Non-fibrous (other)	2% Chrysotile
1-DS-804 081301462-0014A	Drywall	Brown/Gray Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected
1-DS-810 081301462-0015	Joint Compound	Beige Non-Fibrous Homogeneous		98% Non-fibrous (other)	2% Chrysotile
1-DS-810 081301462-0015A	Drywall	Brown/Gray Fibrous Homogeneous	12% Cellulose	88% Non-fibrous (other)	None Detected
2-LN-830 081301462-0016	Linoleum	Gray/White Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
2-LN-840 081301462-0017	Linoleum	Gray Fibrous Homogeneous	7% Cellulose	93% Non-fibrous (other)	None Detected
2-LN-860 081301462-0018	Linoleum	Gray/Tan Fibrous Heterogeneous	15% Cellulose 2% Glass	83% Non-fibrous (other)	None Detected

**Analyst(s)**

Jamie Laginess (19) Ryan Shannon (9)  
Orlando J. Ivey II (41)

Chris Dojlidko, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Ann Arbor, MI NVLAP Lab Code 101048-4

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Phone/Fax: (734) 668-6810 / (734) 668-8532  
<http://www.emsl.com> [annarborlab@emsl.com](mailto:annarborlab@emsl.com)

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**P.O. Box 32865**  
**12838 Gavel**  
**Detroit, MI 48227**

Phone: (313) 491-2600  
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Project: **S. Maple Meadows**

## 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
3-AB-830 <small>081301462-0019</small>	Asbestos Board	Gray/White Fibrous Homogeneous	60% Cellulose	25% Non-fibrous (other)	15% Chrysotile
3-AB-840 <small>081301462-0020</small>	Asbestos Board	Gray/White Fibrous Homogeneous	55% Cellulose	25% Non-fibrous (other)	20% Chrysotile
4-LN-830 <small>081301462-0021</small>	Linoleum Underlayer	Gray Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
5-FT-830 <small>081301462-0022</small>	Floor Tile	Gray/Beige Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (other)	None Detected
5-FT-840 <small>081301462-0023</small>	Floor Tile	Gray/Beige Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected
5-FT-860 <small>081301462-0024</small>	Floor Tile	Gray Non-Fibrous Homogeneous	Mastic insufficient		100% Non-fibrous (other) None Detected
6-C-830 <small>081301462-0025</small>	Caulk	Gray/Rose Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected
6-C-840 <small>081301462-0026</small>	Caulk	Gray/Rose Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected

### Analyst(s)

Jamie Laginess (19)  
Orlando J. Ivey II (41)

Ryan Shannon (9)

Chris Dojliko, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Ann Arbor, MI NVLAP Lab Code 101048-4

Initial report from 06/11/2013 11:38:52



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212 South Wagner Road, Ann Arbor, MI 48103  
Phone/Fax: (734) 668-6810 / (734) 668-8532  
<http://www.emsl.com> [annarborlab@emsl.com](mailto:annarborlab@emsl.com)

EMSL Order: 081301462  
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Attn: **Jef Fox**  
**American Environmental Consultants**  
**P.O. Box 32865**  
**12838 Gavel**  
**Detroit, MI 48227**

Phone: (313) 491-2600  
Fax: (313) 491-2601  
Received: 06/06/13 12:15 PM  
Analysis Date: 6/11/2013  
Collected:

Project: **S. Maple Meadows**

## 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
6-C-862 <i>081301462-0027</i>	Caulk	Gray/Rose Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
6-C-880 <i>081301462-0028</i>	Caulk A	Brown Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
6-C-880 <i>081301462-0028A</i>	Caulk B	Cream Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
6-C-804 <i>081301462-0029</i>	Caulk	Brown/Cream Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
7-FT-826 <i>081301462-0030</i>	Floor Tile	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-FT-826 <i>081301462-0030A</i>	Adhesive	Gray Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected
8-FT-826 <i>081301462-0031</i>	Floor Tile	Gray/White Non-Fibrous Homogeneous	Insufficient Mastic	100% Non-fibrous (other)	None Detected
9-FT-828 <i>081301462-0032</i>	Floor Tile	Gray/Tan Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

**Analyst(s)**

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Ryan Shannon (9)

Chris Dojlidko, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Ann Arbor, MI NVLAP Lab Code 101048-4

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212 South Wagner Road, Ann Arbor, MI 48103

Phone/Fax: (734) 668-6810 / (734) 668-8532

<http://www.emsl.com>

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

EMSL Order:	081301462
CustomerID:	AECL77
CustomerPO:	
ProjectID:	

Attn: **Jef Fox**  
**American Environmental Consultants**  
**P.O. Box 32865**  
**12838 Gavel**  
**Detroit, MI 48227**

Phone: (313) 491-2600  
 Fax: (313) 491-2601  
 Received: 06/06/13 12:15 PM  
 Analysis Date: 6/11/2013  
 Collected:

Project: **S. Maple Meadows**

## 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
9-FT-868 <i>081301462-0033</i>	Floor Tile	Gray/Tan Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
9-FT-882 <i>081301462-0034</i>	Floor Tile	Gray/Tan Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
9-FT-882 <i>081301462-0034A</i>	Adhesive	Yellow Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected
10-SG-828 <i>081301462-0035</i>	Sink Glaze	Gray/Cream Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (other)	None Detected
10-SG-842 <i>081301462-0036</i>	Sink Glaze	Gray/Cream Fibrous Homogeneous	7% Cellulose	93% Non-fibrous (other)	None Detected
10-SG-860 <i>081301462-0037</i>	Sink Glaze	Gray Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
11-SG-820 <i>081301462-0038</i>	Sink Glaze	Gray/Beige/Cream Fibrous Homogeneous	6% Cellulose	94% Non-fibrous (other)	None Detected
11-SG-866 <i>081301462-0039</i>	Sink Glaze	Gray/Beige/Cream Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (other)	None Detected

Analyst(s)

Jamie Laginess (19)  
Orlando J. Ivey II (41)

Ryan Shannon (9)

Chris Dojliko, Laboratory Manager  
or other approved signatory

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 Samples analyzed by EMSL Analytical, Inc. Ann Arbor, MI NVLAP Lab Code 101048-4

Initial report from 06/11/2013 11:38:52



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212 South Wagner Road, Ann Arbor, MI 48103  
Phone/Fax: (734) 668-6810 / (734) 668-8532  
<http://www.emsl.com> [annarborlab@emsl.com](mailto:annarborlab@emsl.com)

EMSL Order: 081301462  
CustomerID: AECL77  
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ProjectID:

Attn: **Jef Fox**  
**American Environmental Consultants**  
**P.O. Box 32865**  
**12838 Gavel**  
**Detroit, MI 48227**

Phone: (313) 491-2600  
Fax: (313) 491-2601  
Received: 06/06/13 12:15 PM  
Analysis Date: 6/11/2013  
Collected:

Project: **S. Maple Meadows**

## 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
11-SG-880 <i>081301462-0040</i>	Sink Glaze	Beige Fibrous Homogeneous	35% Cellulose	65% Non-fibrous (other)	None Detected
12-LN-820 <i>081301462-0041</i>	Linoleum	Gray Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected
13-LN-860 <i>081301462-0042</i>	Linoleum	Gray Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected
14-FT-870 <i>081301462-0043</i>	Floor Tile	Gray Fibrous Homogeneous	7% Cellulose	93% Non-fibrous (other)	None Detected
15-FT-880 <i>081301462-0044</i>	Floor Tile	Gray/White Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (other)	None Detected
16-FT-880 <i>081301462-0045</i>	Floor Tile	Gray/Tan Non-Fibrous Homogeneous	Insufficient Mastic		100% Non-fibrous (other) None Detected
17-BB-880 <i>081301462-0046</i>	Cove Base	Brown Non-Fibrous Homogeneous			100% Non-fibrous (other) None Detected
17-BB-880 <i>081301462-0046A</i>	Adhesive	Tan Non-Fibrous Homogeneous			100% Non-fibrous (other) None Detected

Analyst(s)

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Orlando J. Ivey II (41)

Chris Dojlidko, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Ann Arbor, MI NVLAP Lab Code 101048-4

Initial report from 06/11/2013 11:38:52



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212 South Wagner Road, Ann Arbor, MI 48103  
Phone/Fax: (734) 668-6810 / (734) 668-8532  
<http://www.emsl.com> [annarborlab@emsl.com](mailto:annarborlab@emsl.com)

EMSL Order: 081301462  
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**American Environmental Consultants**  
**P.O. Box 32865**  
**12838 Gavel**  
**Detroit, MI 48227**

Phone: (313) 491-2600  
Fax: (313) 491-2601  
Received: 06/06/13 12:15 PM  
Analysis Date: 6/11/2013  
Collected:

Project: **S. Maple Meadows**

## 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
18-FT-880 <i>081301462-0047</i>	Underlay	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
19-FT-890 <i>081301462-0048</i>	Floor Tile	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
19-FT-890 <i>081301462-0048A</i>	Adhesive	Gray/Tan Non-Fibrous Homogeneous	4% Cellulose	96% Non-fibrous (other)	None Detected
20-LN-802 <i>081301462-0049</i>	Underlay	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
21-SID-804 <i>081301462-0050</i>	Siding	Gray Fibrous Homogeneous	85% Cellulose	15% Non-fibrous (other)	None Detected

Analyst(s)

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*Orlando J. Ivey II (41)*

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Initial report from 06/11/2013 11:38:52

**THIS IS THE LAST PAGE OF THE REPORT.**

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212 South Wagner Road, Ann Arbor, MI 48103  
 Phone/Fax: (734) 668-6810 / (734) 668-8532  
<http://www.emsl.com> [annarborlab@emsl.com](mailto:annarborlab@emsl.com)

EMSL Order: 081301512  
 CustomerID: AECL77  
 CustomerPO:  
 ProjectID:

Attn: **Jef Fox**  
**American Environmental Consultants**  
**P.O. Box 32865**  
**12838 Gavel**  
**Detroit, MI 48227**

Phone: (313) 491-2600  
 Fax: (313) 491-2601  
 Received: 06/11/13 4:00 PM  
 Analysis Date: 6/12/2013  
 Collected:

Project: PtCts for 081301462 / S. Maple Meadows

**Test Report: Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116  
 and/or EPA 600/M4-82-020. Quantitation using 400 Point Count Procedure**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-DS-830 081301512-0001	Joint Compound	Gray/White Fibrous Homogeneous		98.50% Non-fibrous (other)	1.50% Chrysotile
1-DS-824 081301512-0002	Joint Compound	White Fibrous Homogeneous		98.25% Non-fibrous (other)	1.75% Chrysotile
1-DS-840 081301512-0003	Joint Compound	Gray Fibrous Homogeneous		98.75% Non-fibrous (other)	1.25% Chrysotile
1-DS-848 081301512-0004	Joint Compound	White Fibrous Homogeneous		98.75% Non-fibrous (other)	1.25% Chrysotile
1-DS-862 081301512-0005	Joint Compound	Gray/White Fibrous Homogeneous		98.25% Non-fibrous (other)	1.75% Chrysotile
1-DS-866 081301512-0006	Joint Compound	Gray/White Fibrous Homogeneous		98.50% Non-fibrous (other)	1.50% Chrysotile
1-DS-868 081301512-0007	Joint Compound	Gray/White Fibrous Homogeneous		98.75% Non-fibrous (other)	1.25% Chrysotile

Analyst(s)

Orlando J. Ivey II (10)

Chris Dojlidko, Laboratory Manager  
or other approved signatory

Disclaimer: Some samples may contain asbestos fibers present in dimensions below PLM resolution limits. The limit of detection as stated in the method is 0.25%. EMSL Analytical Inc suggests that samples reported as <0.25% or none detected undergo additional analysis via TEM. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval of EMSL Analytical Inc. This test report must not be used by the client to claim product endorsement by NVLAP or any agency of the United States Government. EMSL Analytical Inc., bears no responsibility for sample collection activities, analytical method limitations, or the accuracy of results when requested to separate layered samples. EMSL Analytical Inc., liability is limited to the cost of sample analysis. The test results contained within this report meet the requirements of NELAC unless otherwise noted. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.

Samples analyzed by EMSL Analytical, Inc. Ann Arbor, MI

Initial report from 06/12/2013 13:51:35

Test Report PLMPTC-7.25.0 Printed: 6/12/2013 1:51:35 PM



# EMSL Analytical, Inc.

212 South Wagner Road, Ann Arbor, MI 48103  
Phone/Fax: (734) 668-6810 / (734) 668-8532  
<http://www.emsl.com> [annarborlab@emsl.com](mailto:annarborlab@emsl.com)

EMSL Order: 081301512  
CustomerID: AECL77  
CustomerPO:  
ProjectID:

Attn: **Jef Fox**  
**American Environmental Consultants**  
**P.O. Box 32865**  
**12838 Gavel**  
**Detroit, MI 48227**

Phone: (313) 491-2600  
Fax: (313) 491-2601  
Received: 06/11/13 4:00 PM  
Analysis Date: 6/12/2013  
Collected:

Project: PtCts for 081301462 / S. Maple Meadows

## Test Report: Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 and/or EPA 600/M4-82-020. Quantitation using 400 Point Count Procedure

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-DS-800 <i>081301512-0008</i>	Joint Compound	Gray/White Fibrous Homogeneous		99.25% Non-fibrous (other)	0.75% Chrysotile
1-DS-804 <i>081301512-0009</i>	Joint Compound	Gray/White Fibrous Homogeneous		98.25% Non-fibrous (other)	1.75% Chrysotile
1-DS-810 <i>081301512-0010</i>	Joint Compound	Gray/Tan/White Fibrous Homogeneous		98.00% Non-fibrous (other)	2.00% Chrysotile

Analyst(s)  
Orlando J. Ivey II (10)

*Chris Dojlidko*  
Chris Dojlidko, Laboratory Manager  
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Samples analyzed by EMSL Analytical, Inc. Ann Arbor, MI

Initial report from 06/12/2013 13:51:35

08/30/13

**CHAIN OF CUSTODY Asbestos**  
Electron Microscopy Service Laboratories, Inc.



EMSL Analytical, Inc. 212 S. Wagner, Ann Arbor, MI 48103 (734) 668-6810  
Fax: (734) 668-8532

Company Name: American Environmental Consultants, L.L.C.	EMSL Bill To: American Environmental Consultants, L.L.C.
Address: P.O. Box 32865	Address: P.O. Box 32865
City/State/Zip: Detroit, MI 48232	City/State: Detroit, MI 48232
Phone: 313 491 2600	Bill Attention To:
Fax: 313 491 2601	Phone:
Fax or Phone Results To: JEF FOX	PO#:
Emergency Phone: 313 363 0578	Project Name/Number:

Jfox@aecmi.net

**TYPE OF ANALYSIS (Please Circle One)**

TEM				PLM	PCM	SEM
Air	Bulk	Dust/Wipe	Water	Bulk	Air	
AHERA Level II NIOSH 7402	Qualitative Chatfield	Qualitative Quantitative	Drinking Waste	EPA 600 Point Count	NIOSH 7400	

\*Please call in advance for RUSH sample analysis or large quantities.

**TURNAROUND TIME (Please Circle One)**

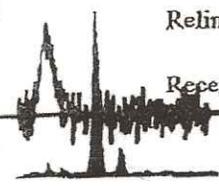
3 Hour    6 Hour    24 Hour    48 Hour    3 Days    5 Days

Sample ID	Location	Volume/Area (if applicable)
11-SG-820	SINK GRATE	
866		
880		
12-LN-820	LINOLEUM WHITE w/ BLUE	
13-LN-860	LINOLEUM ROCK	
14-FT-870	12X12 TAN BLOCK PATTERN	
15-FT-880	12X12 WHITE w/ BLACK SPEC	
16-FT-880	12X12 TAN w/ BLACK SPEC	
17-BB-880	4" TAN BASEBOARD	
18-FT-880	UNDER LAYMENT	
19-FT-890	12X12 TAN w/ WHITE/BROWN STREAK	
20-LN-802	UNDER LAYER	
21-SID-804	SIDING	

Comments: \_\_\_\_\_ Total Number of Samples: \_\_\_\_\_

Relinquished by: Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: Date: 10/6/13 Time: 12:15 PM



walk in

00130146

### CHAIN OF CUSTODY Asbestos

Electron Microscopy Service Laboratories, Inc.



EMSL Analytical, Inc. 212 S. Wagner, Ann Arbor, MI 48103 (734) 668-6810  
Fax: (734) 668-8532

Company Name: American Environmental Consultants, L.L.C.	EMSL Bill To: American Environmental Consultants, L.L.C.
Address: P.O. Box 32865	Address: P.O. Box 32865
City/State/Zip: Detroit, MI 48232	City/State: Detroit, MI 48232
Phone: 313 491 2600	Bill Attention To:
Fax: 313 491 2601	Phone:
Fax or Phone Results To: JEF FOX	PO#:
Emergency Phone: 313 363 0578	Project Name/Number:

Jfox@aecmi.net

#### TYPE OF ANALYSIS (Please Circle One)

TEM				PLM	PCM	SEM
Air	Bulk	Dust/Wipe	Water	Bulk	Air	
AHERA Level II NIOSH 7402	Qualitative Chatfield	Qualitative Quantitative	Drinking Waste	EPA 600 Point Count	NIOSH 7400	

\*Please call in advance for RUSH sample analysis or large quantities.

#### TURNAROUND TIME (Please Circle One)

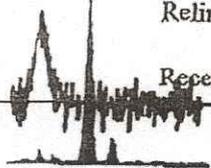
3 Hour    6 Hour    24 Hour    48 Hour    3 Days    5 Days

Sample ID	Location	Volume/Area (if applicable)
6-C-830	CAULKING	
840		
862		
880		
804		
7-FT-826	12X12 WHITE w/ LT BLUE SPLOTCH	
8-FT-826	12X12 WHITE w/ LT GREY STREAK	
9-FT-828	12X12 TAN SPLOTCH	
868		
882		
10-SG-828	SINK GLAZE	
842		
860		

Comments: \_\_\_\_\_ Total Number of Samples: \_\_\_\_\_

Relinquished by: Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: Date: 6/6/13 Time: 12:15 pm



WALK IN

0030148

**CHAIN OF CUSTODY Asbestos**  
Electron Microscopy Service Laboratories, Inc.



EMSL Analytical, Inc. 212 S. Wagner, Ann Arbor, MI 48103 (734) 668-6810  
Fax: (734) 668-8532

Company Name: American Environmental Consultants, L.L.C.	EMSL Bill To: American Environmental Consultants, L.L.C.
Address: P.O. Box 32865	Address: P.O. Box 32865
City/State/Zip: Detroit, MI 48232	City/State: Detroit, MI 48232
Phone: 313 491 2600	Bill Attention To:
Fax: 313 491 2601	Phone:
Fax or Phone Results To: JEF FOX	PO#:
Emergency Phone: 313 363 0578	Project Name/Number:

Jfox@aecmi.net

**TYPE OF ANALYSIS (Please Circle One)**

TEM				PLM	PCM	SEM
Air	Bulk	Dust/Wipe	Water	Bulk	Air	
AHERA Level II NIOSH 7402	Qualitative Chatfield	Qualitative Quantitative	Drinking Waste	EPA 600 Point Count	NIOSH 7400	

\*Please call in advance for RUSH sample analysis or large quantities.

**TURNAROUND TIME (Please Circle One)**

3 Hour    6 Hour    24 Hour    48 Hour    3 Days    5 Days

Sample ID	Location	Volume/Area (if applicable)
1-OS-804 810		
2-LN-830 840 860	GREY SPLOUCH LINOLEUM	
3-AB-830 840	ASBESTOS BOARD	
4-LN-830	LINOLEUM UNDERLAYER	
5-FT-830 840 860	12X12 GREY w/ LT GREEN/BEIGE SPLOUCH	
<del>6-FT-830</del>		

Comments: \_\_\_\_\_ Total Number of Samples: \_\_\_\_\_

Relinquished by: Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: Date: 4/6/13 Time: 12:15 PM

WALK IN

2130148

### CHAIN OF CUSTODY Asbestos

Electron Microscopy Service Laboratories, Inc.



EMSL Analytical, Inc. 212 S. Wagner, Ann Arbor, MI 48103 (734) 668-6810  
Fax: (734) 668-8532

Company Name: American Environmental Consultants, L.L.C.	EMSL Bill To: American Environmental Consultants, L.L.C.
Address: P.O. Box 32865	Address: P.O. Box 32865
City/State/Zip: Detroit, MI 48232	City/State: Detroit, MI 48232
Phone: 313 491 2600	Bill Attention To:
Fax: 313 491 2601	Phone:
Fax or Phone Results To: JEF FOX	PO#:
Emergency Phone: 313 363 0578	Project Name/Number: S. MAPLE

jfox@aecmi.net

MEADOWS

#### TYPE OF ANALYSIS (Please Circle One)

TEM				PLM	PCM	SEM
Air	Bulk	Dust/Wipe	Water	Bulk	Air	
AHERA Level II NIOSH 7402	Qualitative Chatfield	Qualitative Quantitative	Drinking Waste	<u>EPA 600</u> Point Count	NIOSH 7400	

\*Please call in advance for RUSH sample analysis or large quantities.

#### TURNAROUND TIME (Please Circle One)

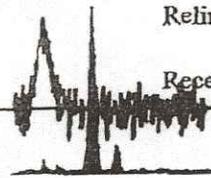
3 Hour    6 Hour    24 Hour    48 Hour    3 Days    5 Days

Sample ID	Location	Volume/Area (if applicable)
1-DS-830	DRYWALL SYSTEMS	
826		
824		
840		
846		
848		
862		
866		
868		
880		
884		
890		
800		

Comments: \_\_\_\_\_ Total Number of Samples: \_\_\_\_\_

Relinquished by: Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: Date: 6/6/13 Time: 12:15pm



walk in

## **Appendix C Site Photographs**



**AMERICAN  
ENVIRONMENTAL  
CONSULTANTS, L.L.C.**

# PHOTOGRAPHIC LOG

12838 Gavel, Detroit, MI 48227 Phone: 313-491-2600 Fax: 313-491-2601

Site Name:	S. Maple Meadows	Project Number:	1459-13010
Street Address:	800-890 S. Maple	City, State, Zip:	Ann Arbor, MI 48108

Photo Number:  
1

Photographer:  
Jef Fox

Date:  
May 30 & June 3, 2013

Description:  
Joint Compound



Photo Number:  
2

Photographer:  
Jef Fox

Date:  
May 30 & June 3, 2013

Description:  
Asbestos Board





Site Name:	S. Maple Meadows	Project Number:	1459-13010
Street Address:	800-890 S. Maple	City, State, Zip:	Ann Arbor, MI 48108

Photo Number:  
3

Photographer:  
Jef Fox

Date:  
May 30 & June 3, 2013

Description:  
  
Multi Layer Flooring



Photo Number:  
4

Photographer:  
Jef Fox

Date:  
May 30 & June 3, 2013

Description:  
  
Exterior Caulk





Site Name:	S. Maple Meadows	Project Number:	1459-13010
Street Address:	800-890 S. Maple	City, State, Zip:	Ann Arbor, MI 48108

Photo Number:  
5

Photographer:  
Jef Fox

Date:  
May 30 & June 3, 2013

Description:  
Baseboard-Tan



Photo Number:  
6

Photographer:  
Jef Fox

Date:  
May 30 & June 3, 2013

Description:  
Siding

