



*Turn-Key Environmental Consultants, Inc.*

790 Barnhart Rd.  
Troy, OH 45373

714 Monument Ave.  
Dayton, OH 45402

Phone: 937-335-8807  
Fax: 937-339-4882

November 23, 2015

Mr. Dennis Zimmer  
City of Dayton, Division of Housing Inspection  
371 West Second Street, 3<sup>rd</sup> Floor  
Dayton, Ohio 45402

RE: Comprehensive Pre-Demolition Asbestos Survey, NOP TK-21, Vacant Residence, 3419 Earlham Dr., Dayton, OH, TKEC Project #TK-21B

Dear Mr. Zimmer:

On November 12, 2015, Mr. Joseph Saunders (Ohio Department of Health Certified Asbestos Hazard Evaluation Specialist #ES34837) and Mr. Oliver Purcell (Ohio Department of Health Certified Asbestos Hazard Evaluation Specialist # ES35952) of Turn-Key Environmental Consultants, Inc. (TKEC) visited the vacant residence located at 3419 Earlham Dr. in Dayton, Ohio (subject property). The purpose of the visit was to perform a pre-demolition asbestos survey of the structure to identify asbestos containing materials (ACMs) located in the structure prior to demolition activities being performed.

### **EXECUTIVE SUMMARY**

On November 12, 2015, Mr. Joseph Saunders (Ohio Department of Health Certified Asbestos Hazard Evaluation Specialist # ES34837) and Mr. Oliver Purcell (Ohio Department of Health Certified Asbestos Hazard Evaluation Specialist # ES35952) of Turn-Key Environmental Consultants, Inc. (TKEC) performed a comprehensive pre-demolition asbestos inspection of the vacant residence located at 3419 Earlham Dr. in Dayton, Ohio. Eight (8) samples of suspect materials were collected from the residential structure. The samples were shipped overnight to an accredited laboratory for analysis. Some of the samples were comprised of layers which resulted in the analysis of a total of sixteen (16) samples. Laboratory analysis indicated that three (3) samples contained 1% or greater asbestos. Two (2) of the drywall/joint compound samples contained <1% and 2% chrysotile asbestos. These samples were subsequently analyzed by EPA PLM 400 Point Count. These samples were determined to contain <0.25% and 0.25% chrysotile asbestos respectively, and this material will not need to be abated.

Two (2) samples of duct wrap in the basement contained >1% asbestos. The duct wrap was observed on only the joints of the ducts. Approximately 100 LF of ducts will need to be abated prior to demolition.

The estimated cost for abating the identified material is \$350.00.

No other suspect materials were observed in the structure that will require abatement.

## **DESCRIPTION OF BUILDING SURVEY AND SAMPLING METHODOLOGY**

A room-by-room inspection of the house was performed and homogenous materials were identified. Sampling locations were determined in a statistically random manner for surfacing materials, or randomly distributed manner for thermal system insulation that is representative of the homogeneous area. Each bulk sample was collected using cleaned hand tools and placed in a clean, zip-lock plastic bag and labeled with a unique sample identification number. Pertinent information was recorded on a Bulk Sample Log Sheet, including sample identification number, date of collection, 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 shipped via overnight courier to SanAir Technologies Laboratory, Inc. (SanAir), an accredited and recognized laboratory under the National Voluntary Laboratory Accreditation Program (NVLAP) 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 material can be used for qualitative identification of six (6) 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 clients 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. 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 and non-asbestos components. A summary of the bulk samples collected from this structure is included in Table 1 – Bulk Sample Log.

Two (2) of the drywall/joint compound samples contained <1% and 2% chrysotile asbestos. These samples were subsequently analyzed by EPA PLM 400 Point Count. These samples were determined to contain <0.25% and 0.25% chrysotile asbestos respectively, and this material will not need to be abated.

Two (2) samples of duct wrap in the basement contained >1% asbestos. The duct wrap was observed on only the joints of the ducts. Approximately 100 LF of ducts will need to be abated prior to demolition.

The results of the sample analyses can be found on the laboratory report attached and in Table 2 – Bulk Sample Data Summary. Table 2 also contains the locations, condition, amount, NESHAP category and type of ACM identified in the structure.

## RESULTS

TKEC collected samples from wall and ceiling systems, flooring materials, roofing materials, duct insulation, blown-in insulation and window glaze and caulking if it was present. Analytical results confirmed that the following suspect asbestos-containing building materials contain more than 1% asbestos:

- **Duct Wrap, [Basement], [Fair], [100 LF]**

No other suspect asbestos-containing building materials that will likely become friable during demolition were identified in the structure.

## ESTIMATED ABATEMENT COSTS

TKEC estimates the costs associated with the removal of the confirmed asbestos-containing materials to be as follows:

The estimated costs for asbestos consulting (specifications and on-site monitoring) if requested by the City of Dayton: N/A

### ESTIMATED COSTS FOR FRIABLE ACM ABATEMENT

<u>Material</u>	<u>Estimated Quantity</u>	<u>Estimated Unit Costs</u>	<u>Estimated Costs</u>
N/A	N/A	N/A	N/A

The estimated costs for asbestos consulting (specifications and on-site monitoring): \$ N/A

### ESTIMATED COSTS FOR NON-FRIABLE ACM LIKELY TO BECOME FRIABLE ABATEMENT

<u>Material</u>	<u>Estimated Quantity</u>	<u>Estimated Unit Costs</u>	<u>Estimated Costs</u>
Duct Wrap	100 LF	\$3.50/SF	\$350.00

The estimated costs for asbestos consulting (specifications and on-site monitoring) if requested by the City of Dayton: N/A

**ESTIMATED COSTS FOR NON-FRIABLE ACM ABATEMENT**

<u>Material</u>	<u>Estimated Quantity</u>	<u>Estimated Unit Costs</u>	<u>Estimated Costs</u>
N/A	N/A	N/A	N/A

The estimated costs for asbestos consulting (specifications and on-site monitoring) if requested by the City of Dayton: N/A

Estimated costs are based on prevailing costs in the Midwest for 2015, and do not include costs for planning, permitting, contractor oversight or air monitoring. Actual costs may vary from estimated costs due to contractor workloads, season, or changes in regulatory requirements.

**RECOMMENDATIONS**

Based on the findings of this asbestos survey and NESHAP regulations, the following recommendations are presented for consideration:

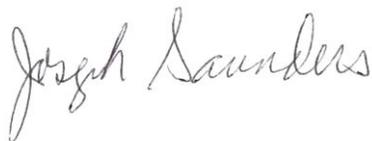
1. Prior to any outside contractor(s) working at the subject structure, the contractor(s) must be notified of the presence of the building materials identified as containing asbestos.
2. Trained workers and supervisors certified by the Ohio Department of Health must be used to remove the identified asbestos-containing building materials using special procedures and protective equipment to ensure that workers are not overexposed to airborne asbestos.
3. Advance notification must be provided to the Regional Air Pollution Control Agency (RAPCA) and the Ohio Department of Health at least ten (10) working days prior to the start of abatement activities.
4. The fact that asbestos containing materials were observed in or on the building should be noted on the demolition notification form along with the name and certification number of the inspector (Joseph D. Saunders, Ohio Department of Health Asbestos Hazard Evaluation Specialist Certification No. ES34837 and Oliver L. Purcell, Ohio Department of Health Asbestos Hazard Evaluation Specialist Certification No. ES 35952).

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

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

Attached are the following TKEC documents: 1) Table I – Bulk Sample Log; 2) Table 2 – Bulk Sample Data Summary; 3) Laboratory Report; 4) Building Sketch/Photographs; and 5) Inspector's Certification. If we can be of further assistance on this or other projects, do not hesitate to call us at (937) 335-8807.

Respectfully submitted,  
TURN-KEY ENVIRONMENTAL CONSULTANTS, INC.



Joseph Saunders  
Project Manager  
ODH Asbestos Hazard Evaluation Specialist  
No. ES34837, Exp. Date 6/10/2016



Oliver Purcell  
Field Technician  
ODH Asbestos Hazard Evaluation Specialist  
No. ES35952, Exp. Date 11/05/2016

# **ATTACHMENT 1**

## **Bulk Sample Log**



# **ATTACHMENT 2**

## **Bulk Sample Data Summary**

**3419 Earlham Dr.**  
**Pre-Demolition Asbestos Survey**  
**Table I - Bulk Sample Data Summary**

**Project TK-21B**

Homogeneous Area					Quantity & Condition			
Sample Description (Material Type)	Sample Location	NSHAP Category	ACM Type	Bulk Sample No.	Good	Fair	Poor	Asbestos Content
Drywall/Joint Compound - Joint Compound	Living Room			1-1				<1% Chrysotile
Drywall/Joint Compound - Paper Backing	Living Room			1-1				NAD
Drywall/Joint Compound - Drywall	Living Room			1-1				NAD
Drywall/Joint Compound - Joint Compound	Kitchen			1-2				NAD
Drywall/Joint Compound - Paper Backing	Kitchen			1-2				NAD
Drywall/Joint Compound - Drywall	Kitchen			1-2				NAD
Drywall/Joint Compound - Joint Compound	Bedroom 1			1-3				2% Chrysotile
Drywall/Joint Compound - Paper Backing	Bedroom 1			1-3				NAD
Drywall/Joint Compound - Drywall	Bedroom 1			1-3				NAD
Floor Tile/Mastic - Linoleum	Bath			2-1				NAD
Floor Tile/Mastic - Mastic	Bath			2-1				NAD
Floor Tile/Mastic - Tile	Bath			2-1				NAD
Floor Tile/Mastic - Floor Tile	Kitchen			3-1				NAD

3419 Earlham Dr.  
 Pre-Demolition Asbestos Survey  
 Table I - Bulk Sample Data Summary

Project TK-21B

Homogeneous Area					Quantity & Condition			
Sample Description (Material Type)	Sample Location	NSHAP Category	ACM Type	Bulk Sample No.	Good	Fair	Poor	Asbestos Content
Duct Wrap	Basement	Cat II Non Friable	Misc	4-1		100 LF		85% Chrysotile
Duct Wrap	Basement	Cat II Non Friable	Misc	4-2				80% Chrysotile
Roofing	Roof			5-1				NAD

3419 Earlham Ave.  
 Pre-Demolition Asbestos Survey  
 Table II - Point Count Sample Data Summary  
 Project TK-21B

Homogeneous Area					Quantity & Condition			
Sample Description (Material Type)	Sample Location	NSHAP Category	ACM Type	Bulk Sample No.	Good	Fair	Poor	Asbestos Content
Drywall/Joint Compound - Joint Compound	Living Room			1-1				<0.25% Chrysotile
Drywall/Joint Compound - Joint Compound	Bedroom 1			1-3				0.25% Chrysotile

# **ATTACHMENT 3**

## **Laboratory Data**



Email: [IAQ@hayesmicrobial.com](mailto:IAQ@hayesmicrobial.com)  
[www.hayesmicrobial.com/lims/](http://www.hayesmicrobial.com/lims/)

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Analysis Report prepared for

## Turn-Key Environmental Consultants

790 Barnhart Road  
Troy, OH 45373  
Ph.: (937) 335-8807 Fax.: (937) 339-4882

Job Number: TK-21B  
Job Name: 3419 Earlham  
Date Sampled: 11-12-2015  
Date Analyzed: 11-17-2015  
Report Date: 11-17-2015

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AIHA EMPAT Laboratory ID# 188863  
EPA Laboratory ID# VA01419



NVLAP Lab Code: 500096-0



LAB #188863  
AIHA Accredited  
Environmental Microbiology



NY ELAP Lab ID#12015

Texas Dept. of State  
Health Services  
Mold License: LAB1021  
Asbestos License: 300435



# HAYES

MICROBIAL CONSULTING  
3005 East Boundary Terrace, #F  
Midlothian, VA 23112, USA  
804.562.3435 Fax: 804.447.5562

HMC #15026315

**Turn-Key Environmental Consultants  
790 Barnhart Road  
Troy, OH 45373**

November 17, 2015

Client Job Number: TK-21B  
Client Job Name: 3419 Earlham

Dear Turn-Key Environmental Consultants,

We would like to thank you for trusting Hayes Microbial for your analytical needs. On November 16, 2015 we received 8 samples by FedEx for the job referenced above.

The results in this analysis pertain only to this job, collected on the stated date and should not be used in the interpretation of any other job. This report may not be duplicated, except in full, without the written consent of Hayes Microbial Consulting, LLC.

This laboratory bears no responsibility for sample collection activities, analytical method limitations, or your use of the test results. Interpretation and use of test results are your responsibility. Any reference to health effects or interpretation of mold levels is strictly the opinion of Hayes Microbial Consulting. In no event, shall Hayes Microbial Consulting or any of its employees be liable for lost profits or any special, incidental or consequential damages arising out of your use of the test results.

Steve Hayes, BSMT(ASCP)  
Laboratory Director  
Hayes Microbial Consulting, LLC



# HAYES

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## Asbestos PLM Analysis

### HMC #15026315

Job Number: <b>TK-21B</b>	Job Name: <b>3419 Earlham</b>	Date Collected: <b>11/12/2015</b>
Collected by: <b>J. Saunders</b>		Date Received: <b>11/16/2015</b>
Email: <b>tke@turn-keyenvironmental.com</b>		Date Reported: <b>11/17/2015</b>

<b>HMC ID Number: 15026315 - 1 - L1</b>		<b>Analysis Type: EPA 600/R-93, M-4/82-020 - 1 Day</b>	
<b>Sample Number: 1-1</b>		<b>Sample Name: White Drywall/Joint Compound</b>	
<b>Homogeneity: Yes</b>		<b>Morphology/Macro Desc.: Joint Compound / Gray</b>	
<b>Estimated % Asbestos</b>	<b>Non-asbestos % Fibers</b>	<b>Non-fibrous</b>	<b>Notes</b>
<1 % Chrysotile	2 % Cellulose fibers	98 %	

<b>HMC ID Number: 15026315 - 1 - L2</b>		<b>Analysis Type: EPA 600/R-93, M-4/82-020 - 1 Day</b>	
<b>Sample Number: 1-1</b>		<b>Sample Name: White Drywall/Joint Compound</b>	
<b>Homogeneity: Yes</b>		<b>Morphology/Macro Desc.: Paper Backing / Brown</b>	
<b>Estimated % Asbestos</b>	<b>Non-asbestos % Fibers</b>	<b>Non-fibrous</b>	<b>Notes</b>
(None Detected)	90 % Cellulose fibers	10 %	

<b>HMC ID Number: 15026315 - 1 - L3</b>		<b>Analysis Type: EPA 600/R-93, M-4/82-020 - 1 Day</b>	
<b>Sample Number: 1-1</b>		<b>Sample Name: White Drywall/Joint Compound</b>	
<b>Homogeneity: Yes</b>		<b>Morphology/Macro Desc.: Sheetrock / White</b>	
<b>Estimated % Asbestos</b>	<b>Non-asbestos % Fibers</b>	<b>Non-fibrous</b>	<b>Notes</b>
(None Detected)	3 % Cellulose fibers	97 %	

<b>HMC ID Number: 15026315 - 2 - L1</b>		<b>Analysis Type: EPA 600/R-93, M-4/82-020 - 1 Day</b>	
<b>Sample Number: 1-2</b>		<b>Sample Name: Drywall/Joint Compound Kitchen</b>	
<b>Homogeneity: Yes</b>		<b>Morphology/Macro Desc.: Joint Compound / White</b>	
<b>Estimated % Asbestos</b>	<b>Non-asbestos % Fibers</b>	<b>Non-fibrous</b>	<b>Notes</b>
(None Detected)	(None Detected)	100 %	

Signature: 

Date: 11/17/2015

Reviewed by: 

Date: 11/17/2015



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Ph.: (937) 335-8807 Fax.: (937) 339-4882

Asbestos PLM Analysis

HMC #15026315

Job Number: <b>TK-21B</b>	Job Name: <b>3419 Earlham</b>	Date Collected: <b>11/12/2015</b>
Collected by: <b>J. Saunders</b>		Date Received: <b>11/16/2015</b>
Email: <b>tke@turn-keyenvironmental.com</b>		Date Reported: <b>11/17/2015</b>

<b>HMC ID Number: 15026315 - 2 - L2</b>		<b>Analysis Type: EPA 600/R-93, M-4/82-020 - 1 Day</b>	
<b>Sample Number: 1-2</b>		<b>Sample Name: Drywall/Joint Compound Kitchen</b>	
<b>Homogeneity: Yes</b>		<b>Morphology/Macro Desc.: Paper Backing / Brown</b>	
<b>Estimated % Asbestos</b>	<b>Non-asbestos % Fibers</b>	<b>Non-fibrous</b>	<b>Notes</b>
(None Detected)	90 % Cellulose fibers	10 %	

<b>HMC ID Number: 15026315 - 2 - L3</b>		<b>Analysis Type: EPA 600/R-93, M-4/82-020 - 1 Day</b>	
<b>Sample Number: 1-2</b>		<b>Sample Name: Drywall/Joint Compound Kitchen</b>	
<b>Homogeneity: Yes</b>		<b>Morphology/Macro Desc.: Sheetrock / White</b>	
<b>Estimated % Asbestos</b>	<b>Non-asbestos % Fibers</b>	<b>Non-fibrous</b>	<b>Notes</b>
(None Detected)	2 % Cellulose fibers	98 %	

<b>HMC ID Number: 15026315 - 3 - L1</b>		<b>Analysis Type: EPA 600/R-93, M-4/82-020 - 1 Day</b>	
<b>Sample Number: 1-3</b>		<b>Sample Name: Drywall/Joint Compound Bedroom 1</b>	
<b>Homogeneity: Yes</b>		<b>Morphology/Macro Desc.: Joint Compound / Green</b>	
<b>Estimated % Asbestos</b>	<b>Non-asbestos % Fibers</b>	<b>Non-fibrous</b>	<b>Notes</b>
2 % Chrysotile	(None Detected)	98 %	

<b>HMC ID Number: 15026315 - 3 - L2</b>		<b>Analysis Type: EPA 600/R-93, M-4/82-020 - 1 Day</b>	
<b>Sample Number: 1-3</b>		<b>Sample Name: Drywall/Joint Compound Bedroom 1</b>	
<b>Homogeneity: Yes</b>		<b>Morphology/Macro Desc.: Sheetrock / White</b>	
<b>Estimated % Asbestos</b>	<b>Non-asbestos % Fibers</b>	<b>Non-fibrous</b>	<b>Notes</b>
(None Detected)	2 % Cellulose fibers	98 %	

Signature: 

Date: 11/17/2015

Reviewed by: 

Date: 11/17/2015



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Asbestos PLM Analysis

HMC #15026315

Job Number: <b>TK-21B</b>	Job Name: <b>3419 Earlham</b>	Date Collected: <b>11/12/2015</b>
Collected by: <b>J. Saunders</b>		Date Received: <b>11/16/2015</b>
Email: <b>tke@turn-keyenvironmental.com</b>		Date Reported: <b>11/17/2015</b>

<b>HMC ID Number: 15026315 - 3 - L3</b>		<b>Analysis Type: EPA 600/R-93, M-4/82-020 - 1 Day</b>	
<b>Sample Number: 1-3</b>		<b>Sample Name: Drywall/Joint Compound Bedroom 1</b>	
<b>Homogeneity: Yes</b>		<b>Morphology/Macro Desc.: Paper Backing / Brown</b>	
<b>Estimated % Asbestos</b>	<b>Non-asbestos % Fibers</b>	<b>Non-fibrous</b>	<b>Notes</b>
(None Detected)	90 % Cellulose fibers	10 %	

<b>HMC ID Number: 15026315 - 4 - L1</b>		<b>Analysis Type: EPA 600/R-93, M-4/82-020 - 1 Day</b>	
<b>Sample Number: 2-1</b>		<b>Sample Name: Floor Tile/Mastic 2 Layers Bath</b>	
<b>Homogeneity: Yes</b>		<b>Morphology/Macro Desc.: Linoleum / Brown</b>	
<b>Estimated % Asbestos</b>	<b>Non-asbestos % Fibers</b>	<b>Non-fibrous</b>	<b>Notes</b>
(None Detected)	(None Detected)	100 %	

<b>HMC ID Number: 15026315 - 4 - L2</b>		<b>Analysis Type: EPA 600/R-93, M-4/82-020 - 1 Day</b>	
<b>Sample Number: 2-1</b>		<b>Sample Name: Floor Tile/Mastic 2 Layers Bath</b>	
<b>Homogeneity: Yes</b>		<b>Morphology/Macro Desc.: Adhesive / Yellow</b>	
<b>Estimated % Asbestos</b>	<b>Non-asbestos % Fibers</b>	<b>Non-fibrous</b>	<b>Notes</b>
(None Detected)	(None Detected)	100 %	

<b>HMC ID Number: 15026315 - 4 - L3</b>		<b>Analysis Type: EPA 600/R-93, M-4/82-020 - 1 Day</b>	
<b>Sample Number: 2-1</b>		<b>Sample Name: Floor Tile/Mastic 2 Layers Bath</b>	
<b>Homogeneity: Yes</b>		<b>Morphology/Macro Desc.: Tile / Brown</b>	
<b>Estimated % Asbestos</b>	<b>Non-asbestos % Fibers</b>	<b>Non-fibrous</b>	<b>Notes</b>
(None Detected)	(None Detected)	100 %	

Signature: 

Date: 11/17/2015

Reviewed by: 

Date: 11/17/2015



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Asbestos PLM Analysis

HMC #15026315

Job Number: <b>TK-21B</b>	Job Name: <b>3419 Earlham</b>	Date Collected: <b>11/12/2015</b>
Collected by: <b>J. Saunders</b>		Date Received: <b>11/16/2015</b>
Email: <b>tke@turn-keyenvironmental.com</b>		Date Reported: <b>11/17/2015</b>

<b>HMC ID Number: 15026315 - 5 - L1</b>		<b>Analysis Type: EPA 600/R-93, M-4/82-020 - 1 Day</b>	
<b>Sample Number: 3-1</b>		<b>Sample Name: Floor Tile/Mastic 2 Layers Kitchen</b>	
<b>Homogeneity: Yes</b>		<b>Morphology/Macro Desc.: Linoleum / Orange</b>	
<b>Estimated % Asbestos</b>	<b>Non-asbestos % Fibers</b>	<b>Non-fibrous</b>	<b>Notes</b>
(None Detected)	75 % Cellulose fibers	25 %	

<b>HMC ID Number: 15026315 - 6 - L1</b>		<b>Analysis Type: EPA 600/R-93, M-4/82-020 - 1 Day</b>	
<b>Sample Number: 4-1</b>		<b>Sample Name: Duct Wrap Basement</b>	
<b>Homogeneity: Yes</b>		<b>Morphology/Macro Desc.: Fibrous / White</b>	
<b>Estimated % Asbestos</b>	<b>Non-asbestos % Fibers</b>	<b>Non-fibrous</b>	<b>Notes</b>
85 % Chrysotile	(None Detected)	15 %	

<b>HMC ID Number: 15026315 - 7 - L1</b>		<b>Analysis Type: EPA 600/R-93, M-4/82-020 - 1 Day</b>	
<b>Sample Number: 4-2</b>		<b>Sample Name: Duct Wrap Basement</b>	
<b>Homogeneity: Yes</b>		<b>Morphology/Macro Desc.: Fibrous / White</b>	
<b>Estimated % Asbestos</b>	<b>Non-asbestos % Fibers</b>	<b>Non-fibrous</b>	<b>Notes</b>
80 % Chrysotile	(None Detected)	20 %	

<b>HMC ID Number: 15026315 - 8 - L1</b>		<b>Analysis Type: EPA 600/R-93, M-4/82-020 - 1 Day</b>	
<b>Sample Number: 5-1</b>		<b>Sample Name: Roofing 4 Layers Roof</b>	
<b>Homogeneity: Yes</b>		<b>Morphology/Macro Desc.: Roofing / Black</b>	
<b>Estimated % Asbestos</b>	<b>Non-asbestos % Fibers</b>	<b>Non-fibrous</b>	<b>Notes</b>
(None Detected)	15 % Fiberglass	85 %	

Signature: 

Date: 11/17/2015

Reviewed by: 

Date: 11/17/2015



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Asbestos - Additional Information

**HMC #15026315**

All samples were received in acceptable condition unless otherwise noted on the report. The Report must not be used by the client to claim product certification, approval, or endorsement by: AIHA, NIST, NVLAP NY ELAP, or any agency. The results relate only to the items tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data can be provided when requested. None detected: Below the detected reporting limit of 1% unless point counting is performed, then the detected, reporting limit is .25%. Per NY ELAP198.6 (NOB) TEM is the only reliable method to declare an NOB material as Non-Asbestos Containing. Hayes Microbial Consulting reserves the right to dispose of all samples after a period of 60 days in compliance with state and federal guidelines.

Signature: Reed

Date: 11/17/2015

Reviewed by: Stephen N. Hayes

Date: 11/17/2015







Email: [IAQ@hayesmicrobial.com](mailto:IAQ@hayesmicrobial.com)  
[www.hayesmicrobial.com/lims/](http://www.hayesmicrobial.com/lims/)

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Analysis Report prepared for

## Turn-Key Environmental Consultants

790 Barnhart Road  
Troy, OH 45373  
Ph.: (937) 335-8807 Fax.: (937) 339-4882

Job Number: TK-21B  
Job Name: 3419 Earlham  
Date Sampled:  
Date Analyzed: 11-20-2015  
Report Date: 11-20-2015

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AIHA EMPAT Laboratory ID# 188863  
EPA Laboratory ID# VA01419



NVLAP Lab Code: 500096-0



LAB #188863  
AIHA Accredited  
Environmental Microbiology



NY ELAP Lab ID#12015

Texas Dept. of State  
Health Services  
Mold License: LAB1021  
Asbestos License: 300435



# HAYES

MICROBIAL CONSULTING  
3005 East Boundary Terrace, #F  
Midlothian, VA 23112, USA  
804.562.3435 Fax: 804.447.5562

HMC #15026876

**Turn-Key Environmental Consultants  
790 Barnhart Road  
Troy, OH 45373**

November 20, 2015

Client Job Number: TK-21B  
Client Job Name: 3419 Earlham

Dear Turn-Key Environmental Consultants,

We would like to thank you for trusting Hayes Microbial for your analytical needs. On November 20, 2015 we received 2 samples by Hand Delivered for the job referenced above.

The results in this analysis pertain only to this job, collected on the stated date and should not be used in the interpretation of any other job. This report may not be duplicated, except in full, without the written consent of Hayes Microbial Consulting, LLC.

This laboratory bears no responsibility for sample collection activities, analytical method limitations, or your use of the test results. Interpretation and use of test results are your responsibility. Any reference to health effects or interpretation of mold levels is strictly the opinion of Hayes Microbial Consulting. In no event, shall Hayes Microbial Consulting or any of its employees be liable for lost profits or any special, incidental or consequential damages arising out of your use of the test results.

Steve Hayes, BSMT(ASCP)  
Laboratory Director  
Hayes Microbial Consulting, LLC



# HAYES

MICROBIAL CONSULTING  
3005 East Boundary Terrace, #F  
Midlothian, VA 23112, USA  
804.562.3435 Fax: 804.447.5562

Turn-Key Environmental Consultants  
790 Barnhart Road  
Troy, OH 45373  
Ph.: (937) 335-8807 Fax.: (937) 339-4882

Asbestos PLM Analysis

HMC #15026876

Job Number: <b>TK-21B</b>	Job Name: <b>3419 Earlham</b>	Date Collected:
Collected by: <b>J. Saunders</b>		Date Received: <b>11/20/2015</b>
Email: <b>tke@turn-keyenvironmental.com</b>		Date Reported: <b>11/20/2015</b>

<b>HMC ID Number: 15026876 - 1 - L1</b>		<b>Analysis Type: EPA 400 Point Count - 1 Day</b>	
<b>Sample Number: 15026315-1-L1</b>		<b>Sample Name:</b>	
<b>Homogeneity: Yes</b>		<b>Morphology/Macro Desc.: Joint Compound / Gray</b>	
<b>Estimated % Asbestos</b>	<b>Non-asbestos % Fibers</b>	<b>Non-fibrous</b>	<b>Notes</b>
<0.25 % Chrysotile	(None Detected)	100 %	Asbestos Observed Not In Counting Field.

<b>HMC ID Number: 15026876 - 2 - L1</b>		<b>Analysis Type: EPA 400 Point Count - 1 Day</b>	
<b>Sample Number: 15026315-3-L1</b>		<b>Sample Name:</b>	
<b>Homogeneity: Yes</b>		<b>Morphology/Macro Desc.: Joint Compound / Green</b>	
<b>Estimated % Asbestos</b>	<b>Non-asbestos % Fibers</b>	<b>Non-fibrous</b>	<b>Notes</b>
0.25 % Chrysotile	(None Detected)	99.75 %	

Signature: 

Date: 11/20/2015

Reviewed by: 

Date: 11/20/2015



# HAYES

MICROBIAL CONSULTING  
3005 East Boundary Terrace, #F  
Midlothian, VA 23112, USA  
804.562.3435 Fax: 804.447.5562

Turn-Key Environmental Consultants  
790 Barnhart Road  
Troy, OH 45373  
Ph.: (937) 335-8807 Fax.: (937) 339-4882

Asbestos - Additional Information

HMC #15026876

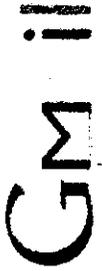
All samples were received in acceptable condition unless otherwise noted on the report. The Report must not be used by the client to claim product certification, approval, or endorsement by: AIHA, NIST, NVLAP NY ELAP, or any agency. The results relate only to the items tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data can be provided when requested. None detected: Below the detected reporting limit of 1% unless point counting is performed, then the detected, reporting limit is .25%. Per NY ELAP198.6 (NOB) TEM is the only reliable method to declare an NOB material as Non-Asbestos Containing. Hayes Microbial Consulting reserves the right to dispose of all samples after a period of 60 days in compliance with state and federal guidelines.

Signature: Reed

Date: 11/20/2015

Reviewed by: Stephen N. Hayes

Date: 11/20/2015



Renaldo Drakes <renaldo@hayesmicrobial.com>

**FW: Point Count Analyses**

1 message

Tammy <tammy@hayesmicrobial.com>

To: Renaldo Drakes <renaldo@hayesmicrobial.com>

Tue, Nov 17, 2015 at 12:04 PM

**From:** Turn-Key Environmental [mailto:tkec@turn-keyenvironmental.com]

**Sent:** Tuesday, November 17, 2015 11:44 AM

**To:** contact@hayesmicrobial.com

**Subject:** Point Count Analyses

Dear Mr. Hayes,

I would like to order EPA Point Counts for the following samples:

~~15026316-1-L1  
15026316-2-L1  
15026316-3-L1  
(Positive Stop)~~

~~15026319-1-L1  
15026319-2-L1  
15026319-3-L1  
15026319-4-L1  
15026319-5-L1  
(Positive Stop)~~

~~15026332-1-L1  
15026332-2-L1  
15026332-3-L1  
15026332-4-L1~~

11/20/2015

Hayes Microbial Consulting Mail - FW: Point Count Analyses

~~15026332-5-L1  
(Positive Stop)~~

~~15026322-1-L1  
15026322-2-L1  
15026322-3-L1  
15026322-4-L1  
15026322-5-L1  
15026322-6-L1  
(Positive Stop)~~

15026315-1-L1  
15026315-3-L1

026876

~~15026328-4-L1  
15026328-8-L1~~

One (1) day TAT would be great for these samples. Please let me know if you have questions or need additional information.

Thank you,

Joe Saunders

Turn-Key Environmental Consultants, Inc.  
790 Barnhart Road  
Troy, Ohio 45373  
937-335-8807  
www.turn-keyenvironmental.com

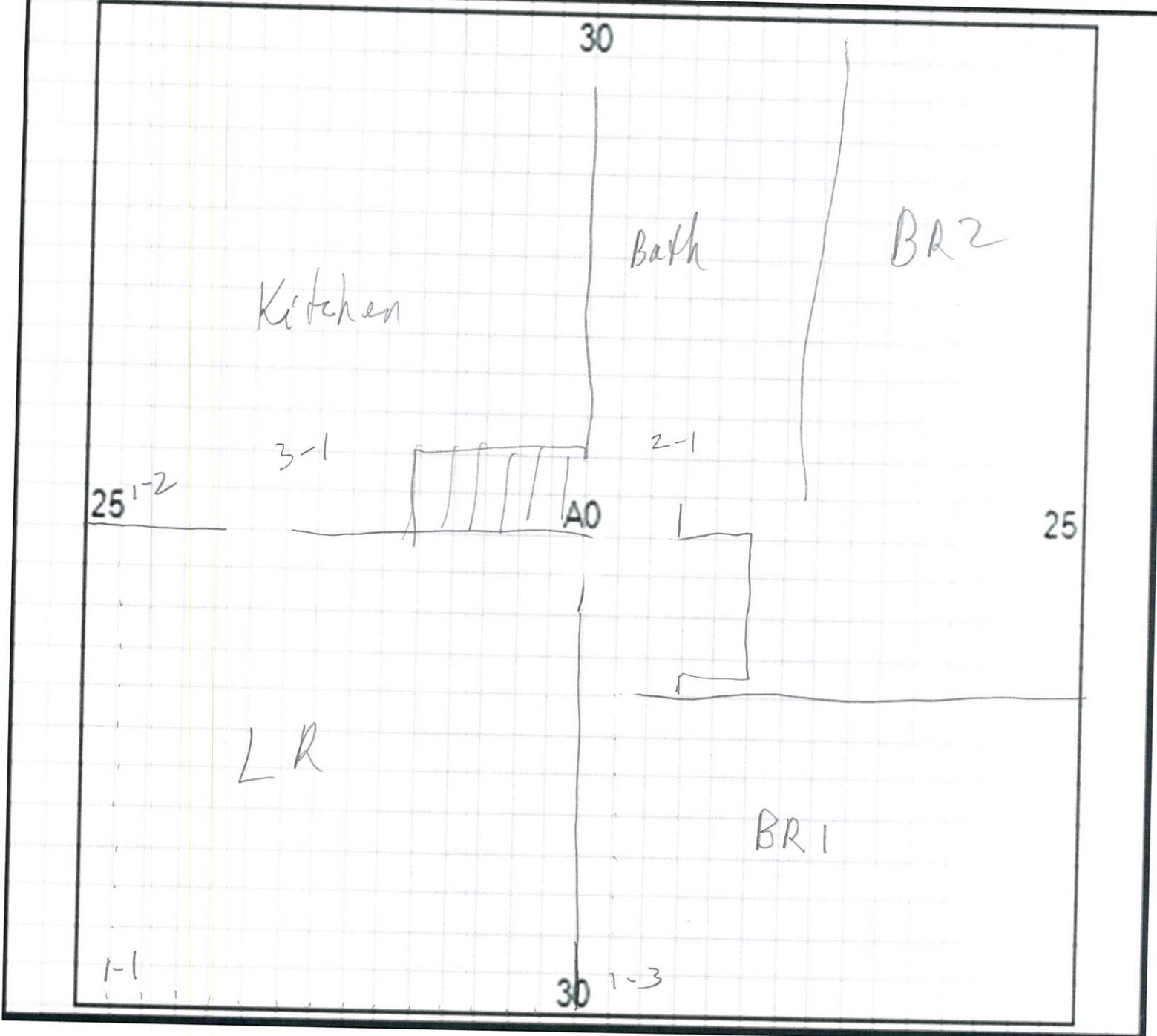
Rec'd @ 11/20/15



This email has been checked for viruses by Avast antivirus software.  
www.avast.com

# **ATTACHMENT 4**

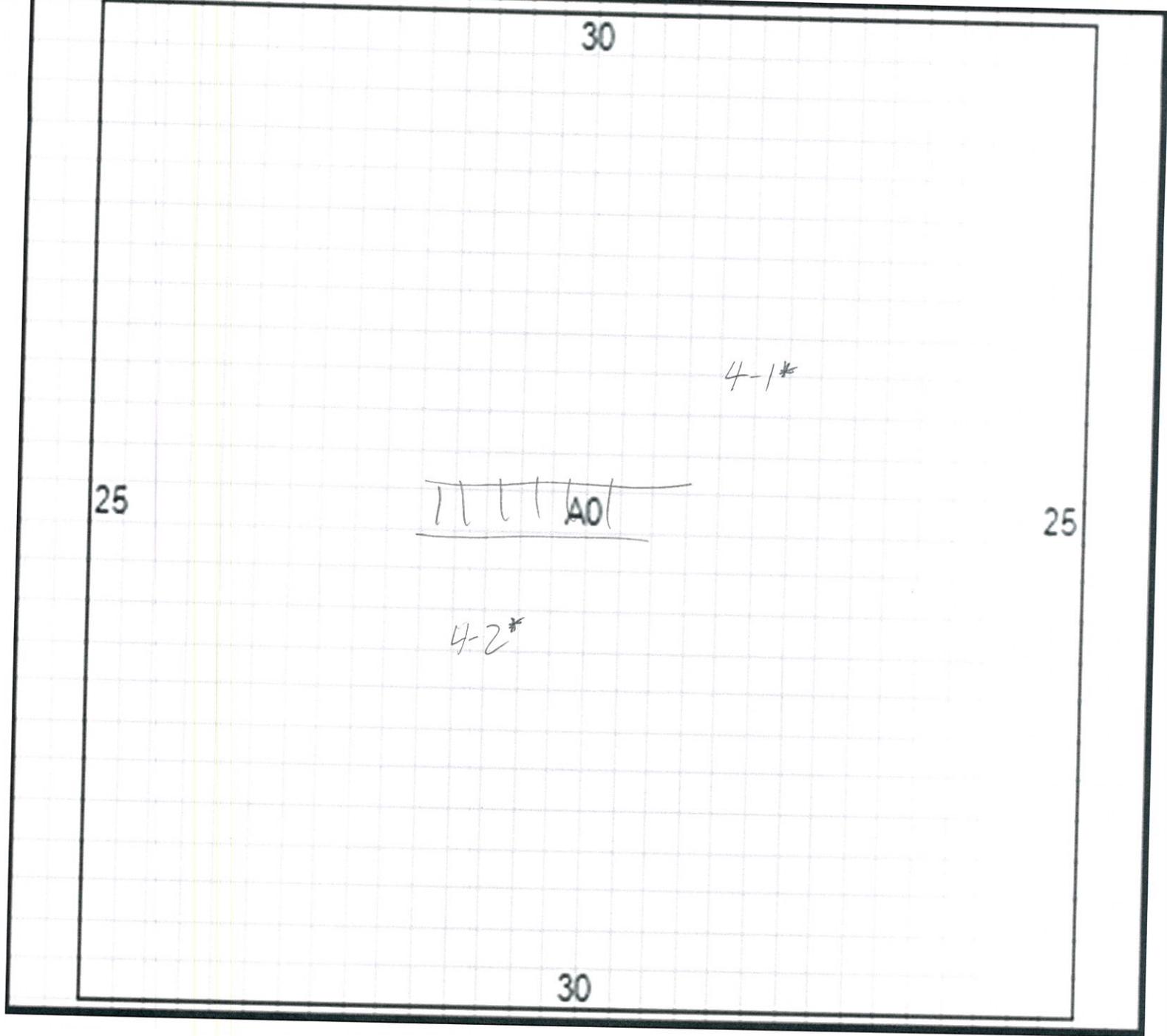
**Site Sketch/Photographs**



Notes: Hg Thermostat

1-1 Approximate  
Sample Location  
1-1\* Asbestos > 1%

First Floor  
**FLOOR PLAN**  
TK-21B\_3419 Earlham

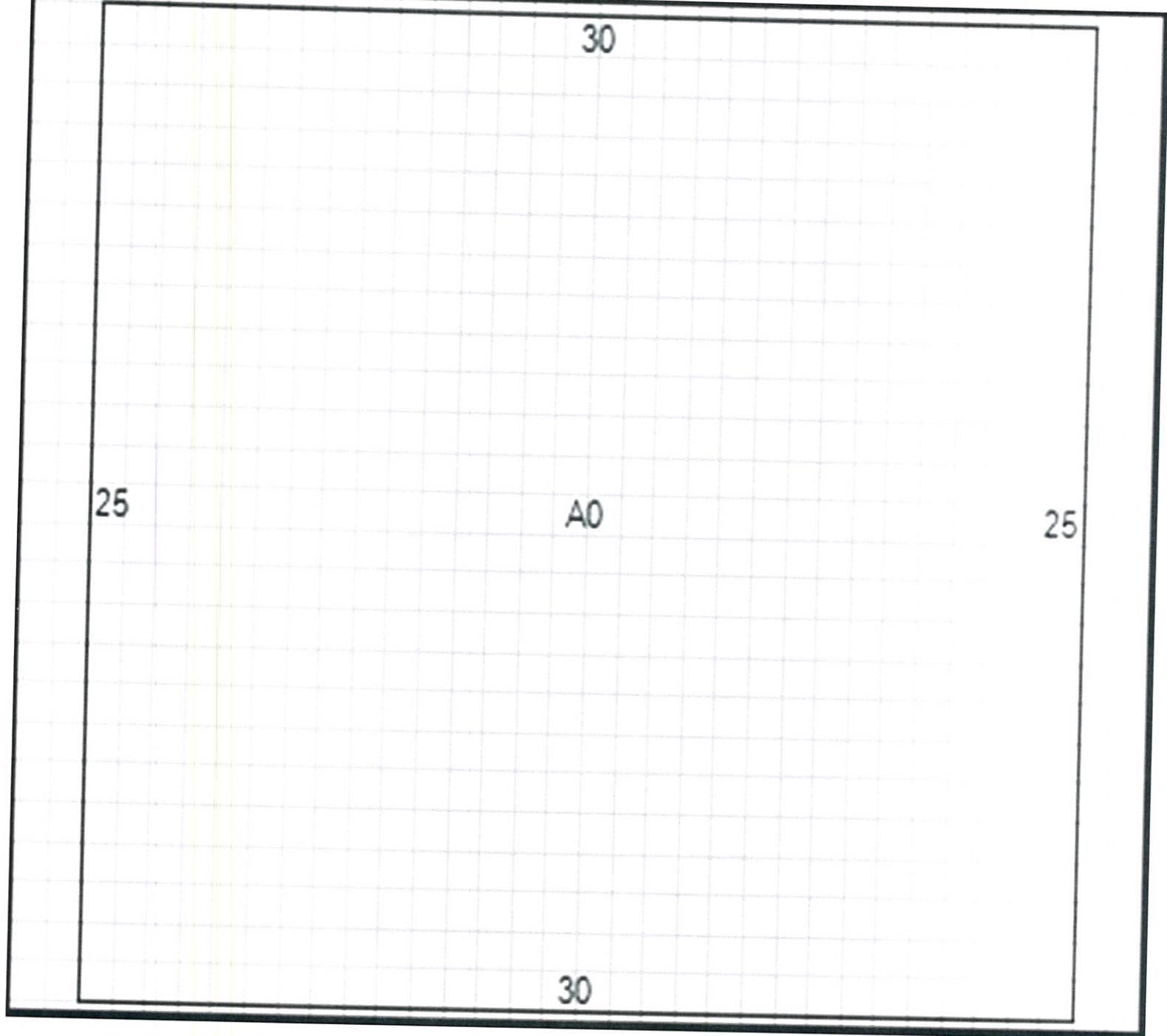


Notes:

*Wrap only on joints*

1-1 Approximate  
Sample Location  
1-1\* Asbestos > 1%

*Basement*  
**FLOOR PLAN**  
**TK-21B\_3419 Earlham**



Notes:

*No Samples*

1-1 Approximate  
Sample Location

1-1\* Asbestos > 1%

*Second Floor*

**FLOOR PLAN**

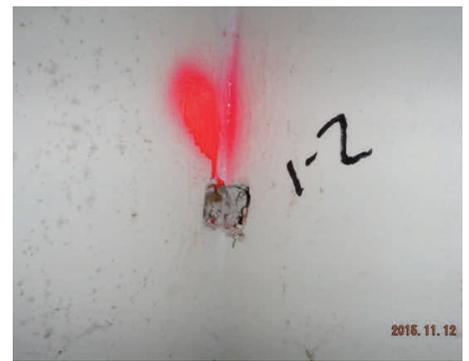
**TK-21B\_3419 Earlham**



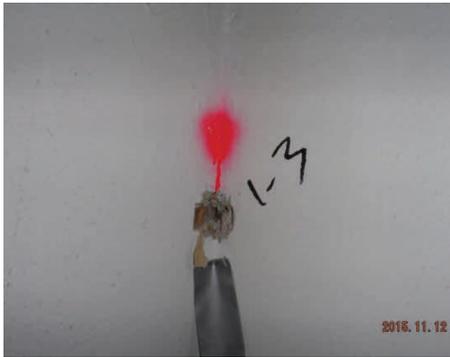
3419 Earham Drive



Sample 1-1 Drywall/Joint Compound



Sample 1-2 Drywall/Joint Compound



Sample 1-3 Drywall/Joint Compound



Sample 2-1 Floor Tile/Mastic



Sample 3-1 Floor Tile/Mastic



Sample 4-1 Duct Wrap



Sample 4-2 Duct Wrap



# **ATTACHMENT 5**

**Inspector's Certification**

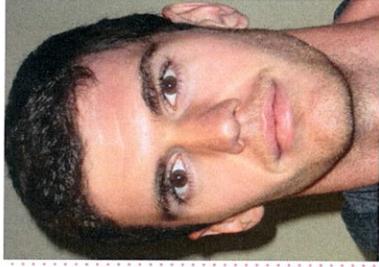


# TSI Training Services International

## Asbestos Building Inspector Initial

### Certificate

This is to certify



# Oliver Purcell

## XXXX-XX-7816

has attended and successfully completed the Asbestos Hazard Emergency Response Act mandatory course for the Asbestos Building Inspector Initial and has passed an examination in that course with a minimum score of 70% or better. Training was in accordance with 40 CFR Part 763 (AHERA). The above student received the requisite training for asbestos accreditation under Title II of the Toxic Substances Control Act and State of Indiana requirements under 326 IAC 18-2 and Chapter 3701-34 Ohio Administrative Code.

*Robert M. Walter*

9/30/16

Training Manager

Date(s) of Course

9/28/15 - 9/30/15

9/30/15

Examination Date

Cleveland, OH

Course Location



33150 Lakeland Blvd.  
Cleveland, OH 44095  
1-866-666-8438

15 TSI 60522 ii

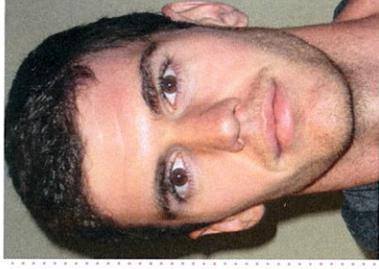


# TSI Training Services International

## Asbestos Management Planner Initial

Certificate

This is to certify



# Oliver Purcell

## XXXX-XX-7816

has attended and successfully completed the Asbestos Hazard Emergency Response Act mandatory course for the Asbestos Management Planner Initial and has passed an examination in that course with a minimum score of 70% or better. Training was in accordance with 40 CFR Part 763 (AHERA). The above student received the requisite training for asbestos accreditation under Title II of the Toxic Substances Control Act and State of Indiana requirements under 326 IAC 18-2 and Chapter 3701-34 Ohio Administrative Code.

*Robert Alletta*

10/2/16

Expiration Date

10/1/15 - 10/2/15

Date(s) of Course

10/2/15

Examination Date

Cleveland, OH

Course Location

**TSI**

33150 Lakeland Blvd.  
Cleveland, OH 44095  
1-866-666-8438

15 TSI 60530 mpi



# OHIO DEPARTMENT OF HEALTH

246 North High Street  
Columbus, Ohio 43215

614/466-3543  
www.odh.ohio.gov

John R. Kasich/Governor

Richard Hodges/Director of Health

November 05, 2015

Oliver L Purcell  
54 Old Yellow Springs Road Unit 11  
Fairborn OH 45324

RE: Asbestos Hazard Evaluation Specialist  
Certification Number: ES35952  
Expiration Date: 11/05/2016

Dear Oliver L Purcell:

This letter and enclosed certification card approves your request to be certified as an Asbestos Hazard Evaluation Specialist. You must present your card upon request at any project site while performing duties. Copies of cards are not acceptable as proof of certification.

This certification may be revoked by the Director of Health for violation of any of the requirements of 3701-34 of the Ohio Administrative Code.

If you have any questions, please call Kathy Butcher, Licensure Specialist, at 614-644-0226.

Sincerely,

Bill Robbins, Section Chief  
Bureau of Licensure Operations  
Office of Health Assurance and Licensing



Asbestos Hazard Evaluation Specialist



**Oliver L Purcell**

**54 Old Yellow Springs Road Unit 11  
Fairborn OH 45324**

Certification Number **ES35952** Expiration Date **11/05/2016**

DOB: 07/12/1992

This certification is issued pursuant to Chapter 3710 of the Revised Code and 3701-34 of the Ohio Administrative Code

Certification Card is not valid if altered



# **TSI** Training Services International

## Asbestos Building Inspector Refresher

Certificate

This is to certify

# Joseph D. Saunders

XXXX-XX-6484



has attended and successfully completed the Asbestos Hazard Emergency Response Act mandatory course for the Asbestos Building Inspector Refresher and has passed an examination in that course with a minimum score of 70% or better. Training was in accordance with 40 CFR Part 763 (AHERA). The above student received the requisite training for asbestos accreditation under Title II of the Toxic Substances Control Act and State of Indiana requirements under 326 IAC 18-2 and Chapter 3701-34 Ohio Administrative Code.

4/30/16

4/30/15

4/30/15

Columbus, OH

Training Manager

Expiration Date

Date(s) of Course

Examination Date

Course Location

**TSI**

33150 Lakeland Blvd.  
Cleveland, OH 44095  
1-866-666-8438

15 TSI 58782 ir



# **TSI** Training Services International

## Asbestos Management Planner Refresher

### Certificate

This is to certify

# Joseph D. Saunders

XXXX-XX-6484



has attended and successfully completed the Asbestos Hazard Emergency Response Act mandatory course for the Asbestos Management Planner Refresher and has passed an examination in that course with a minimum score of 70% or better. Training was in accordance with 40 CFR Part 763 (AHERA). The above student received the requisite training for asbestos accreditation under Title II of the Toxic Substances Control Act and State of Indiana requirements under 326 IAC 18-2 and Chapter 3701-34 Ohio Administrative Code.

4/30/16

4/30/15

4/30/15

Columbus, OH

Training Manager

Expiration Date

Date(s) of Course

Examination Date

Course Location

**TSI**

33150 Lakeland Blvd.  
Cleveland, OH 44095  
1-866-666-8438

15 TSI 58791 mpr



# OHIO DEPARTMENT OF HEALTH

246 North High Street  
Columbus, Ohio 43215

614/466-3543  
www.odh.ohio.gov

John R. Kasich/Governor

Richard Hodges/Director of Health

June 11, 2015

Joseph D Saunders  
3072 Southdale Drive #2  
Kettering OH 45409

RE: Asbestos Hazard Evaluation Specialist  
Certification Number: ES34837  
Expiration Date: 06/10/2016

Dear Joseph D Saunders:

This letter and enclosed certification card approves your request to be certified as an Asbestos Hazard Evaluation Specialist. You must present your card upon request at any project site while performing duties. Copies of cards are not acceptable as proof of certification.

This certification may be revoked by the Director of Health for violation of any of the requirements of 3701-34 of the Ohio Administrative Code.

If you have any questions, please call Kathy Butcher, Licensure Specialist, at 614-644-0226.

Sincerely,

Bill Robbins, Section Chief  
Bureau of Licensure Operations  
Office of Health Assurance and Licensing

**State of Ohio**  
Department of Health  
Asbestos Program

**Asbestos Hazard Evaluation Specialist**



**Joseph D Saunders**  
**3072 Southdale Drive #2**  
**Kettering OH 45409**

DOB: 02/09/1956      Certification Number: **ES34837**      Expiration Date: **06/10/2016**

This certification is issued pursuant to Chapter 3710 of the Revised Code and 3701-34 of the Ohio Administrative Code      Certification Card is not valid if altered