



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

January 11, 2016

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

RE: Comprehensive Pre-Demolition Asbestos Survey, NOP TK-25, Vacant Residence, 618 W. Norman Avenue, Dayton, OH, TKEC Project #TK-25G

Dear Mr. Zimmer:

On December 22, 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 618 W. Norman Avenue 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 December 22, 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 618 W. Norman Avenue in Dayton, Ohio. Twelve (12) 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 seventeen (17) samples. Laboratory analysis indicated that two (2) duct wrap samples and one (1) heat shield sample contained 1% or greater asbestos.

Three (3) plaster/skim coat samples contained <1%asbestos, and were subsequently analyzed by EPA PLM 400 Point Count. The plaster/skim coat samples were determined to contain 0.75% chrysotile asbestos or lower and will not need to be abated.

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

The estimated cost for abatement of the identified materials is \$688.00.

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.

Laboratory analysis indicated that two (2) duct wrap samples and one (1) heat shield sample contained 1% or greater asbestos.

Three (3) plaster/skim coat samples contained <1% asbestos, and were subsequently analyzed by EPA PLM 400 Point Count. The plaster/skim coat samples were determined to contain 0.75% chrysotile asbestos or lower and will not need to be abated.

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, [Throughout House and Basement], [Fair], [192 SF]**
- **Heat Shield, [Basement], [Fair], [4 SF]**

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	192 SF	\$3.50/SF	\$670.00
Heat Shield	4 SF	\$4.00/SF	\$16.00

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>
Duct Wrap	192 SF	\$3.50/SF	\$670.00
Heat Shield	4 SF	\$4.00/SF	\$16.00

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).

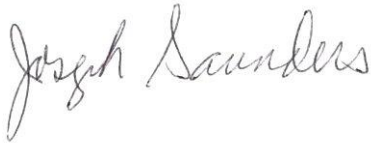
TKEC made every effort to locate suspect ACM that may be concealed; however, suspect ACM which may be located behind hard plaster walls or ceilings, hard walled chases, under flooring or

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

ASBESTOS BULK SAMPLE LOG

Project - 618 W. Norman

TKEC Job# TK-25G

Sample #	Date	Color	Type	Location	Collected By
1-1	12/22/15	White	Plaster/Skim Coat	Living Room	OP/JS
1-2	12/22/15	White	Plaster/Skim Coat	Dining Room	OP/JS
1-3	12/22/15	White	Plaster/Skim Coat	Basement Steps	OP/JS
1-4	12/22/15	White	Plaster/Skim Coat	2nd Floor Hallway	OP/JS
1-5	12/22/15	White	Plaster/Skim Coat	2nd Floor Bedroom 2	OP/JS
2-1	12/22/15	White	Ceiling Tile 12"	Living Room	OP/JS
3-1	12/22/15	White	Window Glaze	Living Room	OP/JS
4-1	12/22/15	Grey	Floor Tile/Mastic 12"	Basement Steps	OP/JS
5-1	12/22/15	Grey	Duct Wrap	2nd Floor Steps	OP/JS
5-2	12/22/15	Grey	Duct Wrap	Basement	OP/JS
6-1	12/22/15	Black	Roofing	Roof	OP/JS
7-1	12/22/15	Grey	Heat Shield	Basement (4 SF)	OP/JS

ATTACHMENT 2

Bulk Sample Data Summary

618 W. Norman
Pre-Demolition Asbestos Survey
Table I - Bulk Sample Data Summary

Project TK-25G

Homogeneous Area					Quantity & Condition			
Sample Description (Material Type)	Sample Location	NSHAP Category	ACM Type	Bulk Sample No.	Good	Fair	Poor	Asbestos Content
Plaster/Skim Coat- Plaster	Living Room			1-1				<1% Chrysotile
Plaster/Skim Coat - Skim Coat	Living Room			1-1				NAD
Plaster/Skim Coat- Plaster	Dining Room			1-2				<1% Chrysotile
Plaster/Skim Coat - Skim Coat	Dining Room			1-2				NAD
Plaster/Skim Coat- Plaster	Basement Steps			1-3				<1% Chrysotile
Plaster/Skim Coat - Skim Coat	Basement Steps			1-3				NAD
Plaster/Skim Coat- Plaster	2nd Floor Hallway			1-4				NAD
Plaster/Skim Coat - Skim Coat	2nd Floor Hallway			1-4				NAD
Plaster/Skim Coat	2nd Floor Bedroom 2			1-5				NAD
Ceiling Tile	Living Room			2-1				NAD
Window Glazing	Living Room			3-1				NAD
Floor Tile/Mastic - Tile	Basement Steps			4-1				NAD
Floor Tile/Mastic - Mastic	Basement Steps			4-1				NAD

618 W. Norman
Pre-Demolition Asbestos Survey
Table I - Bulk Sample Data Summary

Project TK-25G

Homogeneous Area					Quantity & Condition			
Sample Description (Material Type)	Sample Location	NSHAP Category	ACM Type	Bulk Sample No.	Good	Fair	Poor	Asbestos Content
Duct Wrap	2nd Floor Steps	Cat II Non Friable	Misc.	5-1		192 SF		65% Chrysotile
Duct Wrap	Basement	Cat II Non Friable	Misc.	5-2				85% Chrysotile
Roofing	Roof			6-1				NAD
Heat Shield	Basement	Cat II Non Friable	Misc.	7-1		4 SF		65% Chrysotile

618 W. Norman
 Pre-Demolition Asbestos Survey
 Table II - Point Count Sample Data Summary
 Project TK-25G

Homogeneous Area					Quantity & Condition			
Sample Description (Material Type)	Sample Location	NSHAP Category	ACM Type	Bulk Sample No.	Good	Fair	Poor	Asbestos Content
Plaster/Skim Coat - Plaster	Living Room			1-1				0.75% Chrysotile
Plaster/Skim Coat - Plaster	Dining Room			1-2				0.25% Chrysotile
Plaster/Skim Coat - Plaster	Basement Steps			1-3				0.5% Chrysotile

ATTACHMENT 3

Laboratory Data



Email: IAQ@hayesmicrobial.com
www.hayesmicrobial.com/lms/

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-25G
Job Name: 518 W. Norman
Date Sampled: 12-22-2015
Date Analyzed: 12-30-2015
Report Date: 12-30-2015

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 #15029546

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

December 30, 2015

Client Job Number: TK-25G
Client Job Name: 518 W. Norman

Dear Turn-Key Environmental Consultants,

We would like to thank you for trusting Hayes Microbial for your analytical needs. On December 23, 2015 we received 12 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



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Asbestos PLM Analysis

HMC #15029546

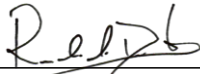
Job Number: TK-25G	Job Name: 518 W. Norman	Date Collected: 12/22/2015
Collected by: J. Saunders		Date Received: 12/23/2015
Email: tke@turn-keyenvironmental.com		Date Reported: 12/30/2015

HMC ID Number: 15029546 - 1 - L1	Analysis Type: EPA 600/R-93, M-4/82-020 - 5 Day		
Sample Number: 1-1	Sample Name: White Plaster/Skim Coat Living Room		
Homogeneity: Yes	Morphology/Macro Desc.: Rough Coat / Gray		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
<1 % Chrysotile	2 % Hair	98 %	

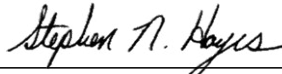
HMC ID Number: 15029546 - 1 - L2	Analysis Type: EPA 600/R-93, M-4/82-020 - 5 Day		
Sample Number: 1-1	Sample Name: White Plaster/Skim Coat Living Room		
Homogeneity: Yes	Morphology/Macro Desc.: Skim Coat / White		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
(None Detected)	(None Detected)	100 %	

HMC ID Number: 15029546 - 2 - L1	Analysis Type: EPA 600/R-93, M-4/82-020 - 5 Day		
Sample Number: 1-2	Sample Name: White Plaster/Skim Coat Dining Room		
Homogeneity: Yes	Morphology/Macro Desc.: Rough Coat / Gray		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
<1 % Chrysotile	3 % Hair	97 %	

HMC ID Number: 15029546 - 2 - L2	Analysis Type: EPA 600/R-93, M-4/82-020 - 5 Day		
Sample Number: 1-2	Sample Name: White Plaster/Skim Coat Dining Room		
Homogeneity: Yes	Morphology/Macro Desc.: Skim Coat / White		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
(None Detected)	(None Detected)	100 %	

Signature: 

Date: 12/30/2015

Reviewed by: 

Date: 12/30/2015

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Asbestos PLM Analysis**HMC #15029546**

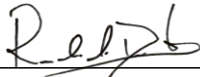
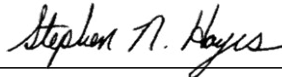
Job Number: TK-25G	Job Name: 518 W. Norman	Date Collected: 12/22/2015
Collected by: J. Saunders		Date Received: 12/23/2015
Email: tke@turn-keyenvironmental.com		Date Reported: 12/30/2015

HMC ID Number: 15029546 - 3 - L1	Analysis Type: EPA 600/R-93, M-4/82-020 - 5 Day		
Sample Number: 1-3	Sample Name: White Plaster/Skim Coat Basement Steps		
Homogeneity: Yes	Morphology/Macro Desc.: Rough Coat / Gray		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
<1 % Chrysotile	(None Detected)	100 %	

HMC ID Number: 15029546 - 3 - L2	Analysis Type: EPA 600/R-93, M-4/82-020 - 5 Day		
Sample Number: 1-3	Sample Name: White Plaster/Skim Coat Basement Steps		
Homogeneity: Yes	Morphology/Macro Desc.: Skim Coat / White		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
(None Detected)	(None Detected)	100 %	

HMC ID Number: 15029546 - 4 - L1	Analysis Type: EPA 600/R-93, M-4/82-020 - 5 Day		
Sample Number: 1-4	Sample Name: White Plaster/Skim Coat 2nd Floor Hallway		
Homogeneity: Yes	Morphology/Macro Desc.: Rough Coat / Gray		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
(None Detected)	2 % Hair	98 %	

HMC ID Number: 15029546 - 4 - L2	Analysis Type: EPA 600/R-93, M-4/82-020 - 5 Day		
Sample Number: 1-4	Sample Name: White Plaster/Skim Coat 2nd Floor Hallway		
Homogeneity: Yes	Morphology/Macro Desc.: Skim Coat / White		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
(None Detected)	(None Detected)	100 %	

Signature: Date: 12/30/2015Reviewed by: Date: 12/30/2015

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Asbestos PLM Analysis**HMC #15029546**

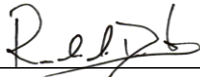
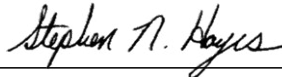
Job Number: TK-25G	Job Name: 518 W. Norman	Date Collected: 12/22/2015
Collected by: J. Saunders		Date Received: 12/23/2015
Email: tke@turn-keyenvironmental.com		Date Reported: 12/30/2015

HMC ID Number: 15029546 - 5 - L1	Analysis Type: EPA 600/R-93, M-4/82-020 - 5 Day		
Sample Number: 1-5	Sample Name: White Plaster/Skim Coat 2nd Floor Bedroom 2		
Homogeneity: Yes	Morphology/Macro Desc.: Debris / Gray		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
(None Detected)	<1 % Cellulose fibers	100 %	

HMC ID Number: 15029546 - 6 - L1	Analysis Type: EPA 600/R-93, M-4/82-020 - 5 Day		
Sample Number: 2-1	Sample Name: White Ceiling Tile 12 inch Living Room		
Homogeneity: Yes	Morphology/Macro Desc.: Fibrous / Brown		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
(None Detected)	85 % Cellulose fibers	15 %	

HMC ID Number: 15029546 - 7 - L1	Analysis Type: EPA 600/R-93, M-4/82-020 - 5 Day		
Sample Number: 3-1	Sample Name: White Window Glaze Living Room		
Homogeneity: Yes	Morphology/Macro Desc.: Glazing / White		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
(None Detected)	(None Detected)	100 %	

HMC ID Number: 15029546 - 8 - L1	Analysis Type: EPA 600/R-93, M-4/82-020 - 5 Day		
Sample Number: 4-1	Sample Name: Floor Tile/Mastic 12 inch Basement Steps		
Homogeneity: Yes	Morphology/Macro Desc.: Linoleum / Tan		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
(None Detected)	(None Detected)	100 %	

Signature: Date: 12/30/2015Reviewed by: Date: 12/30/2015



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Asbestos PLM Analysis

HMC #15029546

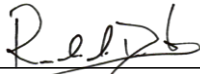
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Collected by: J. Saunders		Date Received: 12/23/2015
Email: tke@turn-keyenvironmental.com		Date Reported: 12/30/2015

HMC ID Number: 15029546 - 8 - L2	Analysis Type: EPA 600/R-93, M-4/82-020 - 5 Day		
Sample Number: 4-1	Sample Name: Floor Tile/Mastic 12 inch Basement Steps		
Homogeneity: Yes	Morphology/Macro Desc.: Adhesive / Yellow		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
(None Detected)	(None Detected)	100 %	

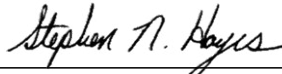
HMC ID Number: 15029546 - 9 - L1	Analysis Type: EPA 600/R-93, M-4/82-020 - 5 Day		
Sample Number: 5-1	Sample Name: Grey Duct Wrap 2nd Floor Steps		
Homogeneity: Yes	Morphology/Macro Desc.: Insulation / White		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
65 % Chrysotile	15 % Cellulose fibers	20 %	

HMC ID Number: 15029546 - 10 - L1	Analysis Type: EPA 600/R-93, M-4/82-020 - 5 Day		
Sample Number: 5-2	Sample Name: Grey Duct Wrap Basement		
Homogeneity: Yes	Morphology/Macro Desc.: Insulation / White		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
85 % Chrysotile	(None Detected)	15 %	

HMC ID Number: 15029546 - 11 - L1	Analysis Type: EPA 600/R-93, M-4/82-020 - 5 Day		
Sample Number: 6-1	Sample Name: Black Roofing		
Homogeneity: Yes	Morphology/Macro Desc.: Roofing / Black		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
(None Detected)	35 % Cellulose fibers	65 %	

Signature: 

Date: 12/30/2015

Reviewed by: 

Date: 12/30/2015



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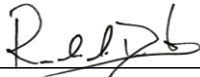
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Asbestos PLM Analysis

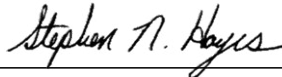
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Collected by: J. Saunders		Date Received: 12/23/2015
Email: tke@turn-keyenvironmental.com		Date Reported: 12/30/2015

HMC ID Number: 15029546 - 12 - L1		Analysis Type: EPA 600/R-93, M-4/82-020 - 5 Day	
Sample Number: 7-1		Sample Name: Grey Heat Shield Basement (4 SF)	
Homogeneity: Yes		Morphology/Macro Desc.: Insulation / White	
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
65 % Chrysotile	(None Detected)	35 %	

Signature: 

Date: 12/30/2015

Reviewed by: 

Date: 12/30/2015



HAYES

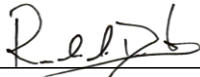
MICROBIAL CONSULTING
3005 East Boundary Terrace, #F
Midlothian, VA 23112, USA
804.562.3435 Fax: 804.447.5562

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

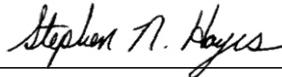
Asbestos - Additional Information

HMC #15029546

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: 

Date: 12/30/2015

Reviewed by: 

Date: 12/30/2015

HAYES

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

Company: Turn-Key Environmental
714 Monument St.
Dayton, OH 45402

1 of 2

Asbestos - Chain of Custody

Form v.101302.5

HMC #

029546

Job Number: TK-256

Job Name: 618 W. Norman

Date Collected: 12/22/15

Mobile: 937/602-4637

Collector: J. Saunders / O. Purwell Email:

Notes:

[illegible]

Analysis Type		Description	Available Turn-Around Times	
PLM	PLM	EPA 600/R-93/116, M-4/82-020	3 Hour, Same Day, 1 Day, 2 Day, 3 Day, 5 Day	
	PC	EPA Point Count	3 Hour, Same Day, 1 Day, 2 Day, 3 Day, 5 Day	
	NY	NYSDOH ELAP 198.1, 198.6	1 Day, 2 Day, 3 Day, 5 Day	
PCM	PCM	NIOSH 7400	Same Day, 1 Day, 2 Day, 3 Day, 5 Day	
TEM	TEM-A	TEM Air (AHERA)	1 Day, 2 Day, 3 Day, 5 Day	
	TEM-C	TEM Bulk (Chatfield)	1 Day, 2 Day, 3 Day, 5 Day	
Relinquished by: <i>J. Saunders</i>		Date: <i>12/22/15</i>	Rcvd By: <i>D. 12/23/15</i>	Date: _____ Time: _____

Hayes Microbial Consulting :: 3005 East Boundary Terrace, Suite E :: Midlothian, VA 23112 :: USA :: www.hayesmicrobial.com :: 1-800-368-4672

ASBESTOS BULK SAMPLE LOG
Project - 618 W. Norman
TKEC Job# TK-25G

2 of 2

029546

Sample #	Date	Color	Type	Location	Collected By
1-1	12/22/15	White	Plaster/Skim Coat	Living Room	OP/JS
1-2	12/22/15	White	Plaster/Skim Coat	Dining Room	OP/JS
1-3	12/22/15	White	Plaster/Skim Coat	Basement Steps	OP/JS
1-4	12/22/15	White	Plaster/Skim Coat	2nd Floor Hallway	OP/JS
1-5	12/22/15	White	Plaster/Skim Coat	2nd Floor Bedroom 2	OP/JS
2-1	12/22/15	White	Ceiling Tile 12"	Living Room	OP/JS
3-1	12/22/15	White	Window Glaze	Living Room	OP/JS
4-1	12/22/15	Grey	Floor Tile/Mastic 12"	Basement Steps	OP/JS
5-1	12/22/15	Grey	Duct Wrap	2nd Floor Steps	OP/JS
5-2	12/22/15	Grey	Duct Wrap	Basement	OP/JS
6-1	12/22/15	Black	Roofing	Roof	OP/JS
7-1	12/22/15	Grey	Heat Shield	Basement (4 SF)	OP/JS

Rec'd @ 12/23/15



Email: IAQ@hayesmicrobial.com
www.hayesmicrobial.com/lms/

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-25G
Job Name: 518 W. Norman
Date Sampled: 12-22-2015
Date Analyzed: 01-07-2016
Report Date: 11-30--0001

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 #16000238

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

November 30, -0001

Client Job Number: TK-25G
Client Job Name: 518 W. Norman

Dear Turn-Key Environmental Consultants,

We would like to thank you for trusting Hayes Microbial for your analytical needs. On December 23, 2015 we received 3 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

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

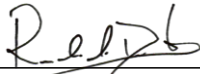
HMC #16000238

Job Number: TK-25G	Job Name: 518 W. Norman	Date Collected: 12/22/2015
Collected by: J. Saunders		Date Received: 12/23/2015
Email: tke@turn-keyenvironmental.com		Date Reported: 11/30/-0001

HMC ID Number: 16000238 - 1 - L1	Analysis Type: EPA 400 Point Count - 2 Day		
Sample Number: 1-1	Sample Name: White Plaster/Skim Coat Living Room		
Homogeneity: Yes	Morphology/Macro Desc.: Rough Coat / Gray		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
0.75 % Chrysotile	(None Detected)	99.25 %	

HMC ID Number: 16000238 - 2 - L1	Analysis Type: EPA 400 Point Count - 2 Day		
Sample Number: 1-2	Sample Name: White Plaster/Skim Coat Dining Room		
Homogeneity: Yes	Morphology/Macro Desc.: Rough Coat / Gray		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
0.25 % Chrysotile	(None Detected)	99.75 %	

HMC ID Number: 16000238 - 3 - L1	Analysis Type: EPA 400 Point Count - 2 Day		
Sample Number: 1-3	Sample Name: White Plaster/Skim Coat Basement Steps		
Homogeneity: Yes	Morphology/Macro Desc.: Rough Coat / Gray		
Estimated % Asbestos	Non-asbestos % Fibers	Non-fibrous	Notes
0.5 % Chrysotile	(None Detected)	99.5 %	

Signature: 

Date: 01/07/2016

Reviewed by: _____

Date: _____



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 #16000238

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: 01/07/2016

Reviewed by: _____

Date: _____



Renaldo Drakes <renaldo@hayesmicrobial.com>

Point Count Analyses

Turn-Key Environmental <tkec@turn-keyenvironmental.com>

To: renaldo@hayesmicrobial.com

Tue, Jan 5, 2016 at 5:26 PM

Dear Renaldo,

I would like EPA PLM 400 Point Count Analysis for the following samples:

15029533-7-L1

15029538-6-L3

15029546-1-L1

15029546-2-L1

15029546-3-L1

000238

15029536-1-L1

15029536-2-L1

15029536-3-L1

15029536-5-L1

15029535-1-L1

15029535-2-L1

15029535-3-L1

15029535-4-L1

15029535-5-L1

15029534-9-L1

15029545-5-L1

15029544-1-L1

15029544-3-L1

15029543-1-L1

15029543-2-L1

15029543-3-L1

15029543-5-L1

Two (2) day TAT will be fine for these samples.

Thanks,

Joe Saunders

Turn-Key Environmental Consultants, Inc.

790 Barnhart Road

714 East Monument Ave

Troy, Ohio 45373

Dayton, OH 45402

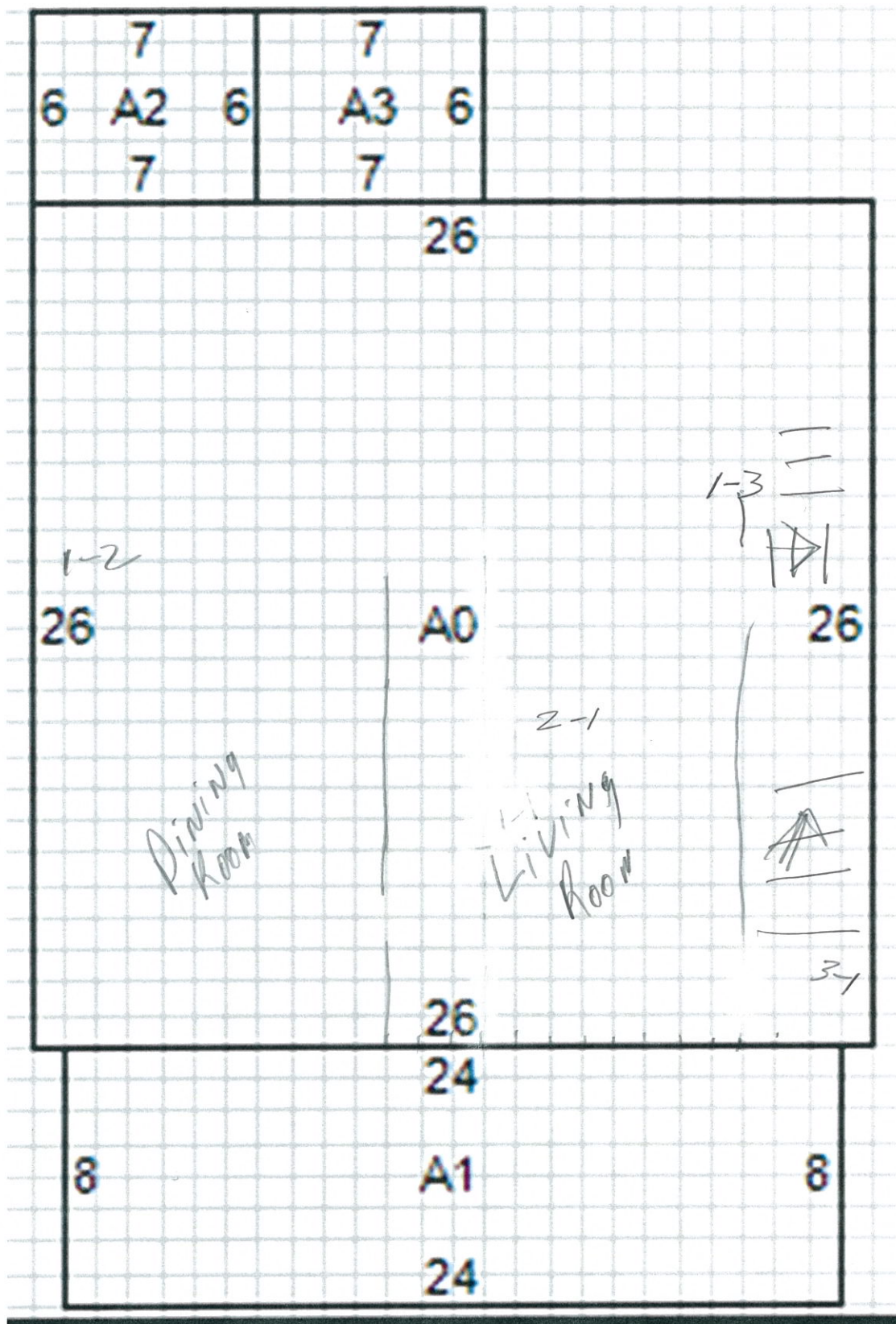
937-335-8807

www.turn-keyenvironmental.com

Rec'd @ 01/06/16

ATTACHMENT 4

Site Sketch/Photographs



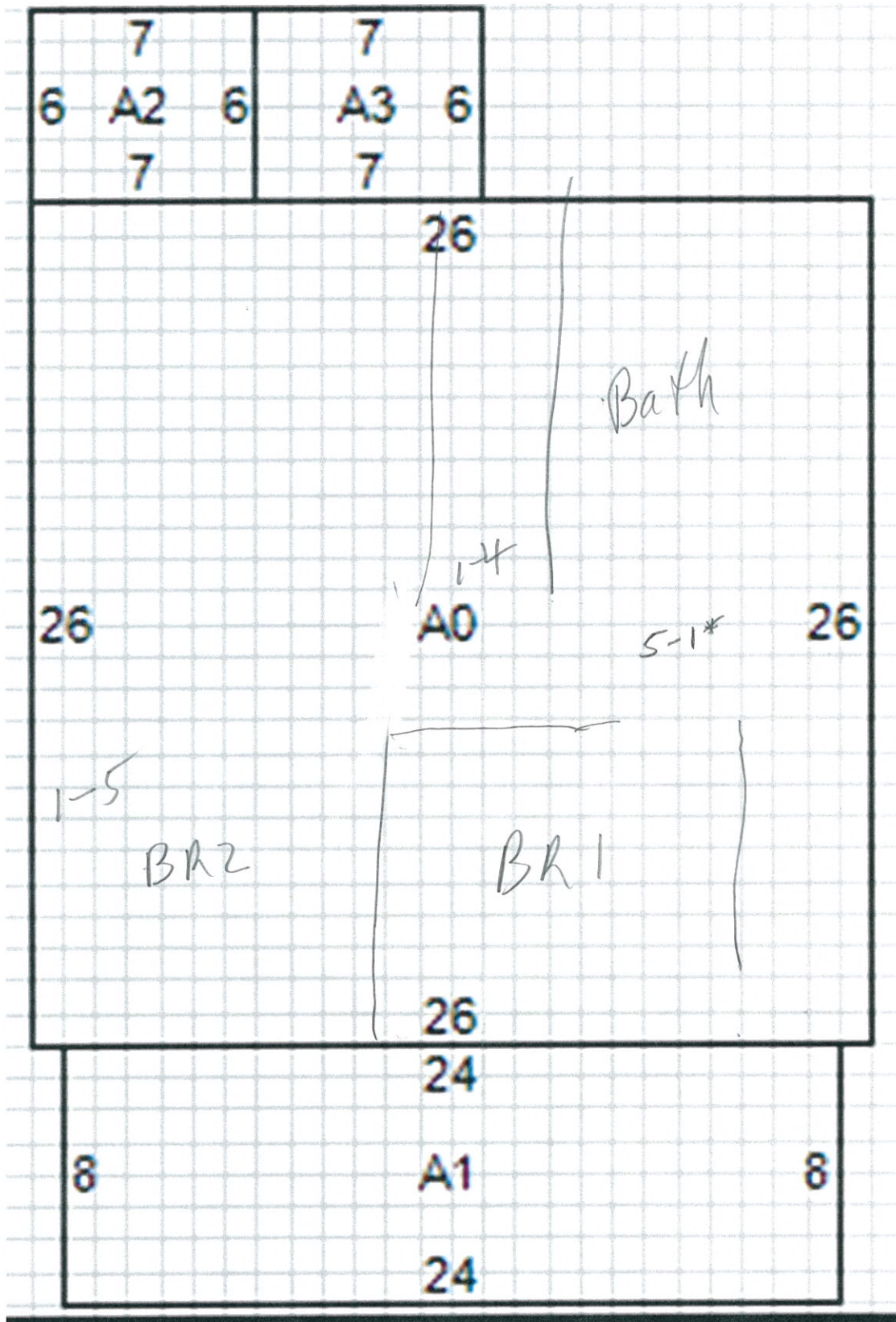
1-1 Approximate
Sample Location

1-1* Asbestos > 1%

Floor 1st

618 W. Norman

TK-25G



1-1 Approximate
Sample Location

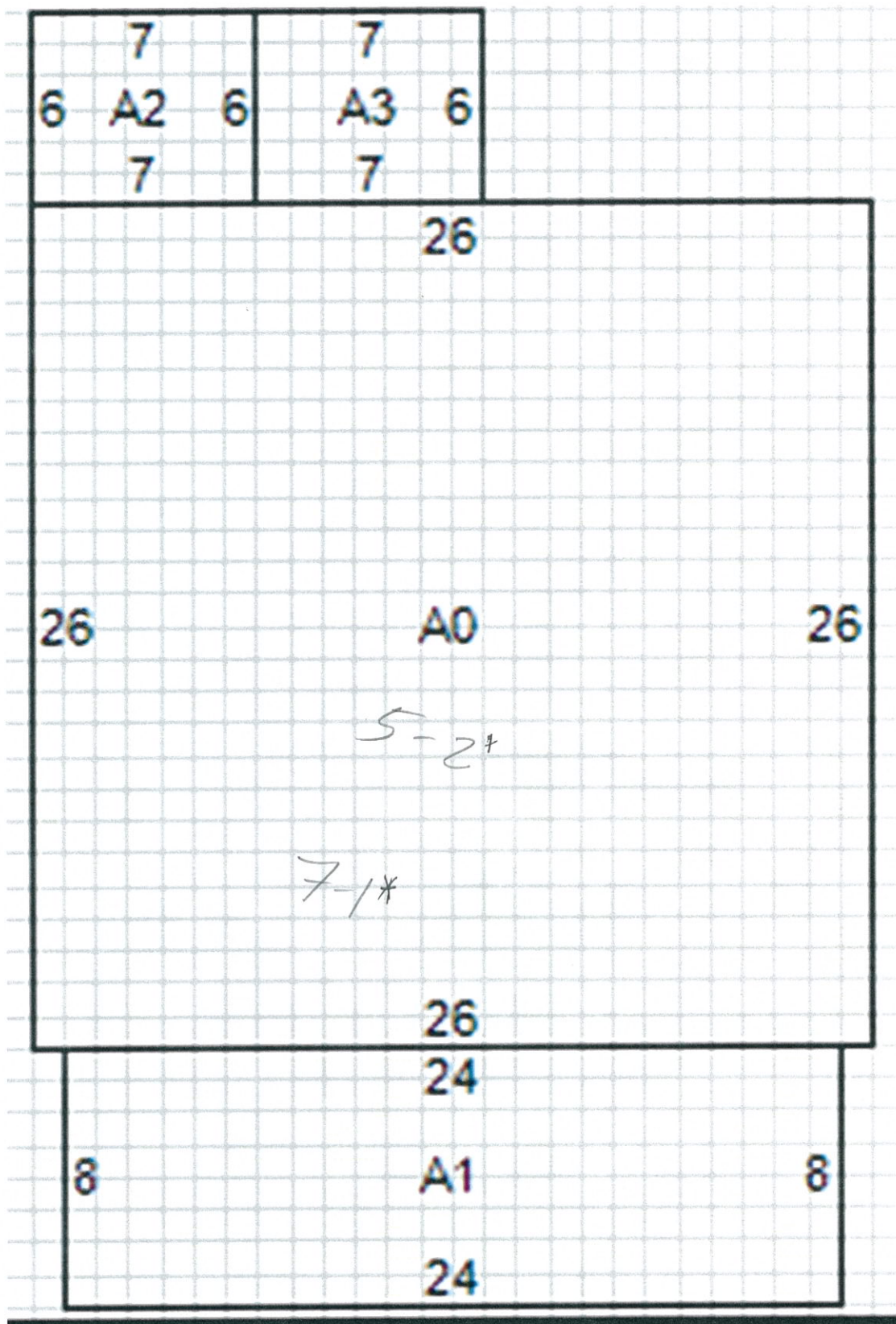
1-1* Asbestos > 1%

4 Ducts

Floor 2nd

618 W. Norman

TK-25G



1-1 Approximate
Sample Location

1-1* Asbestos > 1%

Floor Basement

618 W. Norman

TK-25G



618 W. Norman



Sample 1-1 Plaster/Skim Coat



Sample 1-2 Plaster/Skim Coat



Sample 1-3 Plaster/Skim Coat



Sample 1-4 Plaster/Skim Coat



Sample 1-5 Plaster/Skim Coat



Sample 2-1 Ceiling Tile



Sample 3-1 Window Glazing



Sample 3-2 Window Glazing



Sample 4-1 Floor Tile/Mastic



Sample 5-1 Duct Wrap



Sample 5-2 Duct Wrap



Sample 7-1 Heat Shield



Clutter around basement Steps



Clutter around basement steps

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ATTACHMENT 5

Inspector's Certification



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



TSI Training Services International

Asbestos Building Inspector Refresher

Certificate

This is to certify

Joseph D. Saunders

XXX-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

XXX-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

John R. Kasich/Governor

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

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

State of Ohio
Department of Health
Asbestos Program

Asbestos Hazard Evaluation Specialist

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

DOB: 07/12/1992 Certification Number **ES35952** Expiration Date **11/05/2016**

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



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

Expiration Date

9/28/15 - 9/30/15

Date(s) of Course

9/30/15

Examination Date

Cleveland, OH

Course Location

TSI

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

15 TSI 60522 ii



Training Services International

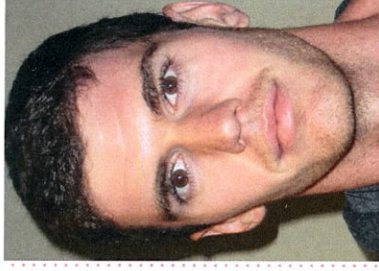
Asbestos Management Planner Initial

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 Hutton

10/2/16

Training Manager

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