

NWASBESTOS-CONTAINING MATERIAL SURVEY

Conducted on

Lightard Knott Lane
7760/7780/7800 Lightard Knott Lane
Fort Myers, Lee County, Florida
UES Project No. 3441.2300046.0000

Survey Date: May 1, 2023
Report Date: May 17, 2023

Prepared for:

Milhaus
460 Virginia Avenue
Indianapolis, IN 46203
Attention: Mr. Taylor Lindsley

Prepared by:

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May 17, 2023

Mr. Taylor Lindsley
Milhaus
460 Virginia Avenue
Indianapolis, IN 46203

Reference: **ASBESTOS-CONTAINING MATERIALS SURVEY**
Lightard Knott Lane
7760/7780/7800 Lightard Knott Lane
Fort Myers, Lee County, Florida
UES Project No. 3441.2300046.0000

Dear Mr. Lindsley:

On behalf of Milhaus (the "client"), Universal Engineering Sciences (UES) has completed this National Emissions Standard for Hazardous Air Pollutants (NESHAP) Asbestos Containing Materials Building Survey Report. This survey was conducted in accordance with Chapter 61-145 of the Environmental Protection Agency's (EPA) Title 40, Part 61, Subpart M of the Code of Federal Regulations (CFR) for the above-referenced property (the "subject property"). UES performed this ACM survey on Monday, May 01, 2023, to categorize and assess readily available suspect homogeneous area within the subject buildings. UES collected 64 bulk samples from 29 homogeneous areas. The bulk samples were transported to a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory using Polarized Light Microscopy (PLM) for the presence of asbestos fibers.

Based on review of the Bulk Sample Analysis Report, asbestos fibers in excess of one percent were detected in four (4) of the 29 homogeneous areas sampled during the course of this ACM survey. Additional details regarding the ACM Survey conducted by UES are presented in the attached report.

UES appreciates this opportunity to provide environmental services to you and we look forward to future endeavors. If you have any comments or questions regarding the information contained within this report or if we can be of further service, please contact the undersigned.

Respectfully submitted,
Universal Engineering Sciences
Business License No. ZA-0000017

Written by,



Matt Laskowski
Senior Environmental Specialist
EPA Accredited Asbestos Inspector

Reviewed by,



Scott A. McManus
Florida Licensed Asbestos Consultant
License No. AX130



5/15/2023

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1.0 INTRODUCTION

Universal Engineering Sciences (UES) conducted a pre-demolition, limited Asbestos-Containing Materials (ACM) Survey on the subject buildings located at 7760/7780/7800 Lightard Knott Lane in Fort Myers, Lee County, Florida. The purpose of this survey was to identify and sample accessible suspect ACM and provide information regarding the identity, location, and condition in anticipation of a renovation and/or demolition of the buildings.

This service was conducted based on the written authorization of Milhaus, dated February 23, 2023. This survey was conducted in accordance with the General Conditions/Master Service Agreement, which are incorporated into the Client authorized agreement that governs this assessment, and in accordance with Chapter 61-145 of the Environmental Protection Agency's (EPA) Title 40, Part 61, Subpart M of the Code of Federal Regulations (CFR).

1.1 Limitations and Exclusions

This survey report is not intended to be used as a specification or work plan. The indicated material quantities of ACM are estimates based on UES' field observations on the date of the inspection and should be considered preliminary in nature. All parties utilizing this report for proposal, estimation or contract negotiations are required to field verify the quantities of material prior to submission of proposal. These estimates should not be used for bidding purposes without verification by the asbestos abatement contractor. The asbestos abatement contractor should ascertain for themselves, by site measurements and inspection, the exact nature and extent of the work to be done.

Inspection and collection of bulk samples of suspect ACMs were limited to those materials readily accessible at the time of inspection. Destructive sampling techniques (such as wall and ceiling testing, and carpet cuts to expose underlying flooring) were employed in limited measures in the areas inspected and completed in a way to minimize disruption to operations and damage to building components. Extensive destructive sampling methods were not used, and exploratory demolition of walls and/or removal of fixed items were not conducted. No attempt was made by UES to observe conditions in spaces not generally accessible, including but not limited to crawlspaces, pipe chases, plenums or confined spaces. Some materials may be hidden or masked by overlying materials such as flooring, carpeting or concealed walls. Although every effort is made to locate all suspect ACMs, it is impossible to rule out the possibility that undiscovered asbestos materials may be present. If the building is to undergo major refurbishment or demolition, it is recommended that the persons carrying out the work are made aware of this and take sufficient precautions, as may be appropriate, to ensure the health and safety of their own employees and any other parties who may be affected by the works. Any suspected building materials not addressed in this report, which are encountered during demolition or renovation, should be analyzed for asbestos content prior to being damaged and/or removed.

Due to the age, use and construction of the subject building(s) asbestos may have been used/present in the past but may have been removed or partially removed and some residue from previous or removal ACMs could still exist. UES has no knowledge or documentation of such.

1.2 Purpose and Scope of Work

The purpose of this study was to perform an evaluation of the above-referenced facility for the presence of ACMs, specifically those building materials which may be present or impacted during potential demolition or renovation activities. The activities and procedures used to accomplish this task were as follows:

- 1) A review of available building documents to identify potential locations of suspect ACMs;
- 2) Visual building inspection of accessible areas by a United States Environmental Protection Agency (EPA) Asbestos Hazard Emergency Response Act (AHERA) accredited asbestos building inspector to identify suspect ACMs;
- 3) Once identified, homogeneous areas (areas having materials which are uniform in color, texture, construction/application date, and general appearance) were determined;
- 4) Determine whether the suspect ACM is friable (a material that when dry, may be crumbled, pulverized or reduced to powder by hand pressure) or non-friable;
- 5) Collection of bulk samples of each suspect ACM homogeneous area. Record sample information on Asbestos Bulk Sample Forms (chain-of-custody sheets), which were signed, dated, and sent with the samples to the laboratory;
- 6) Analysis of the collected bulk samples at a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory using Polarized Light Microscopy (PLM) for the presence of asbestos fibers;
- 7) If applicable, confirmatory analysis of bulk samples documented by PLM analysis as containing less than one percent (<1%), were further analyzed utilizing the "Quantitation using 400 Point Count Procedure" for asbestos analysis of bulk material via EPA method 600/R-93/116; and,
- 8) Prepare and submit a report.

2.0 BUILDING CHARACTERISTICS AND INFORMATION

2.1 General

The project site consists of three (3) single family residences and two out buildings (one barn, one garage) on the contiguous parcels located at 7760, 7780, and 7800 Lightard Knott Lane, Fort Myers, Lee County, Florida. All structures onsite are slated for demolition.

2.2 Available Building Information

No previous asbestos survey report(s), building plans and no other material information were provided in reference to the structure(s) located within the subject property.

2.3 Current Building Use

At the time of UES' evaluation, only the home at 7760 Lightard Knott Lane was occupied; the other two residences were vacant.

3.0 BUILDING INSPECTION

Three forms of ACMs are typically found in buildings. These materials are classified as follows:

- *Surfacing Material* – material that is sprayed-on, troweled-on, or otherwise applied to interior and exterior structural and architectural surfaces. Surfacing material includes acoustical plaster on ceilings, fireproofing on structural members, textured paint and exterior stucco, and other materials applied to surfaces for acoustical, decorative, fireproofing, and other purposes.
- *Thermal System Insulation* — material which is applied to interior and exterior mechanical components to reduce heat gain or loss. Thermal system insulation includes insulation on pipes, fittings, boilers, breeching, tanks, ducts, and other mechanical components.
- *Miscellaneous Materials* — material, other than surfacing material and thermal system insulation, on interior and exterior structural, mechanical, electrical, or architectural components, and surfaces. Miscellaneous material includes but is not limited to ceiling tiles, gaskets, floor coverings and mastics, wallboard joint compound, roofing materials, and cementitious products.

An inspection of the subject buildings was conducted to identify these and other materials present within the building which are typically suspected of containing asbestos.

3.1 Inspection Procedures

UES' field inspection was performed May 1, 2023 by Eric B. Goeller, an inspector accredited according to Federal Regulation 40 CFR, Part 763 (AHERA), under the direction of an Asbestos Consultant licensed in the State of Florida. After a preliminary walk-through of the building, an inspection was conducted to evaluate the location and extent of the suspected asbestos containing building materials. Once identified, these materials were categorized into homogeneous areas containing materials of the same type, age, visual appearance, texture, composition, etc.

This type of survey is designed to be used as a basis for tendering the removal of ACMs from the subject buildings prior to demolition or renovation. Therefore, the survey does not assess the condition of the asbestos, other than to note areas of damage or where additional asbestos debris may be expected to be present. The present condition of each ACM was evaluated by UES and classified as one of three categories: Good, Fair or Poor. The "fair" and "poor" categories correspond to the AHERA definitions of "damaged" and "significantly damaged," respectively.

The number of bulk samples collected was based on the category of homogeneous area and the quantity of the material present, as follows:

AHERA Guidelines for Determining the Number of Samples to Collect

HA Category	HA Quantity	Samples Required
Surfacing Materials	<1,000 Square Feet	3
	1,000 – 5,000 Square Feet	5
	>5,000 Square Feet	7 or more
Thermal System Insulation	No Stipulation	3+ (All repair patches must be sampled)

AHERA Guidelines for Determining the Number of Samples to Collect

HA Category	HA Quantity	Samples Required
Miscellaneous Materials	No Stipulation	<i>Per AHERA Guidelines, these must be sampled "in a manner sufficient to determine whether or not they contain asbestos" typically 1-3 samples based upon the inspector's judgement.</i>

HA = Homogeneous Area

UES' inspectors employ wet methods as applicable during bulk sample collection to reduce the potential for fiber release. Each sample was documented by labeling the container with a unique sample number, entering the sample material on a bulk sample log or chain-of-custody form, and noting the location of each sample on a floor plan. Throughout the sampling process, care was taken to prevent cross-contamination of the collected bulk samples. Sampling equipment was cleaned following the collection of each sample.

Random, and in some cases judgmental, samples of each homogeneous area of material were then collected. The physical condition of each material was assessed. In addition, a tactile inspection of the material was performed to evaluate friability. If the material, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure, it is considered friable. Samples from any homogeneous area where the inspector determine that the material was non-ACM (such as thermal insulation that obviously fibrous glass, foam glass, or rubber) were not collected. Photographic documentation is presented in **Appendix B**. Certifications for the inspector(s) performing the building survey are presented in **Appendix A**.

3.2 Suspected Asbestos-Containing Building Materials

Based on UES' review of the available building system information and thorough visual survey of the subject buildings; twenty-nine (29) homogeneous areas were identified at the subject buildings commonly suspected of containing asbestos. The homogeneous areas consisted of both interior and exterior building materials.

4.0 LABORATORY ANALYSIS

4.1 Polarized Light Microscopy

The samples of the suspected ACMs collected during the field inspection were transported with chain-of-custody documentation to Eurofins EPK Built Environment Testing, LLC located in Fort Lauderdale, Florida. Eurofins EPK Built Environment Testing, LLC is an accredited laboratory for bulk sample analysis according to the National Voluntary Laboratory Accreditation Program (NVLAP).

Bulk samples were analyzed for the presence of asbestos fibers using Polarized Light Microscopy (PLM). The analyses were performed according to EPA Method 600/R-93/116 July 1993 "Method for the Determination of Asbestos in Bulk Building Materials." This analytical method can be used for qualitative identification of six morphologically different types of asbestos fibers: chrysotile, amosite, crocidolite, tremolite, actinolite and anthophyllite. PLM analysis requires the microscopist to take a portion of the sample and treat it with an oil of specific refractive index. The prepared slide is then subjected to a variety of tests while being viewed under varying polarizations of light. Each type of asbestos displays unique characteristics when subjected to these tests.

The method specifies that the asbestos content in a bulk sample shall be estimated and reported as a finite percentage within the range of 0 to 100. Minute quantities of asbestos in bulk samples may be reported as “trace” or less than one percent (<1%). The analytical method determines the asbestos percentage by means of visual estimation technique. If analysis of the sample of a suspect ACM reveals a negative result, UES considers the material to be non-asbestos containing. If at any time during the analytical process a sample tests positive, that material must be treated as asbestos-containing.

4.2 Point Count Analysis

Review of the Bulk Sample Analysis Report indicated four (4) of the 29 homogeneous areas were identified as more than one percent asbestos fibers (or “trace”) based on PLM analysis. Further analysis of one of those building materials was requested for proper EPA clarification (wall systems samples, Homogenous area M). Asbestos point count analysis was performed at a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory utilizing the “Quantitation using 400 Point Count Procedure” for asbestos analysis of bulk material via EPA method 600/R-93/116.

5.0 FINDINGS

Twenty-nine (29) suspect homogeneous areas were identified at the subject buildings. Following AHERA guidelines, the appropriate number of bulk samples were collected from the identified homogeneous area and submitted for laboratory analysis. The bulk sample laboratory reports and associated chain-of-custody documentation is presented in **Appendix C**. The table below outlines general information regarding the suspect ACM.

SUMMARY OF SUSPECT ACMS

HA	Sample No(s).	Material Description (Classification)	Location of Material	Condition	Friable Yes/No
A	01-03	Wall Systems (M)	7760 Guest Beds/Office	F	N
B	04-05	12” x 12” Floor Tile, White (M)	7760 Guest Bed	G	N
C	06-07	12” x 12” VCT Floor Tile, Multi (M)	7760 Guest Bath Closet	F	N
D	08-09	8” x 8” Floor Tile, Brown (M)	7760 Living Room	G	N
E	10-11	8” x 8” Floor Tile, Green/White (M)	7760 Laundry Hall	G	N
F	12-13	Exterior Red Brick (M)	7760 Lanai	F	N
G	14-15	Exterior Flatwork (M)	7760 Lanai	F	N
H	16-18	Exterior Stucco (M)	7760 Exterior	G	N
I	19-20	Roof Shingle & Felt Paper (M)	7760 Roof	F	N

HA	Sample No(s).	Material Description (Classification)	Location of Material	Condition	Friable Yes/No
J	21-23	Exterior Stucco (M)	Adjacent Barn Exterior	G	N
K	24-24A	Roof Shingle & Felt Paper (M)	Adjacent Barn Roof	F	N
L	25-27	Popcorn Ceiling (S)	7780 Interior	G	Y
M	28-30	Wall Systems (M)	7780 Interior	G	N
N	31-32	12" x 12" Floor Tile, White (M)	7780 Living Room	G	N
O	33-34	2-layer 12" x 12" VCT Floor Tile, Brown/Beige (M)	7780 Kitchen	G	N
P	35-36	12" x 12" VCT Floor Tile, Wood Look (M)	7780 Kitchen	F	N
Q	37-38	Gray Wall Tile (M)	7780 Hall Bath	G	N
R	39-41	Exterior Stucco (M)	7780 Exterior	G	N
S	42-43	Exterior Flatwork (M)	7780 Exterior	G	N
T	44-45	Roof Shingle & Felt Paper (M)	7780 Front Roof	G	N
U	46-47	Rolled Asphalt Roof (M)	7780 Rear Roof	G	N
V	48-49	Ceiling Tile (M)	7800 Kitchen	G	N
W	50-51	16" x 16" Floor Tile (M)	7800 Kitchen	G	N
X	52-53	Vinyl Flooring, Wood Pattern Light (M)	7800 East Living Area	G	N
Y	54-55	Ceiling Tile (M)	7800 Living Room	G	N
Z	56-57	Vinyl Flooring, Wood Pattern Dark (M)	7800 West Living Area	G	N
AA	58-59	4" x 4" Floor Tile (M)	7800 Lower Bed/Bath	F	N
BB	60-61	Interior Flatwork (M)	7800 Lower Bed/Bath	G	N
CC	62-63	Exterior Flatwork (M)	7800 Garage	G	N

Table Notes and Definitions:

HA: Homogeneous Area (an area having materials which are uniform in color, texture, construction/application date, and general appearance)

Classifications: M = Miscellaneous | S = Surfacing Material | T = Thermal System Insulation

Condition: Good = Undamaged | Fair = Damaged | Poor = Severely Damaged

Friability = Material that may can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

6.0 SUMMARY OF ASBESTOS-CONTAINING MATERIALS

Inspection of the subject buildings, located at 7760/7780/7800 Lightard Knott Lane in Fort Myers, Lee County, Florida, identified twenty-nine (29) materials suspected of containing asbestos fibers. Bulk samples of each material were collected and submitted to an NVLAP accredited laboratory for analysis. Based on review of laboratory analytical report, asbestos fibers excess of one percent were detected in four (4) of the 29 homogeneous areas.

Asbestos point count analysis was performed on the 2% chrysotile wall system samples (HA M) materials for proper EPA clarification.

SUMMARY OF ACMS

HA	Sample No(s).	Material Description and Location	Estimated Quantity*	% and Type of Asbestos by Analytical Method	NESHAP Category
C	06 07	12" x 12" VCT Floor Tile, Multi 7760 Residence Bathroom	40 SF	3% Chrysotile PLM	CAT I NF
L	25-27	Popcorn Ceiling Texture 7780 Residence Throughout	1050 SF	5% Chrysotile PLM	F
M	28-30	Wall Systems (texture layer only)	1,040 SF	1.75 - 2.75% Chrysotile EPA 400-point count	CAT II NF
	28-30	Wall Systems (joint compound layer only)	TBD	2% Chrysotile PLM	CAT II NF
	28-30	Wall Systems (drywall/joint compound composite)	1,040 SF	0.25 – 0.5% Chrysotile EPA 400-point count	NA
O	33 34	12" x 12" VCT Floor Tile, 2 Layers, Brown	150 SF	2% Chrysotile PLM	CAT I NF

* Estimation only; not to be used for bidding.

Table Notes and Definitions:

S.F. = Square Feet; L.F. = Linear Feet; C.F. = Cubic Feet

ND = Not Detected

NESHAP Categories: CAT I NF = Category I Nonfriable; CAT II NF = Category II Nonfriable; F = Friable

Homogeneous areas C, L, O, and the painted texture surface coat (top material layer of homogeneous area M) are to be considered asbestos containing materials as defined by the NESHAP.

Asbestos point count analysis of the drywall systems (HA M, Samples 28, 29 and 30) were performed for proper EPA clarification of this material. The laboratory asbestos point count analyses indicated that less than one percent asbestos fibers was detected in the composite samples of drywall and joint compound. However, the white texture with paint in HA M, identified as containing 1.75 to 2.75% asbestos is considered RACM. The composite wallboard system samples (HA M drywall/joint compound), excluding the painted texture coating, identified as containing 0.25 to 0.5% asbestos mineral content would not be considered an ACM by EPA. However, this material is regulated to some extent under OSHA's Construction Industry Standard. OSHA requires certain work practice when disturbing this material. These requirements include, but may not be limited to, proper personal protective equipment, proper engineering controls, utilize wet methods to extent feasible; to promptly clean up and dispose in closed

containers waste and debris contaminated with asbestos; and record keeping of negative exposure assessments for employee personnel disturbing the material. UES has included, in **Appendix D**, four interpretative memos from OSHA which discuss the regulatory requirements for these materials in more detail.

7.0 REGULATORY INFORMATION

There are numerous federal and state statutes, regulations, and rules which govern the abatement and disposal of ACMs. In particular, the renovation of buildings containing asbestos building materials is regulated under the National Emission Standard for Hazardous Airborne Pollutants (NESHAP) statute. The NESHAP regulations require notification to the controlling agency and removal of all regulated asbestos containing materials (RACM) prior to renovation. RACM is defined as: (1) friable asbestos material; (2) Category I non-friable asbestos containing material that has become friable; (3) Category I non-friable asbestos containing material that will be or has been subjected to sanding, grinding, cutting, or abrading; or (4) Category II non-friable asbestos containing material that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by NESHAP. It is important to note that even though an activity may be exempt from the EPA NESHAP regulations, such exemption does not extend to OSHA standards or other state and federal statutes.

Renovation or demolition activities in buildings that contain ACM or PACM (Presumed Asbestos Containing Material) are also regulated under the OSHA Asbestos Construction Standard (CFR 1926.1101). The OSHA standard requires the building owner to inform their employees who will work in or adjacent to areas containing ACM or PACM, perspective employers applying or bidding for work whose employees reasonable can be expected to work in or adjacent to areas containing ACM or PACM, all employers of employees on multi-employer work sites who will be performing work with or adjacent to areas containing asbestos, and tenants who will occupy areas containing ACM or PACM, of the presence location, and quantity of ACM or PACM at the work sites in their buildings and facilities. Further, the OSHA standard (1926.1101) requires employers who discover ACM or PACM to convey information concerning the presence, location and quantity of such newly discovered ACM or PACM to other employers of employees working at the work site within 24 hours of discovery. While OSHA says the notification can be in written or personal communication, there are many advantages to written communication.

The OSHA construction standard (CFR 1926.1101) also contains specific training, work practices, procedures, engineering controls, notifications, permissible exposure limits, personal protection, record keeping, and a multitude of other requirements for the demolition, renovation, construction, alterations, repair, maintenance of structures, substrates or portions thereof that contain asbestos.

Future demolition of the on-site structures should be conducted in strict compliance with the aforementioned federal statutes and other applicable regulations, and good health and safety practices. All procedures, methods, and documentation should be accomplished by and be the responsibility of appropriately licensed professionals (asbestos consultants and contractors).

Any material identified as non-friable ACM must be treated as friable ACM when the material is about to become friable as a result of activities performed within the buildings. Prior to renovation or demolition, Universal strongly recommends you meet with the controlling agencies and discuss the specific requirements for disposition of the asbestos containing materials identified in this report. State licensing and OSHA-related requirements would be applicable and should be strictly complied with during the demolition process.

8.0 CONTROLLING AGENCY

The Controlling Agency for the coordination of projects involving asbestos removal or demolition for Lee County is the FDEP's South District Office. The District Air Compliance Contact for asbestos is Renee Kwiat, who can be reached by phone at (239) 344-5673 or by email at Renee.Kwiat@FloridaDEP.gov.

The owner or operator shall provide the above-referenced department with a ten-day notice of the asbestos removal project or demolition by timely submittal of a completed "Notification of Asbestos Removal Project" form, as promulgated under Florida Administrative Code. The notification can be submitted on Florida's Department of Environmental Protection's Business Portal, located online at <https://www.fldepportal.com/DepPortal/go/home>.

APPENDIX A



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THE ASBESTOS INSTITUTE

Certifies that

Eric Goeller

has attended and received instruction in the EPA approved course

AHERA Building Inspector Refresher

on


October 06, 2022

and successfully completed and passed the competency exam.

Certificate:
ON-4644-8655-100622

Date of Examination:
6-Oct-2022

Date of Expiration:
06-Oct-2023


William T. Cavness
Director
Approved Instructor

THE ASBESTOS INSTITUTE

20033 N. 19th Ave, Building 6, Phoenix, AZ 85027
602-864-6564 – www.theasbestosinstitute.com

This training meets all requirements for asbestos certification under Toxic Substance Control Act Title II.

THE ASBESTOS INSTITUTE

Certifies that

Matt Laskowski

has attended and received instruction in the EPA approved course

AHERA Building Inspector Refresher

on

April 22, 2023

and successfully completed and passed the competency exam.

Certificate:
ON-4644-11902-042223

Date of Examination:

22-Apr-2023

Date of Expiration:

22-Apr-2024



William T. Cavness
Director



Approved Instructor

THE ASBESTOS INSTITUTE

20033 N. 19th Ave, Building 6, Phoenix, AZ 85027

602-864-6564 – www.theasbestosinstitute.com

The person receiving this certificate has completed the requisite training for asbestos accreditation under TSCA Title II.



Ron DeSantis, Governor

Melanie S. Griffin, Secretary



STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

ASBESTOS LICENSING UNIT

THE ASBESTOS CONSULTANT HEREIN IS LICENSED UNDER THE
PROVISIONS OF CHAPTER 469, FLORIDA STATUTES

MCMANUS, SCOTT ALAN

INDIVIDUAL

12331 CROOKED CREEK LANE
FORT MYERS FL 33913

LICENSE NUMBER: AX130

EXPIRATION DATE: NOVEMBER 30, 2024

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APPENDIX B



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Photo 1: 7760 Lightard Knott Lane



Photo 2: 7760 Homogenous Area (HA) A & B – Wall Systems and 12" x 12" Floor Tile, White

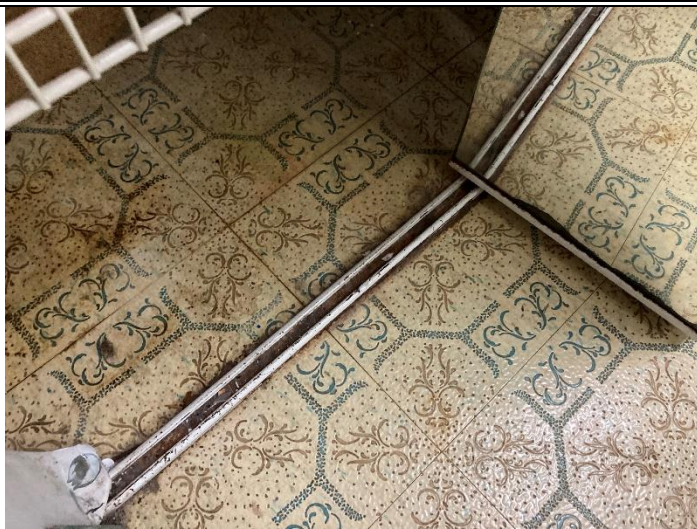


Photo 3: 7760 HA C - 12" x 12" VCT Floor Tile, Multi



Photo 4: 7760 HA D - 8" x 8" Floor Tile, Brown



Photo 5: 7760 HA E - 8" x 8" Floor Tile, Green/White



Photo 6: 7760 HA F - Exterior Red Brick



Photo 7: 7760 HA G - Exterior Flatwork



Photo 8: 7760 HA H - Exterior Stucco



Photo 9: 7760 HA I - Roof Shingle & Felt Paper



Photo 10: 7760 HA J - Exterior Stucco (Barn)



Photo 11: 7760 HA K - Roof Shingle & Felt Paper (Barn)



Photo 12: 7780 Lightard Knott Lane



Photo 13: 7780 HA L - Popcorn Ceiling



Photo 14: 7780 HA M - Wall Systems

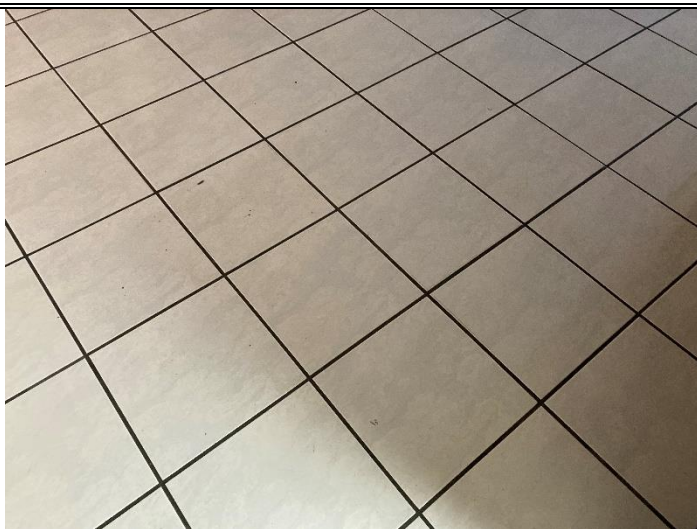


Photo 15: 7780 HA N - 12" x 12" Floor Tile, White



Photo 16: 7780 HA O - 2-layer 12" x 12" VCT Floor Tile, Brown/Beige



Photo 17: 7780 HA Q - Gray Wall Tile



Photo 18: 7780 HA R - Exterior Stucco



Photo 19: 7780 HA S - Exterior Flatwork



Photo 20: 7780 HA T - Roof Shingle & Felt Paper



Photo 21: 7780 HA U - Rolled Asphalt Roof



Photo 22: 7800 Lightard Knott Lane



Photo 23: 7800 HA V - Ceiling Tile

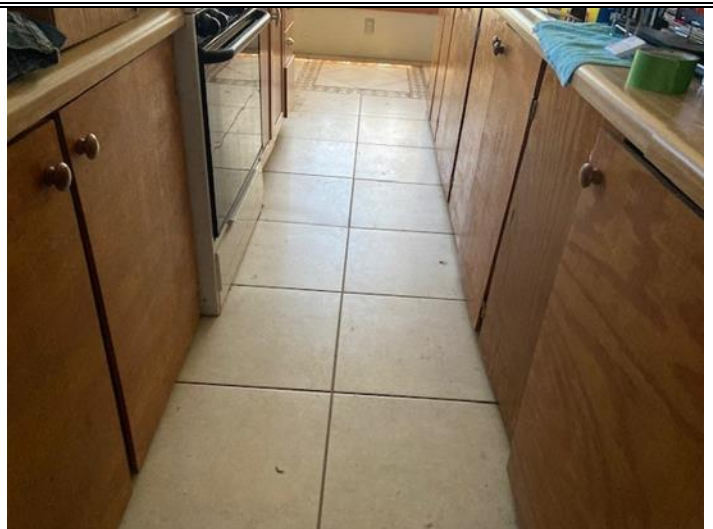


Photo 24: 7800 HA W - 16" x 16" Floor Tile



Photo 25: 7800 HA X - Vinyl Flooring, Wood Pattern Light



Photo 26: 7800 HA Y - Ceiling Tile



Photo 27: 7800 HA Z - Vinyl Flooring, Wood Pattern Dark



Photo 28: 7800 HA AA and HA BB - 4" x 4" Floor Tile and Interior Flatwork



Photo 29: 7800 HA CC - Exterior Flatwork



Photo 30: 7800 Lightard Knott has a metal roof.

APPENDIX C



UNIVERSAL
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Report for:

Ms. Shannon Palombo
Universal Engineering Sciences - Fort Myers
201 Waldo Ave.
Lehigh Acres, FL 33971

Regarding: Eurofins EPK Built Environment Testing, LLC
Project: 3441.2300046.0000; Lightard Lane
EML ID: 3246920

Approved by:



Approved Signatory
Balu Krishnan

Dates of Analysis:
Asbestos PLM: 05-05-2023

Service SOPs: Asbestos PLM (EPA 40CFR App E to Sub E of Part 763 & EPA METHOD 600/R-93-116, SOP EM-AS-S-1267)
NVLAP Lab Code 200738-0

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the samples as received and tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data for sample results with >1% asbestos concentration can be provided when requested.

Eurofins EPK Built Environment Testing, LLC ("the Company"), a member of the Eurofins Built Environment Testing group of companies, shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Client: Universal Engineering Sciences - Fort Myers Date of Sampling: 05-01-2023
C/O: Ms. Shannon Palombo Date of Receipt: 05-02-2023
Re: 3441.2300046.0000; Lightard Lane Date of Report: 05-05-2023

ASBESTOS PLM REPORT

Total Samples Submitted:	64
Total Samples Analyzed:	64
Total Samples with Layer Asbestos Content > 1%:	10

Location: A01, Wall System

Lab ID-Version‡: 15738809-1

Sample Layers	Asbestos Content
White Joint Compound /Paint	ND
White Fibrous Material (Mesh)	ND
Gray Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	10% Cellulose 5% Glass Fibers
Sample Composite Homogeneity:	Moderate

Location: A02, Wall System

Lab ID-Version‡: 15738810-1

Sample Layers	Asbestos Content
White Texture with Paint	ND
Cream Tape	ND
White Joint Compound	ND
Gray Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Moderate

Location: A03, Wall System

Lab ID-Version‡: 15738811-1

Sample Layers	Asbestos Content
White Texture with Paint	ND
Cream Tape	ND
White Joint Compound	ND
Gray Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Moderate

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ASBESTOS PLM REPORT

Location: B04, 12" x 12" FL Tile, White

Lab ID-Version‡: 15738812-1

Sample Layers	Asbestos Content
White Tile	ND
Gray Thinset	ND
Sample Composite Homogeneity: Good	

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ASBESTOS PLM REPORT

Location: B05, 12" x 12" FL Tile, White

Lab ID-Version‡: 15738813-1

Sample Layers	Asbestos Content
White Tile	ND
Gray Thinset	ND
Sample Composite Homogeneity: Good	

Location: C06, 12" x 12" VCT FL, Multi

Lab ID-Version‡: 15738814-1

Sample Layers	Asbestos Content
Multicolored Floor Tile	3% Chrysotile
Yellow Mastic	ND
White Leveling Compound	ND
Sample Composite Homogeneity: Moderate	

Location: C07, 12" x 12" VCT FL, Multi

Lab ID-Version‡: 15738815-1

Sample Layers	Asbestos Content
Multicolored Floor Tile	3% Chrysotile
Yellow Mastic	ND
White Leveling Compound	ND
Sample Composite Homogeneity: Moderate	

Location: D08, 8" x 8" FL Tile, Brown

Lab ID-Version‡: 15738816-1

Sample Layers	Asbestos Content
Brown Tile	ND
Sample Composite Homogeneity: Good	

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ASBESTOS PLM REPORT

Location: D09, 8" x 8" FL Tile, Brown

Lab ID-Version‡: 15738817-1

Sample Layers	Asbestos Content
Brown Tile	ND
Gray Grout	ND
Sample Composite Homogeneity: Good	

Location: E10, 8" x 8" FL Tile, Green & White

Lab ID-Version‡: 15738818-1

Sample Layers	Asbestos Content
Green Tile	ND
Green Grout	ND
Sample Composite Homogeneity: Good	

Location: E11, 8" x 8" FL Tile, Green & White

Lab ID-Version‡: 15738819-1

Sample Layers	Asbestos Content
Green Tile	ND
Green Grout	ND
Sample Composite Homogeneity: Good	

Location: F12, Ext Red Brick

Lab ID-Version‡: 15738820-1

Sample Layers	Asbestos Content
Red Brick	ND
Gray Mortar	ND
Sample Composite Homogeneity: Good	

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ASBESTOS PLM REPORT

Location: F13, Ext Red Brick

Lab ID-Version‡: 15738821-1

Sample Layers	Asbestos Content
Red Brick	ND
Gray Mortar	ND
Sample Composite Homogeneity: Good	

Location: G14, Ext Flatwork

Lab ID-Version‡: 15738822-1

Sample Layers	Asbestos Content
Gray Concrete	ND
Sample Composite Homogeneity: Good	

Location: G15, Ext Flatwork

Lab ID-Version‡: 15738823-1

Sample Layers	Asbestos Content
Gray Concrete	ND
Sample Composite Homogeneity: Good	

Location: H16, Ext Stucco

Lab ID-Version‡: 15738824-1

Sample Layers	Asbestos Content
Gray Stucco with Paint	ND
Sample Composite Homogeneity: Good	

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ASBESTOS PLM REPORT

Location: H17, Ext Stucco

Lab ID-Version‡: 15738825-1

Sample Layers	Asbestos Content
Gray Stucco with Paint	ND
Sample Composite Homogeneity:	Good

Location: H18, Ext Stucco

Lab ID-Version‡: 15738826-1

Sample Layers	Asbestos Content
Gray Stucco with Paint	ND
Sample Composite Homogeneity:	Good

Location: I19, Roof Shingle & Felt Paper

Lab ID-Version‡: 15738827-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Pebbles	ND
Black Felt	ND
Composite Non-Asbestos Content:	30% Cellulose 5% Glass Fibers
Sample Composite Homogeneity:	Moderate

Location: I20, Roof Shingle & Felt Paper

Lab ID-Version‡: 15738828-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Pebbles	ND
Black Felt	ND
Composite Non-Asbestos Content:	30% Cellulose 5% Glass Fibers
Sample Composite Homogeneity:	Moderate

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ASBESTOS PLM REPORT

Location: J21, Barn Stucco

Lab ID-Version‡: 15738829-1

Sample Layers	Asbestos Content
Gray Stucco with Paint	ND
Sample Composite Homogeneity:	Good

Location: J22, Barn Stucco

Lab ID-Version‡: 15738830-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: J23, Barn Stucco

Lab ID-Version‡: 15738831-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: K24, Roof Shingles w/ Felt Paper

Lab ID-Version‡: 15738832-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Pebbles	ND
Black Felt	ND
Composite Non-Asbestos Content:	30% Cellulose 5% Glass Fibers
Sample Composite Homogeneity:	Moderate

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ASBESTOS PLM REPORT

Location: K24A, Roof Shingles w/ Felt Paper

Lab ID-Version‡: 15738833-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Pebbles	ND
Black Felt	ND
Composite Non-Asbestos Content:	30% Cellulose 5% Glass Fibers
Sample Composite Homogeneity:	Moderate

Location: L25, Popcorn Ceiling

Lab ID-Version‡: 15738834-1

Sample Layers	Asbestos Content
White Popcorn Ceiling Texture with Paint	5% Chrysotile
Sample Composite Homogeneity:	Good

Location: L26, Popcorn Ceiling

Lab ID-Version‡: 15738835-1

Sample Layers	Asbestos Content
White Popcorn Ceiling Texture with Paint	5% Chrysotile
Sample Composite Homogeneity:	Good

Location: L27, Popcorn Ceiling

Lab ID-Version‡: 15738836-1

Sample Layers	Asbestos Content
White Popcorn Ceiling Texture with Paint	5% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT

Location: M28, Wall System

Lab ID-Version‡: 15738837-1

Sample Layers	Asbestos Content
White Texture with Paint	2% Chrysotile
Cream Tape	ND
White Joint Compound	2% Chrysotile
White Drywall with Brown Paper	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Moderate

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided for this analysis has been performed by following the NESHAP guidelines.

Location: M29, Wall System

Lab ID-Version‡: 15738838-1

Sample Layers	Asbestos Content
White Texture with Paint	2% Chrysotile
Cream Tape	ND
White Joint Compound	2% Chrysotile
White Drywall with Brown Paper	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Moderate

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided for this analysis has been performed by following the NESHAP guidelines.

Location: M30, Wall System

Lab ID-Version‡: 15738839-1

Sample Layers	Asbestos Content
White Texture with Paint	2% Chrysotile
Cream Tape	ND
White Joint Compound	2% Chrysotile
White Drywall with Brown Paper	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Moderate

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided for this analysis has been performed by following the NESHAP guidelines.

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ASBESTOS PLM REPORT

Location: N31, 12" x 12" White FL Tile

Lab ID-Version‡: 15738840-1

Sample Layers	Asbestos Content
White Tile	ND
White Grout	ND
Gray Thinset	ND
Sample Composite Homogeneity: Good	

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ASBESTOS PLM REPORT

Location: N32, 12" x 12" White FL Tile

Lab ID-Version‡: 15738841-1

Sample Layers	Asbestos Content
White Tile	ND
White Grout	ND
Gray Thinset	ND
Gray Carpet	ND
Composite Non-Asbestos Content:	5% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: O33, 12" x 12" VCT 2 Layers Brown Beige

Lab ID-Version‡: 15738842-1

Sample Layers	Asbestos Content
Brown Floor Tile	2% Chrysotile
Yellow Mastic 1	ND
Beige Floor Tile	2% Chrysotile
Yellow Mastic 2	ND
Sample Composite Homogeneity:	Moderate

Location: O34, 12" x 12" VCT 2 Layers Brown Beige

Lab ID-Version‡: 15738843-1

Sample Layers	Asbestos Content
Brown Floor Tile	2% Chrysotile
Yellow Mastic 1	ND
Beige Floor Tile	2% Chrysotile
Yellow Mastic 2	ND
Sample Composite Homogeneity:	Moderate

Location: P35, 12" x 12" VCT Wood Look

Lab ID-Version‡: 15738844-1

Sample Layers	Asbestos Content
Brown Floor Tile	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Moderate

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ASBESTOS PLM REPORT

Location: P36, 12" x 12" VCT Wood Look

Lab ID-Version‡: 15738845-1

Sample Layers	Asbestos Content
Brown Floor Tile	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Moderate

Location: Q37, Gray Wall Tile

Lab ID-Version‡: 15738846-1

Sample Layers	Asbestos Content
Off-White Tile	ND
White Grout	ND
White Thinset	ND
Sample Composite Homogeneity:	Good

Location: Q38, Gray Wall Tile

Lab ID-Version‡: 15738847-1

Sample Layers	Asbestos Content
Off-White Tile	ND
White Grout	ND
White Thinset	ND
Sample Composite Homogeneity:	Good

Location: R39, Ext Stucco

Lab ID-Version‡: 15738848-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT

Location: R40, Ext Stucco

Lab ID-Version‡: 15738849-1

Sample Layers	Asbestos Content
Gray Stucco with Paint	ND
Sample Composite Homogeneity:	Good

Location: R41, Ext Stucco

Lab ID-Version‡: 15738850-1

Sample Layers	Asbestos Content
Gray Stucco with Paint	ND
Sample Composite Homogeneity:	Good

Location: S42, Ext Flat Work

Lab ID-Version‡: 15738851-1

Sample Layers	Asbestos Content
Gray Concrete with Paint	ND
Sample Composite Homogeneity:	Good

Location: S43, Ext Flat Work

Lab ID-Version‡: 15738852-1

Sample Layers	Asbestos Content
Gray Concrete with Paint	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT

Location: T44, Roof Shingle & Felt

Lab ID-Version‡: 15738853-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Pebbles	ND
Black Felt	ND
Composite Non-Asbestos Content:	10% Glass Fibers 3% Cellulose
Sample Composite Homogeneity:	Moderate

Location: T45, Roof Shingle & Felt

Lab ID-Version‡: 15738854-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Pebbles	ND
Black Felt	ND
Composite Non-Asbestos Content:	10% Glass Fibers 3% Cellulose
Sample Composite Homogeneity:	Moderate

Location: U46, Rolled Asphalt Roof

Lab ID-Version‡: 15738855-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Pebbles	ND
Composite Non-Asbestos Content:	15% Nylon
Sample Composite Homogeneity:	Good

Location: U47, Rolled Asphalt Roof

Lab ID-Version‡: 15738856-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Pebbles	ND
Composite Non-Asbestos Content:	15% Nylon
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT

Location: V48, 12" Ceiling Tile

Lab ID-Version‡: 15738857-1

Sample Layers	Asbestos Content
Gray Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	40% Cellulose 10% Mineral Wool
Sample Composite Homogeneity:	Good

Location: V49, 12" Ceiling Tile

Lab ID-Version‡: 15738858-1

Sample Layers	Asbestos Content
Gray Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	40% Cellulose 10% Mineral Wool
Sample Composite Homogeneity:	Good

Location: W50, Floor Tile 16" x 16"

Lab ID-Version‡: 15738859-1

Sample Layers	Asbestos Content
Beige Tile	ND
Light Brown Grout	ND
White Thinset	ND
Sample Composite Homogeneity:	Good

Location: W51, Floor Tile 16" x 16"

Lab ID-Version‡: 15738860-1

Sample Layers	Asbestos Content
Beige Tile	ND
White Grout	ND
White Thinset	ND
Sample Composite Homogeneity:	Good

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: Universal Engineering Sciences - Fort Myers Date of Sampling: 05-01-2023
C/O: Ms. Shannon Palombo Date of Receipt: 05-02-2023
Re: 3441.2300046.0000; Lightard Lane Date of Report: 05-05-2023

ASBESTOS PLM REPORT

Location: X52, Vinyl Flooring, Wood Pattern Light

Lab ID-Version‡: 15738861-1

Sample Layers	Asbestos Content
Brown Sheet Flooring	ND
Sample Composite Homogeneity:	Good

Location: X53, Vinyl Flooring, Wood Pattern Light

Lab ID-Version‡: 15738862-1

Sample Layers	Asbestos Content
Brown Sheet Flooring	ND
Sample Composite Homogeneity:	Good

Location: Y54, Ceiling Paneling

Lab ID-Version‡: 15738863-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	80% Cellulose
Sample Composite Homogeneity:	Good

Location: Y55, Ceiling Paneling

Lab ID-Version‡: 15738864-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	80% Cellulose
Sample Composite Homogeneity:	Good

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: Universal Engineering Sciences - Fort Myers Date of Sampling: 05-01-2023
C/O: Ms. Shannon Palombo Date of Receipt: 05-02-2023
Re: 3441.2300046.0000; Lightard Lane Date of Report: 05-05-2023

ASBESTOS PLM REPORT

Location: Z56, Vinyl Flooring, Wood Pattern Dark

Lab ID-Version‡: 15738865-1

Sample Layers	Asbestos Content
Dark Brown Sheet Flooring	ND
Transparent Mastic	ND
Sample Composite Homogeneity: Good	

Location: Z57, Vinyl Flooring, Wood Pattern Dark

Lab ID-Version‡: 15738866-1

Sample Layers	Asbestos Content
Dark Brown Sheet Flooring	ND
Transparent Mastic	ND
Sample Composite Homogeneity: Good	

Location: AA58, Floor Tile 4" x4"

Lab ID-Version‡: 15738867-1

Sample Layers	Asbestos Content
White Tile	ND
White Thinset	ND
Sample Composite Homogeneity: Good	

Location: AA59, Floor Tile 4" x4"

Lab ID-Version‡: 15738868-1

Sample Layers	Asbestos Content
White Tile	ND
White Thinset	ND
Sample Composite Homogeneity: Good	

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

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Client: Universal Engineering Sciences - Fort Myers Date of Sampling: 05-01-2023
C/O: Ms. Shannon Palombo Date of Receipt: 05-02-2023
Re: 3441.2300046.0000; Lightard Lane Date of Report: 05-05-2023

ASBESTOS PLM REPORT

Location: BB60, Interior Flat Work

Lab ID-Version‡: 15738869-1

Sample Layers	Asbestos Content
Gray Concrete with Paint	ND
Sample Composite Homogeneity:	Good

Location: BB61, Interior Flat Work

Lab ID-Version‡: 15738870-1

Sample Layers	Asbestos Content
Gray Concrete with Paint	ND
Sample Composite Homogeneity:	Good

Location: CC62, Ext Flat Work

Lab ID-Version‡: 15738871-1

Sample Layers	Asbestos Content
Gray Concrete	ND
Sample Composite Homogeneity:	Good

Location: CC63, Ext Flat Work

Lab ID-Version‡: 15738872-1

Sample Layers	Asbestos Content
Gray Concrete	ND
Sample Composite Homogeneity:	Good

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Report for:

Ms. Shannon Palombo
Universal Engineering Sciences - Fort Myers
201 Waldo Ave.
Lehigh Acres, FL 33971

Regarding: Eurofins EPK Built Environment Testing, LLC
Project: 3441.2300046.0000; Lightard Lane
EML ID: 3246920

Approved by:



Approved Signatory
Balu Krishnan

Dates of Analysis:

Asbestos-EPA 400 point count: 05-15-2023

Service SOPs: Asbestos-EPA 400 point count (EPA 40CFR App E to Sub E of Part 763 & EPA METHOD 600/R-93-116, SOP EM-AS-S-1262)
NVLAP Lab Code 200738-0

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received and tested.

Eurofins EPK Built Environment Testing, LLC ("the Company"), a member of the Eurofins Built Environment Testing group of companies, shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Client: Universal Engineering Sciences - Fort Myers Date of Sampling: 05-01-2023
C/O: Ms. Shannon Palombo Date of Receipt: 05-02-2023
Re: 3441.2300046.0000; Lightard Lane Date of Report: 05-15-2023

ASBESTOS POINT COUNT REPORT

Location:	M28 Wall System		
Total Points Counted:	400		
Lab ID-Version‡:	15787820-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
White Drywall /Joint Compound Composite	Chrysotile	2	0.5
Layer Totals:		2	0.5
White Texture with Paint	Chrysotile	9	2.25
Layer Totals:		9	2.25

Location:	M29 Wall System		
Total Points Counted:	400		
Lab ID-Version‡:	15787821-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
White Drywall /Joint Compound Composite	Chrysotile	1	0.25
Layer Totals:		1	0.25
White Texture with Paint	Chrysotile	11	2.75
Layer Totals:		11	2.75

Location:	M30 Wall System		
Total Points Counted:	400		
Lab ID-Version‡:	15787822-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
White Drywall /Joint Compound Composite	Chrysotile	1	0.25
Layer Totals:		1	0.25
White Texture with Paint	Chrysotile	7	1.75
Layer Totals:		7	1.75

The analytical sensitivity is 1 asbestos point. The limit of detection is 1 asbestos point divided by the total number of points counted and multiplied by 100.

The results relate only to the items tested. Interpretation is left to the company and/or persons who conducted the field work. The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government.

All samples were received in acceptable condition unless otherwise noted. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".



003246920

ERSA
ING SCIENCES

ASBESTOS BULK FIELD LOG

3441.2300046.0000

Date 5/1/23
Page 1-1

MATERIAL DESCRIPTION		SAMPLE LOCATION	APPROXIMATE QUANTITY	CONDITION	NESHAP CATEGORY	COMMENTS:
A	01	7760 BEDROOM (W) CLOSET		F		MATERIAL LOCATION
WALL SYSTEM						
A	02	7760 BEDROOM (E) BEHIND DOOR				
11						
A	03	7760 OFFICE (NE) NEXT WALL				
11						
B	04	7760 BEDROOM CLOSET		G		
12" X 12" FL TILE, WHITE						
B	05	11				
11						
C	06	7760 BATHROOM CLOSET	40 SF	F		
12" X 12" VCT FL, MULTI						
C	07	11				
11						
D	08	7760 LR @ LANAI DOOR				
8" X 8" FL TILE, BROWN						
D	09	7760 LR @ GARAGE DOOR				
11						
E	10	7760 LAUNDRY HALL @ OFFICE DOOR				
8" X 8" FL TILE, GREEN & WHITE						

Project No: _____

KC 5/2/23 10:02

Location: _____



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ERSA
ING SCIENCES

ASBESTOS BULK FIELD LOG

Date

Page 2-7

MATERIAL DESCRIPTION		SAMPLE LOCATION	APPROXIMATE QUANTITY	CONDITION	NESHAP CATEGORY	COMMENTS
E	11	7760 LANDRY HALL @ OFFICE DOOR				MATERIAL LOCATION
8" x 8" FL TILE, GREEN + WHITE						
F	12	7760 LANAI				
EXT RED BRICK						
F	13					
11		11				
G	14					
EXT PLATWORK		11				
G	15					
11		11				
H	16	7760 EXT				
EXT STUCCO						
H	17					
11		11				
H	18					
11		11				
I	19					
ROOF SHINGLE + FELT PAPER		11				
I	20					
11		11				

Project No: _____

KE 612123 10:02

Location: _____



003246920

RSAL
SCIENCES

ASBESTOS BULK FIELD LOG

Date _____
Page 3-7

MATERIAL DESCRIPTION		SAMPLE LOCATION	APPROXIMATE QUANTITY	CONDITION	NESHAP CATEGORY	COMMENTS
J	21	7760 BARN				MATERIAL LOCATION
BARN STUCCO						
J	22	11				
11						
J	23	11				
11						
K	24	11				
ROOF SHINGLES w/ FELT PAPER						
K	24A	11				
(*) 11						
L	25	7780 INTERIOR	7X5	HALLWAY	12X12	BED NW
POPCORN CEILING			17X28	LR	5X7	LAWNORY
			3X40	HALL	7X4	BATH
			10X12	PARTIAL	10X12	BED SW
L	26	11				
11						
L	27	11				
11						
M	28	7780 BEDROOM SW CLOSET				
WALL SYSTEM						
M	29	11				
11						

Project No: _____

KE 512123 10:02

Location: _____



ASBESTOS BULK FIELD LOG

Date _____
Page 4-7

003246920

MATERIAL DESCRIPTION		SAMPLE LOCATION	APPROXIMATE QUANTITY	CONDITION	NESHAP CATEGORY	COMMENTS:
M	30	7780 BEDROOM NW CLOSET				MATERIAL LOCATION
WALL SYSTEM						
N	31	7780 LR UNDER CARPET				
12" X 12" WHITE FL TILE						
N	32	11				
11						
O	33	7780 KITCHEN	150 SF			
2 LAYERS 12" X 12" VCT BROWN 11" 11" BEIGE						
O	34	11				
11						
P	35	11	45 SF			
12" X 12" VCT WOOD LOOK						
P	36	11				
11						
Q	37	7780 HALL BATH				
GRAY WALL TILE						
Q	38	11				
11						
R	39	7780 EXT STUCCO				
EXT STUCCO						

Project No: _____

KE 512123 10:02

Location: _____



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ERSAL
G SCIENCES

ASBESTOS BULK FIELD LOG

Date _____

Page 5-7

AREA	NUMBER	MATERIAL DESCRIPTION	SAMPLE LOCATION	APPROXIMATE QUANTITY	CONDITION	NESHAP CATEGORY	COMMENTS:
R	40	EXT STUCCO	7780 EXT				MATERIAL LOCATION
R	41						
S	42	EXT PLATWORK					
S	43						
T	44	Roof SHINGLE + FELT	7780 ROOF MAIN				
T	45						
U	46	ROOFING ROOF ASPHALT ROOF	7780 ROOF REAR				
U	47						
V	48	12" CEILING TILE	TRAILOR 7800 Kitchen	7x116sf			
V	49						

KC

Project No: _____

5/2/23 10:02

Location: _____



003246920

ERSA
SCIENTIFICS

ASBESTOS BULK FIELD LOG

Date

Page

6-7

MATERIAL DESCRIPTION	SAMPLE LOCATION	APPROXIMATE QUANTITY	CONDITION	NESHAP CATEGORY	COMMENTS
W 50 FLOOR TILE 16" x 16"	7800 TRAILOR KITCHEN				MATERIAL LOCATION
W 51 11	11				
X 52 VINYL FLOORING WOOD PATTERN LIGHT	7800 TRAILOR SE ROOM				
X 53 11	11				
Y 54 CEILING PANELING	7800 TRAILOR LR				
Y 55 11	11				
Z 56 VINYL FLOORING WOOD PATTERN DARK	7800 TRAILOR HALL WEST ROOM				
Z 57 11	11				
AA 58 FLOOR TILE 4" x 4"	7800 TRAILOR LOWER BED BATHROOM				
AA 59 11	11				

KC 5/2/23 10:02

Project No: _____

Location: _____

APPENDIX D



UNIVERSAL
ENGINEERING SCIENCES

Standard Interpretations

/ Compliance requirements for renovation work involving material containing less than 1% asbestos

- **Standard Number:** 1926.1101 ; 1926.1101(e) ; 1926.1101(f)(2) ; 1926.1101(f)(5) ; 1926.1101(f)(6) ; 1926.1101(g)(1) ; 1926.1101(g)(3) ; 1926.1101(g)(8)(ii) ; 1926.1101(k) ; 1926.1101(k)(7) ; 1926.1101(k)(8) ; 1926.1101(l)(1) ; 1926.1101(n)(2)

OSHA requirements are set by statute, standards and regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in response to new information. To keep apprised of such developments, you can consult OSHA's website at <https://www.osha.gov>.

November 24, 2003

Kurt Varga, Ph.D.
The InService Training Network
6813 Flags Center Drive
Columbus, OH 43229

Dear Dr. Varga:

Thank you for your April 18, 2002 letter to the Occupational Safety and Health Administration (OSHA). Your letter was forwarded to the Directorate of Enforcement Programs for a response. You are writing on behalf of the Ohio School Facilities Commission, which deals with the construction of schools in Ohio. As a preliminary matter, it should be noted that the Commission, as an agency of a state, and the public schools, as entities of political subdivisions of a state, are not subject to the Occupational Safety and Health Act of 1970. See 29 U.S.C. Sec. 652(b)(5). However, in light of your concerns about the costs imposed on school building contractors of complying with the asbestos standard, we are answering your questions. You have questions concerning the OSHA requirements covering the renovation of school buildings that have hard plaster containing some asbestos, but the amount is not more than 1%. This letter constitutes OSHA's interpretation only of the requirements discussed and may not be applicable to any question not delineated within your original correspondence. We apologize for the long delay of this response; our replies to your paraphrased questions are provided below.

Question 1: Are the OSHA letters dated April 17, 1997; August 7, 1998; and August 13, 1999 correct? They all say that items that do not contain >1% asbestos are covered to at least some extent by the Construction Asbestos Standard.

Reply: Yes, those letters are correct although some requirements of the Construction Asbestos Standard, 29 CFR 1926.1101 were not addressed. 29 CFR 1926.1101 would apply even if neither asbestos permissible exposure limit (PEL) is exceeded¹. The standard contains numerous work practice requirements and prohibitions which apply, regardless of the exposure levels. However, only two of the requirements and three of the prohibitions must

be observed in the case of work activities involving installed construction materials that do not contain >1% asbestos. Those work practice requirements and prohibitions that must be observed regardless of the exposure levels and of the percentage of asbestos in the installed construction materials are:

- 29 CFR 1926.1101(g)(1)(ii), which requires: **wet methods, or wetting agents, to control employee exposures during asbestos handling, mixing, removal, cutting, application, and cleanup, except where employers demonstrate that the use of wet methods is infeasible due to, for example, the creation of electrical hazards, equipment malfunction, and, in roofing, except as provided in paragraph (g)(8)(ii)² of this section;**
- 29 CFR 1926.1101(g)(1)(iii), which requires: **prompt clean-up and disposal of wastes and debris contaminated with asbestos in leak-tight containers except in roofing operations, where the procedures specified in paragraph (g)(8)(ii)³ of this section apply;**
- 29 CFR 1926.1101(g)(3)(i), which prohibits: **high-speed abrasive disc saws that are not equipped with point-of-cut ventilator or enclosures with HEPA filtered exhaust air;**
- 29 CFR 1926.1101(g)(3)(ii), which prohibits: **compressed air used to remove asbestos, or materials containing asbestos, unless the compressed air is used in conjunction with an enclosed ventilation system designed to capture the dust cloud created by the compressed air;** and
- 29 CFR 1926.1101(g)(3)(iv), which prohibits: **employee rotation as a means of reducing employee exposure to asbestos.**

There are also some other provisions that apply to work activities involving installed construction materials even where the material does not contain >1% asbestos. However, if neither asbestos PEL is exceeded, only the following few provisions apply:

- 29 CFR 1926.1101(f)(2)(i), the provision for establishing that neither asbestos PEL is exceeded: **Each employer who has a workplace or work operation covered by this standard shall ensure that a "competent person" conducts an exposure assessment immediately before or at the initiation of the operation to ascertain expected exposures during that operation or workplace. The assessment must be completed in time to comply with requirements which are triggered by exposure data or the lack of a "negative exposure assessment," and to provide information necessary to assure that all control systems planned are appropriate for that operation and will work properly;**
- 29 CFR 1926.1101(f)(6)(i), a provision covering the observation of monitoring: **The employer shall provide affected employees and their designated representatives an opportunity to observe any monitoring of employee exposure to asbestos conducted in accordance with this section;**
- 29 CFR 1926.1101(f)(5)(i), a provision covering employee notification of monitoring results: **The employer shall notify affected employees of the monitoring results that represent that employee's exposure as soon as possible following receipt of monitoring results;**
- 29 CFR 1926.1101(f)(5)(ii), another provision covering employee notification of monitoring results: **The employer shall notify affected employees of the results of monitoring representing the employee's exposure in writing either individually or by posting at a centrally located place that is accessible to affected employees;** and
- 29 CFR 1926.1101(n)(2)(i)-(iii), a set of provisions covering recordkeeping for measurements of exposures to airborne asbestos.

There are numerous additional provisions of the standard that apply to work activities involving installed construction materials even where the material does not contain >1% asbestos if at least one of the asbestos PELs is exceeded.

Question 2: Did OSHA intend to regulate material that is found to contain asbestos at <1% when it promulgated the Construction Asbestos Standard that it issued in 1994?

Reply: Yes. Instead of making all of the engineering controls and work practices applicable to all materials containing asbestos, OSHA made most of them applicable only to installed building materials that contain >1% asbestos and assigned the term "asbestos-containing material" (ACM) to those materials. However, to prevent needless worker exposures to asbestos, OSHA made a few common-sense work practices and prohibitions applicable if any asbestos is present in materials.

Thus, the current standard contains engineering controls and work practices that apply regardless of the exposure levels to certain work activities involving only installed building materials that meet the definition of ACM. It also contains a few work practices and prohibitions for work involving material that contains any amount of asbestos regardless of the exposure levels. And the standard has exposure-based requirements, consisting of a 0.1 fiber/cc 8-hour TWA PEL and a 1 fiber/cc 30-minute excursion limit, and other requirements that apply whenever worker exposures exceed either or both of the limits, regardless of the amount of asbestos contained in the materials involved.

Question 3: If OSHA had intended to regulate material with <1% asbestos, why aren't we required to communicate information about material with <1% asbestos?

Reply: Most of the requirements for communication of information occur under 29 CFR 1910.1101(k), *Communication of Hazards*. Any of the requirements which apply only to building or facility owners are inapplicable because the buildings are entities of political subdivisions of the State of Ohio and not subject to the OSHA Act. On the other hand, any of the provisions that apply to employers are applicable to private contractors doing the asbestos work. The information that sections (k)(7), (9), and (10) require to be communicated applies to materials not having >1% asbestos which are the source of employee asbestos exposures exceeding one or both of the asbestos PELs as well as to materials containing >1% asbestos. Also, 29 CFR 1926.1101(k)(8), which specifies labeling requirements, applies to materials that contain 1% or more asbestos. On the other hand, it is correct that the information which (k)(1)⁴-(k)(6) require to be communicated pertains only to materials containing >1% asbestos. However, it should be noted that under (k), surfacing material, thermal system insulation and asphalt and vinyl flooring material found in buildings constructed no later than 1980 or installed no later than 1980 must be considered to contain >1% asbestos, unless the employer demonstrates otherwise in accordance with (k)(5).

Question 4: Under 29 CFR 1926.1101(k)(8) are employers required only to communicate information about ACM?

Reply: 29 CFR 1926.1101(k)(8) requires employers to communicate information about ACM and also material that contains 1% asbestos. (ACM, again, is material that contains >1% asbestos.)

Question 5: Should the phrase "products containing asbestos" as used in paragraph (k)(8)(i) be read "ACM" and not as including materials with <1% asbestos, because otherwise there is a contradiction in (k)(8)?

Reply: No. There is no contradiction. Paragraph (k)(8)(i) deals broadly with products containing asbestos. Paragraph (k)(8)(vi)(B) provides for an exclusion from labeling for products with <1% concentrations of asbestos.

Question 6: Why, if material containing <1% asbestos is to be considered hazardous (employers are to wet it, put it in containers, and perform air monitoring), are employers not required to warn workers about its presence when they know it is present at a work site or in a building?

Reply: You **must** inform employees about the presence of material containing <1% asbestos when you know it is present. When employees perform work activities involving such material, you are required per 29 CFR 1926.1101(f)(2)(i) to assess their exposures to asbestos. In connection with this requirement you must, per 29 CFR 1926.1101(f)(6)(i), provide affected employees an opportunity to observe any monitoring of asbestos

exposure. After the monitoring, you must, per 29 CFR 1926.1101(f)(5)(i) and (ii), inform employees of the monitoring results representing their asbestos exposures. In accordance with 29 CFR 1926.1101(e) and (k)(7), if asbestos exposures exceed or are likely to exceed one or both of the PELs, then you must provide warning by posting the area where these overexposures are occurring as a regulated area.

Although employers do not **have to** label containers of waste and debris containing <1% asbestos, promptly placing the waste and debris in leak-tight containers is a work practice that reduces the exposures of the employees producing the waste and debris. That is especially so because this work practice is to be used in conjunction with wet methods or wetting agents. By promptly cleaning up the waste and debris and placing it in containers, it is kept from drying out and possibly releasing airborne asbestos into the work environment. Leak-tight containers prevent the asbestos from seeping out and reintroducing an asbestos exposure hazard.

Question 7: If OSHA had intended to regulate material containing <1% asbestos, why do not employers have to use HEPA-filters when using vacuum cleaners to clean up material containing <1% asbestos?

Reply: An employer does not have to use vacuum cleaners to clean up material containing <1% asbestos. However, if an employer uses vacuum cleaners to clean up the material, then per 29 CFR 1926.1101(l)(1), it must use HEPA-filtered vacuuming equipment.

Question 8: If OSHA had intended to regulate material containing <1% asbestos, why does it not discuss the distinction between ACM and material containing <1% asbestos in the preamble to the regulation?

Reply: OSHA was already regulating materials that contained <1% asbestos. In promulgating the 1994 standard, OSHA was determining which materials to regulate further by additional work practice and engineering control requirements.

Question 9: If OSHA had intended to regulate material containing <1% asbestos, why did it not examine the compliance costs for working with this material?

Reply: As we stated above, OSHA was already regulating materials with <1% asbestos. In promulgating the 1994 standard, OSHA was determining the cost of complying with additional work practice and engineering control requirements.

Question 10: If OSHA had intended to regulate material containing <1% asbestos, why did it not mention this in its CPLs dealing with asbestos in construction?

Reply: That was simply an oversight by the preparers of the Asbestos Compliance Directive. It will be corrected when the directive is next updated.

Thank you for your interest in occupational safety and health. We hope you find this information helpful. OSHA requirements are set by statute, standards, and regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in response to new information. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>. If you have any further questions, please feel free to contact the Office of Health Enforcement at (202) 693-2190.

Sincerely,

Richard E. Fairfax, Director
Directorate of Enforcement Programs

¹ The asbestos PELs are an eight-(8-) hour time-weighted average (TWA) limit of 0.1 fiber per cubic centimeter of air (0.1 f/cc) and an excursion limit of 1.0 f/cc as averaged over a sampling period of thirty (30) minutes. [back to text]

² Paragraph (g)(8)(ii) is directed toward the removal of roofing materials containing >1% asbestos. However, OSHA interprets the reference at (g)(8)(ii)(B) to the exception to the use of wet methods for reasons of infeasibility or the creation of safety hazards as also applying to removing any roofing materials that do not contain >1% asbestos. [back to text]

³ The reference to paragraph (g)(8)(ii) applies even for material that does not contain >1% asbestos. [back to text]

⁴ The phrase, *Installed Asbestos Containing Building Material*, is intended to be the heading and the start of 29 CFR 1926.1101(k)(1). The three sentences preceding that phrase are intended to be an introduction for 29 CFR 1926.1101(k) and precede (k)(1). [back to text]

UNITED STATES DEPARTMENT OF LABOR

Occupational Safety & Health Administration
200 Constitution Ave NW
Washington, DC 20210
☎ 800-321-6742 (OSHA)
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www.OSHA.gov

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Standard Interpretations

/ Application of construction standard to demolition operations involving material less than 1% asbestos.

▪ **Standard Number:** 1926.1101 ; 1926.1101(g)(1)(ii) ; 1926.1101(g)(1)(iii)

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October 27, 2003

JoAnn Hernandez, Chief
Base Infrastructure Flight
37 Contracting Squadron
1655 Selfridge Avenue
Lackland AFB, TX 78236-5103

Dear Ms. Hernandez:

Thank you for your March 20 letter to the Occupational Safety and Health Administration's (OSHA's) Directorate of Enforcement Programs. You asked for an authoritative interpretation of 29 CFR 1926.1101(g)(1) in OSHA's Construction Asbestos Standard as it applies to demolition operations involving material containing <1% asbestos. This letter constitutes OSHA's interpretation only of the requirements discussed and may not be applicable to any question not delineated within your original correspondence. Your paraphrased question and our reply are below.

Question: *Do the wet handling, prompt clean up, and disposal requirements set forth in 29 CFR 1926.1101(g)(1)(ii) and (iii) apply to demolition operations involving material containing <1% asbestos?*

Reply: Yes, those requirements do apply to demolition operations involving material containing <1% asbestos.

Thank you for your interest in occupational safety and health. We hope you find this information helpful. OSHA requirements are set by statute, standards, and regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in response to new information. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>. If you have any further questions, please feel free to contact the Office of Health Enforcement at 202-693-2190.

Sincerely,

Richard E. Fairfax, Director
Directorate of Enforcement Programs

UNITED STATES DEPARTMENT OF LABOR

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Standard Interpretations / Requirements for demolition operations involving material containing <1% asbestos.

- **Standard Number:** 1926.1101(b) ; 1926.1101(f) ; 1926.1101(g) ; 1926.1101(k) ; 1926.1101(n)

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August 13, 1999

Walter Chun, M.S., CSP, CHSP, CECM
OSHCON, INC.
P.O. Box 25850
Honolulu, Hawaii 96825-0850

Dear Mr. Chun:

This is in response to your October 9, 1998 request for clarification of the Occupational Safety and Health Administration's (OSHA's) Construction Industry Asbestos Standard, 29 CFR 1926.1101. We apologize for the delay in our reply.

You note that according to 29 CFR 1926.1101(a)(1), the Construction Industry Asbestos Standard regulates demolition or salvage of structures where asbestos is present and that 29 CFR 1926.1101(b) defines asbestos-containing material (ACM) as any material containing >1% asbestos. You ask that we clarify the applicability of the standard to a demolition operation involving material containing <1% asbestos.

If the demolition operation would involve material containing >1% asbestos it would be Class I or II asbestos work, since Class I or Class II asbestos work is removal of ACM, and according to 29 CFR 1926.1101(b), "removal" includes demolition operations. Since the demolition operation involves material containing <1% asbestos, the work is not a designated class of asbestos work, as you correctly note in your letter. Therefore, only 29 CFR 1926.1101(g)(1)(ii) and (iii), as well as those recordkeeping requirements under 29 CFR 1926.1101(n) that are associated with the negative exposure assessment, apply so long as neither asbestos permissible exposure limit (PEL) is exceeded or might be exceeded. 29 CFR 1926.1101(g)(1)(ii) requires:

"Wet methods, or wetting agents, to control employee exposures during asbestos handling, mixing, removal, cutting, application, and cleanup, except where employers demonstrate that the use of wet methods is infeasible due to for example, the creation of electrical hazards, equipment malfunction, and, in roofing, except as provide in paragraph (g)(8)(ii) of this section;"

and 29 CFR 1926.1101(g)(1)(iii) requires:

"Prompt clean-up and disposal of wastes and debris contaminated with asbestos in leak-tight containers except in roofing operations, where the procedures specified in paragraph (g)(8)(ii) of this section apply."

On the other hand, if at least one of the asbestos PELs is exceeded or might be exceeded, then all the requirements that are not strictly reserved as work practice requirements for Class I, II, III, or IV asbestos work apply or might apply. An exception would be if there were not frequent enough exposures above the asbestos PELs to activate a specific requirement. For example, an employer is not required to make a medical surveillance program available to an employee who is not engaged in Class I, II, or III work or exposed at or above a permissible exposure limit for a combined total of 30 or more days per year.

An example of the many requirements that apply when either one of the asbestos PELs is exceeded is 29 CFR 1926.1101(j)(4) which states, "The employer shall ensure that employees do not smoke in work areas where they are occupationally exposed to asbestos because of activities in that work area." This requirement applies wherever the employer must establish an asbestos-associated regulated area. Such a regulated area must be established where Class I, II, or III asbestos work is done or where at least one of the asbestos PELs is exceeded.

You ask if a demolition project involving only materials containing <1% asbestos requires an initial negative exposure assessment. In order to avoid the need to comply with the elements of the standard that are applicable when either asbestos PEL is exceeded, the contractor conducting the demolition project must produce an initial negative exposure assessment for his/her employees.

There are three potential approaches provided under 29 CFR 1926.1101(f)(2) for producing a negative exposure assessment. These are the use of objective data, previous air monitoring results, or current air monitoring results. If the contractor cannot produce a negative exposure assessment with objective data or previous air monitoring results, then the contractor must conduct asbestos exposure monitoring. Until the contractor is able to produce a negative exposure assessment for his/her employees, the contractor must comply with the elements of the standard that are applicable when either asbestos PEL is exceeded.

As to your inquiry into the protective equipment and training that must be provided to employees who are working while the contractor seeks to produce a negative exposure assessment, the contractor must provide those employees with the protective clothing described in 29 CFR 1926.1101(i). At a minimum, half-mask air-purifying respirators, other than disposable respirators, equipped with high efficiency filters are required. And, the contractor must provide those employees training that meets the mandates of 29 CFR 1926.1101(k)(9)(viii).

You also ask about the procedures for determining the asbestos content of material. Specifically, you ask if OSHA recognizes the point counting method for determining the asbestos content. Yes, OSHA considers the point counting method to be acceptable, but OSHA does not require that it be used. Polarized light microscopy (PLM) is the root method used for identification of asbestos. Point counting is one of the techniques used to quantify the amount of asbestos present in a sample on which PLM has already been performed.

The last issues you raise concern 29 CFR 1926.1101(k), Communication of hazards. You ask whether the building/facility owner must provide information regarding the presence of building or facility materials that contain <1% asbestos. The owner is not required to provide this information. The owner is required to provide information only about the presence of materials containing greater than or equal to 1% asbestos. Nonetheless, a contractor receiving notification from a building owner that all materials in the building are non-ACM may not conclude from this communication that the materials present no potential asbestos exposure hazard for the contractor's employees. If the materials were tested for asbestos in accordance with the testing requirements in 29 CFR 1926.1101, then the contractor is not required to observe the standard's requirements for Class I, II, III, or IV asbestos work when tasks involving the materials are performed. However, if the materials contain some amount of asbestos that is less than or equal to 1%, the contractor must observe the asbestos PELs and 29 CFR 1926.1101(g)(1)(ii) and (iii). Therefore, the contractor has an implied obligation to determine if the materials contain some asbestos. The contractor must exercise due diligence to identify the presence of asbestos in materials.

An investigation of whether any of the materials are prone to contain some amount of asbestos which is less than or equal to 1% would be one example of action the employer must take in order to meet the test of exercising due diligence. If the contractor determines that the materials contain some asbestos, then the contractor must determine if compliance with 29 CFR 1926.1101(g)(1)(ii) and (iii) is sufficient for preventing exposures above the asbestos PELs. Engineering and work practice controls must be used whenever asbestos exposures above either PEL would occur without their use. If feasible engineering and work practice controls are not adequate to prevent exposures above an asbestos PEL, respiratory protection must be used to supplement the controls.

You note that 29 CFR 1926.1101(k) sets out the responsibilities of employers for providing employees information on the presence of asbestos. You ask if employees performing demolition work involving materials containing <1% asbestos are covered by these employer responsibilities. The employer responsibilities to which you refer are presented at 29 CFR 1926.1101(k)(3). The requirements at 29 CFR 1926.1101(k)(3) are not applicable to employees doing demolition work involving material containing <1% asbestos because the scope of the requirements is limited to ACM and PACM. However, if the employee asbestos exposure levels exceed one or both of the PELs, the employees will be informed of the presence of asbestos because the employer must establish a regulated area and implement procedures that comply with 29 CFR 1926.1101(e).

You asked if there are other standards that can be used to protect employees from an asbestos health hazard presented by material containing <1% asbestos. The shipyard employment standard for asbestos, 29 CFR 1915.1001; the General Industry standard for asbestos, 29 CFR 1910.1001; and 29 CFR 1926.1101 are the only OSHA standards for regulating the asbestos health hazard presented by material containing <1% asbestos. The Hazard Communication Standard, 29 CFR 1910.1200, does not apply to material containing <1% asbestos.

Thank you for your interest in occupational safety and health. We hope you find this information helpful. Please be aware that OSHA's enforcement guidance is subject to periodic review and clarification, amplification, or correction. Such guidance could also be affected by subsequent rulemaking. In the future, should you wish to verify that the guidance provided herein remains current, you may consult OSHA's website at <http://www.osha.gov>. If you have any further questions, please feel free to contact OSHA's Office of Health Compliance Assistance at (202) 693-2190.

Sincerely,

Richard E. Fairfax, Director
Directorate of Compliance Programs

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Standard Interpretations / Requirements for work with materials containing less than 1 percent asbestos.

- **Standard Number:** 1926.1101(b) ; 1926.1101(g)

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August 7, 1998

Mr. Joseph A. Rosenthal
Updike, Kelly & Spellacy, P.C.
One Century Tower
265 Church Street
New Haven, Connecticut 06510-7002

Dear Mr. Rosenthal:

We have received your letter addressed to Edith Nash of our Solicitor's office, asking us to reconsider our prior interpretation of June 6, 1997, that work concerning building materials containing less than 1% asbestos is covered by the Occupational Safety and Health Administration's (OSHA's) asbestos construction standard (29 CFR 1926.1101). We are confirming some parts and modifying other parts of our earlier interpretation.

As we stated in the earlier letter, we agree that plaster that contains less than 1% is not "asbestos-containing material" under the standard. However, as we noted, certain precautions set out in paragraph (g) are universal and apply to all work with asbestos, regardless of airborne exposures, or asbestos content of previously installed materials. These requirements are to utilize wet methods, to the extent feasible, (paragraph (g)(1)(ii)); and to promptly clean up and dispose in closed containers, waste and debris contaminated with asbestos, (paragraph (g)(1)(iii)). However, in a change from our June letter, we interpret that paragraph (g)(1)(i) which requires HEPA vacuuming, does not apply to work with material that contains less than 1% asbestos.

We note that the asbestos content of plaster in an area is particularly difficult to assess, in large part because the asbestos often had been mixed into the plaster at the site, and the asbestos content may vary even when the area which is being disturbed looks homogenous. For these reasons an assessment that the plaster in a disturbed area contains less than 1% asbestos must be based on analysis of sufficient samples to represent the entire area.

We hope that this letter clarifies OSHA's position on these issues.

Sincerely,

John B. Miles, Jr.
Director
Directorate of Compliance Programs

UNITED STATES DEPARTMENT OF LABOR

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