

Limited Asbestos Survey

Renovate Pulmonary/Sleep Lab Project

V.A. Project No. 539-13-102

Cincinnati V.A. Medical Center

3200 Vine Street

Cincinnati, Hamilton County, Ohio

October 15, 2012

Terracon Project No. N1127192



Prepared for:

John Poe Architects

Dayton, Ohio

Prepared by:

Terracon Consultants, Inc.

Cincinnati, Ohio

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October 15, 2012



John Poe Architects
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Attn: Mr. Brandon Combs
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Re: Limited Asbestos Survey
Renovate Pulmonary/Sleep Lab Project
V.A. Project No. 539-13-102
Cincinnati V.A. Medical Center
3200 Vine Street
Cincinnati, Hamilton County, Ohio
Terracon Project No. N1127192

Dear Mr. Combs:

The purpose of this report is to present the results of a limited asbestos survey performed on September 27, 2012, for the above-referenced renovation project. We understand that this limited survey was requested due to future planned renovation of an approximately 3,700 square foot space located on the ninth floor (south wing) of the Cincinnati V.A. Medical Center. This sampling was conducted in general accordance with our proposal, dated February 1, 2012. It should be noted that the asbestos survey was specifically limited to within the boundaries of the client-defined project space, and excluded exterior roof space.

Friable and non-friable asbestos-containing materials (ACMs) were identified as a result of the limited survey. Please refer to the attached report for details.

Terracon appreciates the opportunity to provide this service to John Poe Architects. If you have any questions regarding this report, please contact the undersigned at 513-321-5816.

Sincerely,

Terracon Consultants, Inc.

Prepared By:

A handwritten signature in blue ink, appearing to read "Joseph A. Tussey".

Joseph A. Tussey, CHMM
Environmental Specialist

Reviewed By:

A handwritten signature in blue ink, appearing to read "Ben A. Lindenberger".

Ben A. Lindenberger
Project Environmental Scientist



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LIMITED ASBESTOS SURVEY
Renovate Pulmonary/Sleep Lab Project
V.A. Project No. 539-13-102
Cincinnati V.A. Medical Center
Terracon Project No. N1127192

October 15, 2012

1.0 INTRODUCTION

Terracon conducted a project-specific asbestos survey at the Cincinnati V.A. Medical Center (CVAMC) located at 3200 Vine Street, Cincinnati, Ohio. The asbestos survey was specifically limited to within the boundaries of a ninth floor – south wing space, which has a total of approximately 3,700 square feet of interior floor space, as indicated on a client-provided drawing. A copy of a client-provided drawing which indicates the project boundaries is attached in Appendix D.

The limited survey was conducted on September 27, 2012, by an Ohio Department of Health (ODH) certified Asbestos Hazard Evaluation Specialist (AHES) in general accordance with Terracon Proposal No. PN1120081, dated February 1, 2012. Interior building components were surveyed and homogeneous areas of suspect asbestos-containing materials (ACM) were visually identified and documented within the project boundaries. Although reasonable effort was made to identify accessible suspect materials, additional suspect but un-sampled materials could be located in voids or in other concealed areas (e.g. embedded within walls, within equipment, view concealed by items, etc.). Suspect ACM samples were collected in general accordance with the sampling protocols outlined in EPA regulation 40 CFR 763 (Asbestos Hazard Emergency Response Act, AHERA). Samples were delivered to an accredited laboratory for analysis by polarized light microscopy.

1.1 Project Objective

We understood that this limited survey was requested due to future planned renovation of an approximately 3,700 square foot space located on the ninth floor – south wing of the CVAMC. EPA regulation 40 CFR 61, Subpart M, National Emission Standards for Hazardous Air Pollutants (NESHAP), prohibits the release of asbestos fibers to the atmosphere during renovation or demolition activities. The asbestos NESHAP requires that potentially regulated ACM (RACM) be identified, classified and quantified prior to planned disturbances or demolition activities.

2.0 BUILDING DESCRIPTIONS

The approximately 3,700 square foot space, which is to be renovated, is located on the ninth floor – south wing of building number one at the CVAMC (see Appendix D for the project

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location and boundaries). Building number one was reportedly constructed in the early 1950s. The following is a general description of building components and systems observed to be located within the subject project boundaries:

- Flooring materials appeared to consist largely of carpet squares which conceal vinyl composition tile (VCT),
- Wall materials appeared to consist largely of plaster, however, areas of drywall system materials were observed – typically in bathroom areas,
- Ceiling materials appeared to consist largely of plaster in room areas and lay-in ceiling tiles in the hallway,
- Heating, ventilation, and air-conditioning (HVAC) appeared to consist of forced-air wall-mounted units located in various rooms, and an older duct insulation material was observed with respect to two apparent air shafts,
- Piping systems observed above ceilings and sporadically entering concealed chases appeared to be insulated with a variety of materials including fiberglass, a gray insulating material, and layered cardboard insulation.

3.0 FIELD ACTIVITIES

The limited survey was conducted by Mr. Joseph A. Tussey, CHMM, an ODH certified AHES. Copies of their state credentials are attached as Appendix E. The survey was conducted in general accordance with the sample collection protocols established in EPA regulation 40 CFR 763, the Asbestos Hazard Emergency Response Act (AHERA). A summary of survey activities is provided below.

3.1 Visual Assessment

Our sampling activities began with visual observation of building materials located within the project boundaries to identify homogeneous areas of suspect ACM. A homogeneous area consists of building materials that appear similar throughout in terms of color, texture and date of application.

Demolition of walls, ceilings, equipment, etc. to identify possible hidden suspect ACM was not conducted. Materials identified as concrete, glass, wood, masonry, metal or rubber were not considered suspect ACM.

3.2 Physical Assessment

A physical assessment of each homogeneous area of suspect ACM was conducted to assess the friability and condition of the materials. A friable material is defined by the EPA as a

material which can be crumbled, pulverized or reduced to powder by hand pressure when dry. Friability was assessed by physically touching suspect materials.

3.3 Sample Collection

Based on results of the visual observation, bulk samples of suspect ACM were collected in general accordance with AHERA sampling protocols. Random samples of suspect materials were collected in each homogeneous area. Sample team members collected bulk samples using wet methods as applicable to reduce the potential for fiber release. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker.

A total of 85 bulk samples were collected from 27 homogeneous areas of suspect ACM. A summary of suspect ACM samples collected during the sampling is included as Appendix A.

3.4 Sample Analysis

Bulk samples were submitted under chain of custody to IATL of Mt. Laurel, New Jersey for analysis by polarized light microscopy per EPA methodology EPA/600/R-93/116. The percentage of asbestos, where applicable, was determined by microscopic visual estimation and point counting. IATL is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP Accreditation No. 101165-0).

4.0 REGULATORY OVERVIEW

The asbestos NESHAP (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. It also requires the identification and classification of existing materials prior to demolition or renovation activity. Under NESHAP, ACM are classified as either friable, Category I non-friable or Category II non-friable ACM. Friable materials are those that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure. Category I non-friable ACM includes packings, gaskets, resilient floor coverings and asphalt roofing products containing more than 1% asbestos. Category II non-friable ACM are any materials other than Category I materials that contain more than 1% asbestos. Friable ACM, Category I and Category II non-friable ACM which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting or abrading and which could be crushed or pulverized during anticipated renovation or demolition activities are considered regulated ACM (RACM).

In Ohio, the federal NESHAP regulation has been delegated to the state EPA. At the subject project location, the Southwest Ohio Air Quality Agency (SOAQA) is responsible for administering and enforcing the federal and state EPA regulations. NESHAP notifications

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must be submitted to the SOAQA 10 business days prior to project commencement (where >160 SF / 260 LF of friable ACM is removed annually, facility-wide).

ODH regulates friable ACMs containing more than 1% asbestos. ODH regulates asbestos abatement activities, asbestos personnel training, and issuance of asbestos professional certifications within the state under OAC 3701-34-01 through 3701-34-11. Additionally, ODH audits asbestos abatement projects and responds to public health emergencies where friable ACMs has been released. ODH requires a 10-day notification be submitted prior to the abatement of friable ACMs in quantities greater than 50 linear or 50 square feet (per project). For more information about ODH's asbestos program, their website can be found at <http://www.odh.state.oh.us/>.

The Occupational Safety and Health Administration (OSHA) Asbestos standard for construction (29 CFR 1926.1101) regulates workplace exposure to asbestos. The OSHA standard requires that employee exposure to airborne asbestos fibers be maintained below 0.1 asbestos fibers per cubic centimeter of air (0.1 f/cc). The OSHA standard classifies construction and maintenance activities which could disturb ACM, and specifies work practices and precautions which employers must follow when engaging in each class of regulated work.

5.0 FINDINGS AND RECOMMENDATIONS

With respect to suspect ACM located within the project boundaries, laboratory analyses confirmed the presence of asbestos in concentrations greater than one percent (>1%) in the following summarized materials: 1) pipe insulating and duct insulating materials (including loose debris), and 2) black mastic under VCT. A summary of the classification, condition and approximate quantity of the confirmed ACM are presented in Appendix B. Laboratory analytical reports are included in Appendix C.

Terracon has also contracted with the client to provide asbestos abatement specifications (utilizing V.A. master templates) relative to this project. Depending on the renovation project's scope of work, the client and/or building owner representative must assist Terracon by determining whether the identified ACM will be impacted by this renovation project so that these materials may be appropriately included in the project's abatement specification. It should be noted that even if accessible pipe insulation may not be impacted by the project's scope of work, it is recommended that it be addressed if possible given that the majority of the accessibly observed pipe insulation appeared to have some type of damage.

6.0 GENERAL COMMENTS

The limited asbestos survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar

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conditions in the same locale. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our sampling within the project boundaries. The survey was limited to within the boundaries of the project as indicated on the client-provided drawing (see Appendix D).

During the survey, the air-conditioning shaft which is located in room 932 was locked, and access was not provided to Terracon for inclusion in our limited survey; according to the client, this shaft was not believed to be included as part of the renovation project. It should be noted that the client verbally indicated to Terracon that the project may include a southern expansion over a lower roof. Sampling of roofing materials was excluded from our scope of work; however, if roofing materials will be disturbed, these materials must be evaluated for asbestos prior to their disturbance. It should also be noted that, due to the nature of this survey having been conducted in an occupied space, and due to possible observation obstructions/concealments (e.g. inaccessible wall chases, observations being blocked by building components/equipment, etc.), other suspect hidden materials other no previously identified, and additional quantities of identified ACM, may potentially exist within the project boundaries. If additional homogeneous suspect ACMs, not previously sampled/identified during this limited survey are encountered, those additional identified homogeneous suspect ACMs must be assumed to contain asbestos until sampled by state credentialed AHES and shown otherwise.

The information contained in this report is relevant to the date on which this sampling was performed, and should not be relied upon to represent conditions at a later date. This report has been prepared on behalf of and exclusively for use by John Poe Architects for specific application to their project as discussed. This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. Terracon does not warrant the work of regulatory agencies, laboratories or other third parties supplying information which may have been used in the preparation of this report. No warranty, express or implied is made.

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APPENDIX A

LIMITED ASBESTOS SURVEY - SAMPLE SUMMARY

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ASBESTOS SURVEY SAMPLE LOCATION SUMMARY
Renovate Pulmonary/Sleep Lab Project – Cincinnati VAMC
3200 Vine Street, Cincinnati, Ohio

Sample Number	Description	Sample Location	Material Location	Results
01-HP1, HP2-01	Hard plaster	A932 ceiling	Ceilings (except hallway), and walls throughout	No Asbestos Detected
01-HP1, HP2-02		A935 ceiling		No Asbestos Detected
01-HP1, HP2-03		Hall east wall outside A938		No Asbestos Detected
01-HP1, HP2-04		A938 east wall		No Asbestos Detected
01-HP1, HP2-05		A939 ceiling		No Asbestos Detected
01-HP1, HP2-06		A940 north wall		No Asbestos Detected
01-HP1, HP2-07		A941 north wall duct chase, inside chase east wall		No Asbestos Detected
02-WB1-08	Drywall System Materials	A941 bathroom west wall	Typically walls found in renovated bathrooms; surrounds 2 duct chases found above ceilings near A944 and A941	No Asbestos Detected
02-WB1-09		A944 bathroom north wall		No Asbestos Detected
02-WB1-10		Above A941 area, duct chase surround north wall		No Asbestos Detected
03-HP3-11	Soft white rough plaster	North end, hall above ceiling tile	Above ceilings at north end, north end fire wall	No Asbestos Detected
03-HP3-12		Above A945A, north wall		No Asbestos Detected
03-HP3-13		Above A932, north wall		No Asbestos Detected
04-PI3-14	Layered Cardboard Pipe Insulation	Wall chase imbedded into west hall wall outside A943 (collected from above)	Wall chases in hall west wall outside of A944 and A943, also observed in A944 west wall chase; material should also be assumed present inaccessible walls to bathroom plumbing fixtures	60% Chrysotile Asbestos
04-PI3-15		Wall chase access panel in west wall to water fountain in hall outside A944		60% Chrysotile Asbestos
04-PI3-16		Wall chase imbedded into west hall wall outside A944 (collected from above)		60% Chrysotile Asbestos
05-DI5-17	Light gray insulating cement on corners of brown duct insulation	A941 north wall duct chase	Readily observable on brown duct insulation in A941 north wall chase, however, may also be present in A944 south wall chase and on duct above ceiling in A945A, A944, A943, A941 (not readily observable from its east side, but maybe on west side of duct)	70% Chrysotile Asbestos
05-DI5-18		A941 north wall duct chase		70% Chrysotile Asbestos
05-DI5-19		A941 north wall duct chase		70% Chrysotile Asbestos

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Sample Number	Description	Sample Location	Material Location	Results
06-PI5-20	Gray pipe insulation debris	A932 on ceiling near northwest corner	On ceiling area along north wall of A932 (northwest corner) – an inaccessible possibly related pipe was observed imbedded in north immediately adjacent	40% Chrysotile Asbestos
06-PI5-21		A932 on ceiling near northwest corner		50% Chrysotile Asbestos
06-PI5-22		A932 on ceiling near northwest corner		50% Chrysotile Asbestos
07-MJ4-23	White insulating cement fittings on fiberglass ends	A944 below a/c unit	At floor level piping below air-conditioning units in each room (in most rooms, this is concealed by a black metal box, but exposed in A944 and A937)	2.3% Amosite Asbestos
07- MJ4-24		A944 below a/c unit		5.2% Amosite Asbestos
07- MJ4-25		A937 below a/c unit		1.8% Amosite Asbestos
08-DI5-26	Brown duct insulation	Above A945A	In A941 north wall chase, assumed in A944 south wall chase and on duct above ceiling in A945A, A944, A943, A941; material appeared to be held in place by wooden dowel rods	No Asbestos Detected
08-DI5-27		Above A944		No Asbestos Detected
08-DI5-28		Inside A941 north wall chase		No Asbestos Detected
09-SI1-29	Tan batting insulation with tan/black paper	Above A939	Above all plaster ceilings	No Asbestos Detected
09-SI1-30		Above A932		No Asbestos Detected
09-SI1-31		Above A935		No Asbestos Detected
10-FT2-32	12"x12" cream floor tile with black tile mastic and green carpet mastic	A932 under carpet	All rooms under carpet (occasionally in closets with no carpet)	No Asbestos Detected (tile); 1.3% Chrysotile Asbestos (Mastic)
10-FT2-33		A941 closet under carpet		No Asbestos Detected (tile); 1.2% Chrysotile Asbestos (Mastic)
10-FT2-34		A945A under carpet		No Asbestos Detected (tile); 1.2% Chrysotile Asbestos (Mastic)
11-FT2-35	12"x12" beige floor tile with gray/yellow mastic	Hall outside A938	Hallway (has occasional small amount of inset blue tile in middle of hall – not sampled due to aesthetics of an unsightly hole in the middle of the floor – assumed same batch tile though as this tile)	No Asbestos Detected
11-FT2-36		Hall outside A939		No Asbestos Detected
11- FT2-37		Hall outside A940		No Asbestos Detected
12-FC5-38	Faux wood vinyl floor covering with black/gray mastic	A939	Rooms A939 and A940 (and connector hall between)	No Asbestos Detected (flooring); 1.1% Chrysotile Asbestos (Mastic)
12-FC5-39		A939		No Asbestos Detected (flooring); 0.75% Chrysotile Asbestos (Mastic)
12-FC5-40		A940		No Asbestos Detected

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Sample Number	Description	Sample Location	Material Location	Results
13-FC3-41	6" tan cove base with cream mastic	A932	Various rooms throughout	No Asbestos Detected
13-FC3-42		A940		No Asbestos Detected
13-FC3-43		A943		No Asbestos Detected
14-FC3-44	6" dark gray cove base with cream mastic	A945A	Various rooms throughout	No Asbestos Detected
14-FC3-45		A941		No Asbestos Detected
14-FC3-46		A938		No Asbestos Detected
15-FC3-47	6" black cove base with brown mastic	A933	Various rooms throughout, but appeared to be largely associated with closets off of the main hall	No Asbestos Detected
15-FC3-48		A933		No Asbestos Detected
15-FC3-49		A935		No Asbestos Detected
16-MG5-50	White mastic paste on fiberglass ends	Above A934	Various locations throughout, readily observable on various fiberglass lines above ceilings	No Asbestos Detected
16-MG5-51		Above A938		No Asbestos Detected
16-MG5-52		Above hall near A939		No Asbestos Detected
17-MG5-53	Gray duct mastic sealant	Hall above ceiling near A937	Appeared to be on a newer duct section in the hall outside of A939-A935 area	No Asbestos Detected
17-MG5-54		Hall above ceiling near A935		No Asbestos Detected
17-MG5-55		Hall above ceiling near A939		No Asbestos Detected
18-MG5-56	Grayish-tan duct mastic sealant	Above 935A on metal duct	Located on seams of metal ductwork above ceilings and in chases	No Asbestos Detected
18-MG5-57		Hall outside A932, above ceiling on metal duct		No Asbestos Detected
18-MG5-58		A941 north wall duct chase on metal duct		No Asbestos Detected
19-MG5-59	Black vinyl duct connector with yellow mastic inside HVAC units	A938 north wall unit	HVAC units in rooms with those units	No Asbestos Detected
19-MG5-60		A944 north wall unit		No Asbestos Detected
19-MG5-61		A944 south wall unit		No Asbestos Detected
20-MG5-62	Gold/black mastic on old exhaust duct	Hall above ceiling tile near A934	Hall above ceiling tile near A934, on an apparent old abandoned exhaust duct	No Asbestos Detected
20-MG5-63		Hall above ceiling tile near A934		No Asbestos Detected
20-MG5-64		Hall above ceiling tile near A934		No Asbestos Detected

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Sample Number	Description	Sample Location	Material Location	Results
21- CA6-65	Red fire stop caulk	Hall north end above ceiling tile at wall penetrations	North end hall above ceilings	No Asbestos Detected
21- CA6-66		Hall north end above ceiling tile at wall penetrations		No Asbestos Detected
21- CA6-67		Hall north end above ceiling tile at wall penetrations		No Asbestos Detected
22-CT3-68	2'x2' pinhole and non-directional fissure pattern ceiling tile	Hall outside A935	Hallway	No Asbestos Detected
22-CT3-69		Hall outside A939		No Asbestos Detected
22-CT3-70		Hall outside A932		No Asbestos Detected
23- MG5-71	Black mastic vapor barrier	Hall above ceiling tile at south end	Applied to perimeter brick and masonry walls	No Asbestos Detected
23- MG5-72		East wall above A932		No Asbestos Detected
23- MG5-73		West wall above A939		No Asbestos Detected
24- MA8-74	White grout to newer thinner ceramic wall tile	A941 bathroom	Bathrooms which appeared to be newer (most)	No Asbestos Detected
24- MA8-75		A935 bathroom		No Asbestos Detected
24- MA8-76		A944 bathroom		No Asbestos Detected
25- MG5-77	Yellow mastic behind newer thinner ceramic wall tile	A941 bathroom	Bathrooms which appeared to be newer (most)	No Asbestos Detected
25- MG5-78		A935 bathroom		No Asbestos Detected
25- MG5-79		A944 bathroom		No Asbestos Detected
26- MA8-80	White grout to older thicker ceramic wall tile	A937 bathroom	Bathrooms which appeared to be older	No Asbestos Detected
26- MA8-81		A938 bathroom		No Asbestos Detected
26- MA8-82		A940 bathroom		No Asbestos Detected
27- MA7-83	Gray thin set behind older thicker ceramic wall tile	A937 bathroom	Bathrooms which appeared to be older	No Asbestos Detected
27- MA7-84		A938 bathroom		No Asbestos Detected
27- MA7-85		A940 bathroom		No Asbestos Detected

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APPENDIX B

CONFIRMED ASBESTOS-CONTAINING MATERIALS

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CONFIRMED ASBESTOS-CONTAINING MATERIALS
Renovate Pulmonary/Sleep Lab Project – Cincinnati VAMC
3200 Vine Street, Cincinnati, Ohio

SAMPLE # (S)	DESCRIPTION	MATERIAL LOCATION(S)	PERCENT & TYPE ASBESTOS	NESHAP CLASSIFICATION	CONDITION	ESTIMATED QUANTITY
04-PI3-14, 15, and 16	Layered Cardboard Pipe Insulation (~4" O.D.)	Embedded in two wall chases in hall - walls outside of A944 and A943, and in an accessible wall chase next to water fountain; also observed from above in A944 inaccessible west wall chase; material also assumed present inaccessible walls to bathroom plumbing fixtures	60% chrysotile asbestos	RACM	Fair	~98 total linear feet apparent with observed chases; ~288 total linear feet of assumed insulation concealed in walls to bathrooms
05-DI5-17, 18, and 19	Light gray insulating cement on corners of non-ACM brown duct insulation (brown duct insulation appeared to be held on with wooden dowel rods; duct is ~1'x2')	Vertical duct chases in 944 (southeast corner) and 941 (northeast corner); horizontal duct is also above 945A, 944, and 943 which leads to the two chases (cement was not visible on east side – however assumed on non-accessible west side)	70% chrysotile asbestos	RACM	Fair	~900 square feet of non-ACM brown duct insulation with the ACM cement on corners (ACM cement totals ~75 square feet)
06-PI5-20, 21, and 22	Gray pipe insulation debris	On ceiling area along north wall of A932 (northwest corner) – an inaccessible possibly related pipe was observed imbedded in the wall - immediately adjacent to the debris	50% chrysotile asbestos	RACM	Poor	~8 square feet of surface area with debris; ~24 linear feet of insulation assumed in wall
07-MJ4-23, 24, and 25	White insulating cement fittings on fiberglass ends (~8"-10" O.D.)	All rooms with forced-air wall mounted HVAC units; material is located at the floor level where pipes penetrate the floor; most are concealed by a black metal panel (panel is missing to some)	5.2% amosite asbestos	RACM	Fair	~ 48 fittings

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SAMPLE # (S)	DESCRIPTION	MATERIAL LOCATION(S)	PERCENT & TYPE ASBESTOS	NESHAP CLASSIFICATION	CONDITION	ESTIMATED QUANTITY
10-FT2-32, 33, and 34	Black Mastic under non-ACM 12"x12" cream floor tile	All rooms with carpet, including closets (tile is under carpet) (some closets do not have carpet – tile is exposed); includes closets off the hallway (some have tile missing, but black mastic is exposed) (note: the hallway tile did not appear to have black mastic underneath and is not included)	1.3% chrysotile asbestos	Category I non-friable	Good	~2,600 square feet
12-FC5-38 and 39	Black Mastic under faux wood vinyl floor sheeting	Rooms 939, 940, and connecting hall between 939 and 940	1.1% chrysotile asbestos	Category I non-friable	Good	~450 square feet

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APPENDIX C

ASBESTOS LABORATORY ANALYTICAL DATA

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806465	Description / Location:	White Plaster
Client No.:	01-HP1,HP2-01		A932 Ceiling
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	None Detected	None Detected
			100

Lab No.:	4806465	Description / Location:	Grey Plaster	Layer No.:	2
Client No.:	01-HP1,HP2-01		A932 Ceiling		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	Trace	Cellulose	100	

Lab No.:	4806466	Description / Location:	White Plaster
Client No.:	01-HP1,HP2-02		A935 Ceiling
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	None Detected	None Detected
			100

Lab No.:	4806466	Description / Location:	Grey Plaster	Layer No.:	2
Client No.:	01-HP1,HP2-02		A935 Ceiling		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	


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

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

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

Analysis Performed By: L. Solebello

Approved By: 

Date: 10/8/2012

Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806467	Description / Location:	White Plaster
Client No.:	01-HP1,HP2-03		Hall East Wall Outside A938
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	None Detected	None Detected
			100

Lab No.:	4806467	Description / Location:	Grey Plaster	Layer No.:	2
Client No.:	01-HP1,HP2-03		Hall East Wall Outside A938		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

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

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

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

Analysis Performed By: L. Solebello

Date: 10/8/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806468	Description / Location:	White Plaster
Client No.:	01-HP1,HP2-04		A938 East Wall
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	None Detected	None Detected
			100

Lab No.:	4806468	Description / Location:	Grey Plaster	Layer No.:	2
Client No.:	01-HP1,HP2-04		A938 East Wall		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.:	4806468	Description / Location:	Off-White Joint Compound	Layer No.:	3
Client No.:	01-HP1,HP2-04		A938 East Wall		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

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

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

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

Analysis Performed By: L. Solebello

Date: 10/8/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806469	Description / Location:	White Plaster	
Client No.:	01-HP1,HP2-05		A939 Ceiling	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806469	Description / Location:	Grey Plaster	Layer No.:	2
Client No.:	01-HP1,HP2-05		A939 Ceiling		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Accreditations:	NIST-NVLAP No. 101165-0	NY-DOH No. 11021	AIHA-LAP, LLC No. 100188
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Analytical Method:	EPA 600/R-93/116, by Polarized Light Microscopy
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Analysis Performed By: L. Solebello

Date: 10/8/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806470	Description / Location:	White Plaster	
Client No.:	01-HP1,HP2-06		A940 North Wall	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806470	Description / Location:	Grey Plaster	Layer No.: 2
Client No.:	01-HP1,HP2-06		A940 North Wall	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	Trace	Cellulose	100

Lab No.:	4806470	Description / Location:	White Joint Compound	Layer No.: 3
Client No.:	01-HP1,HP2-06		A940 North Wall	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Accreditations:

NIST-NVLAP No. 101165-0

NY-DOH No. 11021

AIHA-LAP, LLC No. 100188

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Analytical Method:

EPA 600/R-93/116, by Polarized Light Microscopy

Comments:

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Analysis Performed By: L. Solebello

Date: 10/8/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806471	Description / Location:	White Plaster
Client No.:	01-HP1,HP2-07		A941 NorthWallDuctChase,InsideChaseEWall
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	None Detected	None Detected
			100

Lab No.:	4806471	Description / Location:	Grey Plaster	Layer No.:	2
Client No.:	01-HP1,HP2-07		A941 NorthWallDuctChase,InsideChaseEWall		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.:	4806472	Description / Location:	White/Tan Sheetrock
Client No.:	02-WB1-08		A941 Bathroom West Wall
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	12	Cellulose
		3	Fibrous Glass
			85

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

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

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Analysis Performed By: L. Solebello

Date: 10/8/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806473	Description / Location:	Tan/White Sheetrock
Client No.:	02-WB1-09		A944 Bathroom North Wall
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	60	Cellulose
		Trace	Fibrous Glass

Lab No.:	4806473	Description / Location:	White Joint Compound	Layer No.:	2
Client No.:	02-WB1-09		A944 Bathroom North Wall		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.:	4806474	Description / Location:	Tan/White Sheetrock
Client No.:	02-WB1-10		AboveA941Area,DuctChaseSurroundNorthWall
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	60	Cellulose
		Trace	Fibrous Glass

Lab No.:	4806474	Description / Location:	White Joint Compound	Layer No.:	2
Client No.:	02-WB1-10		AboveA941Area,DuctChaseSurroundNorthWall		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

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

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

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Analysis Performed By: L. Solebello

Date: 10/8/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806475	Description / Location:	Off-White Plaster
Client No.:	03-HP3-11		North End, Hall Above Ceiling Tile
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	None Detected	None Detected
			100

Lab No.:	4806476	Description / Location:	Off-White Plaster
Client No.:	03-HP3-12		Above A945A, North Wall
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	None Detected	None Detected
			100

Lab No.:	4806477	Description / Location:	Off-White Plaster
Client No.:	03-HP3-13		Above A932, North Wall
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	None Detected	None Detected
			100

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

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Analysis Performed By: L. Solebello

Date: 10/8/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806478	Description / Location:	Grey Insulation; Wall Chase	
Client No.:	04-PI3-14		Imbedded Into W Hall Wall Outside A943	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
60	Chrysotile	None Detected	None Detected	40

Lab No.:	4806478	Description / Location:	Brown Insulation; Wall Chase	Layer No.:	2
Client No.:	04-PI3-14		Imbedded Into W Hall Wall Outside A943		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	95	Cellulose	5	

Lab No.:	4806478	Description / Location:	Tan Wrap; Wall Chase	Layer No.:	3
Client No.:	04-PI3-14		Imbedded Into W Hall Wall Outside A943		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	80	Cellulose	20	

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

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Analysis Performed By: L. Solebello

Date: 10/8/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806479	Description / Location:	Grey Insulation; Wall Chase Access Panel
Client No.:	04-PI3-15		InWallToWaterFountainInHallOutsideA944
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
60	Chrysotile	None Detected	None Detected
			40

Lab No.:	4806479	Description / Location:	Tan Wrap; Wall Chase Access Panel	Layer No.:	2
Client No.:	04-PI3-15		InWallToWaterFountainInHallOutsideA944		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	80	Cellulose	20	

Lab No.:	4806479	Description / Location:	Brown Insulation; Wall Chase AccessPanel	Layer No.:	3
Client No.:	04-PI3-15		InWallToWaterFountainInHallOutsideA944		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	95	Cellulose	5	

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

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

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Analysis Performed By: L. Solebello

Date: 10/8/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806480	Description / Location:	Grey Insulation; Wall Chase	
Client No.:	04-PI3-16		Imbedded Into WHall Wall Outside A944	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
60	Chrysotile	None Detected	None Detected	40

Lab No.:	4806480	Description / Location:	Brown Insulation; Wall Chase	Layer No.:	2
Client No.:	04-PI3-16		Imbedded Into WHall Wall Outside A944		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	95	Cellulose	5	

Lab No.:	4806481	Description / Location:	Grey Insulation	
Client No.:	05-DI5-17		A941 North Wall Duct Chase	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
70	Chrysotile	None Detected	None Detected	30

Lab No.:	4806481	Description / Location:	Brown Insulation	Layer No.:	2
Client No.:	05-DI5-17		A941 North Wall Duct Chase		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	80	Fibrous Glass	20	
		Trace	Cellulose		

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

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

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Analysis Performed By: L. Solebello

Date: 10/8/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806482	Description / Location:	Grey Insulation
Client No.:	05-DI5-18		A941 North Wall Duct Chase
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
70	Chrysotile	None Detected	None Detected
			30

Lab No.:	4806482	Description / Location:	Brown Insulation	Layer No.:	2
Client No.:	05-DI5-18		A941 North Wall Duct Chase		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	Trace	Cellulose	20	
		80	Fibrous Glass		

Lab No.:	4806483	Description / Location:	Grey Insulation
Client No.:	05-DI5-19		A941 North Wall Duct Chase
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
70	Chrysotile	None Detected	None Detected
			30

Lab No.:	4806483	Description / Location:	Brown Insulation	Layer No.:	2
Client No.:	05-DI5-19		A941 North Wall Duct Chase		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	80	Fibrous Glass	20	
		Trace	Cellulose		

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

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

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Analysis Performed By: L. Solebello

Date: 10/8/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806484	Description / Location:	Grey Pipe Insulation	
Client No.:	06-PI5-20		A932 On Ceiling Near Northwest Corner	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
40	Chrysotile	None Detected	None Detected	60

Lab No.:	4806485	Description / Location:	Grey Pipe Insulation	
Client No.:	06-PI5-21		A932 On Ceiling Near Northwest Corner	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
50	Chrysotile	None Detected	None Detected	50

Lab No.:	4806486	Description / Location:	Grey Pipe Insulation	
Client No.:	06-PI5-22		A932 On Ceiling Near Northwest Corner	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
50	Chrysotile	None Detected	None Detected	50

Lab No.:	4806487	Description / Location:	White Insulation	
Client No.:	07-MJ4-23		A944 Below A/C Unit	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
PC 2.5	Amosite	5	Cellulose	PC 57.5
		35	Mineral Wool	

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Analysis Performed By: L. Price

Date: 10/9/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806488	Description / Location:	White Insulation
Client No.:	07-MJ4-24		A944 Below A/C Unit
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
PC 5.2	Amosite	30	Mineral Wool
			PC 64.8

Lab No.:	4806489	Description / Location:	White Insulation
Client No.:	07-MJ4-25		A937 Below A/C Unit
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
PC 1.8	Amosite	40	Mineral Wool
			PC 58.2

Lab No.:	4806490	Description / Location:	Brown Duct Insulation
Client No.:	08-DI5-26		Above A945A
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	30	Cellulose
		50	Mineral Wool
			20

Lab No.:	4806491	Description / Location:	Brown Duct Insulation
Client No.:	08-DI5-27		Above A944
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	30	Cellulose
		50	Mineral Wool
			20

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Analysis Performed By: L. Price

Date: 10/9/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806492	Description / Location:	Brown Duct Insulation	
Client No.:	08-DI5-28		Inside A941 North Wall Chase	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	25	Cellulose	25
		50	Mineral Wool	

Lab No.:	4806493	Description / Location:	Tan Insulation	
Client No.:	09-SI1-29		Above A939	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	100	Mineral Wool	None Detected

Lab No.:	4806493	Description / Location:	Tan/Black Tar Paper	Layer No.: 2
Client No.:	09-SI1-29		Above A939	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	80	Cellulose	20

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Analysis Performed By: L. Price

Date: 10/9/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806494	Description / Location:	Tan Insulation
Client No.:	09-SI1-30		Above A932
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	100	Mineral Wool
			None Detected

Lab No.:	4806494	Description / Location:	Tan/Black Tar Paper	Layer No.:	2
Client No.:	09-SI1-30		Above A932		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	75	Cellulose	25	

Lab No.:	4806495	Description / Location:	Tan Insulation
Client No.:	09-SI1-31		Above A935
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	100	Mineral Wool
			None Detected

Lab No.:	4806495	Description / Location:	Tan/Black Tar Paper	Layer No.:	2
Client No.:	09-SI1-31		Above A935		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	80	Cellulose	20	

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

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Analysis Performed By: L. Price

Date: 10/9/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806496	Description / Location:	Off-White Floor Tile; 12x12
Client No.:	10-FT2-32		A932 Under Carpet
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	None Detected	None Detected
			100

Lab No.:	4806496	Description / Location:	Black Mastic	Layer No.:	2
Client No.:	10-FT2-32		A932 Under Carpet		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
PC 1.3	Chrysotile	None Detected	None Detected	PC 98.7	

Lab No.:	4806496	Description / Location:	Green/Yellow Mastic	Layer No.:	3
Client No.:	10-FT2-32		A932 Under Carpet		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

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Analysis Performed By: L. Price

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CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806497	Description / Location:	Off-White Floor Tile; 12x12
Client No.:	10-FT2-33		A941 Closet Under Carpet
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	None Detected	None Detected
			100

Lab No.:	4806497	Description / Location:	Black Mastic	Layer No.:	2
Client No.:	10-FT2-33		A941 Closet Under Carpet		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
PC 1.2	Chrysotile	None Detected	None Detected	PC 98.8	

Lab No.:	4806497	Description / Location:	Green/Yellow Mastic	Layer No.:	3
Client No.:	10-FT2-33		A941 Closet Under Carpet		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

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Date: 10/9/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806498	Description / Location:	Off-White Floor Tile; 12x12	
Client No.:	10-FT2-34		A945A Under Carpet	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806498	Description / Location:	Black Mastic	Layer No.:	2
Client No.:	10-FT2-34		A945A Under Carpet		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
PC 1.2	Chrysotile	None Detected	None Detected	PC 98.8	

Lab No.:	4806498	Description / Location:	Green/Yellow Mastic	Layer No.:	3
Client No.:	10-FT2-34		A945A Under Carpet		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

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Analysis Performed By: L. Price

Date: 10/9/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806499	Description / Location:	Tan Floor Tile; 12x12	
Client No.:	11-FT2-35		Hall Outside A938	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806499	Description / Location:	Yellow Mastic		Layer No.:	2
Client No.:	11-FT2-35		Hall Outside A938			
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>		
None Detected	None Detected	None Detected	None Detected	100		

Lab No.:	4806500	Description / Location:	Tan Floor Tile; 12x12	
Client No.:	11-FT2-36		Hall Outside A939	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806500	Description / Location:	Yellow Mastic		Layer No.:	2
Client No.:	11-FT2-36		Hall Outside A939			
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>		
None Detected	None Detected	None Detected	None Detected	100		

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

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Analysis Performed By: L. Price

Date: 10/9/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806501	Description / Location:	Tan Floor Tile; 12x12	
Client No.:	11-FT2-37		Hall Outside A940	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806501	Description / Location:	Yellow Mastic		Layer No.:	2
Client No.:	11-FT2-37		Hall Outside A940			
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>		
None Detected	None Detected	None Detected	None Detected	100		

Lab No.:	4806502	Description / Location:	Brown/Grey Floor Tile	
Client No.:	12-FC5-38		A939	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806502	Description / Location:	Black Mastic		Layer No.:	2
Client No.:	12-FC5-38		A939			
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>		
PC 1.1	Chrysotile	None Detected	None Detected	PC 98.9		

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

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Analysis Performed By: L. Price

Date: 10/9/2012

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Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806503	Description / Location:	Brown/Grey Floor Tile	
Client No.:	12-FC5-39		A939	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806503	Description / Location:	Black Mastic	Layer No.: 2
Client No.:	12-FC5-39		A939	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
PC 0.75	Chrysotile	None Detected	None Detected	PC 99.25

Lab No.:	4806504	Description / Location:	Brown/Grey Floor Tile	
Client No.:	12-FC5-40		A940	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806504	Description / Location:	Brown Mastic	Layer No.: 2
Client No.:	12-FC5-40		A940	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

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

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

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

Analysis Performed By: L. Price

Date: 10/9/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806505	Description / Location:	Tan Rubber Cove Base; 6"	
Client No.:	13-FC3-41		A932	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806505	Description / Location:	Tan Mastic		Layer No.:	2
Client No.:	13-FC3-41		A932			
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>		
None Detected	None Detected	None Detected	None Detected	100		

Lab No.:	4806506	Description / Location:	Tan Rubber Cove Base; 6"	
Client No.:	13-FC3-42		A940	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806506	Description / Location:	Tan Mastic		Layer No.:	2
Client No.:	13-FC3-42		A940			
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>		
None Detected	None Detected	None Detected	None Detected	100		

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	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806507	Description / Location:	Tan Rubber Cove Base; 6"	
Client No.:	13-FC3-43		A943	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806507	Description / Location:	Tan Mastic		Layer No.:	2
Client No.:	13-FC3-43		A943			
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>		
None Detected	None Detected	None Detected	None Detected	100		

Lab No.:	4806508	Description / Location:	Grey Rubber Cove Base; 6"	
Client No.:	14-FC3-44		A945A	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806508	Description / Location:	Tan Mastic		Layer No.:	2
Client No.:	14-FC3-44		A945A			
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>		
None Detected	None Detected	None Detected	None Detected	100		

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CERTIFICATE OF ANALYSIS

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	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806509	Description / Location:	Grey Rubber Cove Base; 6"
Client No.:	14-FC3-45		A941
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	None Detected	None Detected
			100

Lab No.:	4806509	Description / Location:	Tan Mastic	Layer No.:	2
Client No.:	14-FC3-45		A941		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.:	4806510	Description / Location:	Grey Rubber Cove Base; 6"
Client No.:	14-FC3-46		A938
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	None Detected	None Detected
			100

Lab No.:	4806510	Description / Location:	Tan Mastic	Layer No.:	2
Client No.:	14-FC3-46		A938		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

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		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806511	Description / Location:	Black Rubber Cove Base; 6"	
Client No.:	15-FC3-47		A933	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806511	Description / Location:	Brown Mastic	Layer No.: 2
Client No.:	15-FC3-47		A933	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	Trace	Other	100

Lab No.:	4806512	Description / Location:	Black Rubber Cove Base; 6"	
Client No.:	15-FC3-48		A933	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806512	Description / Location:	Brown Mastic	Layer No.: 2
Client No.:	15-FC3-48		A933	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	Trace	Other	100

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	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806513	Description / Location:	Black Rubber Cove Base; 6"
Client No.:	15-FC3-49		A935
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	None Detected	None Detected
			100

Lab No.:	4806513	Description / Location:	Tan Mastic	Layer No.:	2
Client No.:	15-FC3-49		A935		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.:	4806514	Description / Location:	White Mastic
Client No.:	16-MG5-50		Above A934
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	None Detected	None Detected
			100

Lab No.:	4806514	Description / Location:	Yellow Insulation	Layer No.:	2
Client No.:	16-MG5-50		Above A934		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	100	Mineral Wool	None Detected	

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		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806515	Description / Location:	White Mastic
Client No.:	16-MG5-51		Above A938
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	None Detected	None Detected
			100

Lab No.:	4806515	Description / Location:	Yellow Insulation	Layer No.:	2
Client No.:	16-MG5-51		Above A938		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	100	Mineral Wool	None Detected	

Lab No.:	4806516	Description / Location:	White Mastic
Client No.:	16-MG5-52		Above Hall Near A939
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	None Detected	None Detected
			100

Lab No.:	4806516	Description / Location:	Yellow Insulation	Layer No.:	2
Client No.:	16-MG5-52		Above Hall Near A939		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	100	Mineral Wool	None Detected	

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		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806517	Description / Location:	Grey Duct Mastic
Client No.:	17-MG5-53		Hall Above Ceiling Near A937
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	Trace	Synthetic
			100

Lab No.:	4806518	Description / Location:	Grey Duct Mastic
Client No.:	17-MG5-54		Hall Above Ceiling Near A935
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	Trace	Synthetic
			100

Lab No.:	4806519	Description / Location:	Grey Duct Mastic
Client No.:	17-MG5-55		Hall Above Ceiling Near A939
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	Trace	Synthetic
			100

Lab No.:	4806520	Description / Location:	Tan/Grey Duct Mastic
Client No.:	18-MG5-56		Above 935A On Metal Duct
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	None Detected	None Detected
			100

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BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806521	Description / Location:	Tan/Grey Duct Mastic	
Client No.:	18-MG5-57		HallOutsideA932, AboveCeilingOnMetalDuct	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806522	Description / Location:	Tan/Grey Duct Mastic	
Client No.:	18-MG5-58		A941 North Wall Duct Chase On Metal Duct	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806523	Description / Location:	Black/White Woven Fibers	
Client No.:	19-MG5-59		A938 North Wall Unit	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	60	Fibrous Glass	40

Lab No.:	4806523	Description / Location:	Yellow Mastic	Layer No.: 2
Client No.:	19-MG5-59		A938 North Wall Unit	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

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	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806524	Description / Location:	Black/White Woven Fibers
Client No.:	19-MG5-60		A944 North Wall Unit
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	60	Fibrous Glass
			40

Lab No.:	4806524	Description / Location:	Yellow Mastic	Layer No.:	2
Client No.:	19-MG5-60		A944 North Wall Unit		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.:	4806525	Description / Location:	Black/White Woven Fibers
Client No.:	19-MG5-61		A944 South Wall Unit
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>
None Detected	None Detected	60	Fibrous Glass
			40

Lab No.:	4806525	Description / Location:	Yellow Mastic	Layer No.:	2
Client No.:	19-MG5-61		A944 South Wall Unit		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

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

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This report shall not be reproduced except in full, without written approval of the laboratory.

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

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

Analysis Performed By: L. Price

Date: 10/9/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806526	Description / Location:	Gold/Black Mastic; A/W Old Exhaust Duct	
Client No.:	20-MG5-62		Hall Above Ceiling Tile Near A934	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806527	Description / Location:	Gold Mastic; A/W Old Exhaust Duct	
Client No.:	20-MG5-63		Hall Above Ceiling Tile Near A934	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806528	Description / Location:	Gold Mastic; A/W Old Exhaust Duct	
Client No.:	20-MG5-64		Hall Above Ceiling Tile Near A934	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806529	Description / Location:	Red Firestop Caulk; Hall North End	
Client No.:	21-CA6-65		Above Ceiling Tile At Wall Penetration	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	1	Fibrous Glass	99

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

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Analysis Performed By: L. Price

Date: 10/9/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806530	Description / Location:	Red Firestop Caulk; Hall North End	
Client No.:	21-CA6-66		Above Ceiling Tile At Wall Penetrations	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	2	Fibrous Glass	98

Lab No.:	4806531	Description / Location:	Red Firestop Caulk; Hall North End	
Client No.:	21-CA6-67		Above Ceiling Tile At Wall Penetrations	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	Trace	Fibrous Glass	100

Lab No.:	4806532	Description / Location:	White/Tan Ceiling Tile; 2x2	
Client No.:	22-CT3-68		Hall Outside A935	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	50	Cellulose	50

Lab No.:	4806533	Description / Location:	White/Tan Ceiling Tile; 2x2	
Client No.:	22-CT3-69		Hall Outside A939	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	50	Cellulose	50

Accreditations: **NIST-NVLAP No. 101165-0** **NY-DOH No. 11021** **AIHA-LAP, LLC No. 100188**
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Analytical Method: EPA 600/R-93/116, by Polarized Light Microscopy

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Analysis Performed By: L. Price

Date: 10/9/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806534	Description / Location:	White/Tan Ceiling Tile; 2x2	
Client No.:	22-CT3-70		Hall Outside A932	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	60	Cellulose	40

Lab No.:	4806535	Description / Location:	Black Mastic; Vapor Barrier	
Client No.:	23-MG5-71		Hall Above Ceiling Tile At South End	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806536	Description / Location:	Black Mastic; Vapor Barrier	
Client No.:	23-MG5-72		East Wall Above A932	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806537	Description / Location:	Black Mastic; Vapor Barrier	
Client No.:	23-MG5-73		West Wall Above A939	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

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

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

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Analysis Performed By: L. Price

Date: 10/9/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806538	Description / Location:	White Grout; A/W Ceramic Wall Tile	
Client No.:	24-MA8-74		A941 Bathroom	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806539	Description / Location:	White Grout; A/W Ceramic Wall Tile	
Client No.:	24-MA8-75		A935 Bathroom	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806540	Description / Location:	White Grout; A/W Ceramic Wall Tile	
Client No.:	24-MA8-76		A944 Bathroom	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806541	Description / Location:	Yellow Mastic; A/W Ceramic Wall Tile	
Client No.:	25-MG5-77		A941 Bathroom	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Accreditations: **NIST-NVLAP No. 101165-0** **NY-DOH No. 11021** **AIHA-LAP, LLC No. 100188**
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Analysis Performed By: L. Price

Date: 10/9/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806542	Description / Location:	Yellow Mastic; A/W Ceramic Wall Tile	
Client No.:	25-MG5-78		A935 Bathroom	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806543	Description / Location:	Yellow Mastic; A/W Ceramic Wall Tile	
Client No.:	25-MG5-79		A944 Bathroom	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806544	Description / Location:	White Grout; A/W Ceramic Wall Tile	
Client No.:	26-MA8-80		A937 Bathroom	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806545	Description / Location:	White Grout; A/W Ceramic Wall Tile	
Client No.:	26-MA8-81		A938 Bathroom	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

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

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

Analysis Performed By: L. Price

Date: 10/9/2012

CERTIFICATE OF ANALYSIS

Client:	Terracon	Report Date:	10/9/2012
	611 Lunken Park Drive	Report No.:	286960
	Cincinnati OH 45226	Project:	Pulmonary Sleep Lab
		Project No.:	N1127192

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:	4806546	Description / Location:	White Grout; A/W Ceramic Wall Tile	
Client No.:	26-MA8-82		A940 Bathroom	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806547	Description / Location:	Grey Cementitious; A/W Ceramic Wall Tile	
Client No.:	27-MA7-83		A937 Bathroom	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806548	Description / Location:	Grey Cementitious; A/W Ceramic Wall Tile	
Client No.:	27-MA7-84		A938 Bathroom	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.:	4806549	Description / Location:	Grey Cementitious; A/W Ceramic Wall Tile	
Client No.:	27-MA7-85		A940 Bathroom	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

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

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

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

Analysis Performed By: L. Price

Date: 10/9/2012

Limited Asbestos Survey

Pulmonary/Sleep Lab Project ■ Cincinnati VAMC
October 15, 2012 ■ Terracon Project No. N1127192



APPENDIX D

PROJECT BOUNDARY DRAWING

CORRIDC

STOR.

STOR.

LIN.

SIG. CLOS.

IAC

F. TLT.

CHIEF PSYCH. OFF.

FAC

DN. UP

STAIR#1

A/C SHAFT

RSDNT. LOUNGE

CLINICAL

INFECT.

STAIR#5

BATH

F. RSDNT.

BATH

CLOS.

CLOS.

BATH

CLOS.

F. RSDNT.

CLOS.

CLOS.

CLOS.

STOR.

STOR.

STOR.

FAC

CLOS.

CORRIDOR

ELEC.

Outside Scope

DIR. OFF.

OFF.

PSYCH. OFF.

BATH

CLOS.

ELEC.

CLOS.

BATH

CLOS.

CLOS.

CLOS.

RSDNT.

M. RSDNT.

RSDNT.

RSDNT.

BATH

M. RSDNT.

roof below
(outside scope)

9th FL. SOUTH

Duct
SHAFT

Duct
SHAFT

Limited Asbestos Survey

Pulmonary/Sleep Lab Project ■ Cincinnati VAMC
October 15, 2012 ■ Terracon Project No. N1127192



APPENDIX E

CERTIFICATIONS



OHIO DEPARTMENT OF HEALTH

246 North High Street
Columbus, Ohio 43215

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

John R. Kasich/Governor

Theodore E. Wymysio, M.D./Director of Health

August 01, 2012

Joseph A Tussey

Cincinnati OH

RE: Asbestos Hazard Evaluation Specialist
Certification Number: ES32388
Expiration Date: 09/02/2013

Dear Joseph A Tussey:

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 Adria Goodwin, Licensure Specialist, at 614-644-0226.

Sincerely,

Bridgette C. Smith
Licensure Program Administrator
Bureau of Information and Operational Support

