

November 4, 2021

East Carolina University
Eppes Building 3
Greenville, North Carolina

Attn: Mr. Ricky Hill, Director, Facilities Services

M: (252) 328-6776 E: hillr@ecu.edu

Re: Asbestos Consulting Services Report

Brewster Building A-Wing

East 10<sup>th</sup> Street

Greenville, North Carolina 27858 Terracon Project No. 70217599

Dear Mr. Hill:

The purpose of this report is to present the results of the limited asbestos survey and water and air sampling for asbestos performed on October 6, 2021, at the A-Wing of the Brewster Building on the East Carolina University (ECU) campus in Greenville, North Carolina. This survey was conducted in general accordance Terracon proposal P70217599, dated September 3, 2021. We understand that these services were requested due to occupant complaints within the A-Wing of the building.

**Asbestos was detected** in samples collected in bulk samples collected from the building. Asbestos was not detected in the water or air samples collected. Please refer to the attached report for details.

Terracon appreciates the opportunity to provide these services to East Carolina University. If you have any questions regarding this report, please contact the undersigned at (919) 873-2211.

Sincerely,

**Terracon Consultants Inc.** 

Alicia Coley, CIH

Project Industrial Hygienist

For: Jeffrey A. Gurrie, CIH

Authorized Project Reviewer



Terracon Consultants, Inc. 2401 Brentwood Road Suite 107 Raleigh, North Carolina 27604 P (919) 873-2211 F (919) 873-9555 terracon.com

### **ASBESTOS CONSULTING SERVICES REPORT**

Brewster Building A\_Wing
East 10th Street
Greenville, North Carolina 27858

November 4, 2021 Terracon Project No. 70217599



### Prepared For:

East Carolina University Greenville, North Carolina

### Prepared By:

Terracon Consultants, Inc. Raleigh, North Carolina

terracon.com



Environmental B Facilities B Geotechnical Materials

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## ASBESTOS CONSULTING SERVICES REPORT BREWSTER BUILDING A-WING

### EAST 10TH STREET

#### **GREENVILLE, NORTH CAROLINA 27858**

Terracon Project No. 70217599 November 4, 2021

#### 1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) conducted a limited asbestos survey, limited water testing for asbestos, and limited air sampling for asbestos at the A-Wing of the Brewster Building on the East Carolina University (ECU) campus in Greenville, North Carolina. The survey was conducted on October 6, 2021, by State of North Carolina Accredited Asbestos Building Inspectors and Air Monitors in general accordance with Terracon proposal P70217599, dated September 3, 2021.

Building components within the client-specified area of the building were visually assessed and homogeneous areas of readily accessible suspect asbestos-containing materials (ACM) were identified and documented. The survey was limited to interior areas of the A-Wing of the Brewster Building. Suspect ACM samples were collected in general accordance with the sampling protocols outlined in Environmental Protection Agency (EPA) regulation 40 CFR 763 (Asbestos Hazard Emergency Response Act, AHERA). Suspect ACM samples were delivered to an accredited laboratory for analysis by Polarized Light Microscopy (PLM).

In addition to the asbestos survey, Terracon conducted water testing and air sampling for asbestos. Water testing was performed at two water fountains and two restroom sinks and were analyzed by an accredited laboratory by EPA Method 100.2 "Determination of Asbestos Structures over 10  $\mu$ m in Length in Drinking Water" (EPA/600/R-94/134) for asbestos fibers greater than or equal to ( $\geq$ ) 0.5  $\mu$ m in length. The air sampling included collecting two samples on each floor of the building and delivering them to an accredited laboratory for analysis by NIOSH Method 7402 "Asbestos by Transmission Electron Microscopy (TEM)".

We understand these asbestos services were requested due to occupant complaints within the subject space. We further understand the purpose of these services is to identify and quantify readily accessible ACM present for informational purposes. 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 be identified, classified and quantified prior to planned disturbances, renovation or demolition activities.

Brewster Building A-Wing Greenville, North Carolina November 4, 2021 Terracon Project No. 70217599



#### 2.0 BUILDING DESCRIPTION

The A-Wing of the Brewster Building is a four-story building with approximately 37,000 square feet, built in the 1960s. The building is a concrete structure atop a concrete slab. The exterior of the building is finished with concrete. Ceilings are finished with acoustical ceiling tile, ceiling texture, or are unfinished. Walls are painted concrete masonry unit (CMU), ceramic tile, and/or drywall. The floors are finished with vinyl floor tile, carpet, and/or ceramic tile or are unfinished concrete.

The air handler units (AHUs) for the heating, ventilation, and air conditioning (HVAC) system located in mechanicals rooms on each floor. HVAC duct is either insulated with canvas wrap over fiberglass or foil-backed fiberglass. Visible piping throughout the building is insulated with either fiberglass insulation or mudded/hard insulation.

Terracon's scope of services was limited to readily accessible materials in the interior of the A-Wing of the building.

#### 3.0 FIELD ACTIVITIES

#### 3.1 Asbestos in Building Materials

The survey was conducted by state of North Carolina Accredited Asbestos Building Inspectors Alicia Coley (NC Accredited Asbestos Inspector Number 12548) and Anthony Scialdone (NC Accredited Asbestos Inspector Number 12284). The survey was conducted in general accordance with the sample collection protocols established in EPA regulation 40 CFR 763 (AHERA). Copies of applicable accreditations are included in Appendix H. A summary of survey activities is provided below.

#### 3.1.1 Visual Assessment

Our survey activities began with visual observation of the A-Wing 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. The assessment was conducted throughout visually accessible areas of the A-Wing.

#### 3.1.2 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.

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#### 3.1.3 Sample Collection

Based on results of our visual observations, bulk samples of suspect ACM were collected in general accordance with AHERA sampling protocols. Random samples of suspect materials were collected for each homogeneous area. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker.

Terracon collected 96 bulk samples from 29 homogeneous areas of suspect ACM. A summary of suspect ACM samples collected during the survey is included as Appendix A. Photographs are included as Appendix F.

#### 3.1.4 Bulk Sample Analysis

Bulk samples were submitted under chain of custody to EMSL Analytical, Inc. (EMSL) of Morrisville, North Carolina for analysis by PLM with dispersion staining techniques per EPA's Method for the Determination of Asbestos in Bulk Building Materials (600/R-93-116). The percentage of asbestos, where applicable, was determined by microscopic visual estimation. Samples exhibiting a percentage of asbestos under 3%, by visual estimation, were re-analyzed by PLM point count techniques per EPA/600/R-93/116 (400 Point Count). EMSL is accredited under the National Voluntary Laboratory Accreditation Program NVLAP (Accreditation Number 200671-0). The asbestos laboratory analytical report is provided in Appendix C.

#### 3.2 Ambient Asbestos Air Monitoring

As requested by ECU, Terracon collected two air samples from each floor of the A-Wing of the building. The samples were placed in common spaces on each floor and were collected prior to asbestos survey activities during normal working hours, for approximately five hours.

Samples were collected using a 25-millimeter cassette fitted with a 0.45 micron mixed cellulose ester filter and high volume pump set to approximately 10 liters per minute. The pumps were calibrated before and after the sampling event with suitable media inline using a TSI 4146 Primary Flow Calibrator (Serial Number 41461809010). For quality control and quality assurance purposes, two blank samples were prepared and submitted for analysis.

The samples were submitted under a chain of custody to Eurofins/CEI (CEI) in Cary, North Carolina for analysis in accordance with NIOSH Method 7402 "Asbestos by Transmission Electron Microscopy (TEM)". CEI is accredited under the National Voluntary Laboratory Accreditation Program NVLAP (Accreditation Number 101768-0). The air sampling laboratory analytical report is provided in Appendix D.

#### 3.3 Water Testing for Asbestos

As requested by ECU, Terracon collected two water samples from drinking fountains (1st and 3rd floor water fountain) and two water samples from non-filtered restroom sinks (4th floor women's restroom and 2nd floor men's restroom) in the A-Wing of the building. Approximately 800 milliliters

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of water was collected in a laboratory supplied plastic autoclaved one liter container for each sample location.

The samples were sealed immediately after collection, labeled, and transported on ice under written chain-of-custody protocol to CEI in Cary, North Carolina. CEI is a North Carolina Certified Drinking Water Laboratory (Laboratory Number 37912). The samples were analyzed by EPA Method 100.2 "Determination of Asbestos Structures over 10 µm in Length in Drinking Water" (EPA/600/R-94/134) for asbestos fibers greater than or equal to (≥) 0.5 µm in length. The water sampling laboratory analytical report is provided in Appendix E.

#### 4.0 REGULATORY OVERVIEW

The following section provide a regulatory overview. Specific regulations should be referenced for compliance.

#### 4.1 NESHAP

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 building materials prior to demolition or renovation activities. Under NESHAP, asbestos-containing building materials 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).

#### 4.2 North Carolina State Regulations

In the state of North Carolina, asbestos activities are regulated by the North Carolina Department of Health and Human Services, Health Hazards Control Unit (HHCU) under 10A NCAC 41C Section .0600 – Asbestos Hazard Management Program (AHMP). The AHMP requires that any asbestos-related activity conducted in a public building be performed by personnel accredited by the HHCU.

Asbestos abatement must be conducted under the direct supervision of a North Carolina accredited supervisor, except that permitted removals of roofing products may be conducted under the direct supervision of a North Carolina accredited roofing supervisor. An asbestos abatement design must be prepared by a North Carolina accredited abatement designer for each individually permitted removal of more than 3000 square feet (281 square meters), 1500 linear feet (462 meters) or 656 cubic feet (18 cubic meters), of regulated asbestos containing materials conducted in public areas.

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Third-party air monitoring must be conducted during the abatement activities in accordance with AHMP requirements.

AHMP requires that no person remove more than 35 cubic feet (1 cubic meter), 160 square feet (15 square meters), or 260 linear feet (80 linear meters) of regulated asbestos containing material, without a permit issued by the HHCU. Applications must be postmarked or received by the HHCU at least 10 working days prior to the scheduled removal start date.

The North Carolina Asbestos Exposure Standard for Public Areas has a maximum allowable ambient asbestos level of 0.01 fibers per cubic centimeter (f/cc) as analyzed by phase contrast microscopy under 10A NCAC 41C Section .0607.

#### 4.3 OSHA

OSHA's general industry asbestos standard (29 CFR 1910.1001) requires employers to exercise due diligence in complying with the requirements to inform their employees and affected contractors working in the facility about the presence and location of both ACM and materials assumed to contain asbestos.

The OSHA Asbestos standard for construction (29 CFR 1926.1101) regulates workplace exposure to asbestos during construction and maintenance activities. The 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. States which administer their own federally-approved state OSHA programs may require additional precautions.

A full copy of the OSHA asbestos standard for general and construction industry may be found at OSHA's website (www.osha.gov) and should be referenced for specific information.

#### 4.4 EPA Water Testing for Asbestos

The EPA Safe Drinking Water Act establishes safe levels of chemicals in drinking water which do or may cause health problems. These drinking water standards and the regulations for ensuring these standards are met, are called National Primary Drinking Water Regulations. All public water supplies must abide by these regulations.

Based solely on possible health risks and exposure, the Maximum Contaminant Level Goal (MCLG) for asbestos has been set at 7 million fibers per liter of water (M.L.). This level was set based on the ability of public water systems to detect and remove contaminants using suitable treatment technologies. The EPA also set this Maximum Contaminant Level (MCL) at 7 M.L. since this is the lowest level to which water systems can reasonably be required to remove asbestos should it occur in drinking water based on present technology and resources.

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#### 5.0 FINDINGS

#### 5.1 Asbestos in Building Materials

Asbestos was detected in several building materials. At the time of the assessment these materials are in good condition. Please refer to Appendix B for specific materials and locations of the identified and less than 1% asbestos ACM. A summary of suspect materials sampled is provided in Appendix A. Laboratory analytical reports are provided in Appendix C. Photographs are provided in Appendix F.

Asbestos was identified at concentrations greater than 1% in the following building materials:

- Black Mastic associated with White Canvas Wrap on 6"-8" Pipes
- Black Mastic associated with White Canvas Wrap on 12"-14" Pipes
- Black Mastic associated with Fiberglass Pipe Insulation
- Black Mastic associated with Brown Paper and White Canvas over Fiberglass Pipe Insulation
- 12" x 12" Gray with Brown and Black Specks Floor Tile and Mastic
- Black Seam Caulk at Air Handler Unit/Duct Joints
- 12" x 12" White with Tan Specks Floor Tile and Mastic (mastic only)
- Light Fixture Foil Reflective Insulation
- Drywall joint compound; however, the composite of drywall and joint compound is less than 1%. Compositing is allowed under state regulations but not for OSHA.

Asbestos was identified at concentrations less than 1% in the following materials:

- Hard TSI Elbows/Joints with Canvas Wrap on 6"-8" Pipes
- Hard TSI Elbows/Joints with Canvas Wrap on 12"-14" Pipes

Regarding materials with less than 1% asbestos, OSHA regulates these materials and requires specified work practice requirements.

This asbestos survey was limited to readily accessible materials in the interior of the A-Wing of the Brewster Building. Future renovations may require additional testing. Terracon recommends the identified and less than 1% asbestos ACM be managed in place.

#### 5.2 Ambient Asbestos Air Monitoring

Asbestos was not identified by TEM in the ambient air samples collected during the October 6, 2021, sampling event. A summary of the air sample data is included in Table 1.0 below. Laboratory analytical reports are provided in Appendix D.

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Table 1.0 Summary of Ambient Asbestos Air Monitoring Results, October 6, 2021

Sample Number	Sample Location	Start Time**	Start Flow Rate (LPM)	End Time**	End Flow Rate (LPM)	Total Volume Sampled (Liters)	Asbestos Type	Laboratory Result (f/cc)
A-A-1	Hall by A114	1325	10.30	1831	10.29	3,150	None Detected	<0.00086
A-A-2	Hall by A121	1327	10.10	1833	10.00	3,075	None Detected	<0.001
A-A-3	Hall by A216	1331	10.10	1838	10.02	3,088	None Detected	<0.00087
A-A-4	Hall by A224	1329	10.11	1840	10.27	3,169	None Detected	<0.0015
A-A-5	Hall by A318	1333	10.10	1845	10.70	3,245	None Detected	<0.00042
A-A-6	Hall by A327	1335	10.16	1847	10.07	3,156	None Detected	<0.00085
A-A-7	Hall by A423	1337	10.05	1851	10.02	3,151	None Detected	<0.00086
A-A-8	Hall by A418	1339	10.10	1853	9.95	3,148	None Detected	<0.00086
A-A-FB	Blank	N/A	N/A	N/A	N/A	N/A	None Detected	N/A
A-A-LB	Blank	N/A	N/A	N/A	N/A	N/A	None Detected	N/A

<sup>\*</sup>LPM – liter per minute; f/cc – asbestos fibers per cubic centimeter of air

#### 5.3 Water Testing for Asbestos

Asbestos was not identified in the asbestos in water samples collected during the October 6, 2021 sampling event. A summary of the water sample data is included in Table 2.0 below. Laboratory analytical reports are provided in Appendix E.

Table 2.0 Summary of Asbestos in Water Sampling Results, October 6, 2021

Sample Number	Sample Location	Asbestos Type	Concentration (MFL)
A-W-1	4 <sup>th</sup> Floor Women's Restroom Sink	None Detected	<1.1
A-W-2	3 <sup>rd</sup> Floor Water Fountain	None Detected	<0.18
A-W-3	2 <sup>nd</sup> Floor Men's Restroom Sink	None Detected	<0.19
A-W-4	1 <sup>st</sup> Floor Water Fountain	None Detected	<0.18

<sup>\*</sup>MFL – million fibers per liter, greater than 0.5 microns in length

<sup>\*\*</sup>Sample start and end times are recorded in 24-hour time format.

Brewster Building A-Wing Greenville, North Carolina November 4, 2021 Terracon Project No. 70217599



#### 6.0 GENERAL COMMENTS

These asbestos consulting services were conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the building. Many factors, such as building use and ventilation patterns can affect the air sampling results. The findings, conclusions, and recommendations expressed in this report are based on the results of the monitoring performed on October 6, 2021. The information contained in this report should not be relied upon to represent conditions that existed prior to or after this monitoring event.

This report has been prepared on behalf of and exclusively for use by East Carolina University. 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, expressed or implied is made.

# APPENDIX A ASBESTOS SURVEY SAMPLE SUMMARY

## ASBESTOS SURVEY SAMPLE SUMMARY East Carolina University - Brewster Building A Wing East 10th Street Greenville, North Carolina

Terracon Project No. 70217599

НА	Sample No.	Description	Sample Location	Lab Results
			• • • • • • • • • • • • • • • • • • • •	Drywall: None Detected
1	A-1	Drywall and Joint Compound	4th Floor Elevator Lobby	Joint Compound: <1% Chrysotile Composite: 0.8% Chrysotile (EPA Point Count)
1	A-2	Drywall and Joint Compound	A421	Drywall: None Detected Joint Compound: 3% Chrysotile Composite: <0.25% Chrysotile (EPA Point Count)
1	A-3	Drywall and Joint Compound	Hall at A318	Drywall: None Detected Joint Compound: 2% Chrysotile Composite: <0.25% Chrysotile (EPA Point Count)
1	A-4	Drywall and Joint Compound	A332	Drywall: None Detected Joint Compound: 2% Chrysotile Composite: 0.9% Chrysotile (EPA Point Count)
1	A-5	Drywall and Joint Compound	A226	Drywall: None Detected Joint Compound: <1% Chrysotile Composite: <0.25% Chrysotile (EPA Point Count)
1	A-6	Drywall and Joint Compound	Hall at A202	Drywall: None Detected Joint Compound: 2% Chrysotile Composite: <0.25% Chrysotile (EPA Point Count)
1	A-7	Drywall and Joint Compound	A105	Drywall: None Detected Joint Compound: 2% Chrysotile Composite: <0.25% Chrysotile (EPA Point Count)
1	A-8	Drywall and Joint Compound	Hall at A119	Drywall: None Detected Joint Compound: <1% Chrysotile Composite: <0.25% Chrysotile (EPA Point Count)
2	A-9	2' x 2' White Ceiling Tile with Dots and Pits	4th Floor Elevator Lobby	None Detected
2	A-10	2' x 2' White Ceiling Tile with Dots and Pits	Hall at A318	None Detected
2	A-11	2' x 2' White Ceiling Tile with Dots and Pits	A226	None Detected
3	A-12	4" Black Covebase and Mastic	A427	Cove Base: None Detected
	7. 12	4 Black Governoe and Mastic	74721	Mastic: None Detected Cove Base: None Detected
3	A-13	4" Black Covebase and Mastic	A332	Mastic: None Detected
3	A-14	4" Black Covebase and Mastic	A106	Cove Base: None Detected
	A 45	NAVI 'I O NAV OIL DI	4-t Floor Monkowing Doors	Mastic: None Detected Wrap 1: None Detected
4	A-15	White Canvas Wrap on 6"-8" Pipes	1st Floor Mechanical Room	Wrap 2: None Detected
4	A-16	White Canvas Wrap on 6"-8" Pipes	2nd Floor Mechanical Room	Wrap 1: None Detected Wrap 2: None Detected Mastic (Black): 3% Chrysotile
4	A-17	White Canvas Wrap on 6"-8" Pipes	3rd Floor Mechanical Room	Wrap 1: None Detected
				Wrap 2: None Detected Wrap 1: None Detected
4	A-18	White Canvas Wrap on 6"-8" Pipes	4th Floor Mechanical Room	Wrap 2: None Detected
5	A-19	White Canvas Wrap on HVAC Duct	1st Floor Mechanical Room	Wrap 1: None Detected Wrap 2: None Detected Insulation: None Detected
5	A-20	White Canvas Wrap on HVAC Duct	2nd Floor Mechanical Room	Wrap 1: None Detected Wrap 2: None Detected Insulation: None Detected
5	A-21	White Canvas Wrap on HVAC Duct	3rd Floor Mechanical Room	Wrap 1: None Detected Wrap 2: None Detected Insulation: None Detected
5	A-22	White Canvas Wrap on HVAC Duct	4th Floor Mechanical Room	Wrap 1: None Detected Wrap 2: None Detected Insulation: None Detected
6	A-23	Hard TSI Elbows/Joint with Canvas Wrap 6"- 8"	1st Floor Mechanical Room	TSI: <0.25% Chrysotile (EPA Point Count) Wrap: None Detected
6	A-24	Hard TSI Elbows/Joint with Canvas Wrap 6"-8"	2nd Floor Mechanical Room	TSI: <0.25% Chrysotile (EPA Point Count) Wrap: None Detected
6	A-25	Hard TSI Elbows/Joint with Canvas Wrap 6"- 8"	3rd Floor Mechanical Room	TSI: <0.25% Chrysotile (EPA Point Count) Wrap: None Detected

# ASBESTOS SURVEY SAMPLE SUMMARY East Carolina University - Brewster Building A Wing East 10th Street

Greenville, North Carolina Terracon Project No. 70217599

НА	Sample No.	Description	Sample Location	Lab Results
6	A-26	Hard TSI Elbows/Joint with Canvas Wrap 6"-	4th Floor Mechanical Room	TSI: <0.25% Chrysotile (EPA Point Count) Wrap: None Detected
7	A-27	Red Fire Caulk	4th Floor Telephone	None Detected
7	A-28	Red Fire Caulk	Fauipment A226	None Detected
7	A-29	Red Fire Caulk	A113A	None Detected
				Cove Base: None Detected
8	A-30	4" Gray Covebase and Mastic	A205	Mastic: None Detected
8	A-31	4" Gray Covebase and Mastic	A102B	Cove Base: None Detected Mastic: None Detected
8	A-32	4" Gray Covebase and Mastic	A105	Cove Base: None Detected  Mastic: None Detected
9	A-33	Ceramic Floor Tile Grout and Mortar	3rd Floor Janitor Closet	Grout: None Detected Mortar: None Detected
9	A-34	Ceramic Floor Tile Grout and Mortar	2nd Floor Janitor Closet	Grout: None Detected Mortar: None Detected
9	A-35	Ceramic Floor Tile Grout and Mortar	1st Floor Janitor Closet	Grout: None Detected Mortar: None Detected
10	A-36	Ceramic Wall Tile Grout and Mortar	3rd Floor Janitor Closet	Grout: None Detected Mortar: None Detected
10	A-37	Ceramic Wall Tile Grout and Mortar	2nd Floor Janitor Closet	Grout: None Detected Mortar: None Detected
10	A-38	Ceramic Wall Tile Grout and Mortar	1st Floor Janitor Closet	Grout: None Detected Mortar: None Detected
11	A-39	4" Dark Brown Covebase and Mastic	A425	Cove Base: None Detected  Mastic: None Detected
11	A-40	4" Dark Brown Covebase and Mastic	A326	Cove Base: None Detected  Mastic: None Detected
11	A-41	4" Dark Brown Covebase and Mastic	A226	Cove Base: None Detected  Mastic: None Detected
12	A-42	12" x 12" Gray with Brown and Black Specks Floor Tile and Mastic	A425	Floor Tile: 5% Chrysotile Mastic: 5% Chrysotile
12	A-43	12" x 12" Gray with Brown and Black Specks Floor Tile and Mastic	A326	Positive Stop (Not Analyzed)
12	A-44	12" x 12" Gray with Brown and Black Specks Floor Tile and Mastic	A226	Positive Stop (Not Analyzed)
12	A-45	12" x 12" Gray with Brown and Black Specks Floor Tile and Mastic	A105 (Under Carpet)	Positive Stop (Not Analyzed)
13	A-46	Gray Interior Window Sealant	A332	None Detected
13	A-47	Gray Interior Window Sealant	A204	None Detected
13	A-48	Gray Interior Window Sealant	A105	None Detected
14	A-49	CMU Block Surface Filler	4th Floor Janitor Closet	None Detected
14	A-50	CMU Block Surface Filler	3rd Floor Janitor Closet	None Detected
14	A-51	CMU Block Surface Filler	2nd Floor Janitor Closet	None Detected
15	A-52	12" x 12" Tri-Gray Floor Tile and Mastic	Elevator	Floor Tile: None Detected Mastic: None Detected
15	A-53	12" x 12" Tri-Gray Floor Tile and Mastic	Elevator	Floor Tile: None Detected  Mastic: None Detected
15	A-54	12" x 12" Tri-Gray Floor Tile and Mastic	Elevator	Floor Tile: None Detected Mastic: None Detected
16	A-55	Black Seam Caulk on AHU/Duct Joint	2nd Floor Mechanical Room	2% Chrysotile
16	A-56	Black Seam Caulk on AHU/Duct Joint	3rd Floor Mechanical Room	Positive Stop (Not Analyzed)
16	A-57	Black Seam Caulk on AHU/Duct Joint	4th Floor Mechanical Room	Positive Stop (Not Analyzed)
17	A-58	12" x 12" White with Tan Specks Floor Tile and Mastic	A204	Floor Tile: None Detected Mastic: 3% Chrysotile
17	A-59	12" x 12" White with Tan Specks Floor Tile and Mastic	A204	Floor Tile: None Detected Mastic: Positive Stop (Not Analyzed)

# ASBESTOS SURVEY SAMPLE SUMMARY East Carolina University - Brewster Building A Wing East 10th Street

#### Greenville, North Carolina Terracon Project No. 70217599

НА	Sample No.	Description	Sample Location	Lab Results
17	A-60	12" x 12" White with Tan Specks Floor	A204	Floor Tile: None Detected
		Tile and Mastic		Mastic: Positive Stop (Not Analyzed)  Cove Base: None Detected
18	A-61	4" Tan Covebase and Mastic	A204	Mastic: None Detected
			1001	Cove Base: None Detected
18	A-62	4" Tan Covebase and Mastic	A204	Mastic: None Detected
18	A-63	4" Tan Covebase and Mastic	A204	Cove Base: None Detected  Mastic: None Detected
19	A-64	2' x 2' White Ceiling Tile with Dots and Fissures	4th Floor Elevator Lobby	None Detected
19	A-65	2' x 2' White Ceiling Tile with Dots and Fissures	2nd Floor Elevator Lobby	None Detected
19	A-66	2' x 2' White Ceiling Tile with Dots and Fissures	Hall at A202	None Detected
20	A-67	2' x 2' White Ceiling Tile with Dots	4th Floor Elevator Lobby	None Detected
20	A-68	2' x 2' White Ceiling Tile with Dots	4th Floor Elevator Lobby	None Detected
20	A-69	2' x 2' White Ceiling Tile with Dots	4th Floor Elevator Lobby	None Detected
21	A-70	White Canvas Wrap on 12"-14" Pipes	4th Floor Mechanical Room	Wrap: None Detected Mastic (Black): 5% Chrysotile
21	A-71	White Canvas Wrap on 12"-14" Pipes	4th Floor Mechanical Room	Wrap: None Detected  Mastic: Positive Stop (Not Analyzed)
21	A-72	White Canvas Wrap on 12"-14" Pipes	4th Floor Mechanical Room	Wrap: None Detected Mastic: Positive Stop (Not Analyzed)
22	A-73	Hard TSI Elbows/Joint with Canvas Wrap 12"-14"	4th Floor Mechanical Room	TSI: <0.25% Chrysotile (EPA Point Count) Wrap: None Detected
22	A-74	Hard TSI Elbows/Joint with Canvas Wrap 12"-14"	4th Floor Mechanical Room	TSI: None Detected Wrap: None Detected
22	A-75	Hard TSI Elbows/Joint with Canvas Wrap 12"-14"	4th Floor Mechanical Room	TSI: None Detected Wrap: None Detected
23	A-76	Popcorn Ceiling Texture	Lobby	None Detected
23	A-77	Popcorn Ceiling Texture	Lobby	None Detected
23	A-78	Popcorn Ceiling Texture	Lobby	None Detected
24	A-79	Tan Carpet Glue	A427	None Detected
24	A-80	Tan Carpet Glue	A205	None Detected
24	A-81	Tan Carpet Glue	A105	None Detected
25	A-82	Light Fixture Foil Reflective Insulation	4th Floor Men's Restroom	55% Chrysotile
25	A-83	Light Fixture Foil Reflective Insulation	2nd Floor Women's Restroom	Positive Stop (Not Analyzed)
25	A-84	Light Fixture Foil Reflective Insulation	2nd Floor Men's Restroom	Positive Stop (Not Analyzed)
26	A-85	Black Mastic on Fiberglass Pipe Insulation	4th Floor Elevator Lobby	8% Chrysotile
26	A-86	Black Mastic on Fiberglass Pipe Insulation	A422	Positive Stop (Not Analyzed)
26	A-87	Black Mastic on Fiberglass Pipe Insulation	4th Floor Elevator Lobby	Positive Stop (Not Analyzed)
27	A-88	Brown Paper and White Canvas with Black Mastic over Fiberglass Pipe Insulation	4th Floor Elevator Lobby	Paper: None Detected Canvas: None Detected Mastic (Black): 2% Chrysotile
27	A-89	Brown Paper and White Canvas with Black Mastic over Fiberglass Pipe Insulation	4th Floor Elevator Lobby	Paper: None Detected Canvas: Layer Not Present Mastic (Black): Layer Not Present
27	A-90	Brown Paper and White Canvas with Black Mastic over Fiberglass Pipe Insulation	4th Floor Elevator Lobby	Paper: None Detected Canvas: None Detected Mastic (Black): Positive Stop (Not Analyzed)
28	A-91	Yellow HVAC Fiberglass Duct Insulation Glue	4th Floor Elevator Lobby	None Detected

# ASBESTOS SURVEY SAMPLE SUMMARY East Carolina University - Brewster Building A Wing East 10th Street Greenville, North Carolina

Terracon Project No. 70217599

НА	Sample No.	Description	Sample Location	Lab Results
28	A-92	Yellow HVAC Fiberglass Duct Insulation Glue	Hall at A318	None Detected
28	A-93	Yellow HVAC Fiberglass Duct Insulation Glue	2nd Floor Elevator Lobby	None Detected
29	A-94	Brown Paper over Brown Pipe Insulation	A421	Paper: None Detected Insulation: None Detected
29	A-95	Brown Paper over Brown Pipe Insulation	A422	Paper: None Detected Insulation: None Detected
29	A-96	Brown Paper over Brown Pipe Insulation	A422	Paper: None Detected Insulation: None Detected

<sup>\*</sup>Highlighted and bolded samples indicate materials with >1% asbestos.

<sup>\*</sup>Highlighted samples indicate materials with <1% asbestos.

# APPENDIX B MATERIALS CONTAINING ASBESTOS SUMMARY

#### Appendix B

# MATERIALS CONTAINING ASBESTOS SUMMARY East Carolina University - Brewster Building A Wing East 10th Street Greenville, North Carolina Terracon Project No. 70217599

#### MATERIALS CONTAINING GREATER THAN 1% ASBESTOS

на	Sample No.	Description	Material Location	NESHAP Classification	Percent/Type Asbestos	Condition	Estimated Quantity*
4	A-16	White Canvas Wrap on 6"- 8" Pipes		Category II Non-Friable	Wrap 1: None Detected Wrap 2: None Detected Mastic (Black): 3% Chrysotile	Good	
21	A-70	White Canvas Wrap on 12"-14" Pipes	Black Mastic on Pipes Throughout	Category II Non-Friable	Wrap: None Detected Mastic (Black): 5% Chrysotile	Good	2,500 Linear Feet
26	A-85	Black Mastic on Fiberglass Pipe Insulation	Building	Category II Non-Friable	8% Chrysotile	Good	reet
27	A-88	Brown Paper and White Canvas with Black Mastic over Fiberglass Pipe Insulation		Category II Non-Friable	Paper: None Detected Canvas: None Detected Mastic (Black): 2% Chrysotile	Good	
12	A-42	12" x 12" Gray with Brown and Black Specks Floor Tile and Mastic	Throughout, except mechanical rooms, restrooms, 1st floor hallway, janitor closets, 2nd floor west office space hallway	Category I Non-Friable	Floor Tile: 5% Chrysotile Mastic: 5% Chrysotile	Good	32,000 Square Feet
16	A-55	Black Seam Caulk on AHU/Duct Joint	Mechanical Rooms	Category II Non-Friable	2% Chrysotile	Good	50 Square Feet
17	A-58	12" x 12" White with Tan Specks Floor Tile and Mastic	A204	Category I Non-Friable	Floor Tile: None Detected Mastic: 3% Chrysotile	Good	100 Square Feet
25	A-82	Light Fixture Foil Reflective Insulation	Restrooms	Category II Non-Friable	55% Chrysotile	Good	24 Lights

#### **MATERIALS 1% OR LESS ASBESTOS**

НА	Sample No.	Description	Material Location	NESHAP Classification	Percent/Type Asbestos	Condition	Estimated Quantity*
1	A-1 A-2 A-3 A-4 A-5 A-6 A-7 A-8	Drywall and Joint Compound	Throughout Building	Not Applicable	Drywall: None Detected Joint Compound: <1-3% Chrysotile Composite: <0.25-0.9% Chrysotile (EPA Point Count)	Good	250,000 Square Feet
6	A-23 A-24 A-25 A-26	Hard TSI Elbows/Joint with Canvas Wrap 6"-8"	Mechanical Rooms	Not Applicable	TSI: <0.25% Chrysotile (EPA Point Count) Wrap: None Detected	Good	120 Elbows/Joints
22	A-73	Hard TSI Elbows/Joint with Canvas Wrap 12"- 14"	4th Floor Mechanical Room	Not Applicable	TSI: <0.25% Chrysotile (EPA Point Count) Wrap: None Detected	Good	4 Elbows/Joints

Note: All quantities should be verified by the asbestos abatement contractor.

# APPENDIX C ASBESTOS LABORATORY ANALYTICAL REPORT



2500 Gateway Centre Blvd., Suite 600 Morrisville, NC 27560

Tel/Fax: (919) 465-3900 / (919) 465-3950 http://www.EMSL.com / raleighlab@emsl.com **EMSL Order:** 292109505 **Customer ID:** TITA51 **Customer PO:** 70217599

Project ID:

Phone:

**Fax:** (919) 873-9555

**Received Date:** 10/07/2021 2:00 PM

Analysis Date: 10/12/2021 - 10/14/2021

Collected Date: 10/06/2021

Attention: Alicia Coley
Terracon Consultants, Inc.

Suite 107 Raleigh, NC 27604

2401 Brentwood Road

Project: 70217599, Brewster Building, Greenville, NC

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			<u>Asbestos</u>		
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
A-1-Drywall 292109505-0001	4th Floor Elevator Lobby - Drywall and Joint Compound	Brown/Gray Fibrous Homogeneous	20% Cellulose 2% Glass	20% Ca Carbonate 30% Gypsum 28% Non-fibrous (Other)	None Detected
A-1-Joint Compound	4th Floor Elevator Lobby - Drywall and Joint Compound	White Fibrous Homogeneous	2% Cellulose	65% Ca Carbonate 33% Non-fibrous (Other)	<1% Chrysotile
A-1-Composite 292109505-0001B	4th Floor Elevator Lobby - Drywall and Joint Compound	Brown/Gray/White Fibrous Homogeneous	12% Cellulose <1% Glass	20% Ca Carbonate 20% Gypsum 48% Non-fibrous (Other)	<1% Chrysotile
A-2-Drywall	A421 - Drywall and Joint Compound	Brown/Gray Fibrous	20% Cellulose 2% Glass	20% Ca Carbonate 30% Gypsum	None Detected
<u>292109505-0002</u> A-2-Joint Compound <u>292109505-0002A</u>	A421 - Drywall and Joint Compound	Homogeneous White Fibrous Homogeneous		28% Non-fibrous (Other) 65% Ca Carbonate 32% Non-fibrous (Other)	3% Chrysotile
A-2-Composite 292109505-0002B	A421 - Drywall and Joint Compound	Brown/Gray/White Fibrous Homogeneous	12% Cellulose <1% Glass	20% Ca Carbonate 20% Gypsum 48% Non-fibrous (Other)	<1% Chrysotile
A-3-Drywall 292109505-0003	Hall at A318 - Drywall and Joint Compound	Brown/Gray Fibrous Homogeneous	20% Cellulose	20% Ca Carbonate 30% Gypsum 30% Non-fibrous (Other)	None Detected
A-3-Joint Compound	Hall at A318 - Drywall and Joint Compound	White Fibrous Homogeneous		65% Ca Carbonate 33% Non-fibrous (Other)	2% Chrysotile
A-3-Composite	Hall at A318 - Drywall and Joint Compound	Brown/Gray/White Fibrous Homogeneous	12% Cellulose	20% Ca Carbonate 20% Gypsum 48% Non-fibrous (Other)	<1% Chrysotile
A-4-Drywall 292109505-0004	A332 - Drywall and Joint Compound	Brown/Gray Fibrous Homogeneous	20% Cellulose 2% Glass	20% Ca Carbonate 30% Gypsum 28% Non-fibrous (Other)	None Detected
A-4-Joint Compound	A332 - Drywall and Joint Compound	White Fibrous Homogeneous	2% Cellulose	65% Ca Carbonate 31% Non-fibrous (Other)	2% Chrysotile
A-4-Composite	A332 - Drywall and Joint Compound	Brown/Gray/White Fibrous Homogeneous	12% Cellulose <1% Glass	20% Ca Carbonate 20% Gypsum 48% Non-fibrous (Other)	<1% Chrysotile
A-5-Drywall 292109505-0005	A226 - Drywall and Joint Compound	Brown/Gray Fibrous Homogeneous	15% Cellulose	50% Gypsum 35% Non-fibrous (Other)	None Detected
A-5-Joint Compound	A226 - Drywall and Joint Compound	White Fibrous	<1% Cellulose <1% Wollastonite	60% Ca Carbonate 40% Non-fibrous (Other)	<1% Chrysotile
292109505-0005A A-5-Composite 292109505-0005B	A226 - Drywall and Joint Compound	Homogeneous  Brown/Gray/White Fibrous Homogeneous	10% Cellulose	40% Ca Carbonate 20% Gypsum 30% Non-fibrous (Other)	<1% Chrysotile
A-6-Drywall 292109505-0006	Hall at A202 - Drywall and Joint Compound	Brown/Gray Fibrous Homogeneous	15% Cellulose <1% Glass	50% Gypsum 35% Non-fibrous (Other)	None Detected

Project ID:

# Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			<u>Asbestos</u>		
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
A-6-Joint Compound	Hall at A202 - Drywall and Joint Compound	White Fibrous Homogeneous	2% Wollastonite	60% Ca Carbonate 36% Non-fibrous (Other)	2% Chrysotile
A-6-Composite	Hall at A202 - Drywall and Joint Compound	Brown/Gray/White Fibrous	12% Cellulose <1% Glass	20% Ca Carbonate 30% Gypsum	<1% Chrysotile
<u>292109505-0006B</u> A-7-Drywall	A105 - Drywall and Joint Compound	Homogeneous  Brown/Gray Fibrous	<1% Wollastonite  15% Cellulose <1% Glass	38% Non-fibrous (Other) 50% Gypsum 35% Non-fibrous (Other)	None Detected
292109505-0007	·	Homogeneous		. ,	
A-7-Joint Compound	A105 - Drywall and Joint Compound	White Fibrous	2% Wollastonite	20% Ca Carbonate 76% Non-fibrous (Other)	2% Chrysotile
292109505-0007A	A405 Downsill and	Homogeneous	400/ O-II-I	000/ 0 - 0 - th th	440/ Object of Class
A-7-Composite 292109505-0007B	A105 - Drywall and Joint Compound	Brown/Gray/White Fibrous Homogeneous	12% Cellulose <1% Glass <1% Wollastonite	20% Ca Carbonate 30% Gypsum 38% Non-fibrous (Other)	<1% Chrysotile
A-8-Drywall	Hall at A119 - Drywall and Joint Compound	Brown/Gray Fibrous	15% Cellulose <1% Glass	50% Gypsum 35% Non-fibrous (Other)	None Detected
292109505-0008		Homogeneous			
A-8-Joint Compound 292109505-0008A	Hall at A119 - Drywall and Joint Compound	White Non-Fibrous	<1% Cellulose <1% Wollastonite	60% Ca Carbonate 40% Non-fibrous (Other)	<1% Chrysotile
A-8-Composite	Hall at A119 - Drywall and Joint Compound	Homogeneous  Brown/Gray/White Fibrous	10% Cellulose	40% Ca Carbonate 20% Gypsum	<1% Chrysotile
292109505-0008B	·	Homogeneous		30% Non-fibrous (Other)	
A-9 292109505-0009	4th Floor Elevator Lobby - 2' x 2' White Ceiling Tile with Dots	White Fibrous Homogeneous	30% Cellulose 40% Min. Wool	10% Ca Carbonate 15% Perlite 5% Non-fibrous (Other)	None Detected
A-10	and Pits  Hall at A318 - 2' x 2'  White Ceiling Tile with	White Fibrous	30% Cellulose 40% Min. Wool	10% Ca Carbonate 15% Perlite	None Detected
<u>292109505-0010</u> A-11	Dots and Pits  A226 - 2' x 2' White Ceiling Tile with Dots	Homogeneous  Gray/White Fibrous	30% Cellulose 40% Min. Wool	5% Non-fibrous (Other)  15% Perlite  15% Non-fibrous (Other)	None Detected
292109505-0011	and Pits	Homogeneous			
A-12-Cove Base	A427 - 4" Black Covebase and Mastic	Black Non-Fibrous Homogeneous		25% Ca Carbonate 75% Non-fibrous (Other)	None Detected
A-12-Mastic	A427 - 4" Black Covebase and Mastic	Beige Fibrous	2% Cellulose 2% Synthetic	10% Ca Carbonate 86% Non-fibrous (Other)	None Detected
292109505-0012A	1000 411 71 1	Homogeneous		25% 2 2 : :	N
A-13-Cove Base	A332 - 4" Black Covebase and Mastic	Black Non-Fibrous Homogeneous		25% Ca Carbonate 75% Non-fibrous (Other)	None Detected
A-13-Mastic	A332 - 4" Black Covebase and Mastic	Tan/White Fibrous	2% Cellulose	10% Ca Carbonate 88% Non-fibrous (Other)	None Detected
292109505-0013A		Homogeneous		20,0110	
A-14-Cove Base	A106 - 4" Black Covebase and Mastic	Black Non-Fibrous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
292109505-0014		Homogeneous			
A-14-Mastic	A106 - 4" Black Covebase and Mastic	Tan Non-Fibrous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
292109505-0014A	dat Elaan Marchinette d	Homogeneous	750/ 0-11-1	400/ Ca Cash	Nama Datasta I
A-15-Wrap 1 292109505-0015	1st Floor Mechanical Room - White Canvas Wrap on 6"-8" Pipes	White Fibrous Homogeneous	75% Cellulose	10% Ca Carbonate 15% Non-fibrous (Other)	None Detected
HA 4 sample group is not ho	•				

Project ID:

# Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			<u>Asbestos</u>		
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
A-15-Wrap 2	1st Floor Mechanical Room - White Canvas	Brown Fibrous	85% Cellulose	15% Non-fibrous (Other)	None Detected
292109505-0015A	Wrap on 6"-8" Pipes	Homogeneous			
A-16-Wrap 1	2nd Floor Mechanical Room - White Canvas	White Fibrous	75% Cellulose	10% Ca Carbonate 15% Non-fibrous (Other)	None Detected
292109505-0016	Wrap on 6"-8" Pipes	Homogeneous			
A-16-Wrap 2	2nd Floor Mechanical Room - White Canvas	White/Silver Fibrous	45% Cellulose 10% Glass	45% Non-fibrous (Other)	None Detected
292109505-0016A	Wrap on 6"-8" Pipes	Homogeneous			
A-16-Mastic	2nd Floor Mechanical Room - White Canvas	Black Fibrous	2% Cellulose 2% Min. Wool	5% Ca Carbonate 86% Non-fibrous (Other)	3% Chrysotile
292109505-0016B	Wrap on 6"-8" Pipes	Homogeneous	2% Wollastonite		
A-16-Insulation	2nd Floor Mechanical Room - White Canvas	Yellow Fibrous	90% Min. Wool	10% Non-fibrous (Other)	None Detected
292109505-0016C	Wrap on 6"-8" Pipes	Homogeneous			
A-17-Wrap 1	3rd Floor Mechanical Room - White Canvas	White Fibrous	75% Cellulose	10% Ca Carbonate 15% Non-fibrous (Other)	None Detected
292109505-0017	Wrap on 6"-8" Pipes	Homogeneous			
A-17-Wrap 2	3rd Floor Mechanical Room - White Canvas	Brown Fibrous	85% Cellulose	15% Non-fibrous (Other)	None Detected
292109505-0017A	Wrap on 6"-8" Pipes	Homogeneous			
A-18-Wrap 1	4th Floor Mechanical Room - White Canvas	White Fibrous	70% Cellulose	10% Ca Carbonate 20% Non-fibrous (Other)	None Detected
292109505-0018	Wrap on 6"-8" Pipes	Homogeneous			
A-18-Wrap 2	4th Floor Mechanical Room - White Canvas	Brown/Silver Fibrous	55% Cellulose 20% Glass	25% Non-fibrous (Other)	None Detected
292109505-0018A	Wrap on 6"-8" Pipes	Homogeneous			
A-19-Wrap 1	1st Floor Mechanical Room - White Canvas	White Fibrous	75% Cellulose	10% Ca Carbonate 15% Non-fibrous (Other)	None Detected
292109505-0019	Wrap on HVAC Duct	Homogeneous			
A-19-Wrap 2	1st Floor Mechanical Room - White Canvas	Brown/White/Silver Fibrous	45% Cellulose 15% Glass	40% Non-fibrous (Other)	None Detected
292109505-0019A	Wrap on HVAC Duct	Homogeneous			
A-19-Insulation	1st Floor Mechanical Room - White Canvas	Yellow Fibrous	90% Min. Wool	10% Non-fibrous (Other)	None Detected
292109505-0019B	Wrap on HVAC Duct	Homogeneous			
A-20-Wrap 1	2nd Floor Mechanical Room - White Canvas	White Fibrous	75% Cellulose	25% Non-fibrous (Other)	None Detected
292109505-0020	Wrap on HVAC Duct	Homogeneous			
A-20-Wrap 2 292109505-0020A	2nd Floor Mechanical Room - White Canvas Wrap on HVAC Duct	Brown/Silver Fibrous Homogeneous	45% Cellulose 15% Glass	40% Non-fibrous (Other)	None Detected
	·		000/ Min West	100/ Non fibrary (Other)	None Detected
A-20-Insulation 292109505-0020B	2nd Floor Mechanical Room - White Canvas Wrap on HVAC Duct	Yellow Fibrous Homogeneous	90% Min. Wool	10% Non-fibrous (Other)	None Detected
-	·	White	75% Cellulose	259/ Non fibrage (Other)	None Detected
A-21-Wrap 1	3rd Floor Mechanical Room - White Canvas Wrap on HVAC Duct	Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
	·	-	55% Cellulose	200/ Non fibrary (Other)	None Detected
A-21-Wrap 2 292109505-0021A	3rd Floor Mechanical Room - White Canvas Wrap on HVAC Duct	Brown/Silver Fibrous Homogeneous	15% Glass	30% Non-fibrous (Other)	None Detected
	·		000/ Min West	100/ Non fibrary (Other)	None Detected
A-21-Insulation 292109505-0021B	3rd Floor Mechanical Room - White Canvas Wrap on HVAC Duct	Brown Fibrous Homogeneous	90% Min. Wool	10% Non-fibrous (Other)	None Detected
A-22-Wrap 1	4th Floor Mechanical	White	70% Cellulose	30% Non-fibrous (Other)	None Detected
292109505-0022	Room - White Canvas Wrap on HVAC Duct	Fibrous Homogeneous			

Project ID:

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbes	stos	<u>Asbestos</u>	
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type	
A-22-Wrap 2 292109505-0022A	4th Floor Mechanical Room - White Canvas Wrap on HVAC Duct	Brown/White Fibrous Homogeneous	60% Cellulose 15% Glass	25% Non-fibrous (Other)	None Detected	
A-22-Insulation	4th Floor Mechanical Room - White Canvas Wrap on HVAC Duct	Brown Fibrous Homogeneous	90% Min. Wool	10% Non-fibrous (Other)	None Detected	
A-23-TSI	1st Floor Mechanical Room - Hard TSI	Gray Fibrous	40% Min. Wool	40% Ca Carbonate 20% Non-fibrous (Other)	<1% Chrysotile	
292109505-0023	Elbows/Joint with Canvas Wrap 6"-8"	Homogeneous		, ,		
A-23-Wrap 292109505-0023A	1st Floor Mechanical Room - Hard TSI Elbows/Joint with	White Fibrous Homogeneous	75% Cellulose	10% Ca Carbonate 15% Non-fibrous (Other)	None Detected	
	Canvas Wrap 6"-8"					
A-24-TSI 292109505-0024	2nd Floor Mechanical Room - Hard TSI Elbows/Joint with	Gray Fibrous Homogeneous	40% Min. Wool	40% Ca Carbonate 20% Non-fibrous (Other)	<1% Chrysotile	
A-24-Wrap	Canvas Wrap 6"-8"  2nd Floor Mechanical Room - Hard TSI	White Fibrous	70% Cellulose	30% Non-fibrous (Other)	None Detected	
292109505-0024A	Elbows/Joint with Canvas Wrap 6"-8"	Homogeneous				
A-25-TSI	3rd Floor Mechanical Room - Hard TSI	Gray Fibrous	<1% Cellulose 40% Min. Wool	30% Ca Carbonate 30% Non-fibrous (Other)	<1% Chrysotile	
292109505-0025	Elbows/Joint with Canvas Wrap 6"-8"	Homogeneous				
A-25-Wrap	3rd Floor Mechanical Room - Hard TSI Elbows/Joint with	White Fibrous Homogeneous	70% Cellulose	10% Ca Carbonate 20% Non-fibrous (Other)	None Detected	
292109303-0023A	Canvas Wrap 6"-8"	Homogeneous				
A-26-TSI	4th Floor Mechanical Room - Hard TSI	Gray Fibrous	<1% Cellulose 40% Min. Wool	30% Ca Carbonate 30% Non-fibrous (Other)	<1% Chrysotile	
292109505-0026	Elbows/Joint with Canvas Wrap 6"-8"	Homogeneous				
A-26-Wrap	4th Floor Mechanical Room - Hard TSI	White Fibrous	70% Cellulose	10% Ca Carbonate 20% Non-fibrous (Other)	None Detected	
292109505-0026A	Elbows/Joint with Canvas Wrap 6"-8"	Homogeneous				
A-27	4th Floor Telephone Equipment - Red Fire	Red Non-Fibrous		100% Non-fibrous (Other)	None Detected	
292109505-0027	Caulk	Homogeneous		1000/ 11 - 5" - 12" - 1		
A-28 292109505-0028	A226 - Red Fire Caulk	Red Non-Fibrous		100% Non-fibrous (Other)	None Detected	
A-29	A113A - Red Fire	Homogeneous Brown/Red		100% Non-fibrous (Other)	None Detected	
292109505-0029	Caulk	Non-Fibrous Homogeneous		100 /s rion indicate (Onion)	Traile Detected	
A-30-Cove Base	A205 - 4" Gray Covebase and Mastic	Gray Non-Fibrous		25% Ca Carbonate 75% Non-fibrous (Other)	None Detected	
292109505-0030		Homogeneous				
A-30-Mastic	A205 - 4" Gray Covebase and Mastic	Tan Fibrous Homogeneous	2% Cellulose	10% Ca Carbonate 88% Non-fibrous (Other)	None Detected	
A-31-Cove Base	A102B - 4" Gray Covebase and Mastic	Gray Non-Fibrous		25% Ca Carbonate 75% Non-fibrous (Other)	None Detected	
292109505-0031	22.22.30 aaaolio	Homogeneous				

Project ID:

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbest	<u>tos</u>	Asbestos	
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type	
A-31-Mastic	A102B - 4" Gray Covebase and Mastic	Tan Fibrous Homogeneous	2% Cellulose	10% Ca Carbonate 88% Non-fibrous (Other)	None Detected	
A-32-Cove Base	A105 - 4" Gray Covebase and Mastic	Gray Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected	
A-32-Mastic	A105 - 4" Gray Covebase and Mastic	Tan Non-Fibrous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected	
292109505-0032A	Ond Floor Louiton	Homogeneous		200/ On Onderson	News Detected	
A-33-Grout 292109505-0033	3rd Floor Janitor Closet - Ceramic Floor Tile Grout and Mortar	Gray Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected	
A-33-Mortar	3rd Floor Janitor Closet - Ceramic	Gray Non-Fibrous		15% Quartz 10% Ca Carbonate	None Detected	
292109505-0033A	Floor Tile Grout and Mortar	Homogeneous		75% Non-fibrous (Other)		
A-34-Grout 292109505-0034	2nd Floor Janitor Closet - Ceramic Floor Tile Grout and Mortar	Gray Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected	
A-34-Mortar	2nd Floor Janitor	Gray		15% Quartz	None Detected	
292109505-0034A	Closet - Ceramic Floor Tile Grout and Mortar	Non-Fibrous Homogeneous		10% Ca Carbonate 75% Non-fibrous (Other)		
A-35-Grout 292109505-0035	1st Floor Janitor Closet - Ceramic Floor Tile Grout and	Gray Non-Fibrous Homogeneous		20% Quartz 20% Ca Carbonate 60% Non-fibrous (Other)	None Detected	
A-35-Mortar 292109505-0035A	Mortar  1st Floor Janitor Closet - Ceramic Floor Tile Grout and	Gray Non-Fibrous Homogeneous		10% Quartz 20% Ca Carbonate 70% Non-fibrous (Other)	None Detected	
A-36-Grout	Mortar  3rd Floor Janitor Closet - Ceramic Wall	White Non-Fibrous		25% Ca Carbonate 75% Non-fibrous (Other)	None Detected	
292109505-0036 A-36-Mortar	Tile Grout and Mortar  3rd Floor Janitor  Closet - Ceramic Wall	Homogeneous Gray Non-Fibrous		15% Quartz 10% Ca Carbonate	None Detected	
292109505-0036A	Tile Grout and Mortar	Homogeneous		75% Non-fibrous (Other)		
A-37-Grout	2nd Floor Janitor Closet - Ceramic Wall Tile Grout and Mortar	White Non-Fibrous Homogeneous		25% Ca Carbonate 75% Non-fibrous (Other)	None Detected	
A-37-Mortar	2nd Floor Janitor Closet - Ceramic Wall	Gray Non-Fibrous		15% Quartz 10% Ca Carbonate	None Detected	
292109505-0037A	Tile Grout and Mortar	Homogeneous		75% Non-fibrous (Other)		
A-38-Grout	1st Floor Janitor Closet - Ceramic Wall Tile Grout and Mortar	White Non-Fibrous Homogeneous		20% Quartz 20% Ca Carbonate 60% Non-fibrous (Other)	None Detected	
A-38-Mortar	1st Floor Janitor Closet - Ceramic Wall	White Non-Fibrous		60% Ca Carbonate 40% Non-fibrous (Other)	None Detected	
292109505-0038A	Tile Grout and Mortar	Homogeneous				
A-39-Cove Base	A425 - 4" Dark Brown Covebase and Mastic	Brown Non-Fibrous		25% Ca Carbonate 75% Non-fibrous (Other)	None Detected	
292109505-0039 A-39-Mastic	A425 - 4" Dark Brown Covebase and Mastic	Homogeneous  Brown Non-Fibrous	<1% Cellulose <1% Glass	100% Non-fibrous (Other)	None Detected	
292109505-0039A		Homogeneous	<1% Wollastonite			

Project ID:

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbest	<u>os</u>	Asbestos	
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type	
A-40-Cove Base	A326 - 4" Dark Brown Covebase and Mastic	Brown Non-Fibrous Homogeneous		25% Ca Carbonate 75% Non-fibrous (Other)	None Detected	
A-40-Mastic	A326 - 4" Dark Brown Covebase and Mastic	Brown Non-Fibrous Homogeneous	<1% Cellulose <1% Glass <1% Wollastonite	100% Non-fibrous (Other)	None Detected	
A-41-Cove Base	A226 - 4" Dark Brown Covebase and Mastic	Brown/Black Non-Fibrous	< 1 /0 VVOIIdStorme	20% Ca Carbonate 80% Non-fibrous (Other)	None Detected	
92109505-0041 41-Mastic	A226 - 4" Dark Brown Covebase and Mastic	Homogeneous Brown Non-Fibrous	<1% Cellulose	100% Non-fibrous (Other)	None Detected	
92109505-0041A		Homogeneous				
A-42-Floor Tile	A425 - 12" x 12" Gray with Brown and Black Specks Floor Tile and Mastic	Brown/Gray Fibrous Homogeneous		35% Ca Carbonate 60% Non-fibrous (Other)	5% Chrysotile	
A-42-Mastic	A425 - 12" x 12" Gray with Brown and Black Specks Floor Tile and Mastic	Black Fibrous Homogeneous	2% Cellulose	5% Ca Carbonate 88% Non-fibrous (Other)	5% Chrysotile	
A-43 92109505-0043	A326 - 12" x 12" Gray with Brown and Black Specks Floor Tile and Mastic				Positive Stop (Not Analyzed)	
A-44	A226 - 12" x 12" Gray with Brown and Black				Positive Stop (Not Analyzed)	
92109505-0044	Specks Floor Tile and Mastic					
<b>1-45</b> 292109505-0045	A105 (Under Carpet) - 12" x 12" Gray with Brown and Black Specks Floor Tile and Mastic				Positive Stop (Not Analyzed)	
A-46	A332 - Gray Interior Window Sealant	Gray Non-Fibrous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected	
92109505-0046 A-47	A204 - Gray Interior Window Sealant	Gray Non-Fibrous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected	
92109505-0047 A-48	A105 - Gray Interior Window Sealant	Gray Non-Fibrous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected	
92109505-0048 A-49	4th Floor Janitor Closet - CMU Block	Homogeneous  Gray/White Non-Fibrous		20% Quartz 10% Ca Carbonate	None Detected	
92109505-0049	Surface Filler	Homogeneous		70% Non-fibrous (Other)		
A-50 92109505-0050	3rd Floor Janitor Closet - CMU Block Surface Filler	Gray/White Non-Fibrous Homogeneous		20% Quartz 10% Ca Carbonate 70% Non-fibrous (Other)	None Detected	
A-51 92109505-0051	2nd Floor Janitor Closet - CMU Block Surface Filler	Gray/White/Various Fibrous Homogeneous	2% Wollastonite	20% Quartz 10% Ca Carbonate 68% Non-fibrous (Other)	None Detected	
A-52-Floor Tile	Elevator - 12" x 12" Tri-Gray Floor Tile	Gray Non-Fibrous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected	
292109505-0052 A-52-Mastic	and Mastic  Elevator - 12" x 12"  Tri-Gray Floor Tile	Homogeneous  Brown/Tan Non-Fibrous	<1% Cellulose	100% Non-fibrous (Other)	None Detected	
92109505-0052A	and Mastic	Homogeneous				

Project ID:

# Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbe	stos	<u>Asbestos</u>	
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type	
A-53-Floor Tile	Elevator - 12" x 12" Tri-Gray Floor Tile and Mastic	Gray Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected	
A-53-Mastic	Elevator - 12" x 12" Tri-Gray Floor Tile and Mastic	Brown/Tan Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected	
A-54-Floor Tile	Elevator - 12" x 12" Tri-Gray Floor Tile and Mastic	Gray/Various Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected	
\-54-Mastic	Elevator - 12" x 12" Tri-Gray Floor Tile	Brown/Tan Fibrous	5% Cellulose 2% Synthetic	10% Ca Carbonate 83% Non-fibrous (Other)	None Detected	
92109505-0054A	and Mastic	Homogeneous	<1% Glass			
A-55 92109505-0055	2nd Floor Mechanical Room - Black Seam Caulk on AHU/Duct Joint	White/Black Fibrous Homogeneous	<1% Cellulose	98% Non-fibrous (Other)	2% Chrysotile	
<b>A-56</b>	3rd Floor Mechanical Room - Black Seam Caulk on AHU/Duct Joint				Positive Stop (Not Analyzed)	
<b>A-57</b>	4th Floor Mechanical Room - Black Seam Caulk on AHU/Duct Joint				Positive Stop (Not Analyzed)	
A-58-Floor Tile	A204 - 12" x 12" White with Tan	White Non-Fibrous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected	
92109505-0058	Specks Floor Tile and Mastic	Homogeneous				
A-58-Mastic	A204 - 12" x 12" White with Tan Specks Floor Tile and	Black Fibrous Homogeneous	2% Cellulose	95% Non-fibrous (Other)	3% Chrysotile	
	Mastic					
A-59-Floor Tile	A204 - 12" x 12" White with Tan Specks Floor Tile and	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected	
A-59-Mastic	Mastic A204 - 12" x 12" White with Tan				Positive Stop (Not Analyzed)	
292109505-0059A	Specks Floor Tile and Mastic					
A-60-Floor Tile	A204 - 12" x 12" White with Tan Specks Floor Tile and	White/Various Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected	
A-60-Mastic	Mastic A204 - 12" x 12"				Positive Stop (Not Analyzed)	
92109505-0060A	White with Tan Specks Floor Tile and Mastic					
A-61-Cove Base	A204 - 4" Tan Covebase and Mastic	Tan Non-Fibrous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected	
92109505-0061		Homogeneous		·		
A-61-Mastic	A204 - 4" Tan Covebase and Mastic	Brown/White Non-Fibrous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected	
292109505-0061A A-62-Cove Base	A204 - 4" Tan Covebase and Mastic	Tan Non-Fibrous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected	
292109505-0062	Covedase and Mastic	Homogeneous		00 /0 Nort-Ilbrous (Otriel)		

Project ID:

# Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbest	<u>tos</u>	<u>Asbestos</u>	
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type	
A-62-Mastic 292109505-0062A	A204 - 4" Tan Covebase and Mastic	Brown/Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected	
A-63-Cove Base	A204 - 4" Tan Covebase and Mastic	Tan Non-Fibrous Homogeneous		25% Ca Carbonate 75% Non-fibrous (Other)	None Detected	
A-63-Mastic	A204 - 4" Tan Covebase and Mastic	Brown/Tan Fibrous	2% Cellulose <1% Wollastonite	10% Ca Carbonate 88% Non-fibrous (Other)	None Detected	
292109505-0063A		Homogeneous				
A-64 292109505-0064	4th Floor Elevator Lobby - 2' x 2' White Ceiling Tile with Dots and Fissures	Gray/White Fibrous Homogeneous	30% Cellulose 40% Min. Wool	15% Perlite 15% Non-fibrous (Other)	None Detected	
A-65 292109505-0065	2nd Floor Elevator Lobby - 2' x 2' White Ceiling Tile with Dots and Fissures	Gray/White Fibrous Homogeneous	30% Cellulose 40% Min. Wool	15% Perlite 15% Non-fibrous (Other)	None Detected	
A-66 292109505-0066	Hall at A202 - 2' x 2' White Ceiling Tile with Dots and Fissures	White Fibrous Homogeneous	30% Cellulose 40% Min. Wool	10% Ca Carbonate 15% Perlite 5% Non-fibrous (Other)	None Detected	
A-67	4th Floor Elevator Lobby - 2' x 2' White	Gray/White Fibrous	30% Cellulose 40% Min. Wool	15% Perlite 15% Non-fibrous (Other)	None Detected	
292109505-0067 A-68	Ceiling Tile with Dots  4th Floor Elevator  Lobby - 2' x 2' White	Homogeneous Gray/White Fibrous	30% Cellulose 40% Min. Wool	15% Perlite 15% Non-fibrous (Other)	None Detected	
292109505-0068 A-69	Ceiling Tile with Dots  4th Floor Elevator Lobby - 2' x 2' White	Homogeneous White Fibrous	30% Cellulose 40% Min. Wool	10% Ca Carbonate 15% Perlite	None Detected	
292109505-0069	Ceiling Tile with Dots	Homogeneous		5% Non-fibrous (Other)		
A-70-Wrap 292109505-0070	4th Floor Mechanical Room - White Canvas Wrap on 12"-14" Pipes	Brown/White/Silver Fibrous Homogeneous	45% Cellulose 5% Glass	10% Ca Carbonate 40% Non-fibrous (Other)	None Detected	
A-70-Mastic	4th Floor Mechanical Room - White Canvas Wrap on 12"-14"	Black Fibrous Homogeneous	2% Cellulose	93% Non-fibrous (Other)	5% Chrysotile	
A-71-Wrap	Pipes  4th Floor Mechanical Room - White Canvas Wrap on 12"-14"	Brown/White/Silver Fibrous Homogeneous	45% Cellulose 5% Glass	10% Ca Carbonate 40% Non-fibrous (Other)	None Detected	
A-71-Mastic	Pipes 4th Floor Mechanical				Positive Stop (Not Analyzed)	
292109505-0071A	Room - White Canvas Wrap on 12"-14" Pipes					
A-72-Wrap 1	4th Floor Mechanical Room - White Canvas	Brown/White/Silver Fibrous	45% Cellulose 15% Glass	40% Non-fibrous (Other)	None Detected	
292109505-0072	Wrap on 12"-14" Pipes	Homogeneous				
A-72-Mastic 292109505-0072A	4th Floor Mechanical Room - White Canvas Wrap on 12"-14"				Positive Stop (Not Analyzed)	
	Pipes					
A-72-Wrap 2 292109505-0072B	4th Floor Mechanical Room - White Canvas Wrap on 12"-14" Pipes	White Fibrous Homogeneous	85% Cellulose	15% Non-fibrous (Other)	None Detected	

Project ID:

# Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbes	<u>itos</u>	<u>Asbestos</u>	
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type	
A-73-TSI 192109505-0073	4th Floor Mechanical Room - Hard TSI Elbows/Joint with Canvas Wrap 12"-14"	Gray Fibrous Homogeneous	40% Min. Wool	40% Ca Carbonate 20% Non-fibrous (Other)	<1% Chrysotile	
A-73-Wrap 92109505-0073A	4th Floor Mechanical Room - Hard TSI Elbows/Joint with	White Fibrous Homogeneous	70% Cellulose	10% Ca Carbonate 20% Non-fibrous (Other)	None Detected	
A-74-TSI 92109505-0074	Canvas Wrap 12"-14"  4th Floor Mechanical Room - Hard TSI Elbows/Joint with	Gray Fibrous Homogeneous	40% Min. Wool	40% Ca Carbonate 20% Non-fibrous (Other)	None Detected	
A-74-Wrap	Canvas Wrap 12"-14" 4th Floor Mechanical	White	70% Cellulose	10% Ca Carbonate	None Detected	
92109505-0074A	Room - Hard TSI Elbows/Joint with Canvas Wrap 12"-14"	Fibrous Homogeneous	7070 Gelialose	20% Non-fibrous (Other)	None Detected	
A-75-TSI 92109505-0075	4th Floor Mechanical Room - Hard TSI Elbows/Joint with Canvas Wrap 12"-14"	Gray Non-Fibrous Homogeneous	40% Min. Wool	40% Ca Carbonate 20% Non-fibrous (Other)	None Detected	
-75-Wrap 92109505-0075A	4th Floor Mechanical Room - Hard TSI Elbows/Joint with Canvas Wrap 12"-14"	White Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected	
L-76	Lobby - Popcorn Ceiling Texture	White Non-Fibrous		65% Ca Carbonate 35% Non-fibrous (Other)	None Detected	
92109505-0076	Lobby - Popcorn Ceiling Texture	Homogeneous White Non-Fibrous		65% Ca Carbonate 35% Non-fibrous (Other)	None Detected	
92109505-0077	Lobby - Popcorn Ceiling Texture	Homogeneous White Non-Fibrous		70% Ca Carbonate 30% Non-fibrous (Other)	None Detected	
92109505-0078		Homogeneous				
n-79 92109505-0079	A427 - Tan Carpet Glue	Tan Fibrous	2% Cellulose	5% Ca Carbonate 93% Non-fibrous (Other)	None Detected	
A-80 92109505-0080	A205 - Tan Carpet Glue	Tan Fibrous Homogeneous	2% Synthetic	5% Ca Carbonate 93% Non-fibrous (Other)	None Detected	
A-81 92109505-0081	A105 - Tan Carpet Glue	Tan Fibrous Homogeneous	<1% Cellulose 2% Synthetic	98% Non-fibrous (Other)	None Detected	
92109505-0082	4th Floor Men's Restroom - Gray Foil-backed Light	Gray/Silver Fibrous Homogeneous	20% Cellulose	25% Non-fibrous (Other)	55% Chrysotile	
A-83 92109505-0083	Insulation  2nd Floor Women's Restroom - Gray Foil-backed Light				Positive Stop (Not Analyzed)	
ı-84	Insulation 2nd Floor Men's Restroom - Gray				Positive Stop (Not Analyzed)	
92109505-0084	Foil-backed Light Insulation					
A-85 192109505-0085	4th Floor Elevator Lobby - Black Mastic on Fiberglass Pipe Insulation	Black Fibrous Homogeneous	2% Cellulose	5% Ca Carbonate 85% Non-fibrous (Other)	8% Chrysotile	

Project ID:

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

		_	Non-Asbe		Asbestos	
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type	
n-86 92109505-0086	A422 - Black Mastic on Fiberglass Pipe Insulation				Positive Stop (Not Analyzed)	
92109505-0087	4th Floor Elevator Lobby - Black Mastic on Fiberglass Pipe				Positive Stop (Not Analyzed)	
32703000 0007	Insulation					
A-88-Paper	4th Floor Elevator Lobby - Brown Paper	Brown Fibrous	65% Cellulose 5% Glass	30% Non-fibrous (Other)	None Detected	
92109505-0088	and White Canvas with Black Mastic over Fiberglass Pipe Insulation	Homogeneous				
\-88-Canvas	4th Floor Elevator Lobby - Brown Paper	White Fibrous	85% Cellulose	15% Non-fibrous (Other)	None Detected	
292109505-0088A	and White Canvas with Black Mastic over Fiberglass Pipe Insulation	Homogeneous				
A-88-Mastic	4th Floor Elevator Lobby - Brown Paper	Black Fibrous	2% Cellulose	96% Non-fibrous (Other)	2% Chrysotile	
92109505-0088B	and White Canvas with Black Mastic over Fiberglass Pipe Insulation	Homogeneous				
\-89-Paper	4th Floor Elevator Lobby - Brown Paper	Brown Fibrous	65% Cellulose 5% Glass	30% Non-fibrous (Other)	None Detected	
92109505-0089	and White Canvas with Black Mastic over Fiberglass Pipe Insulation	Homogeneous	0/0 Glade			
\-89-Canvas	4th Floor Elevator Lobby - Brown Paper				Layer Not Present	
92109505-0089A	and White Canvas with Black Mastic over Fiberglass Pipe Insulation					
\-89-Mastic	4th Floor Elevator Lobby - Brown Paper				Layer Not Present	
992109505-0089B	and White Canvas with Black Mastic over Fiberglass Pipe Insulation					
\-90-Paper	4th Floor Elevator Lobby - Brown Paper	Brown Fibrous	85% Cellulose	15% Non-fibrous (Other)	None Detected	
92109505-0090	and White Canvas with Black Mastic over Fiberglass Pipe Insulation	Homogeneous				
A-90-Canvas	4th Floor Elevator Lobby - Brown Paper	White Fibrous	85% Cellulose	15% Non-fibrous (Other)	None Detected	
292109505-0090A	and White Canvas with Black Mastic over Fiberglass Pipe Insulation	Homogeneous				



Project ID:

#### Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbes	stos .	<u>Asbestos</u>	
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type	
A-90-Mastic 292109505-0090в	4th Floor Elevator Lobby - Brown Paper and White Canvas with Black Mastic over Fiberglass Pipe Insulation				Positive Stop (Not Analyzed)	
A-91 292109505-0091	4th Floor Elevator Lobby - Yellow HVAC Fiberglass Duct Insulation Glue	Yellow Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected	
A-92 292109505-0092	Hall at A318 - Yellow HVAC Fiberglass Duct Insulation Glue	Yellow Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected	
A-93 292109505-0093	2nd Floor Elevator Lobby - Yellow HVAC Fiberglass Duct Insulation Glue	Tan Non-Fibrous Homogeneous	<1% Cellulose <1% Min. Wool	100% Non-fibrous (Other)	None Detected	
A-94-Paper 292109505-0094	A421 - Brown Paper over Brown Pipe Insulation	Brown Fibrous Homogeneous	65% Cellulose 5% Glass	30% Non-fibrous (Other)	None Detected	
A-94-Insulation	A421 - Brown Paper over Brown Pipe Insulation	Brown Fibrous Homogeneous	90% Min. Wool	10% Non-fibrous (Other)	None Detected	
A-95-Paper 292109505-0095	A422 - Brown Paper over Brown Pipe Insulation	Brown Fibrous Homogeneous	65% Cellulose 5% Glass	30% Non-fibrous (Other)	None Detected	
A-95-Insulation	A422 - Brown Paper over Brown Pipe Insulation	Brown Fibrous Homogeneous	90% Min. Wool	10% Non-fibrous (Other)	None Detected	
A-96-Paper 292109505-0096	A422 - Brown Paper over Brown Pipe Insulation	Brown Fibrous Homogeneous	85% Cellulose	15% Non-fibrous (Other)	None Detected	
A-96-Insulation	A422 - Brown Paper over Brown Pipe Insulation	Yellow Fibrous Homogeneous	90% Min. Wool	10% Non-fibrous (Other)	None Detected	

Analyst(s)

Billy Barnes (8) Joshua Moorman (62)

Roxsee Stover (85)

Billy Barress

Billy Barnes, Asbestos Lab Manager or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Morrisville, NC NVLAP Lab Code 200671-0, VA 3333 000278, WVA LT000296



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EMSL Order:

292109505 TITA51 70217599

ProjectID:

Attn: Alicia Coley Terracon Consultants, Inc. 2401 Brentwood Road Suite 107 Raleigh, NC 27604

(919) 873-2211 Phone: Fax: (919) 873-9555 Received: 10/7/2021 02:00 PM

10/22/2021 Analysis Date: Collected: 10/6/2021

Project: 70217599, Brewster Building, Greenville, NC

#### Test Report: Polarized Light Microscopy (PLM) - Point Count Performed by EPA 600/R-93/116 Method with Gravimetric Reduction and 400 Point Count

SAMPLE ID	DESCRIPTION	APPEARANCE	(%) N Organio		NON- ASBESTOS % Fibrous	NON- ASBESTOS % NON-FIBROUS	ASBESTOS % TYPES
A-1-Composite 292109505-0001B	4th Floor Elevator Lobby - Drywall and Joint Compound	Brown/Gray/Whit e Fibrous Homogeneous	44.0	30.8		24.4 Non-fibrous (other)	0.8 Chrysotile
A-2-Composite 292109505-0002B	A421 - Drywall and Joint Compound	Brown/Gray/Whit e Fibrous Homogeneous	31.4	14.0		54.6 Non-fibrous (other)	<0.25 Chrysotile
A-3-Composite 292109505-0003B	Hall at A318 - Drywall and Joint Compound	Brown/Gray/Whit e Fibrous Homogeneous	21.2	1.0		77.8 Non-fibrous (other)	<0.25 Chrysotile
A-4-Composite 292109505-0004B	A332 - Drywall and Joint Compound	Brown/Gray/Whit e Fibrous Homogeneous	36.4	4.2		58.5 Non-fibrous (other)	0.9 Chrysotile
A-5-Composite 292109505-0005B	A226 - Drywall and Joint Compound	Brown/Gray/Whit e Fibrous Homogeneous	33.4	1.8		64.8 Non-fibrous (other)	<0.25 Chrysotile
A-6-Composite 292109505-0006B	Hall at A202 - Drywall and Joint Compound	Brown/Gray/Whit e Fibrous Homogeneous	36.2	39.4		24.4 Non-fibrous (other)	<0.25 Chrysotile

Analyst(s)

Joshua Moorman (3) Roxsee Stover (5)

Billy Barnes, Asbestos Lab Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Morrisville, NC NVLAP Lab Code 200671-0, VA 3333 000278, WVA LT000296



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ProjectID:

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Attn: Alicia Coley Terracon Consultants, Inc. 2401 Brentwood Road Suite 107 Raleigh, NC 27604

(919) 873-2211 Phone: Fax: (919) 873-9555 10/7/2021 02:00 PM Received: 10/22/2021

Analysis Date: Collected: 10/6/2021

Project: 70217599, Brewster Building, Greenville, NC

#### Test Report: Polarized Light Microscopy (PLM) - Point Count Performed by EPA 600/R-93/116 Method with Gravimetric Reduction and 400 Point Count

SAMPLE ID	DESCRIPTION	APPEARANCE	(%) N Organio	latrix c Acid	NON- ASBESTOS % Fibrous	NON- ASBESTOS % NON-FIBROUS	ASBESTOS % TYPES
A-7-Composite	A105 - Drywall and Joint	Brown/Gray/Whit e	35.7	13.6		50.7 Non-fibrous (other)	<0.25 Chrysotile
292109505-0007B	Compound	Fibrous Homogeneous					
A-8-Composite	Hall at A119 - Drywall and	Brown/Gray/Whit e	26.8	29.7		43.5 Non-fibrous (other)	<0.25 Chrysotile
292109505-0008B	Joint Compound	Fibrous Homogeneous					

Analyst(s)

Joshua Moorman (3) Roxsee Stover (5)

Billy Barnes, Asbestos Lab Manager or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Some samples may contain asbestos fibers present in dimensions below PLM resolution limits. EMSL suggests that samples reported as <0.25% or none detected undergo additional analysis via TEM. Estimation of

Samples analyzed by EMSL Analytical, Inc. Morrisville, NC NVLAP Lab Code 200671-0, VA 3333 000278, WVA LT000296



2500 Gateway Centre Blvd., Suite 600 Morrisville, NC 27560

Phone/Fax: (919) 465-3900 / (919) 465-3950 http://www.EMSL.com / raleighlab@emsl.com

EMSL Order: 292109505 Customer ID: TITA51 **Customer PO: 70217599** 

Project ID:

Attention: Alicia Coley

Terracon Consultants, Inc. 2401 Brentwood Road

Suite 107 Raleigh, NC 27604

Project: 70217599, Brewster Building, Greenville, NC

Canvas Wrap 12"-14"

Phone:

Fax: (919) 873-9555

10/07/2021 2:00 PM Received:

10/19/2021 Analysis Date:

Collected: 10/06/2021

### Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy. Quantitation using 400 Point Count Procedure

Non-Asbestos <u>Asbestos</u> Sample Description Appearance % Fibrous % Non-Fibrous % Type A-23-TSI 1st Floor Mechanical Gray 100.0% Non-fibrous (Other) <0.25%Chrysotile Room - Hard TSI Non-Fibrous 292109505-0023 Elbows/Joint with Homogeneous Canvas Wrap 6"-8" <0.25%Chrysotile Gray 100.0% Non-fibrous (Other) A-24-TSI 2nd Floor Mechanical Room - Hard TSI 292109505-0024 Non-Fibrous Flbows/Joint with Homogeneous Canvas Wrap 6"-8" 100.0% Non-fibrous (Other) A-25-TSI 3rd Floor Mechanical Gray <0.25% Chrysotile Room - Hard TSI 292109505-0025 Non-Fibrous Elbows/Joint with Homogeneous Canvas Wrap 6"-8" Gray 100.0% Non-fibrous (Other) < 0.25% Chrysotile A-26-TSI 4th Floor Mechanical 292109505-0026 Room - Hard TSI Non-Fibrous Flbows/Joint with Homogeneous Canvas Wrap 6"-8" A-73-TSI Gray 100.0% Non-fibrous (Other) <0.25% Chrysotile 4th Floor Mechanical Room - Hard TSI 292109505-0073 **Fibrous** Flbows/Joint with Homogeneous

Analy	st(s)	
Allai	y St(S)	

Joshua Moorman (2) Roxsee Stover (3)



Billy Barnes, Asbestos Lab Manager or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Morrisville, NC NVLAP Lab Code 200671-0, VA 3333 000278, WVA LT000296

# APPENDIX D AIR SAMPLING LABORATORY ANALYTICAL REPORT



October 13, 2021

Terracon Consultants, Inc. 2401 Brentwood Road, Suite 107 Raleigh, NC 27604

**CLIENT PROJECT:** ECU Brewster, 70217599

**LAB CODE:** R211032

Dear Customer:

Enclosed are asbestos analysis results for TEM air samples received at our laboratory on October 7, 2021. The samples were analyzed for asbestos using transmission electron microscopy (TEM) per NIOSH 7402 Method.

The current OSHA 8-hour time weighted average permissible exposure limit (PEL) for asbestos is 0.1 f/cc and the 30 minutes excursion limit is 1 f/cc. The detection limit for the NIOSH 7402 method is one confirmed asbestos fiber above 95% expected mean blank value.

Thank you for your business and we look forward to continuing good relations.

Kind Regards,

Tianbao Bai, Ph.D., CIH Laboratory Director



# **ASBESTOS ANALYTICAL REPORT By: Transmission Electron Microscopy**

### **Prepared for**

## **Terracon Consultants, Inc.**

CLIENT PROJECT: ECU Brewster, 70217599

LAB CODE: R211032

TEST METHOD: Air NIOSH 7402

REPORT DATE: 10/13/21



### **ASBESTOS AIR ANALYSIS**

By: TRANSMISSION ELECTRON MICROSCOPY

Client: Terracon Consultants, Inc.

2401 Brentwood Road, Suite 107

Raleigh, NC 27604

Lab Code: R211032 Date Received: 10-07-21 Date Analyzed: 10-12-21

Date Reported: 10-13-21

Project: ECU Brewster, 70217599

### **TEM AIR NIOSH 7402**

Client ID Lab ID	Volume (Liters)	PCM f/cc	Asbestos Type	Asbestos Fibers	Asbestos %	Asbestos f/cc
A-A-1 15783	3150.27	0.00086	None Detected	0	0	<0.00086
A-A-2 15784	3075.3	0.001	None Detected	0	0	<0.001
A-A-3 15785	3088.42	0.00087	None Detected	0	0	<0.00087
A-A-4 15786	3169.09	0.0015	None Detected	0	0	<0.0015
A-A-5 15787	3244.8	0.00083	None Detected	0	0	<0.00042
A-A-6 15788	3155.88	0.00085	None Detected	0	0	<0.00085
A-A-7 15789	3150.99	0.00086	None Detected	0	0	<0.00086
A-A-8 15790	3147.85	0.00086	None Detected	0	0	<0.00086
A-A-FB 15791	Blank		None Detected			
A-A-LB 15792	Blank		None Detected			



**LEGEND:** f/cc = fibers/cubic centimeter

**METHOD:** NIOSH 7402

Limit of Detection: 1 confirmed asbestos fiber above 95% of expected mean blank value

**REGULATORY LIMIT:** OSHA Excursion Limit (EL) is 1.0 fibers per cc based on a 30 minute sample; OSHA Permissible Exposure Limit (PEL) is 0.10 fibers per cc based on 8 hour TWA

ANALYTICAL EQUIPMENT: JEOL Electron Microscope (JEM-1200 EXII)
NORAN EDS System 7 (NSS112E)

This report relates only to the samples tested or analyzed and may not be reproduced, except in full, without written approval by Eurofins CEI. Eurofins CEI makes no warranty representation regarding the accuracy of client submitted information in preparing and presenting analytical results. Interpretation of the analytical results is the sole responsibility of the client. *Estimated measurement of uncertainty is available on request*. Samples were received in acceptable condition unless otherwise noted.

Information provided by customer includes customer sample ID, location, volume and area as well as date and time of sampling. Customer shall submit PCM results with sample COC. If not, Eurofins CEI will analyze the samples using NIOSH 7400 Method.

**ANALYST** 

\_\_\_\_ APPROVED BY

Tianbao Bai, Ph.D., CIH Laboratory Director



### CHAIN OF CUSTODY

730 SE Maynard Road, Cary, NC 27511 Tel: 866-481-1412; Fax: 919-481-1442

ECEI Lab Code: R211028

ECEI Lab I.D. Range: (215783 - 792

COMPANY INFORMATION	PROJECT INFORMATION
ECEI CLIENT #:	Job Contact: Alicia Coley
Company: Terracon	Email / Tel: ancoley@terracon.com
Address: 2401 Brentwood Road Suite 107	Project Name: ECU Brewster
Raleigh, NC 27604	Project ID#:70217599
Billing Email: ancoley@terracon.com	PO#:
Tel: 919-873-2211	State of sample origin NC

ECEI standard terms are Net 30 days.

### IF TAT IS NOT MARKED STANDARD 3 DAY TAT APPLIES.

		TURN AROUND TIME							
ASBESTOS	METHOD	4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY		
PLM BULK	EPA 600/R-93/116								
PLM POINT COUNT (400)	EPA 600/R-93/116								
PLM POINT COUNT (1000)	EPA 600/R-93/116								
PLM GRAV w POINT COUNT	EPA 600/R-93/116								
PLM BULK	CARB 435								
PCM AIR*	NIOSH 7400								
TEM AIR	EPA AHERA								
TEM AIR	NIOSH 7402						×		
TEM AIR (PCME)	ISO 10312								
TEM AIR	ASTM 6281-15								
TEM BULK	CHATFIELD / EPA 600/R- 93/116 Sec. 2.5.5.1								
TEM DUST WIPE	ASTM 06480-19								
TEM DUST MICROVAC	ASTM D5755-09 (2014)								
TEM SOIL	ASTM D7521-16								
TEM VERMICULITE	CINCINNATI METHOD								
TEM QUALITATIVE	IN-HOUSE METHOD								
OTHER:									
Blanks should be taken from the same to	Participation of the Control of the								
REMARKS / SPECIAL IN	STRUCTIONS:					ccept Sample			
Relinquished By:	Date/Time		Recei	ved By:		Date/Time			
Alisa Chy	10/1/21 133	Ω		D	c_ 10	-7 8	190		
By submitting samples, you	are agreeing to ECEI's	Terms and	d Condition	ıs.		T	2		

Samples will be disposed of 30 days after analysis

Page 1 of ○
Version: CCOC.02.21.1/2.LD



### SAMPLING FORM

CEI

COMPANY CONTACT INFORMATION				
Company: Terracon Job Contact: Alicia Coley				
Project Name: ECU Brewster				
Project ID #: 70217599	Tel: 919-873-2211			

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA		TEST
A-A-1	Hall by A114	3150.27L	PLM	TEM 🔯
A-A-2	Hall by A121	3075.3L	PLM	TEM 🔯
A-A-3	Hall by A216	3088,42L	PLM	TEM 🔯
A-A-4	Hall by A224	3169.09L	PLM	TEM 💢
A-A-5	Hall by A318	3244.BL	PLM	TEM X
A-A-6	Hall by A327	3155.88L	PLM	TEM X
A-A-7	Hall by A423	3150.99L	PLM	TEM 💟
A-A-8	Hall by A418	3147.85L	PLM	TEM [X]
A-A-FB	Field Blank	N/A	PLM	TEM 🔀
A-A-LB	Lab Blank	N/A	PLM	TEM 💢
			PLM	TEM
			PLM	TEM
			PLM	TEM [
			PLM	TEM
L.			PLM	TEM
			PLM	TEM
Ĭ			PLM	TEM [
			PLM	TEM

Page 2 of 2

Version: CCOC.02.21.2/2.LD

## APPENDIX E WATER SAMPLING LABORATORY ANALYTICAL REPORT



October 14, 2021

Terracon Consultants, Inc. 2401 Brentwood Road, Suite 107 Raleigh, NC 27604

**CLIENT PROJECT:** ECU Brewster, 70217599

**LAB CODE**: W210476

Dear Customer:

Enclosed are asbestos analysis results for TEM drinking water samples received at our laboratory on October 7, 2021. The samples were analyzed for asbestos using transmission electron microscopy (TEM) per the US EPA 100.2 Method.

The current EPA regulatory limit for asbestos in drinking water is 7 million fibers per liter (MFL, > 10 µm in length). The analytical sensitivity for the EPA 100.2 method is 0.2 MFL.

Thank you for your business and we look forward to continuing good relations.

Kind Regards,

Tianbao Bai, Ph.D., CIH Laboratory Director



## **ASBESTOS ANALYTICAL REPORT**By: Transmission Electron Microscopy

### **Prepared for**

### **Terracon Consultants, Inc.**

CLIENT PROJECT: ECU Brewster, 70217599

LAB CODE: W210476

TEST METHOD: EPA 100.2

REPORT DATE: 10/14/21



### **ASBESTOS IN DRINKING WATER ANALYSIS**

By: TRANSMISSION ELECTRON MICROSCOPY

Client: Terracon Consultants, Inc.

2401 Brentwood Road, Suite 107

Raleigh, NC 27604

Lab Code: W210476 Time Collected: 10:00 PM **Date Collected:** 10-06-21 Time Received: 2:00 PM **Date Received:** 10-07-21 Time Filtered: 3:00 PM Date Filtered: 10-07-21 Time Analyzed: 10:24 AM Date Analyzed: 10-14-21 **Date Reported:** 10-14-21 Avg Grid Opening Size: .01 mm<sup>2</sup>

Project: ECU Brewster, 70217599

### **TEM DRINKING WATER (EPA 100.2)**

Client ID	Sample Volume	Dilution	Effective Filter Area	# Of Grid	Total Area of Filter	Analytical Sensitivity	Asbestos	c	oncentrati	Confiden	ce Limit
Lab ID	Filtered	Factor	(mm²)	Analyzed	Examined	(MFL)	Туре	>.5 µm	(MFL)	Lower	Upper
A-W-1 W2186	100	10	1060	10	0.1	1.06	None Detected	0	<1.1	0.0	<3.9

Due to excessive particulate the analytical sensitivity of 0.2 MFL as required by the method was not reached.

A-W-2 W2187	100	1	1060	6	0.06	0.177	None Detected	0	<.18	0.0	<0.65
A-W-3 W2188	100	2	1060	11	0.11	0.193	None Detected	0	<.19	0.0	<0.71
A-W-4 W2189	100	1	1060	6	0.06	0.177	None Detected	0	<.18	0.0	<0.65



**LEGEND:** MFL = million fibers per liter , > .5 um in length

CHRY = chrysotile

CROC = crocidolite

NSD = no asbestos structures detected

um = micrometer

mm = millimeter

ml = milliliter

METHOD: EPA 100.2

**ANALYTICAL SENSITIVITY: 0.2 MFL** 

#### **MAXIMUM CONTAMINANT LEVEL: 7 MFL**

This report relates only to the samples tested or analyzed and may not be reproduced, except in full, without written approval by Eurofins CEI. Eurofins CEI makes no warranty representation regarding the accuracy of customer submitted information in preparing and presenting analytical results. Interpretation of the analytical results is the sole responsibility of the customer. Samples were received in acceptable condition unless otherwise noted.

Information provided by customer includes customer sample ID, location, volume and area as well as date and time of sampling.

Sample bottle was not provided by Eurofins CEI.

For the current states of certification please refer to the website: www.EurofinsUS.com/CEI

Brunilda Gjoka

ANALYST:

**APPROVED BY:** 

Tianbao Bai, Ph.D., CIH Laboratory Director



### ASBESTOS IN WATER CHAIN OF CUSTODY

CEI

730 SE Maynard Road, Cary, NC 27511 Tel: 866-481-1412; Fax: 919-481-1442 ECEI Lab Code: W216476

10: 000-401-1412; F8X: 919-4	101-1442		ECEI LAD	.b. Kange.	WALE	, e	61911
COMPANY INFORMATION			PROJECT	TINFORM.	ATION	3410	
ECEI CLIENT #:			Job Contac	# Alicio	Caley		
Company: Tennacen			Email / Tel	919-8	13-221	ancoleye	termond
Address: 2401 Branton	Project Na	me: ECU	Breust	-			
			Project ID#	1021	7599		
Billing Email: ancolone	tremen con		PO#:				
Tel: 919-473-2211	Fax: 919 - 773	5-9555	STATE SA	MPLES CO	LLECTED	IN: NC	
ECEI standard terms are Net 30 days.	IF TAT IS NOT MA	RKED STAN	DARD 3 DAY	TAT APPL	IES.		
			TURN AR	OUND TIME			
ASBESTOS	METHOD	4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY
TEM DRINKING WATER // con	TO STATE OF THE						

			TOTAL ALCOHO TIME						
ASBESTOS		METHOD	4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY	
TEM DRINKING WATER fibers > 10 µm only)		EPA Method 100.2							
TEM DRINKING WATER fibers ≥ 0.5 μm)	R (All	EPA Method 100.2						M	
TEM WASTE WATER (I fibers > 10 µm only)		EPA Method 100.2							
TEM WASTE WATER (All ≥ 0.5 µm)	fibers	EPA Method 100.2							
OTHER:									
Sample Collected By:	icia	Coley	Signature:	Alian (	lu	State Compliance	Yes	No.	
SAMPLE ID# / PWS ID	PUB	LIC WATER SYSTEM NAME	VOLUME (ml)	DATE Collected	TIME	Collected	THE RESERVE OF THE PARTY OF THE	sture ( °C)	
A-11-1	4HF	-1 Womens Azstovan Sir	× 400	10/2/21	ಇತ	00	17.0		
A-4-2	300 5		400	10/6/21	aa	00	17	1	
4-11-3	30/	F) Mens Partmansil	400	16/2/01	22	05	17.F	8	
1-12-4	1545		\$50	10/6/91	as	205	17.0	٦	
	1								

REMARKS / SPECIAL	INSTRUCTIONS:		Reject Samples
Relinquished By:	Date/Time	Received By:	Date/Time
Aliendy	10721 1330	TX	_ 10-7 220

By submitting samples, you are agreeing to ECEI's Terms and Conditions. Samples will be disposed of 30 days after analysis

Page \_\_\_\_1\_of \_2\_\_

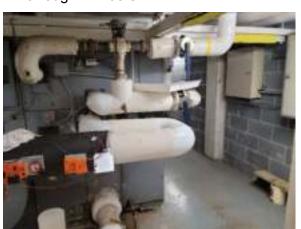
Version TWCOC,02,21.1/1,LD

## APPENDIX F PHOTOGRAPHS





**Photo #1** Typical view of hallway on 2<sup>nd</sup> through 4<sup>th</sup> floors.



**Photo #3** Typical view of mechanical room.



Photo #5 OSHA-regulated (<1% asbestoscontaining) drywall and joint compound (HA #1)



Photo #2 Typical view of office space.



**Photo #4** Typical view of plenum on 1st through 3rd floors.



Photo #6 Non-asbestos containing 2' x 2' white ceiling tile with dots and pits (HA #2)





Photo #7 Non-asbestos containing 4" black covebase and mastic (HA #3)



**Photo #9** Non-asbestos containing white canvas wrap on HVAC duct (HA #5)

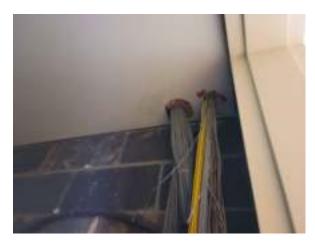


Photo #11 Non-asbestos containing red fire caulk (HA #7)



**Photo #8** Non-asbestos containing white canvas wrap on 6"-8" pipes with asbestoscontaining black mastic (HA #4)



Photo #10 OSHA-regulated (<1% asbestoscontaining) hard TSI elbows/joints with non-asbestos containing canvas wrap 6"-8" (HA #6)



Photo #12 Non-asbestos containing 4" gray covebase and mastic (HA #8)





**Photo #13** Non-asbestos containing ceramic floor tile grout and mortar (HA #9)



Photo #14 Non-asbestos containing ceramic wall tile grout and mortar (HA #10)



Photo #15 Non-asbestos containing 4" dark brown covebase and mastic (HA #11)



Photo #16 Asbestos-containing 12" x 12" gray with brown and black specks floor tile and mastic (HA #12)



**Photo #17** Non-asbestos containing gray interior window sealant (HA #13)



Photo #18 Non-asbestos containing CMU surface block filler (HA #14)





**Photo #21** Non-asbestos containing 12" x 12" tri-gray floor tile and mastic (HA #15)



**Photo #22** Asbestos-containing black seam caulk at AHU/Duct Joint (HA #16)



Photo #23 Asbestos-containing black floor mastic under non-asbestos containing 12" x 12" white with tan specks floor tile (HA #17)



Photo #24 Non-asbestos containing 4" tan covebase and mastic (HA #18)



Photo #25 Non-asbestos containing 2' x 2' white ceiling tile with dots and fissures (HA #19)



Photo #26 Non-asbestos containing 2' x 2' white ceiling tile with dots (HA #20)

#### **Limited Asbestos Survey Report**

ECU Brewster Building – A Wing • Greenville, North Carolina Photos Taken October 6, 2021 • Terracon Project No. 70217599





Photo #27 Non-asbestos containing white canvas wrap on 12"-14" pipes with asbestos-containing black mastic and OSHA-regulated (<1% asbestos) hard TSI elbows/joints (HA #21 and 22)



**Photo #28** Non-asbestos containing tan carpet glue (HA #24)



**Photo #29** Asbestos-containing gray foil-backed light insulation (HA #25)



**Photo #30** Asbestos-containing black mastic on fiberglass pipe insulation (HA #26)



Photo #31 Non-asbestos containing brown paper and white canvas over fiberglass pipe insulation with asbestos-containing black mastic (HA #27)



Photo #32 Non-asbestos containing yellow HVAC fiberglass duct insulation glue (HA #28)

Limited Asbestos Survey Report

ECU Brewster Building – A Wing ■ Greenville, North Carolina

Photos Taken October 6, 2021 ■ Terracon Project No. 70217599





**Photo #33** Non-asbestos containing brown paper over brown pipe insulation (HA #29)

# APPENDIX G ACCREDITATIONS AND CERTIFICATIONS



Alicia N Coley 51 Wolf Den Dr Gamer, NC 27529

132076

#### North Carolina Asbestos Accreditation

EXPIRATION CONSTRUCTOR					
DOB SE	х нт	WT			
09-07-1983 F	5'5"	130			
CLASS		EXP			
DESIGNER	40502				
INSPECTOR	12548	1553			
SUPER AIR MONITO	OR 90159	21.5			



Anthony J Scieldone 111 Tower Dr Anger, NC 27501

133246

### North Carolina Astestos Accreditation

EXPIRATION						
11-06-1971	SEX	HT Var	WT			
AR MONITOR		8075B	EXP			
DESIGNER INSPECTOR MONT PLANNER		40426 17254 20962				



### Mass Flowmeter Calibration Certificate

Model:

4146

Rev: F

Summary Status

Environmental Conditions Pressurer 98.0 kPa

Serial Number: Verification date: 09-Jun-2021

41461809010

☐ Ae-Found in Tolerance 🔯 As Left Out of Tolerance

Temperature: 22.1%

Air Flow

Tolerance: +11 75% of reading or 0.005 SLPM")

Reference Measured		Allowable Range	
(SLPM)	(SLPM)	Min	Max
0.056	0.056	0.051	0.061
0.162	0.181	0.157	0.167
0.285	0.266	0.281	0.291
0.432	0.430	0.424	0.439
0.998	0.997	0.980	1.015
1,997	1.068	1.062	2.031
3.740	3.748	3.675	3,806
7.484	7.457	7.353	7.615
14.97	14.94	14,71	15:23
19.98	19.94	19.63	20.33

### Temperature

Tolerance +1 000 %

Reference Magained		Al (wable Range	
(°C)	(10)	Min	Max
21.85	22.03	20-86	22.80
3	PAS	is	

#### Pressure

Totalance: ±0.110 psia

Reference Massurad		A Israahis Bango	
(0914)	(psla)	Min	Max
14.22	14.22	94.03	14.93
22,60	2261	22.49	22.71

Internal Calibration Reference(s)		
Measurement Tyre	Reference (FC4)	Dice for Calibration
FISH	2006068	30-Jun-2021
Pressure:	2008089	20-Jun-2021
Temperatura	F005060	во Јън 202:

TS1.5te Chivállans: 78 fF (21.11 fC) and (4.7 psia)

Verified by: Baoyans

TSI Inc. 500 Cardigan Rd Shoreview, MN 55126 USA

Fridge 10-Jun-2021 00:28 Var 3 9 9.2 Page | 653

\*Tolerance specified: whichever is greater

TSI does hereby certify that this flowmeter has been calibration using TSI procedure 10000021269. The calibration of the reference standards maintain national laboratory traceability to National Institute of Standards & Technology (NIST)

## United States Department of Commerce National Institute of Standards and Technology



### Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 200671-0

EMSL Analytical, Inc.

Morrisville, NC

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

### Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2021-04-01 through 2022-03-31

Effective Dates



For the National Voluntary Laboratory Accreditation Program





### SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

### EMSL Analytical, Inc.

2500 Gateway Centre, Ste. 600 Morrisville, NC 27560 Mr. Billy Barnes Phone: 919-465-3900

Email: bbarnes@emsl.com http://www.emsl.com

### ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 200671-0

### **Bulk Asbestos Analysis**

Code Description

(\$/A0) EPA = 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of

Asbestos in Bulk Insulation Samples

13/A03 EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

### Airborne Asbestos Analysis

<u>Code</u> Description

15/A02 U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and

Nonmandatory-and Mandatory Section to Determine Completion of Response Actions<sup>6</sup> as found in

40 CFR, Part 763, Subpart E, Appendix A,

For the National Voluntary Laboratory Accreditation Program.



March 18, 2021

Tianbao Bai Eurofins CEI, Inc. 730 SE Maynard Road Cary, NC 27511

NVLAP Lab Code: 101768-0

Dear Dr. Bai,

Thank you for continuing your accreditation for Asbestos Fiber Analysis under the National Voluntary Laboratory Accreditation Program (NVLAP). This accreditation is effective until March 31, 2022, provided that your laboratory continues to comply with the accreditation requirements contained in the NVLAP Procedures.

Your updated accreditation documents are enclosed. You may reproduce these documents in their entirety and use the NVLAP symbol and/or term to reference your accredited status in accordance with the requirements published in NIST Handbook 150, 1.8. Accreditation does not relieve your laboratory from observing and complying with any applicable existing laws and/or regulations.

We are pleased to have you participate in NVLAP and look forward to your continued association with this program. If you have any questions concerning your NVLAP accreditation, please direct them to Derek Ho, Program Manager, Laboratory Accreditation Program, National Institute of Standards and Technology, 100 Bureau Dr. Stop 2140, Gaithersburg, MD 20899-2140; 301-975-4023.

Sincerely,

Dana S. Leaman, Chief

National Voluntary Laboratory Accreditation Program





## United States Department of Commerce National Institute of Standards and Technology



### Certificate of Accreditation to ISO/IEC 17025:2017

**NVLAP LAB CODE: 101768-0** 

**Eurofins CEI, Inc.** 

Cary, NC

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

### **Asbestos Fiber Analysis**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2021-04-01 through 2022-03-31

Effective Dates



For the National Voluntary Laboratory Accreditation Program

### SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

### **Eurofins CEI, Inc.**

730 SE Maynard Road Cary, NC 27511 Dr. Tianbao Bai

Phone: 919-481-1413 Fax: 919-481-1442 Email: tianbaobai@eurofinsus.com http://www.eurofinsus.com/CEI

### ASBESTOS FIBER ANALYSIS

### **NVLAP LAB CODE 101768-0**

### **Bulk Asbestos Analysis**

<u>Code</u> <u>Description</u>

18/A01 EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of

Asbestos in Bulk Insulation Samples

18/A03 EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

### Airborne Asbestos Analysis

<u>Code</u> <u>Description</u>

18/A02 U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and

Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in

40 CFR, Part 763, Subpart E, Appendix A.

For the National Voluntary Laboratory Accreditation Program



ROY COOPER + Governor

MANDY COHEN, MD, MPH . Secretary

MARK T. BENTON · Assistant Secretary for Public Health

Division of Public Health

SCOTT M. SHONE, PhD. HCLD (ABB) • Laboratory Director, State Laboratory of Public Health

## Memo

To: NC CERTIFIED DRINKING WATER LABORATORIES

From: NC DRINKING WATER CERTIFICATION OFFICE

Date: July 30, 2021

Re: 2021-2022 CERTIFICATE – DRINKING WATER CERTIFICATION

Enclosed is your laboratory's drinking water certificate for the year 2021-2022. Please review the certificate and accompanying status sheet(s) – if you find an error please email <a href="tiffany.kohl@dhhs.nc.gov">tiffany.kohl@dhhs.nc.gov</a> and a corrected copy will be sent. <a href="Please note">Please note</a>: if your laboratory is certified for only <a href="unregulated">unregulated</a> (UR) <a href="inorganic parameters">inorganic parameters</a> under the general chemistry section of your status sheet, this will only be listed on the status sheet and not on the certificate.

If you have any questions, please do not hesitate to call (919) 807-8879.

## North Carolina Department of Health and Human Services Laboratory Certification



in accordance with the provisions of regulations 10A NCAC 42D 0.200 certification for the analysis of drinking water has been granted to

### **Eurofins CEI, Inc.**

Laboratory Number 37912

For the following analyte group(s)

Inorganic Chemistry

Refer to most-recent status sheet for analytes and methods

July 1, 2021

Issue date

July 31, 2022

Expiration date

Elizabeth Tilson, MD, MPH State Health Director

Michele Sartin

Scott M. Shone, PhD, HCLD (ABB)

Drinking Water Certification

Director, State Laboratory

This laboratory has met the minimum requirements for the certification to analyze drinking water.

This certificate does not guarantee accurate results.

### North Carolina Department of Health and Human Services State Laboratory of Public Health

EUROFINS CEI, INC

Lab Number 37912

Effective Date:

July 1, 2021

'INTERIM CERTIFICATION

North Carolina Drinking Water Certification Status Sheet:

Analyte Cod	de (UR = Unregulated)	Method Code	Method
200000	General Chemistry	D/06-05-05-0	520 Or 5000 - 1000
1094	Total Asbestos	100.2	Transmission Electron Microsc.