



PRE-RENOVATION ASBESTOS CONTAINING MATERIALS SURVEY AND LEAD-BASED PAINT SCREENING REPORT

**Greenville Technical College
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506 South Pleasantburg Drive
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1.0 INTRODUCTION

Froehling & Robertson, Inc. (F&R) conducted a Pre-Renovation Limited Asbestos-Containing Material (ACM) survey and Lead-Based Paint (LBP) screening on August 27, 2020 within an approximate 3,200 square foot (SF) building section on the northwest side of Engineering Technology Building 103 located on the Greenville Technical College campus at 506 South Pleasantburg Drive in Greenville, South Carolina. It is F&R's understanding that the offices, classroom, computer laboratory in the Machine Technology Program area on the northwest side of the building and a portion of the campus book store that adjoins the Machine Technology Program area are the subject of planned renovation and selective demolition activities which will impact building materials. Based on the Client provided building plan, this section of Engineering Technology Building 103 is referred to as Area 5. Interior renovations within the portions of Area 5 that are represented in this survey include the removal and replacement of vinyl flooring, ceiling tiles, and the demolition of interior demising walls in the office and classroom area; the demolition of the interior concrete masonry unit (CMU) block wall located between campus book store and the office and classroom area; and the partial demolition of the interior brick wall located between the computer lab and the book storage room/book store to facilitate the installation of interior windows. The following sections document the survey procedures and results. Refer to Appendix A for Personnel Accreditation documentation of F&R personnel associated with this survey.

1.1. Purpose

The purpose of the Pre-Demolition ACM Survey and LBP Screening is to identify ACMs and LBP coatings that may require appropriate removal, handling, and disposal procedures prior to scheduled renovation and selective demolition activities at the subject property. This survey is to aid in the determination of health and safety requirements during the conduct of work which will impact identified materials.

1.2. Site Description

The subject property consists of an approximately 3,200 SF section within Area 5 of Engineering Technology Building 103. Engineering Technology Building 103 is an approximate 115,000 square foot one-story building that was constructed in the late 1970s to the early 1980s. The portions of Area 5 that are represented in this survey are utilized as classrooms, office space, a computer lab, and the campus book store. In addition, the building includes additional classroom and offices, computer labs, machine shop hands on learning areas, restrooms, mechanical and electrical rooms, a canteen, student common areas, and other education related features. The building is constructed upon a shallow concrete foundation with concrete floor slabs and consists of a combination of steel-frame and concrete masonry unit (CMU) construction with steel columns, beams, roof joists, and corrugated roof decking, and interior wood-framed walls. Engineering Technology Building 103 is covered by a combination of an ethylene propylene diene



terpolymer (EPDM) rubber membrane roof and metal roof sections. The exterior of the building is finished with a combination of a brick veneer and Exterior and Insulation Finish System (EIFS) which consists of a two layer cementitious coating applied on a metal reinforcing mesh/frame with an exterior stucco surfacing coating. Interior finishes within Area 5 include acoustic lay-in ceiling tile, open unfinished ceilings with exposed fiberglass insulation, gypsum board walls, vinyl composite tile, and finished and unfinished concrete floors.

It should be noted that material and color descriptions are subjective and that, due to the nature of the environment, identical materials and colors may have been labeled as different depending on the lighting, other colors in the area, and other factors.

2.0 SCOPE OF SERVICES

As outlined in F&R proposal number 2059-00568, the survey included the following services with respect to the proposed building demolition:

- Identification and sampling, as necessary, of suspect ACMs for analysis.
- Determination of the presence, location, and estimated quantity of identified ACMs.
- Screening and testing, as necessary, of surface coatings for the presence of Lead.

Based on information provided by the client, it is F&R's understanding that the structure will be the subject of a renovation and selective demolition activities which will impact building materials. Invasive and destructive sampling methods were used; however, these methods were not exhaustive. As such, while this survey as performed constitutes a relatively comprehensive building survey, this report shall not be utilized for the determination of presence or absence of ACMs or LBP coatings outside of the renovation area should the scope of work be altered or expanded beyond that of the area currently scheduled for renovation and selective demolition, or for materials that are discovered during demolition.

3.0 LIMITED ASBESTOS-CONTAINING MATERIALS SURVEY

F&R's South Carolina Licensed Asbestos Building Inspector, Andréa LeCroy (South Carolina Asbestos Building Inspector #BI-01080), conducted the Asbestos Survey of Area 5 within Engineering Technology Building 103 located at 506 South Pleasantburg Drive, Greenville, South Carolina on August 27, 2020.

Federal Regulations (40 CFR Part 61, Subpart M – National Emission Standard for Asbestos (NESHAP)), as well as South Carolina State Regulations (61-86.1 Standards of Performance for Asbestos Projects) require a thorough asbestos inspection of the structure to be conducted prior to the commencement of renovation and/or demolition activities. An ACM is defined by the Occupational Safety & Health Administration (OSHA) and the Environmental Protection Agency (EPA) as material containing greater than one percent (1%) asbestos.



3.1. Asbestos-Containing Materials (ACM) Methodology

This survey was conducted in general accordance with the Federal NESHAP and applicable State regulations for the presence of ACMs. The survey was characterized by a visual inspection and sampling of suspect building components at the subject property to be impacted by the proposed renovation/demolition activities.

Guidelines utilized in the asbestos survey were established by the EPA, ASTM International (ASTM), and The Environmental Information Association, Inc. (EIA). Utilized guidelines included: the Asbestos Hazard Emergency Response Act (40 CFR Part 763, Subpart E – Asbestos-Containing Materials in Schools (cited as AHERA)), ASTM Standard E2356-14 *Standard Practice for Comprehensive Building Asbestos Surveys*, and the EIA publication *Managing Asbestos in Buildings: A Guide for Owners and Managers – A Revision to the United States Environmental Protection Agency’s 1985 document Guidance for Controlling Asbestos-Containing Materials in Buildings (EPA 560/5-85-024) Known as the Purple Book*.

F&R’s aforementioned Industrial Hygienist collected and submitted fifty-two (52) suspect asbestos-containing bulk samples to the laboratory. Due to multiple layers, a total of sixty-four (64) suspect asbestos-containing bulk samples with discernable layers were analyzed including eight (8) non-friable organically bound samples which were analyzed by Transmission Electron Microscopy (TEM) in accordance with South Carolina State Regulations (61-86.1 Standards of Performance for Asbestos Projects).

Samples of suspect ACMs were organized as per the AHERA concept of Homogeneous Area (HA), collected, and transported to Eurofins CEI (ECEI) testing laboratory. ECEI is a National Institute for Standards and Technology (NIST) National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory (NVLAP Lab Code: 101768-0), for analysis by Polarized Light Microscopy (PLM) following EPA Method 600/R-93/116. Additionally, as required by South Carolina DHEC, eight (8) samples of non-friable organically bound (NOB) materials such as mastics and vinyl flooring were analyzed using TEM analysis. Refer to Appendix A for Laboratory Certificates of Accreditations. Refer to Appendix C for Laboratory Certificates of Analysis and Bulk Sample Chain of Custody Forms for further description of sampled materials/analytical results.

3.2. Asbestos-Containing Materials Findings

The following material types were identified, sampled, and accordingly homogenized based upon similar construction discovered during bulk sampling:

- Vinyl Flooring
- Leveling Compound
- Gypsum Wallboard/Joint Compound
- Mastics
- Brick/Grout
- Cove Base



- Ceiling Tile
- Cove Base
- CMU Block Filler Surfacing
- CMU Block/Mortar/Grout

The following table presents a summary of survey results from sampling events performed on August 27, 2020. Refer to Appendix B for illustration of the locations of collected bulk samples.

SUSPECT ASBESTOS-CONTAINING MATERIALS SAMPLE INFORMATION

HA #	Sample #	Situation ¹	Sample Location(s)	Material Description	Friable/Non Friable	Percent Asbestos
1	VF-1	1	Classroom 509, West End of North Wall	Light Gray Vinyl Floor Tile	NF	NAD ²
				Yellow Mastic		NAD
1	VF-2	1	Classroom 508 East End of North Wall	Light Gray Vinyl Floor Tile	NF	NAD ³
				Yellow Mastic		NAD ³
1	VF-3	1	Reception 506 North Wall, Adjacent to Door to Office 510	Light Gray Vinyl Floor Tile	NF	NAD
				Yellow Mastic		NAD
2	VF-4	1	Foyer, Northeast Side	Dark Gray Vinyl Floor Tile	NF	NAD
				Yellow Mastic		NAD
2	VF-5	1	Foyer, South of Center	Dark Gray Vinyl Floor Tile	NF	NAD
				Yellow Mastic		NAD
2	VF-6	1	Foyer, Near Entrance	Dark Gray Vinyl Floor Tile	NF	NAD ³
				Yellow Mastic		NAD ³
3	LC-7	1	Foyer, Near Entrance	Leveling Compound (Isolated to Area of Dark Gray VFT)	F	NAD
3	LC-8	1	Foyer, Near Entrance	Leveling Compound (Isolated to Area of Dark Gray VFT)	F	NAD
3	LC-9	1	Foyer, Near Entrance	Leveling Compound (Isolated to Area of Dark Gray VFT)	F	NAD
4	CB-10	1	Office 510, West Wall	Gray Cove Base	NF	NAD
				Cream Mastic		NAD
4	CB-11	1	Office 511 South Wall	Gray Cove Base	NF	NAD
				Cream Mastic		NAD
4	CB-12	1	Classroom 508, West End of South Wall	Gray Cove Base	NF	NAD ³
				Cram Mastic		NAD ³
5	CT-13	1	Office 510 North Side, Near Center	2'X2' White Ceiling Tile with Pinholes	F	NAD
5	CT-14	1	Office 511 East Side, Near Center	2'X2' White Ceiling Tile with Pinholes	F	NAD
5	CT-15	1	Classroom 508 North Side, West of Center	2'X2' White Ceiling Tile with Pinholes	F	NAD



HA #	Sample #	Situation ¹	Sample Location(s)	Material Description	Friable/Non Friable	Percent Asbestos
6	WB-16	1	Classroom 509 North Wall, Behind Switch Plate	Gypsum Wallboard	F	NAD
6	WB-17	1	Office 511 South Wall, Behind Switch Plate	Gypsum Wallboard	F	NAD
6	WB-18	1	Classroom 508 East Wall, Behind Switch Plate	Gypsum Wallboard	F	NAD
6	JC-19		Foyer, Northeast Corner	Joint Compound	F	NAD
6	JC-20	1	Office 511, East Wall, Above Ceiling Tile	Joint Compound	F	NAD
6	JC-21	1	Wall Near Reception Desk Northeast Corner	Joint Compound	F	NAD
6	JC-22	1	Classroom 508 East Wall, Behind Switch Plate	Joint Compound	F	NAD
6	JC-23	1	Reception 506 West Wall Northwest Corner	Joint Compound	F	NAD
6	JC-24	1	Classroom 509 South Wall Behind Switch Plate	Joint Compound	F	NAD
6	JC-25	1	Classroom 507 Near Southeast Corner	Joint Compound	F	NAD
7	BR-26	1	South Brick Wall Computer Lab 517 Sampled Near Entrance to Bookstore	Red Brick	NF	NAD
7	BR-27	1	South Brick Wall Computer Lab 517 Sampled Above Drop Ceiling, West of Center	Red Brick	NF	NAD
7	BR-28	1	South Brick Wall Computer Lab 517 Sampled Above Drop Ceiling, Near Center	Red Brick	NF	NAD
8	GR-29	1	South Brick Wall Computer Lab 517 Sampled Near Entrance to Bookstore	Gray Grout	NF	NAD



HA #	Sample #	Situation ¹	Sample Location(s)	Material Description	Friable/Non Friable	Percent Asbestos
8	GR-30	1	South Brick Wall Computer Lab 517 Sampled Above Drop Ceiling, Near Center	Gray Grout	NF	NAD
8	GR-31	1	South Brick Wall Computer Lab 517 Sampled Above Drop Ceiling, West of Center	Gray Grout	NF	NAD
9	CB-32	1	Book Store, Base of East Wallboard Wall in Book Storage, North of Center	Dark Gray Cove Base	NF	NAD
				Cream Mastic		NAD
9	CB-33	1	Book Storage, Base of CMU Wall Adjacent to Door to Computer Lab	Dark Gray Cove Base	NF	NAD
				Cream Mastic		NAD
9	CB-34	1	Book Store Base of CMU Wall in Book Storage, West of Center	Dark Gray Cove Base	NF	NAD ³
				Cream Mastic		NAD ³
10	WB-35	1	Demising Wall Between Book Storage and Book Store Sales Floor, North End of East Wall	Gypsum Wallboard	F	NAD
				Joint Compound (Listed as Mud by Lab)		NAD
10	WB-36	1	Demising Wall Between Book Storage Area and Book Store Sales Floor, East Wall, Near Center, Behind Switch Plate	Gypsum Wallboard	F	NAD
				Joint Compound (Listed as Mud by Lab)		NAD
10	WB-37	1	Demising Wall Between Book Storage Area and Book Store Sales Floor, East Wall, South End, Behind Switch Plate	Gypsum Wallboard	F	NAD
				Joint Compound (Listed as Mud by Lab)		NAD
10	JC-38	1	Demising Wall Between Book Storage Area and Book Store Sales Floor, East Wall, North End	Joint Compound	F	NAD
10	JC-39	1	Demising Wall Between Book Storage Area and Book Store Sales Floor, East Wall, Near Center, Behind Switch Plate	Joint Compound	F	NAD



HA #	Sample #	Situation ¹	Sample Location(s)	Material Description	Friable/Non Friable	Percent Asbestos
10	JC-40	1	Demising Wall Between Book Storage Area and Book Store Sales Floor, East Wall, South End, Behind Switch Plate	Joint Compound	F	NAD
11	BF-41	1	Book Store CMU Wall in Book Storage Area, West of Center	Off-White Block Filler (Surface of CMU, Below Paint)	F	NAD
11	BF-42	1	Book Store CMU Wall in Book Storage Area, East of Center	Off-White Block Filler (Surface of CMU, Below Paint)	F	NAD
11	BF-43	1	Book Store CMU Wall in Book Storage Area, Near Center	Off-White Block Filler (Surface of CMU, Below Paint)	F	NAD
12	CMU-44	1	Book Store CMU Wall in Book Storage Area, Adjacent to East Side of Door to Computer Lab Area	CMU Block	NF	NAD
12	CMU-45	1	Book Store CMU Wall in Book Storage Area, Adjacent to West Side of Door to Computer Lab Area	CMU Block	NF	NAD
12	CMU-46	1	Book Store CMU Wall in Book Storage Area, West of Center	CMU Block	NF	NAD
13	M-47	1	Book Store CMU Wall in Book Storage Area, Adjacent to East Side of Door to Computer Lab Area	CMU Mortar	NF	NAD ³
13	M-48	1	Book Store CMU Wall in Book Storage Area, Adjacent to West Side of Door to Computer Lab Area	CMU Mortar	NF	NAD



HA #	Sample #	Situation ¹	Sample Location(s)	Material Description	Friable/Non Friable	Percent Asbestos
13	M-49	1	Book Store CMU Wall in Book Storage Area, West of Center	CMU Mortar	NF	NAD
14	GR-50	1	West CMU Wall, Sampled at Hole In CMU at Base of Wall	CMU Grout	NF	NAD
14	GR-51	1	West CMU Wall, Sampled at Hole In CMU at Base of Wall	CMU Grout	NF	NAD
14	GR-52	1	West CMU Wall, Sampled at Hole In CMU at Base of Wall	CMU Grout	NF	NAD

¹Situation: 1 –First

²NAD: No Asbestos Detected

³Analyzed by TEM

3.3. Asbestos-Containing Materials Inventory

F&R conducted a survey of the reasonably and safely accessible portions of the approximate 3,200 SF portion of Area 5 within the Engineering Technology Building 103 that includes offices, classrooms, and a computer laboratory in the Machine Technology Program area; and portions of the campus book store on the northwest side of the building which are the subject of planned renovation and selective demolition activities which will impact building materials. The building exterior, roof, and areas outside of the renovation area were excluded.

Based on the laboratory results for the samples collected, asbestos was not identified.

3.3.1. Presumed Asbestos-Containing Materials

During the conduct of this survey, sampling was limited to those materials which were within the areas designated by the client, which were safely accessible, and which were able to be sampled without damaging systems or structures. As such, materials within the renovation area which were not observed or represented during this survey should be presumed to be positive upon discovery, until sampling is conducted and shown to be negative. In addition, building materials outside of the approximate 3,200 SF area within Area 5 proposed for renovation should be presumed to contain asbestos.

Note that asbestos was used in over 3,000 known products and was used extensively in construction materials including in insulation and finish materials such as drywall-based systems, acoustical tiles, caulks and mastics, vinyl-based materials, and specialty products. Asbestos also continues to be used in new construction because, as stated by the EPA, "the manufacture, importation, processing, and distribution in commerce of [various] products [...] are not banned."



3.4. Applicable Regulations

3.4.1. EPA/NESHAP Regulations for Asbestos-Containing Materials

The U.S. Environmental Protection Agency promulgated the National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR Part 61], which addresses the application, removal, and disposal of asbestos-containing materials (ACM). Under NESHAP the following categories are defined for asbestos-containing materials:

Friable - When dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

Non-friable - When dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Category I Non-friable ACM - Packings, gaskets, resilient floor coverings, and asphalt roofing products containing more than 1% asbestos.

Category II Non-friable ACM – Material, excluding Category I Non-friable ACM, which contains more than 1% asbestos.

Regulated Asbestos Containing Material (RACM) – One of the following:

1. Friable ACM
2. Category I Non-friable ACM that has become friable.
3. Category I Non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
4. Category II Non-friable ACM that has a high probability of becoming, or has become, friable by the forces expected to act on the material in the course of demolition or renovation operations.

Under NESHAP, the following actions are required:

1. Prior to the commencement of demolition or renovation activities, the building owner must inspect the affected facility or part of the facility where the demolition or renovation activities will occur for the presence of asbestos.
2. Remove RACM from the facility before activities begin that would break up, dislodge, or similarly disturb the material or preclude access for subsequent removal.
3. ACM need not be removed if:
 - a) It is Category I non-friable ACM that is not in poor condition.



- b) It is on a facility component that is encased in concrete or other similar material and is adequately wet whenever exposed.
- c) It was not accessible for testing and was therefore not discovered until after demolition began and because of the demolition the material cannot be safely removed.
- d) It is Category II non-friable ACM and the probability is low that the material will become crumbled, pulverized, or reduced to powder during demolition.

3.4.2. South Carolina Asbestos Hazard Management Program

The South Carolina Department of Health and Environmental Control (DHEC) Department of Air Quality administers the Asbestos Hazard Management Program (AHMP) which accredits individuals and issues permits for asbestos removal projects on behalf of the Federal NESHAP program which has been delegated to the State of South Carolina.

For more information, visit the SC DHEC website at: <https://www.scdhec.gov/Environment/AirQuality/Asbestos/>

3.4.3. OSHA Asbestos Regulations

The Occupational Safety and Health Administration (OSHA) regulates employee exposure to asbestos under 29 CFR 1926.1101 and 29 CFR 1910.1001. Work associated with known or suspect ACMs must be conducted according to these regulations in addition to the noted EPA regulations.

4.0 LIMITED LEAD-BASED PAINT SURVEY

F&R's Andréa LeCroy, performed the testing of surface coatings for lead on August 27, 2020. For definitions of terms used in this document with regard to Lead-Based Paint, please reference the Glossary of the [U.S. Department of Housing and Urban Development \(HUD\) Guidelines for the Evaluation and Control of Lead-Based paint Hazards in Housing \(Second Edition, July 2012\)](#).

Based on the nature of this survey, when one component tests positive for the presence of lead, similar painted/coated components shall be assumed to be lead-containing, unless additional testing is performed.

4.1. Lead-Based Paint Survey Methodology

The survey was conducted in general accordance with ASTM E1729-16 Standard Practice for Field Collection of Dried Paint Samples for Subsequent Lead Determination; this was not a



comprehensive surface-by-surface investigation for LBP, but rather a screening survey of major coated surfaces where the presence of LBP is suspected.

4.1.1. Bulk Paint Film Sample Collection

For this project, a limited visually-based invasive survey and testing for LBP was conducted within the facility where demolition activities are anticipated to impact extant building materials. Lead paint chip sampling was conducted on major painted surfaces that are anticipated to be impacted or disturbed during scheduled demolition activities. A total of nine (9) samples of suspected lead paint film were collected, transferred to the Laboratory under chain-of-custody procedures, and analyzed by Flame Atomic Absorption Spectroscopy via EPA Method SW846 3050B/7000B by Scientific Analytical Institute, Inc., in Greensboro, North Carolina (AIHA ELLAP Participant ID# 173190), a participant laboratory in the American Industrial Hygiene Association (AIHA) Environmental Lead Laboratory Accreditation Program (ELLAP) for environmental Lead. Refer to Appendix A for Laboratory Accreditation documentation. Refer to Appendix C for Laboratory Certificates of Analysis and Bulk Sample Chain of Custody forms for further description of sampled materials and analytical results.

Sample were collected by removing the paint film layer from a predetermined location in a manner which reduced potential inclusion of the underlying substrate in the sample.

4.2. Lead-Based Paint Survey Findings

4.2.1. Bulk Sample Results

Lead paint chip sampling was conducted on painted surfaces that would be impacted as part of the demolition. The paint chip samples were analyzed for lead content.

LEAD-BASED PAINT FILM SAMPLE RESULTS

Sample #	Paint Color	Substrate	Location	Floor	Lead Content	Lead Content (ppm)	Classification
P-1	Cream	Gypsum Wallboard	Office 511	1	<0.0064%	<64	Negative
P-2	Beige	Gypsum Wallboard	Class 509	1	<0.0054%	<54	Negative
P-3	Gray	Gypsum Wallboard	Halls, Classroom s, Offices	1	0.0081%	81	Negative
P-4	Light Gray	Gypsum Wallboard	Office 510	1	<0.0049%	<49	Negative
P-5	White	Brick	Computer Lab	1	0.0082%	82	Negative



Sample #	Paint Color	Substrate	Location	Floor	Lead Content	Lead Content (ppm)	Classification
P-6	Dark Gray	CMU Block, Gypsum Wallboard	Bookstore	1	0.0044%	44	Negative
P-7	Light Gray	CMU Block, Gypsum Wallboard	Bookstore	1	<0.0054%	<54	Negative
P-8	Purple	Gypsum Wallboard	Bookstore	1	<0.0061%	<61	Negative
P-9	Green	Gypsum Wallboard	Bookstore	1	<0.0061%	<61	Negative

¹Situation: 1 –First

None of the paint chip samples collected and analyzed indicated coated materials in the interior and exterior of the building at the subject property were positive for lead-based paint, when compared to the EPA and HUD standard of 0.5% by weight. Seven of the nine samples yielded results above the reporting limit of 4 micrograms total lead however lead was detected by the laboratory in three samples.

4.3. Lead-Based Paint Conclusions & Recommendations

This survey concludes that building components located in the project area in interior of the structure do not contain lead-based paint/coatings. The coatings collected from the cream, beige, gray, purple, and green gypsum wallboard walls throughout the project area; white coating collected from the brick wall in the computer lab; and light gray coating collected from the gypsum wallboard and CMU block walls in the book store were reported to be between <0.0054% and 0.0082% by weight (54 to 82 parts per million, ppm).

The Consumer Products Safety Commission (CPSC) has set a standard for most paints to not exceed 0.009% lead by weight (90 ppm). While none of the tested paints exceeded the CPSC threshold value, F&R recommends that activities which may disturb coatings where lead was detected be conducted following appropriate Federal and State regulations. Federal regulations with regard to worker safety and disposal requirements are summarized in the following Section – Applicable Regulations; this is not an exhaustive list.

Should additional suspect LBP coated components be discovered during renovation and selective demolition activities that have not been evaluated but will be disturbed, F&R recommends work be temporarily halted. Samples of suspect materials should be evaluated and handled accordingly prior to the resumption of renovation and/or demolition activities.



4.4. Applicable Regulations

4.4.1. OSHA Regulations for Lead-Based Paint

While the materials tested at the site were negative for lead based paint and/or surface coatings, painted and/or coated surfaces or materials containing lead may contain sufficient concentrations of lead, which when disturbed, may generate lead dust greater than the “Action Level” concentration of 30 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) or greater than the “Permissible Exposure Limit” of 50 micrograms per cubic meter established by the OSHA “Lead Exposure in Construction Rule” (29 CFR 1926.62). The OSHA standard does not define acceptable levels of lead in paint at which no exposure to airborne lead (above the action level) would be expected; however, guidance is available for work practices which present the highest risk for lead exposure to workers. Rather, OSHA defines airborne concentrations and references specific types of work practices and operations from which a lead hazard may be generated (reference 29 CFR 1926.62, section d). Environmental and personnel monitoring should be conducted during removal or demolition processes (as applicable) to determine actual personal exposure. This monitoring information can be used to determine the levels of personnel protection and environmental controls required for work involving specific removal/demolition processes on specific structures. Under OSHA requirements, the Contractor performing the work will be required to conduct this monitoring. It is important to note that environmental controls will vary dependent upon the content of lead in paint, the process used to remove it, duration of the work, and the amount of paint to be removed.

F&R recommends that workers disturbing painted (or coated) surfaces as part of this project receive OSHA Lead in Construction Awareness training and that engineering controls and hygiene practices described in 29 CFR 1926.62 be followed during the disturbance of painted (or coated) surfaces.

5.0 LIMITATIONS

This report has been prepared for the exclusive use of Greenville Technical College and/or their agents. This service was performed in accordance with generally accepted environmental practices. No other warranty, expressed or implied, is made. Conclusions and recommendations are based, in part, upon information provided to us by others and site observations. We have not verified the completeness or accuracy of the information provided by others, unless otherwise noted. Observations and recommendations are based upon conditions readily visible at the site at the time of the site visit, and upon current industry standards.

During this study, suspect asbestos samples were submitted for analysis at a NVLAP-accredited laboratory via polarized light microscopy and transmission electron microscopy; suspect LBP was field characterized using industry standard methods and practices. Invasive and destructive sampling methods were used; however, these were not exhaustive; as such, some target



materials may not have been identified such as behind solid walls. As with similar surveys of this nature, actual conditions exist only at the precise locations from which samples were collected or tested. Areas inspected were limited to those designated by the scope of services by the Client. Certain inferences are based on the results of this sampling and related testing to form a professional opinion of conditions in areas beyond those from which the samples were collected. Unless otherwise noted, F&R does not claim to have performed exhaustive delineation and/or quantification of identified materials; it is the responsibility of the client or abatement contractor to verify locations and quantities of regulated materials. It is also understood that this was a relatively invasive survey and although destructive and invasive sampling methods were used, it is possible that concealed materials may be present that were not accessible during the original survey. No other warranty, expressed or implied, is made. Reasonable effort was made by inspection personnel to locate and sample suspect materials within the structure with regard to the scope of services. However, for a facility, the existence of unique or concealed ACMs or LBP and debris is a possibility. F&R does not warrant, guarantee or profess to have the ability to locate or identify all ACMs, LBP in a facility.

Under this scope of services, F&R assumes no responsibility regarding response actions (e.g. O&M Plans, Encapsulation, Abatement, Removal, Tenant Notification, etc.) initiated as a result of these findings. F&R assumes no liability for the duties and responsibilities of the Client with respect to compliance with appropriate regulations. Compliance with regulations and response actions are the sole responsibility of the Client and should be conducted in accordance with local, state, and/or federal requirements and should be performed by appropriately qualified and licensed/accredited personnel, as warranted.

Froehling & Robertson, Inc. by virtue of providing the services described in this report, does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to local, state, or federal public agencies conditions at the site that may present a potential danger to public health, safety, or the environment. The Client agrees to notify the appropriate local, state, or federal public agencies as required by law, or otherwise to disclose, in a timely manner, information that may be necessary to prevent danger to public health, safety, or the environment. The contents of the report should not be construed in any way as a recommendation to purchase, sell, or develop the project site. F&R retains the right to revise this report if new information is later discovered or made available. The report must be presented in its entirety.

Appendix A

F&R Personnel and Laboratory Accreditations



Education

B.S., Environmental Studies
University of North Carolina
Asheville, 2001

Years of Experience

3 1/2 Years with F&R
9 Years Total

Undergraduate Coursework
Geology, University of South
Carolina (1991-1993)

Asbestos

Federal / North Carolina / South Carolina

- Building Inspector
- Air Monitor

North Carolina
Asbestos Accreditation

EXPIRATION			
02-28-2021			
DOB	SEX	HT	WT
07-22-1971	F	5'4"	138
CLASS		#	EXP
AIR MONITOR		80957	10-20
INSPECTOR		12917	02-21

Andrea C Lecroy
2820 S Old Highway 14
Greer, SC 29650
129715

SCDHEC ISSUED
Asbestos ID Card

Andrea Lecroy

	AIR SAMPLER	AS-00570	10/07/20
	CONSULTBI	BI-01080	02/03/21

Expire Date: 10/07/20

Erosion Control & Sediment Control

- SC Certified Erosion Prevention and Sediment Control Inspector (CEPSCI)

South Carolina Department of Health and Environmental Control
Certifies that:

Andrea LeCroy

Successfully Completed Certification Requirements for:
Erosion Prevention & Sediment Control Inspector

PROMOTE PROTECT PROSPER

Ann R. Clark
Ann R. Clark, Director
Stormwater, Construction, Agricultural, and Permitting Division
Bureau of Water

EXPIRATION
6/30/2019

REG. NO.
10549

OSHA Training

- 40-Hour HAZWOPER



UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

March 7, 2019

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, 2020, 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.

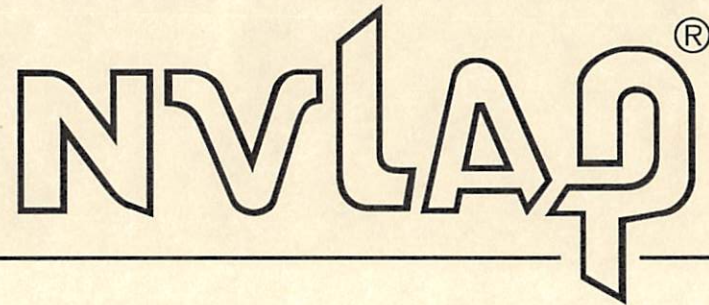
We are pleased to have you participate in NVLAP and look forward to your continued association with this program. If you have any questions concerning your NVLAP accreditation, please direct them to Hazel Richmond, Program Manager, Laboratory Accreditation Program, National Institute of Standards and Technology, 100 Bureau Dr. Stop 2140, Gaithersburg, MD 20899-2140; (301) 975-3024.

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 17025:2005

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:*

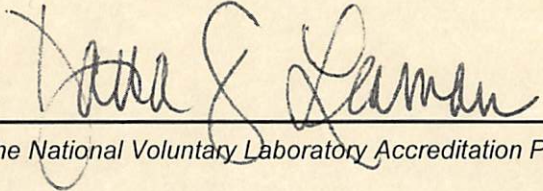
Asbestos Fiber Analysis

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
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).*

2019-04-01 through 2020-03-31

Effective Dates




For the National Voluntary Laboratory Accreditation Program



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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.

A handwritten signature in black ink, appearing to read "Dana S. Laman".

For the National Voluntary Laboratory Accreditation Program



AIHA Laboratory Accreditation Programs, LLC

SCOPE OF ACCREDITATION

Scientific Analytical Institute, Inc.

4604 Dundas Dr., Greensboro, NC 27407

Laboratory ID: LAP-173190

Issue Date: 11/25/2019

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

The EPA recognizes the AIHA-LAP, LLC ELLAP program as meeting the requirements of the National Lead Laboratory Accreditation Program (NLLAP) established under Title X of the Residential Lead-Based Paint Hazard Reduction Act of 1992 and includes paint, soil and dust wipe analysis. Air and composited wipes analyses are not included as part of the NLLAP.

Environmental Lead Laboratory Accreditation Program (ELLAP)

Initial Accreditation Date: 03/01/2007

Component, parameter or characteristic tested	Technology sub-type/Detector	Method	Method Description <i>(for internal methods only)</i>
Airborne Dust	AA	NIOSH 7082	N/A
Paint	AA	EPA SW-846 3050B	N/A
		EPA SW-846 6010C	N/A
		EPA SW-846 7000B	N/A
	ICP	EPA SW-846 3050B	N/A
		EPA SW-846 6010C	N/A
Settled Dust by Wipe	AA	EPA SW-846 3050B	N/A
		EPA SW-846 6010C	N/A
		EPA SW-846 7000B	N/A
	ICP	EPA SW-846 3050B	N/A
		EPA SW-846 6010C	N/A
Soil	AA	EPA SW-846 3050B	N/A
		EPA SW-846 6010C	N/A
		EPA SW-846 7000B	N/A
	ICP	EPA SW-846 3050B	N/A
		EPA SW-846 6010C	N/A

Effective: 11/21/2019

Revision: 8

Page 1 of 2



A complete listing of currently accredited ELLAP laboratories is available on the AIHA-LAP, LLC website at: <http://www.aihaaccreditedlabs.org>



AIHA Laboratory Accreditation Programs, LLC

acknowledges that

Scientific Analytical Institute, Inc.

4604 Dundas Dr., Greensboro, NC 27407

Laboratory ID: 173190

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

LABORATORY ACCREDITATION PROGRAMS

- | | |
|--------------------------------------|--|
| ✓ INDUSTRIAL HYGIENE | Accreditation Expires: November 01, 2020 |
| ✓ ENVIRONMENTAL LEAD | Accreditation Expires: November 01, 2020 |
| ✓ ENVIRONMENTAL MICROBIOLOGY | Accreditation Expires: November 01, 2020 |
| <input type="checkbox"/> FOOD | Accreditation Expires: |
| ✓ UNIQUE SCOPES | Accreditation Expires: November 01, 2020 |

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

Elizabeth Bair

Elizabeth Bair
Chairperson, Analytical Accreditation Board

Cheryl O. Morton

Cheryl O. Morton
Managing Director, AIHA Laboratory Accreditation Programs, LLC



AIHA Laboratory Accreditation Programs, LLC SCOPE OF ACCREDITATION

Scientific Analytical Institute, Inc.
4604 Dundas Dr., Greensboro, NC 27407

Laboratory ID: **173190**
Issue Date: 10/31/2018

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Industrial Hygiene Laboratory Accreditation Program (IHLAP)

Initial Accreditation Date: 03/01/2007

IHLAP Scope Category	Field of Testing (FoT) (FoTs cover all relevant IH matrices)	Technology sub-type/ Detector	Published Reference Method/ Title of In-house Method	Method Description or Analyte <i>(for internal methods only)</i>
Chromatography Core	Ion Chromatography (IC)		NIOSH 7600	
			OSHA ID-215 v2	
Spectrometry Core	Atomic Absorption	CVAA	NIOSH 6009	
		FAA	OSHA ID-140	
	Inductively-Coupled Plasma	ICP/AES	NIOSH 7082	
	X-ray Diffraction (XRD)		NIOSH 7300	
Asbestos/Fiber Microscopy Core	Polarized Light Microscopy (PLM)		EPA 600/R-93/116	
	Phase Contrast Microscopy (PCM)		NIOSH 7400	
	Transmission Electron Microscopy (TEM)		40 CFR Part 763 Subpart E Appendix A	
			AHERA	
Miscellaneous Core	Gravimetric		NIOSH 7402	
			NIOSH 0500	
			NIOSH 0600	

A complete listing of currently accredited Industrial Hygiene laboratories is available on the AIHA-LAP, LLC website at: <http://www.aihaaccreditedlabs.org>



AIHA Laboratory Accreditation Programs, LLC

SCOPE OF ACCREDITATION

Scientific Analytical Institute, Inc.

4604 Dundas Dr., Greensboro, NC 27407

Laboratory ID: **173190**

Issue Date: 10/31/2018

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

The EPA recognizes the AIHA-LAP, LLC ELLAP program as meeting the requirements of the National Lead Laboratory Accreditation Program (NLLAP) established under Title X of the Residential Lead-Based Paint Hazard Reduction Act of 1992 and includes paint, soil and dust wipe analysis. Air and composited wipes analyses are not included as part of the NLLAP.

Environmental Lead Laboratory Accreditation Program (ELLAP)

Initial Accreditation Date: 03/01/2007

Field of Testing (FoT)	Technology sub-type/ Detector	Method	Method Description <i>(for internal methods only)</i>
Paint		EPA SW-846 3050B	
		EPA SW-846 6010C	
		EPA SW-846 7000B	
Soil		EPA SW-846 3050B	
		EPA SW-846 6010C	
		EPA SW-846 7000B	
Settled Dust by Wipe		EPA SW-846 3050B	
		EPA SW-846 6010C	
		EPA SW-846 7000B	
Airborne Dust		NIOSH 7082	

A complete listing of currently accredited Environmental Lead laboratories is available on the AIHA-LAP, LLC website at: <http://www.aihaaccreditedlabs.org>

Appendix B

Figure 1: Site Vicinity Map

Figure 2: Site Location Map

Figures 3 through 5: Sample Location Plans



SITE VICINITY MAP



FROEHLING & ROBERTSON, INC.
Engineering Stability Since 1881
 18 Woods Lake Road
 Greenville, SC 29607 | USA
 T 864.271.2840 | F 864.271.8124

Project:	Engineering Tech. Building 103 ACM Survey & LBP Screening
Location:	506 South Pleasantburg Drive, Bldg. 103, Greenville, SC
Source:	Bing Maps
Date:	September 2020
Job Number:	59Y-0393
Drawn By: AL	Not to Scale

Figure 1

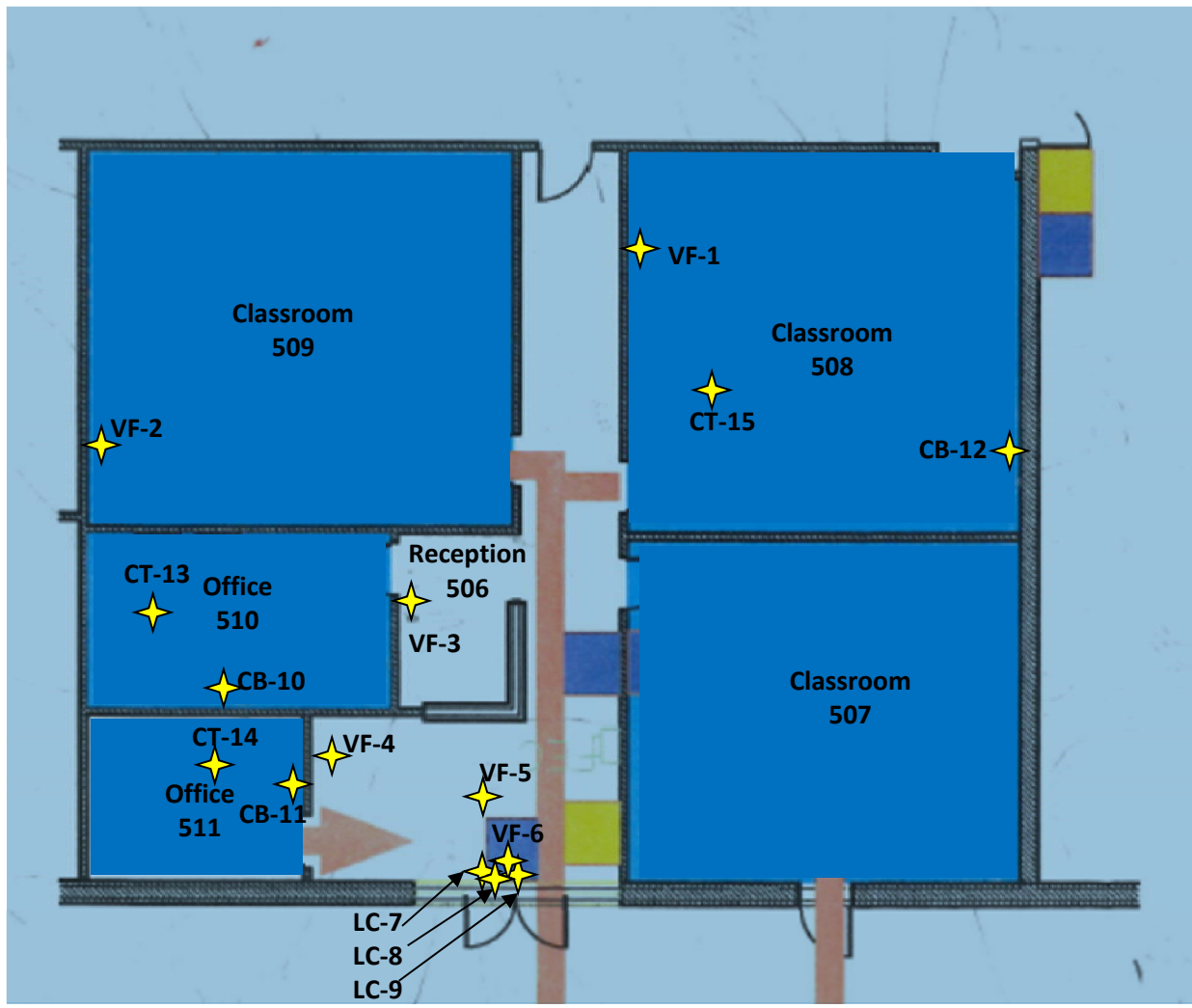


SITE LOCATION MAP



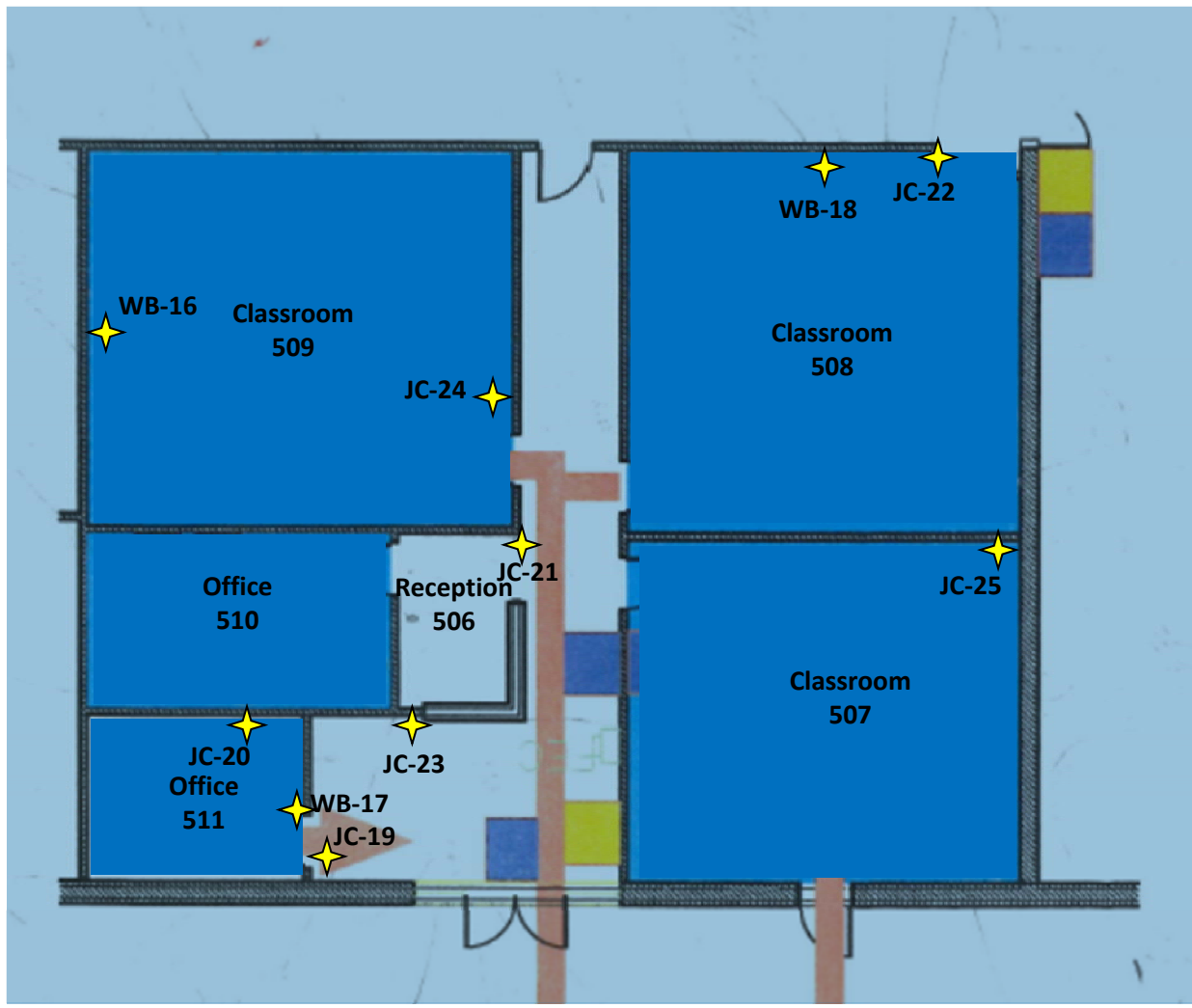
FROEHLING & ROBERTSON, INC.
Engineering Stability Since 1881
 18 Woods Lake Road
 Greenville, SC 29607 | USA
 T 864.271.2840 | F 864.271.8124

Project:	Engineering Tech. Building 103 ACM Survey & LBP Screening
Location:	506 South Pleasantburg Drive, Building 103, Greenville, SC
Source:	Bing Maps
Date:	September 2020
Job Number:	59Y-0393
Drawn By: AL	Not to Scale



★ No Asbestos Detected

AREA 5: OFFICE AND CLASSROOM SAMPLE LOCATION PLAN 1			
	FROEHLING & ROBERTSON, INC. <i>Engineering Stability Since 1881</i> 18 Woods Lake Road Greenville, SC 29607 USA T 864.271.2840 F 864.271.8124	Project:	Engineering Tech. Building 103 ACM Survey & LBP Screening
		Location:	506 South Pleasantburg Drive, Building 103, Greenville, SC
		Source:	Greenville Technical College
		Date:	September 2020
		Job Number:	59Y-0393
		Drawn By: AL	Not to Scale



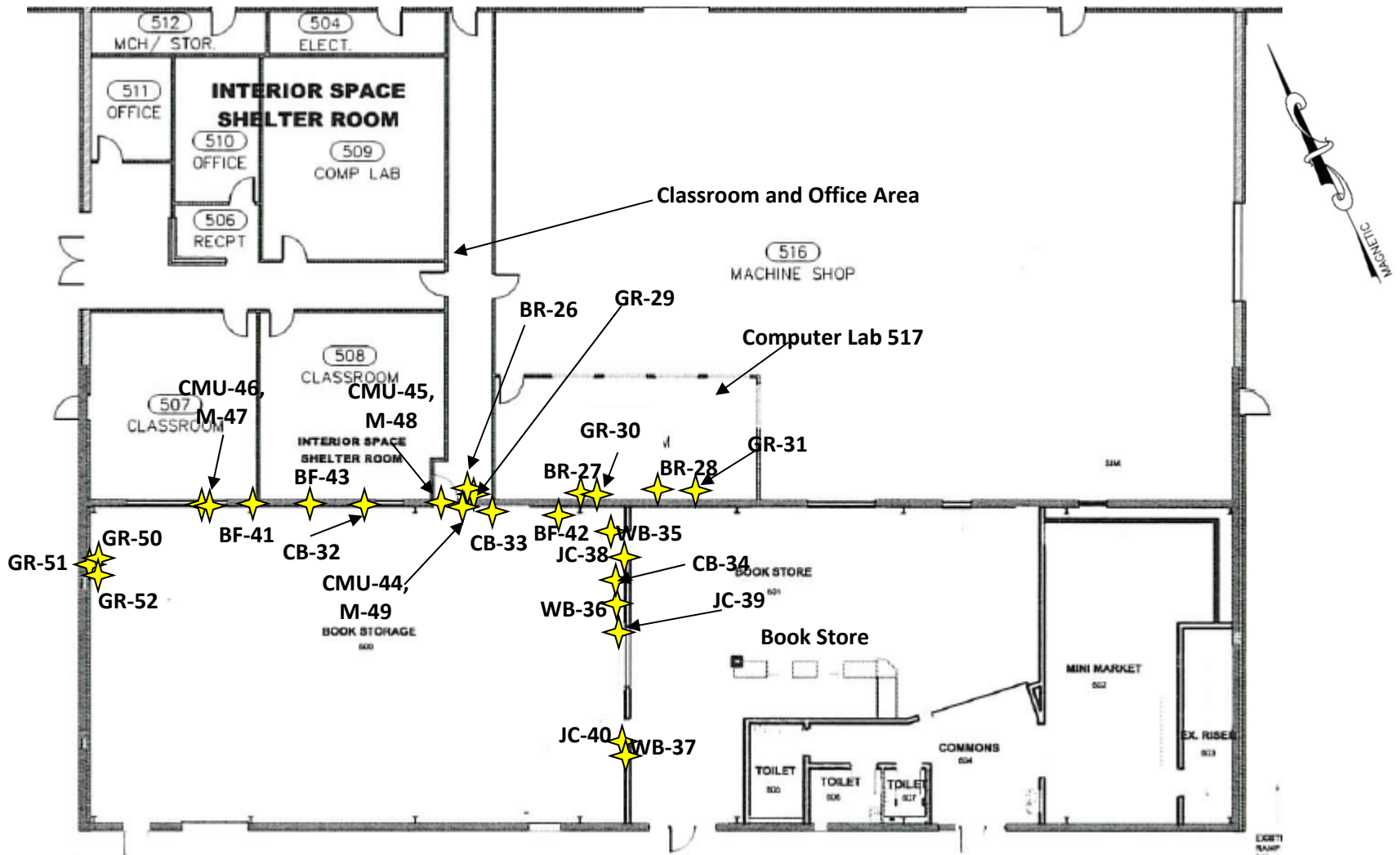
★ No Asbestos Detected

AREA 5: OFFICE AND CLASSROOM SAMPLE LOCATION PLAN 2



FROEHLING & ROBERTSON, INC.
Engineering Stability Since 1881
 18 Woods Lake Road
 Greenville, SC 29607 | USA
 T 864.271.2840 | F 864.271.8124

Project:	Engineering Tech. Building 103 ACM Survey & LBP Screening	
Location:	506 South Pleasantburg Drive, Building 103, Greenville, SC	
Source:	Greenville Technical College	
Date:	September 2020	
Job Number:	59Y-0393	
Drawn By: AL	Not to Scale	Figure 4



★ No Asbestos Detected

AREA 5: COMPUTER LAB AND BOOK STORAGE SAMPLE LOCATION PLAN 3



FROEHLING & ROBERTSON, INC.
Engineering Stability Since 1881
 18 Woods Lake Road
 Greenville, SC 29607 | USA
 T 864.271.2840 | F 864.271.8124

Project:	Engineering Tech. Building 103 ACM Survey & LBP Screening
Location:	506 South Pleasantburg Drive, Building 103, Greenville, SC
Source:	Greenville Technical College
Date:	September 2020
Job Number:	59Y-0393
Drawn By: AL	Not to Scale

Appendix C

Laboratory Certificates of Analysis
Bulk Sample Chain of Custody Forms

Section 1
Asbestos-Containing Materials

September 8, 2020

Froehling & Robertson, Inc
18 Woods Lake Road
Greenville, SC 29607

CLIENT PROJECT: Eng. Bldg. 103, 59Y-0393
CEI LAB CODE: B205441

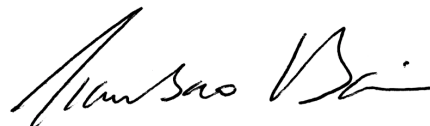
Dear Customer:

Enclosed are asbestos analysis results for PLM Bulk samples received at our laboratory on August 31, 2020. The samples were analyzed for asbestos using polarizing light microscopy (PLM) per the EPA 600 Method.

Sample results containing >1% asbestos are considered asbestos-containing materials (ACMs) per EPA regulatory requirements. The detection limit for the EPA 600 Method is <1% asbestos by weight as determined by visual estimation.

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

Kind Regards,



Tianbao Bai, Ph.D., CIH
Laboratory Director



CEI

ASBESTOS ANALYTICAL REPORT

By: Polarized Light Microscopy

Prepared for

Froehling & Robertson, Inc

CLIENT PROJECT: Eng. Bldg. 103, 59Y-0393

LAB CODE: B205441

TEST METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORT DATE: 09/08/20

TOTAL SAMPLES ANALYZED: 49

SAMPLES >1% ASBESTOS:



CEI

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: Eng. Bldg. 103, 59Y-0393

LAB CODE: B205441

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
VF-1		B91765A	Light Gray	Vinyl Floor Tile	None Detected
		B91765B	Yellow	Mastic	None Detected
VF-3		B91766A	Light Gray	Vinyl Floor Tile	None Detected
		B91766B	Yellow	Mastic	None Detected
VF-4		B91767A	Dark Gray	Vinyl Floor Tile	None Detected
		B91767B	Yellow	Mastic	None Detected
VF-5		B91768A	Dark Gray	Vinyl Floor Tile	None Detected
		B91768B	Yellow	Mastic	None Detected
LC-7		B91769	Gray	Leveling Compound	None Detected
LC-8		B91770	Gray	Leveling Compound	None Detected
LC-9		B91771	Gray	Leveling Compound	None Detected
CB-10		B91772A	Dark Gray	Cove Base	None Detected
		B91772B	Cream	Mastic	None Detected
CB-11		B91773A	Dark Gray	Cove Base	None Detected
		B91773B	Cream	Mastic	None Detected
CB-12		B91774A	Dark Gray	Cove Base	None Detected
		B91774B	Cream	Mastic	None Detected
CT-13		B91775	White,Beige	Ceiling Tile	None Detected
CT-14		B91776	White,Beige	Ceiling Tile	None Detected
CT-15		B91777	White,Beige	Ceiling Tile	None Detected
WB-16	Layer 1	B91778	White	Wallboard	None Detected
	Layer 2	B91778	White	Mud	None Detected
WB-17		B91779	White	Wallboard	None Detected
WB-18		B91780	White	Wallboard	None Detected
JC-19		B91781	White	Joint Compound	None Detected
JC-20		B91782	White	Joint Compound	None Detected
JC-21		B91783	White	Joint Compound	None Detected
JC-22		B91784	White	Joint Compound	None Detected
JC-23		B91785	White	Joint Compound	None Detected
JC-24		B91786	White	Joint Compound	None Detected
JC-25		B91787	White	Joint Compound	None Detected



CEI

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: Eng. Bldg. 103, 59Y-0393

LAB CODE: B205441

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
BR-26		B91788	Red	Brick	None Detected
BR-27		B91789	Red	Brick	None Detected
BR-28		B91790	Red	Brick	None Detected
GR-29		B91791	Gray	Grout	None Detected
GR-30		B91792	Gray	Grout	None Detected
GR-31		B91793	Gray	Grout	None Detected
CB-32		B91794A	Dark Gray	Covebase	None Detected
		B91794B	Cream	Mastic	None Detected
CB-33		B91795A	Dark Gray	Covebase	None Detected
		B91795B	Cream	Mastic	None Detected
WB-35	Layer 1	B91796	White	Wallboard	None Detected
	Layer 2	B91796	White	Mud	None Detected
WB-36	Layer 1	B91797	White	Wallboard	None Detected
	Layer 2	B91797	White	Mud	None Detected
WB-37	Layer 1	B91798	White	Wallboard	None Detected
	Layer 2	B91798	White	Mud	None Detected
JC-38		B91799	White	Joint Compound	None Detected
JC-39		B91800	White	Joint Compound	None Detected
JC-40		B91801	White	Joint Compound	None Detected
BF-41		B91802	Gray,Cream	Block Filler	None Detected
BF-42		B91803	Gray,Cream	Block Filler	None Detected
BF-43		B91804	Gray,Cream	Block Filler	None Detected
CMV-44		B91805	Black,Gray	Cmv Block	None Detected
CMV-45		B91806	Black,Gray	Cmv Block	None Detected
CMV-46		B91807	Black,Gray	Cmv Block	None Detected
M-47		B91808	Cream,Gray	CMU Mortar	None Detected
M-48		B91809	Cream,Gray	CMU Mortar	None Detected
M-49		B91810	Cream,Gray	CMU Mortar	None Detected
GR-50		B91811	Gray	Cmu Grout	None Detected
GR-51		B91812	Gray	Cmu Grout	None Detected
GR-52		B91813	Gray	Cmu Grout	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Froehling & Robertson, Inc
 18 Woods Lake Road
 Greenville, SC 29607

Lab Code: B205441
Date Received: 08-31-20
Date Analyzed: 09-04-20
Date Reported: 09-08-20

Project: Eng. Bldg. 103, 59Y-0393

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
VF-1 B91765A	Vinyl Floor Tile	Homogeneous Light Gray Fibrous Bound	2%	Cellulose	60%	Vinyl Calc Carb	None Detected
B91765B	Mastic	Homogeneous Yellow Fibrous Bound	2%	Cellulose	60%	Mastic Calc Carb	None Detected
VF-3 B91766A	Vinyl Floor Tile	Homogeneous Light Gray Fibrous Bound	2%	Cellulose	60%	Vinyl Calc Carb	None Detected
B91766B	Mastic	Homogeneous Yellow Fibrous Bound	2%	Cellulose	60%	Mastic Calc Carb	None Detected
VF-4 B91767A	Vinyl Floor Tile	Homogeneous Dark Gray Fibrous Bound	2%	Cellulose	60%	Vinyl Calc Carb	None Detected
B91767B	Mastic	Homogeneous Yellow Fibrous Bound	2%	Cellulose	60%	Mastic Calc Carb	None Detected
VF-5 B91768A	Vinyl Floor Tile	Homogeneous Dark Gray Fibrous Bound	2%	Cellulose	60%	Vinyl Calc Carb	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Froehling & Robertson, Inc
 18 Woods Lake Road
 Greenville, SC 29607

Lab Code: B205441
Date Received: 08-31-20
Date Analyzed: 09-04-20
Date Reported: 09-08-20

Project: Eng. Bldg. 103, 59Y-0393

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
B91768B	Mastic	Homogeneous Yellow Fibrous Bound	2%	Cellulose	60%	Mastic 38% Calc Carb	None Detected
LC-7 B91769	Leveling Compound	Homogeneous Gray Fibrous Bound	2%	Cellulose	98%	Binder	None Detected
LC-8 B91770	Leveling Compound	Homogeneous Gray Fibrous Bound	2%	Cellulose	98%	Binder	None Detected
LC-9 B91771	Leveling Compound	Homogeneous Gray Fibrous Bound	2%	Cellulose	98%	Binder	None Detected
CB-10 B91772A	Cove Base	Homogeneous Dark Gray Fibrous Bound	2%	Cellulose	98%	Vinyl	None Detected
B91772B	Mastic	Homogeneous Cream Fibrous Bound	2%	Cellulose	60%	Mastic 38% Calc Carb	None Detected
CB-11 B91773A	Cove Base	Homogeneous Dark Gray Fibrous Bound	2%	Cellulose	98%	Vinyl	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Froehling & Robertson, Inc
 18 Woods Lake Road
 Greenville, SC 29607

Lab Code: B205441
Date Received: 08-31-20
Date Analyzed: 09-04-20
Date Reported: 09-08-20

Project: Eng. Bldg. 103, 59Y-0393

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
B91773B	Mastic	Homogeneous Cream Fibrous Bound	2%	Cellulose	60%	Mastic 38% Calc Carb	None Detected
CB-12 B91774A	Cove Base	Homogeneous Dark Gray Fibrous Bound	2%	Cellulose	98%	Vinyl	None Detected
B91774B	Mastic	Homogeneous Cream Fibrous Bound	2%	Cellulose	60%	Mastic 38% Calc Carb	None Detected
CT-13 B91775	Ceiling Tile	Homogeneous White,Beige Fibrous Loosely Bound	65% 10%	Cellulose Fiberglass	5% 20%	Paint Perlite	None Detected
CT-14 B91776	Ceiling Tile	Homogeneous White,Beige Fibrous Loosely Bound	65% 10%	Cellulose Fiberglass	5% 20%	Paint Perlite	None Detected
CT-15 B91777	Ceiling Tile	Homogeneous White,Beige Fibrous Loosely Bound	65% 10%	Cellulose Fiberglass	5% 20%	Paint Perlite	None Detected
WB-16 Layer 1 B91778	Wallboard	Heterogeneous White Fibrous Bound	10%	Cellulose	90%	Gypsum	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Froehling & Robertson, Inc
 18 Woods Lake Road
 Greenville, SC 29607

Lab Code: B205441
Date Received: 08-31-20
Date Analyzed: 09-04-20
Date Reported: 09-08-20

Project: Eng. Bldg. 103, 59Y-0393

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
Layer 2 B91778	Mud	Heterogeneous White Fibrous Bound	2%	Cellulose	3%	Paint Calc Carb Binder	None Detected
WB-17 B91779	Wallboard	Heterogeneous White Fibrous Bound	10%	Cellulose	2%	Paint Gypsum	None Detected
WB-18 B91780	Wallboard	Heterogeneous White Fibrous Bound	10%	Cellulose	2%	Paint Gypsum	None Detected
JC-19 B91781	Joint Compound	Heterogeneous White Fibrous Bound	2%	Cellulose	3%	Paint Calc Carb Binder	None Detected
JC-20 B91782	Joint Compound	Heterogeneous White Fibrous Bound	2%	Cellulose	3%	Paint Calc Carb Binder	None Detected
JC-21 B91783	Joint Compound	Heterogeneous White Fibrous Bound	2%	Cellulose	3%	Paint Calc Carb Binder	None Detected
JC-22 B91784	Joint Compound	Heterogeneous White Fibrous Bound	2%	Cellulose	3%	Paint Calc Carb Binder	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Froehling & Robertson, Inc
 18 Woods Lake Road
 Greenville, SC 29607

Lab Code: B205441
Date Received: 08-31-20
Date Analyzed: 09-04-20
Date Reported: 09-08-20

Project: Eng. Bldg. 103, 59Y-0393

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
JC-23 B91785	Joint Compound	Heterogeneous White Fibrous Bound	2%	Cellulose	3%	Paint 80% Calc Carb 15% Binder	None Detected
JC-24 B91786	Joint Compound	Heterogeneous White Fibrous Bound	2%	Cellulose	3%	Paint 80% Calc Carb 15% Binder	None Detected
JC-25 B91787	Joint Compound	Heterogeneous White Fibrous Bound	2%	Cellulose	3%	Paint 80% Calc Carb 15% Binder	None Detected
BR-26 B91788	Brick	Homogeneous Red Fibrous Bound	<1%	Cellulose	60%	Binder 40% Silicates	None Detected
BR-27 B91789	Brick	Homogeneous Red Fibrous Bound	<1%	Cellulose	60%	Binder 40% Silicates	None Detected
BR-28 B91790	Brick	Homogeneous Red Fibrous Bound	<1%	Cellulose	60%	Binder 40% Silicates	None Detected
GR-29 B91791	Grout	Homogeneous Gray Fibrous Bound	<1%	Cellulose	60%	Binder 40% Silicates	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Froehling & Robertson, Inc
 18 Woods Lake Road
 Greenville, SC 29607

Lab Code: B205441
Date Received: 08-31-20
Date Analyzed: 09-04-20
Date Reported: 09-08-20

Project: Eng. Bldg. 103, 59Y-0393

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
GR-30 B91792	Grout	Homogeneous	<1%	Cellulose	60%	Binder	None Detected
		Gray Fibrous Bound			40%	Silicates	
GR-31 B91793	Grout	Homogeneous	<1%	Cellulose	60%	Binder	None Detected
		Gray Fibrous Bound			40%	Silicates	
CB-32 B91794A	Covebase	Homogeneous	2%	Cellulose	98%	Vinyl	None Detected
		Dark Gray Fibrous Bound					
B91794B	Mastic	Homogeneous	2%	Cellulose	60%	Mastic	None Detected
		Cream Fibrous Bound			38%	Calc Carb	
CB-33 B91795A	Covebase	Homogeneous	2%	Cellulose	98%	Vinyl	None Detected
		Dark Gray Fibrous Bound					
B91795B	Mastic	Homogeneous	2%	Cellulose	60%	Mastic	None Detected
		Cream Fibrous Bound			38%	Calc Carb	
WB-35 Layer 1 B91796	Wallboard	Heterogeneous	10%	Cellulose	90%	Gypsum	None Detected
		White Fibrous Bound					

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Froehling & Robertson, Inc
 18 Woods Lake Road
 Greenville, SC 29607

Lab Code: B205441
Date Received: 08-31-20
Date Analyzed: 09-04-20
Date Reported: 09-08-20

Project: Eng. Bldg. 103, 59Y-0393

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID	Lab	Lab	NON-ASBESTOS COMPONENTS				ASBESTOS
Lab ID	Description	Attributes	Fibrous			Non-Fibrous	%
Layer 2 B91796	Mud	Heterogeneous White Fibrous Bound	2%	Cellulose	3%	Paint Calc Carb Binder	None Detected
WB-36 Layer 1 B91797	Wallboard	Heterogeneous White Fibrous Bound	10%	Cellulose	90%	Gypsum	None Detected
Layer 2 B91797	Mud	Heterogeneous White Fibrous Bound	2%	Cellulose	3%	Paint Calc Carb Binder	None Detected
WB-37 Layer 1 B91798	Wallboard	Heterogeneous White Fibrous Bound	10%	Cellulose	90%	Gypsum	None Detected
Layer 2 B91798	Mud	Heterogeneous White Fibrous Bound	2%	Cellulose	3%	Paint Calc Carb Binder	None Detected
JC-38 B91799	Joint Compound	Heterogeneous White Fibrous Bound	2%	Cellulose	3%	Paint Calc Carb Binder	None Detected
JC-39 B91800	Joint Compound	Heterogeneous White Fibrous Bound	2%	Cellulose	3%	Paint Calc Carb Binder	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Froehling & Robertson, Inc
 18 Woods Lake Road
 Greenville, SC 29607

Lab Code: B205441
Date Received: 08-31-20
Date Analyzed: 09-04-20
Date Reported: 09-08-20

Project: Eng. Bldg. 103, 59Y-0393

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
JC-40 B91801	Joint Compound	Heterogeneous White Fibrous Bound	2%	Cellulose	3%	Paint 80% Calc Carb 15% Binder	None Detected
BF-41 B91802	Block Filler	Heterogeneous Gray,Cream Fibrous Bound	2%	Cellulose	5%	Paint 93% Binder	None Detected
BF-42 B91803	Block Filler	Heterogeneous Gray,Cream Fibrous Bound	2%	Cellulose	5%	Paint 93% Binder	None Detected
BF-43 B91804	Block Filler	Heterogeneous Gray,Cream Fibrous Bound	2%	Cellulose	5%	Paint 93% Binder	None Detected
CMV-44 B91805	Cmv Block	Heterogeneous Black,Gray Fibrous Tightly Bound	<1%	Cellulose	2%	Paint 60% Binder 38% Silicates	None Detected
CMV-45 B91806	Cmv Block	Heterogeneous Black,Gray Fibrous Tightly Bound	<1%	Cellulose	2%	Paint 60% Binder 38% Silicates	None Detected
CMV-46 B91807	Cmv Block	Heterogeneous Black,Gray Fibrous Tightly Bound	<1%	Cellulose	2%	Paint 60% Binder 38% Silicates	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Froehling & Robertson, Inc
 18 Woods Lake Road
 Greenville, SC 29607

Lab Code: B205441
Date Received: 08-31-20
Date Analyzed: 09-04-20
Date Reported: 09-08-20

Project: Eng. Bldg. 103, 59Y-0393

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous	Cellulose	Non-Fibrous		
M-47 B91808	CMU Mortar	Heterogeneous Cream, Gray Fibrous Tightly Bound	<1%	Cellulose	2% 60% 38%	Paint Binder Silicates	None Detected
M-48 B91809	CMU Mortar	Heterogeneous Cream, Gray Fibrous Tightly Bound	<1%	Cellulose	2% 60% 38%	Paint Binder Silicates	None Detected
M-49 B91810	CMU Mortar	Heterogeneous Cream, Gray Fibrous Tightly Bound	<1%	Cellulose	2% 60% 38%	Paint Binder Silicates	None Detected
GR-50 B91811	Cmu Grout	Homogeneous Gray Fibrous Tightly Bound	<1%	Cellulose	60% 40%	Binder Silicates	None Detected
GR-51 B91812	Cmu Grout	Homogeneous Gray Fibrous Tightly Bound	<1%	Cellulose	60% 40%	Binder Silicates	None Detected
GR-52 B91813	Cmu Grout	Homogeneous Gray Fibrous Tightly Bound	<1%	Cellulose	60% 40%	Binder Silicates	None Detected

LEGEND: Non-Anth = Non-Asbestiform Anthophyllite
 Non-Trem = Non-Asbestiform Tremolite
 Calc Carb = Calcium Carbonate

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORTING LIMIT: <1% by visual estimation

REPORTING LIMIT FOR POINT COUNTS: 0.25% by 400 Points or 0.1% by 1,000 Points

REGULATORY LIMIT: >1% by weight

Due to the limitations of the EPA 600 method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles can be difficult to analyze via polarized light microscopy (PLM). EPA recommends that all NOBs analyzed by PLM, and found not to contain asbestos, be further analyzed by Transmission Electron Microscopy (TEM). Please note that PLM analysis of dust and soil samples for asbestos is not covered under NVLAP accreditation. *Estimated measurement of uncertainty is available on request.*


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. Samples were received in acceptable condition unless otherwise noted. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government.

Information provided by customer includes customer sample ID and sample description.

ANALYST:


Shilpa Ladekar

APPROVED BY:


Tianbao Bai, Ph.D., CIH
Laboratory Director



CEI

CHAIN OF CUSTODY

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

LAB USE ONLY:

CEI Lab Code: **BZ05441**

CEI Lab I.D. Range: **B91765-B91813**

49

COMPANY INFORMATION	PROJECT INFORMATION
CEI CLIENT #:	Job Contact: ANDREA LeROY
Company: F&R	Email / Tel: 864.704.1210
Address: 18 WOODS LAKE RD. GREENVILLE, SC 29607	Project Name: ENG. Bldg. 103
Email: alecrov@F&R.com	Project ID#: 59Y-0393
Tel: 864.704.1210 Fax:	PO #: 59Y-0393
	STATE SAMPLES COLLECTED IN: SC

cell 864-434-0954

IF TAT IS NOT MARKED STANDARD 3 DAY TAT APPLIES.

ASBESTOS	METHOD	TURN AROUND TIME					
		4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY
PLM BULK	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PLM POINT COUNT (400)	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM POINT COUNT (1000)	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM GRAV w POINT COUNT	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM BULK	CARB 435	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PCM AIR	NIOSH 7400	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	EPA AHERA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	NIOSH 7402	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR (PCME)	ISO 10312	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	ASTM 6281-15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM BULK	CHATFIELD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
TEM DUST WIPE	ASTM D6480-05 (2010)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM DUST MICROVAC	ASTM D5755-09 (2014)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM SOIL	ASTM D7521-16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM VERMICULITE	CINCINNATI METHOD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM QUALITATIVE	IN-HOUSE METHOD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OTHER:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

REMARKS / SPECIAL INSTRUCTIONS: PERFORM PLM & TEM AT THE SAME TIME		<input checked="" type="checkbox"/> Accept Samples
		<input type="checkbox"/> Reject Samples
Relinquished By:	Date/Time	Received By:
ANDREA LeROY	8.29.20 / 12:00pm	CB
		Date/Time
		8/31 9:30

Samples will be disposed of 30 days after analysis

COMPANY CONTACT INFORMATION	
Company: FBK	Job Contact: F. LeGROY
Project Name:	
Project ID #: 59Y-0393	Tel: 864-704-1210

SAMPLE ID#	CLASSES/OFFICES / COMPUTER LABS DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
			PLM	TEM
VF-1	LIGHT GRAY 12X12 VINYL FLOOR TILE & yellow MASTIC		<input checked="" type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
VF-2	LIGHT GRAY 12X12 VFT & yellow MASTIC		<input type="checkbox"/>	<input checked="" type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
VF-3	LIGHT GRAY 12X12 VFT & yellow MASTIC		<input checked="" type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
VF-4	DARK GRAY 12X12 VFT & yellow MASTIC		<input checked="" type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
VF-5	DARK GRAY 12X12 VFT & yellow MASTIC		<input checked="" type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
VF-6	DARK GRAY 12X12 VFT & yellow MASTIC		<input type="checkbox"/>	<input checked="" type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
LC-7	LEVELING COMPOUND		<input checked="" type="checkbox"/>	<input type="checkbox"/>
LC-8	LEVELING COMPOUND		<input checked="" type="checkbox"/>	<input type="checkbox"/>
LC-9	LEVELING COMPOUND		<input checked="" type="checkbox"/>	<input type="checkbox"/>
CB-10	GRAY CONE BASE & MASTIC		<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
CB-11	GRAY CONE BASE & MASTIC		<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
CB-12	GRAY CONE BASE & MASTIC		<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>

COMPANY CONTACT INFORMATION	
Company: FBR	Job Contact: F. LeBrey
Project Name:	
Project ID #: 59Y-0393	Tel: 864-704-1210 864-434-0954

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
			PLM	TEM
CT-13	2x2 white ceiling TILE w/ pinholes		<input checked="" type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
CT-14	2x2 white ceiling TILE w/ pinholes		<input checked="" type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
CT-15	2x2 white ceiling TILE w/ pinholes		<input checked="" type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
WB-16	WALLBOARD		<input checked="" type="checkbox"/>	<input type="checkbox"/>
WB-17	WALLBOARD		<input checked="" type="checkbox"/>	<input type="checkbox"/>
WB-18	WALLBOARD		<input checked="" type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
JC-19	JOINT Compound		<input checked="" type="checkbox"/>	<input type="checkbox"/>
JC-20	JOINT Compound		<input checked="" type="checkbox"/>	<input type="checkbox"/>
JC-21	JOINT Compound		<input checked="" type="checkbox"/>	<input type="checkbox"/>
JC-22	JOINT Compound		<input checked="" type="checkbox"/>	<input type="checkbox"/>
JC-23	JOINT Compound		<input checked="" type="checkbox"/>	<input type="checkbox"/>
JC-24	JOINT Compound		<input type="checkbox"/>	<input type="checkbox"/>
JC-25	JOINT Compound		<input type="checkbox"/>	<input type="checkbox"/>
BR-26	RED BRICK		<input type="checkbox"/>	<input type="checkbox"/>
BR-27	RED BRICK		<input type="checkbox"/>	<input type="checkbox"/>
BR-28	RED BRICK		<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>

COMPANY CONTACT INFORMATION	
Company: F&R	Job Contact: ANDREA LeCROY
Project Name: ENG. BLDG. 103	
Project ID #: 59Y-0393	Tel: 864-704-1210 864-434-0954

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
			PLM	TEM
GR-29	GRAY GROUT	(BRICK	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
GR-30	GRAY GROUT	WALL)	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
GR-31	GRAY GROUT		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
	BOOK STORE		PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
CB-32	DARK GRAY COVE BASE /		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
	CREAM MASTIC		PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
CB-33	DARK GRAY COVE BASE		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
	CREAM MASTIC		PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
CB-34	DARK GRAY COVE BASE		PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
	CREAM MASTIC		PLM <input type="checkbox"/>	TEM <input checked="" type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
WB-35	WALL BOARD	ONE	PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
WB-36	WALL BOARD	WALL	PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
WB-37	WALL BOARD	BOOK	PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
		STORE	PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
JC-38	JOINT COMPOUND		PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
JC-39	JOINT COMPOUND		PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
JC-40	JOINT COMPOUND		PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
BF-41	BLOCK FILLER	(CM V)	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
BF-42	BLOCK FILLER	WALL)	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
BF-43	BLOCK FILLER		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>



CEI

SAMPLING FORM

B3205441

COMPANY CONTACT INFORMATION	
Company: FBR	Job Contact: F. LeROY
Project Name: ENR. BLDG. 103	
Project ID #: 594-0393	Tel: 864-704-1210 864-434-0954

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
CMU-44	CMU BLOCK		PLM TEM	TEM <input type="checkbox"/>
CMU-45	CMU BLOCK		PLM TEM	TEM <input type="checkbox"/>
CMU-46	CMU BLOCK		PLM TEM	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
M-47	CMU MORTAR		PLM TEM	TEM <input type="checkbox"/>
M-48	CMU MORTAR		PLM TEM	TEM <input type="checkbox"/>
M-49	CMU MORTAR		PLM TEM	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
GR-50	CMU GROUT		PLM TEM	TEM <input type="checkbox"/>
GR-51	CMU GROUT		PLM TEM	TEM <input type="checkbox"/>
GR-52	CMU GROUT		PLM TEM	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>

September 9, 2020

Froehling & Robertson, Inc
18 Woods Lake Road
Greenville, SC 29607

CLIENT PROJECT: Eng. Bldg. 103, 598-0393
LAB CODE: T201847v3

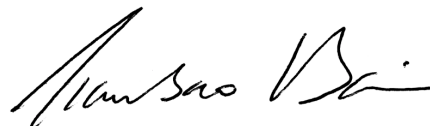
Dear Customer:

Enclosed are asbestos analysis results for TEM bulk samples received at our laboratory on August 31, 2020. The samples were analyzed for asbestos using transmission electron microscopy (TEM) per Chatfield/EPA 600/R-93/116 Sec. 2.5.5.1 method.

Sample results containing > 1% asbestos are considered asbestos-containing materials (ACMs) per the EPA regulatory requirements. The detection limit for the TEM Chatfield/EPA 600/R-93/116 Sec. 2.5.5.1 method is <1% depending on the processed weight and constituents of the sample.

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

Kind Regards,



Tianbao Bai, Ph.D., CIH
Laboratory Director



CEI

AMENDED

ASBESTOS ANALYTICAL REPORT
By: Transmission Electron Microscopy

Prepared for

Froehling & Robertson, Inc

CLIENT PROJECT: Eng. Bldg. 103, 598-0393

LAB CODE: T201847v3

TEST METHOD: Bulk Chatfield
EPA 600 / R93 / 116 Sec. 2.5.5.1

REPORT DATE: 09/08/20



CEI

AMENDED**ASBESTOS BULK ANALYSIS**

By: TRANSMISSION ELECTRON MICROSCOPY

Client: Froehling & Robertson, Inc
 18 Woods Lake Road
 Greenville, SC 29607

Lab Code: T201847v3
Date Received: 08-31-20
Date Analyzed: 09-03-20
Date Reported: 09-08-20

Project: Eng. Bldg. 103, 598-0393

TEM BULK CHATFIELD / EPA 600 / R93 / 116 Sec. 2.5.5.1

Client ID Lab ID	Material Description	Sample Weight (g)	Organic Material %	Acid Soluble Material %	Acid Insoluble Material %	Asbestos %
VF-2 T11442	Light Gray 12 x 12 VFT	0.914	15.9	10.4	73.7	None Detected
VF-2 T11443	Yellow Mastic	0.131	49.6	30.5	19.9	None Detected
VF-6 T11444	Dark Gray 12 x 12 VFT	0.826	15.5	24.8	59.7	None Detected
VF-6 T11445	Yellow Mastic	0.138	38.4	46.4	15.2	None Detected
CB-12 T11599	Covebase	0.773	47.6	50.6	1.8	None Detected
CB-12 T11600	Mastic	0.419	40.8	18.4	40.8	None Detected
CB-34 T11446	Dark Gray Cove Base	0.469	56.3	31.3	12.4	None Detected
CB-34 T11447	Cream Mastic	0.144	45.1	21.5	33.4	None Detected

LEGEND: None

METHOD: CHATFIELD & EPA/600/R-93/116 Sec. 2.5.5.1

LIMIT OF DETECTION: Varies with the weight and constituents of the sample (<1%)

REGULATORY LIMIT: >1% by weight

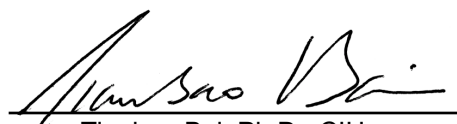
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Information provided by customer includes customer sample ID, location, volume and area as well as date and time of sampling.

ANALYST:


Emily Morris

APPROVED BY:


Tianbao Bai, Ph.D., CIH
Laboratory Director

AMENDED due to Client Wishes to Change Specifications for Analysis - Additional Samples Submitted



CHAIN OF CUSTODY

CEI

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

LAB USE ONLY:

CEI Lab Code: T201847

CEI Lab I.D. Range: T11442 - 47 (6)

COMPANY INFORMATION		PROJECT INFORMATION	
CEI CLIENT #:		Job Contact:	ANDREA LeCROY
Company:	F&R	Email / Tel:	864.704.1210
Address:	18 WOODS LAKE RD. GREENVILLE, SC 29607	Project Name:	ENG. Bldg. 103
Email:	alecroy@F&R.com	Project ID#:	59Y-0393
Tel:	864.704.1210	PO #:	59Y-0393
Fax:		STATE SAMPLES COLLECTED IN:	SC

cell 864-434-0954

IF TAT IS NOT MARKED STANDARD 3 DAY TAT APPLIES.

ASBESTOS	METHOD	TURN AROUND TIME					
		4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY
PLM BULK	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PLM POINT COUNT (400)	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM POINT COUNT (1000)	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM GRAV w POINT COUNT	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM BULK	CARB 435	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PCM AIR	NIOSH 7400	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	EPA AHERA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	NIOSH 7402	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR (PCME)	ISO 10312	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	ASTM 6281-15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM BULK	CHATFIELD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
TEM DUST WIPE	ASTM D6480-05 (2010)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM DUST MICROVAC	ASTM D5755-09 (2014)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM SOIL	ASTM D7521-16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM VERMICULITE	CINCINNATI METHOD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM QUALITATIVE	IN-HOUSE METHOD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OTHER:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

REMARKS / SPECIAL INSTRUCTIONS:
 PERFORM PLM & TEM AT THE SAME TIME

Accept Samples
 Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
ANDREA LeCROY	8.29.20 / 12:00PM	EB	8/31/20 9:34
		Em	9/1/20 7:33

Samples will be disposed of 30 days after analysis

CEI

COMPANY CONTACT INFORMATION	
Company: FGK	Job Contact: H. LeROY
Project Name:	
Project ID #: 59Y-0393	Tel: 864-704-1210

SAMPLE ID#	CLASSES/OFFICES / COMPUTER LAB DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
			PLM	TEM
VF-1	LIGHT GRAY 12X12 VINYL FLOOR TILE & yellow MASTIC		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
VF-2	LIGHT GRAY 12X12 VFT & yellow MASTIC		PLM <input type="checkbox"/>	TEM <input checked="" type="checkbox"/>
VF-3	LIGHT GRAY 12X12 VFT & yellow MASTIC		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
VF-4	DARK GRAY 12X12 VFT & yellow MASTIC		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
VF-5	DARK GRAY 12X12 VFT & yellow MASTIC		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
VF-6	DARK GRAY @ 12X12 VFT & yellow MASTIC		PLM <input type="checkbox"/>	TEM <input checked="" type="checkbox"/>
LC-7	LEVELING COMPOUND		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
LC-8	LEVELING COMPOUND		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
LC-9	LEVELING COMPOUND		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
CB-10	GRAY CONE BASE & MASTIC		PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
CB-11	GRAY CONE BASE & MASTIC		PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
CB-12	GRAY CONE BASE & MASTIC		PLM <input type="checkbox"/>	TEM <input checked="" type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>

* added per email

CEI
COMPANY CONTACT INFORMATION

Company: FBR	Job Contact: F. LeGroy
Project Name:	
Project ID #: 59Y-0393	Tel: 864-704-1210 864-434-0954

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
			PLM	TEM
CT-13	2x2 white ceiling tile w/ pinholes		<input checked="" type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
CT-14	2x2 white ceiling tile w/ pinholes		<input checked="" type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
CT-15	2x2 white ceiling tile w/ pinholes		<input checked="" type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
WB-16	WALLBOARD		<input checked="" type="checkbox"/>	<input type="checkbox"/>
WB-17	WALLBOARD		<input checked="" type="checkbox"/>	<input type="checkbox"/>
WB-18	WALLBOARD		<input checked="" type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
JC-19	JOINT Compound		<input checked="" type="checkbox"/>	<input type="checkbox"/>
JC-20	JOINT Compound		<input checked="" type="checkbox"/>	<input type="checkbox"/>
JC-21	JOINT Compound		<input checked="" type="checkbox"/>	<input type="checkbox"/>
JC-22	JOINT Compound		<input checked="" type="checkbox"/>	<input type="checkbox"/>
JC-23	JOINT Compound		<input checked="" type="checkbox"/>	<input type="checkbox"/>
JC-24	JOINT Compound		<input type="checkbox"/>	<input type="checkbox"/>
JC-25	JOINT Compound		<input type="checkbox"/>	<input type="checkbox"/>
BR-26	RED BRICK		<input type="checkbox"/>	<input type="checkbox"/>
BR-27	RED BRICK		<input type="checkbox"/>	<input type="checkbox"/>
BR-28	RED BRICK		<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>

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COMPANY CONTACT INFORMATION	
Company: F&R	Job Contact: ANDREA LeCROY
Project Name: ENG. BLDG. 103	
Project ID #: 59Y-0393	Tel: 864-704-1210 864-434-0954

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST			
			PLM	PLM	TEM	<input type="checkbox"/>
GR-29	GRAY GROUT	(BRICK	PLM	PLM	TEM	<input type="checkbox"/>
GR-30	GRAY GROUT	WALL)	PLM	PLM	TEM	<input type="checkbox"/>
GR-31	GRAY GROUT		PLM	PLM	TEM	<input type="checkbox"/>
			PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
	BOOK STORE		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
	↓ ↓		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
CB-32	DARK GRAY COVE BASE /		PLM	PLM	TEM	<input type="checkbox"/>
	CREAM MASTIC		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
CB-33	DARK GRAY COVE BASE		PLM	PLM	TEM	<input type="checkbox"/>
	/ CREAM MASTIC		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
CB-34	DARK GRAY COVE BASE		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
	/ CREAM MASTIC		PLM	<input type="checkbox"/>	TEM	PLM
			PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
B-35 WB-25	WALL BOARD	ONE	PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
B-36 WB-26	WALL BOARD	WALL	PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
B-37 WB-27	WALL BOARD	BOOK STORE	PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
			PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
JC-38	JOINT COMPOUND		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
JC-39	JOINT COMPOUND		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
JC-40	JOINT COMPOUND		PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
			PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
BF-41	BLOCK FILLER (CMV)		PLM	PLM	TEM	<input type="checkbox"/>
BF-42	BLOCK FILLER (WALL)		PLM	PLM	TEM	<input type="checkbox"/>
BF-43	BLOCK FILLER		PLM	PLM	TEM	<input type="checkbox"/>
			PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
			PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>
			PLM	<input type="checkbox"/>	TEM	<input type="checkbox"/>

CEI

COMPANY CONTACT INFORMATION	
Company: FBK	Job Contact: F. LeROY
Project Name: ENG. BLDG. 103	
Project ID #: 594-0393	Tel: 864-704-1210 864-434-0954

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
CMU-44	CMU BLOCK		PLM TEM	TEM <input type="checkbox"/>
CMU-45	CMU BLOCK		PLM TEM	TEM <input type="checkbox"/>
CMU-46	CMU BLOCK		PLM TEM	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
M-47	CMU MORTAR		PLM TEM	TEM <input type="checkbox"/>
M-48	CMU MORTAR		PLM TEM	TEM <input type="checkbox"/>
M-49	CMU MORTAR		PLM TEM	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
GR-50	CMU GROUT		PLM TEM	TEM <input type="checkbox"/>
GR-51	CMU GROUT		PLM TEM	TEM <input type="checkbox"/>
GR-52	CMU GROUT		PLM TEM	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
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			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>

Reichert, Kamila

From: Coppens, Vanessa <Vanessa.Coppens@eurofinset.com>
Sent: Tuesday, September 8, 2020 3:09 PM
To: Kamila Reichert; #US73_TemTech
Subject: FW: Laboratory Report for Eng. Bldg. 103, 598-0393 (T201847)

-----Original Message-----

From: Andrea LeCroy <ALeCroy@FandR.com>
Sent: Tuesday, September 8, 2020 2:02 PM
To: Coppens, Vanessa <Vanessa.Coppens@eurofinset.com>
Subject: RE: Laboratory Report for Eng. Bldg. 103, 598-0393 (T201847)

EXTERNAL EMAIL*

Hi Vanessa,

Sample weight was below protocol guidelines for TEM analysis performed for sample IDs VF-2 and VF-6. Can you please check with the lab to see if the other samples of these same materials (VF-1, VF-3) and (VF-4, VF-5) possibly have enough mastic to perform a TEM (within the sample weight protocol guidelines)?

If this is possible then please perform the TEM with a 24 hour TAT via TEM Bulk Chatfield method on whichever samples have sufficient mastic to be within sample weight protocol guidelines

If this is not possible and there is not enough mastic, I will likely collect additional samples tomorrow and will send in large samples of floor tile with sufficient mastic to perform additional TEM analyses.

Thanks!

Drea

Andréa LeCroy
Project Manager
Environmental Scientist

FROEHLING & ROBERTSON, INC.
18 Woods Lake Road, Greenville, SC 29607 | USA T 864.271.2840 | F 864.271.8124 INTRODUCING the NEW FandR.com!

-----Original Message-----

From: Coppens, Vanessa <Vanessa.Coppens@eurofinset.com>
Sent: Tuesday, September 08, 2020 10:57 AM
To: Andrea LeCroy <ALeCroy@FandR.com>

Subject: Laboratory Report for Eng. Bldg. 103, 598-0393 (T201847)

Attached is the laboratory report for your recently submitted samples. Please print out a copy for your records.

Thank you for choosing Eurofins CEI.

Eurofins CEI
730 SE Maynard Rd
Cary, NC 27511
USA
919-481-1413

Website: http://secure-web.cisco.com/1_3HCl7mhX2zu_6QOOU9jBOUEvY-B-BjGJ7LvcQkdMVeXkiTJQszPjbtXzN4wahb4fwl5KogRIDr3VVFrBRFeA3lppj-oc7A5KGZ_2FoNQF4QMdi9GFEFFStCl6e2MBonpxEp2mvaHzgxMGhMA8q6WJf7_FI31weWY4GLP_9e1ZJdfDX5oF4ZfyecU U7DOR_Dqbaf4_L_ub0Uglueec8MeFRcmUt-cEhnKi5fp7qzp7dYro4wB117UaLDsGSCw92MAWMIPp4KSB0Xu0qUHzKOelciQBGe17bFsjFqsO2CB3E74AbwdAe9bvCkRDZ_rTjvoEyhclgj-XOb0l_8htwJXc5TPGjtLBl4-67x3Js4EM/http%3A%2F%2Fwww.EurofinsUS.com%2FCEI

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Reichert, Kamila

From: Andrea LeCroy <ALeCroy@FandR.com>
Sent: Tuesday, September 8, 2020 2:13 PM
To: Reichert, Kamila
Subject: RE: Eng. Bldg. 103, 598-0393

EXTERNAL EMAIL*

Yes please add the samples to the report and go ahead and do the analysis with a 24 hour TAT.

Thank you!

Andréa LeCroy
Project Manager
Environmental Scientist

FROEHLING & ROBERTSON, INC.
18 Woods Lake Road, Greenville, SC 29607 | USA
T 864.271.2840 | F 864.271.8124

INTRODUCING the NEW FandR.com!



From: Reichert, Kamila <Kamila.Reichert@eurofinset.com>
Sent: Tuesday, September 08, 2020 2:02 PM
To: Andrea LeCroy <ALeCroy@FandR.com>
Subject: Eng. Bldg. 103, 598-0393

Good afternoon Andrea,

For the project listed above two NOB samples CB-12 were not marked for TEM (on the customer COC). This morning you already received a report for this job but if you like us to add the samples to the report please let me know.

Sincerely

Kamila Reichert
TEM Laboratory Manager

Eurofins CEI
730 SE Maynard Rd
Cary, NC 27511

Appendix C

Laboratory Certificates of Analysis
Bulk Sample Chain of Custody Forms

Section 2
Lead- Based Paint



Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B



Customer: Froehling & Robertson
18 Woods Lake Rd
Greenville, SC 29607

Attn: Andrea LeCroy

Lab Order ID: 71949208
Analysis ID: 71949208_PBP
Date Received: 8/31/2020
Date Reported: 9/4/2020

Project: Eng. Bldg 103

Sample ID	Description	Mass (g)	Concentration (ppm)	Concentration (% by weight)
Lab Sample ID	Lab Notes			
P-1	Cream paint	0.0628	< 64	< 0.0064%
71949208PBP_1				
P-2	Beige paint	0.0744	< 54	< 0.0054%
71949208PBP_2				
P-3	Gray paint	0.0825	81	0.0081%
71949208PBP_3				
P-4	Light gray paint	0.0819	< 49	< 0.0049%
71949208PBP_4				
P-5	White paint	0.0776	82	0.0082%
71949208PBP_5				
P-6	Dark gray paint	0.0918	< 44	< 0.0044%
71949208PBP_6				
P-7	Light gray paint	0.0747	< 54	< 0.0054%
71949208PBP_7				
P-8	Purple paint	0.0660	< 61	< 0.0061%
71949208PBP_8				
P-9	Green paint	0.0653	< 61	< 0.0061%
71949208PBP_9				

Unless otherwise noted blank sample correction was not performed on analytical results. Scientific Analytical Institute participates in the AIHA ELPAT program. ELPAT Laboratory ID: 173190. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAL. Analytical uncertainty available upon request. The quality control samples run with the samples in this report have passed all EPA required specifications unless otherwise noted. RL: (Report Limit for an undiluted 50ml sample is 4µg Total Pb). Unless indicated, areas and volumes were provided by the customer.

Athena Summa (9)

Laboratory Director



Scientific Analytical Institute
 4604 Dundas Dr. Greensboro, NC 27407
 Phone: 336.292.3888 Fax: 336.292.3313
 www.sailab.com lab@sailab.com

Lab Use Only
 Lab Order ID: 11949208
 Client Code: _____

Contact Information	
Company Name:	F&R
Address:	18 WOOD LAKE RD. GREENVILLE, SC 29607
Contact:	A. LeCroy
Phone <input checked="" type="checkbox"/> :	864-704-1210
Fax <input type="checkbox"/> :	
Email <input checked="" type="checkbox"/> :	alecroy@FandR.com
PO Number:	59Y-0393
Project Name/Number:	ENG. Bldg. 103

Billing/Invoice Information	
Company:	F&R
Address:	18 WOODS LAKE RD GREENVILLE, SC
Contact:	ANDREA LeCROY
Phone <input checked="" type="checkbox"/> :	864-704-1210
Fax <input type="checkbox"/> :	
Email <input type="checkbox"/> :	alecroy@FandR.com

Turn Around Times			
3 Hours	<input type="checkbox"/>	72 Hours	<input type="checkbox"/>
6 Hours	<input type="checkbox"/>	96 Hours	<input type="checkbox"/>
12 Hours	<input type="checkbox"/>	120 Hours	<input checked="" type="checkbox"/>
24 Hours	<input type="checkbox"/>	144+ Hours	<input type="checkbox"/>
48 Hours	<input type="checkbox"/>		

Lead Test Types		
Paint Chips by Flame AA (PBP) <input checked="" type="checkbox"/>	Soil by Flame AA (PBS) <input type="checkbox"/>	Other <input type="checkbox"/>
Wipe by Flame AA (PBW) <input type="checkbox"/>	Air by Flame AA (PBA) <input type="checkbox"/>	

Sample ID #	Description/Location	Volume/Area	Comments
P-1	CREAM PAINT	OFFICE 511	WALL PAINT -could NOT separate substrate
P-2	BEIGE PAINT	class 509	WALL PAINT
P-3	GRAY PAINT	HALL, classrooms	TRIM PAINT
P-4	LIGHT GRAY PAINT	OFFICES	doors, door frames, etc.
P-5	WHITE PAINT	office 510 classrooms computer LAB	could NOT separate substrate BRICK WALL
P-6	DARK GRAY PAINT	BOOKSTORE	CMU-WALLS WALLBOARD WALLS ETC.
P-7	LIGHT GRAY PAINT		↓ ↓
P-8	PURPLE PAINT		WALLBOARD WALLS
P-9	GREEN PAINT		WALLBOARD WALLS

Accepted
 Rejected Total Number of Samples 9

Relinquished by	Date/Time	Received by	Date/Time
ANDREA LeCroy	8.29.20	Bohler	8/31 1030A

Appendix D

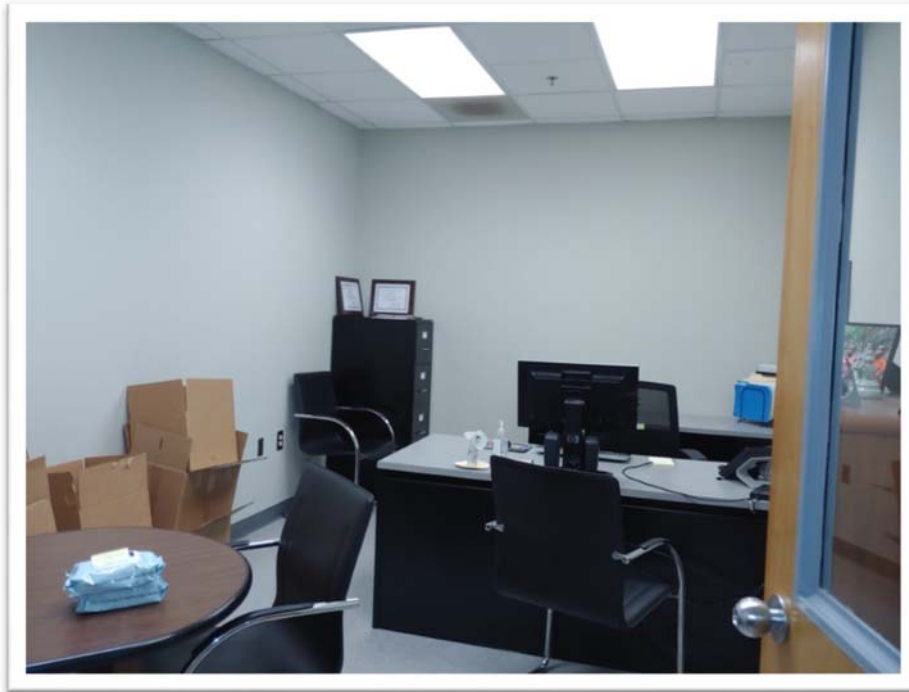
Photographic Documentation



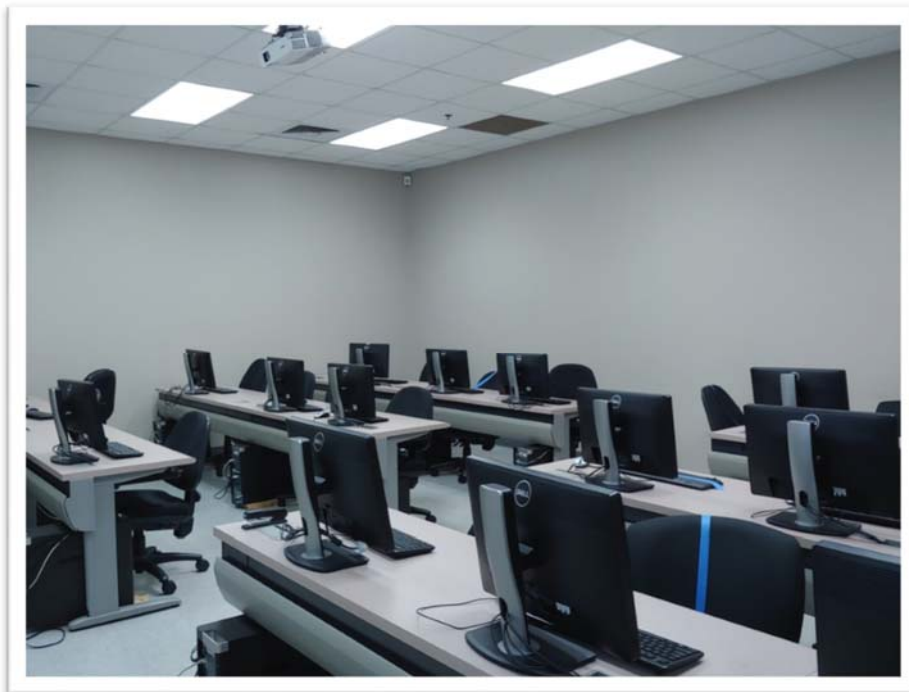
Photograph #001 View looking east-northeast at the northwest side of Engineering Technology Building 103.



Photograph #002 View of the interior of the classroom and office area to be renovated in Area 5 on the northwest side of Engineering Technology Building 103.



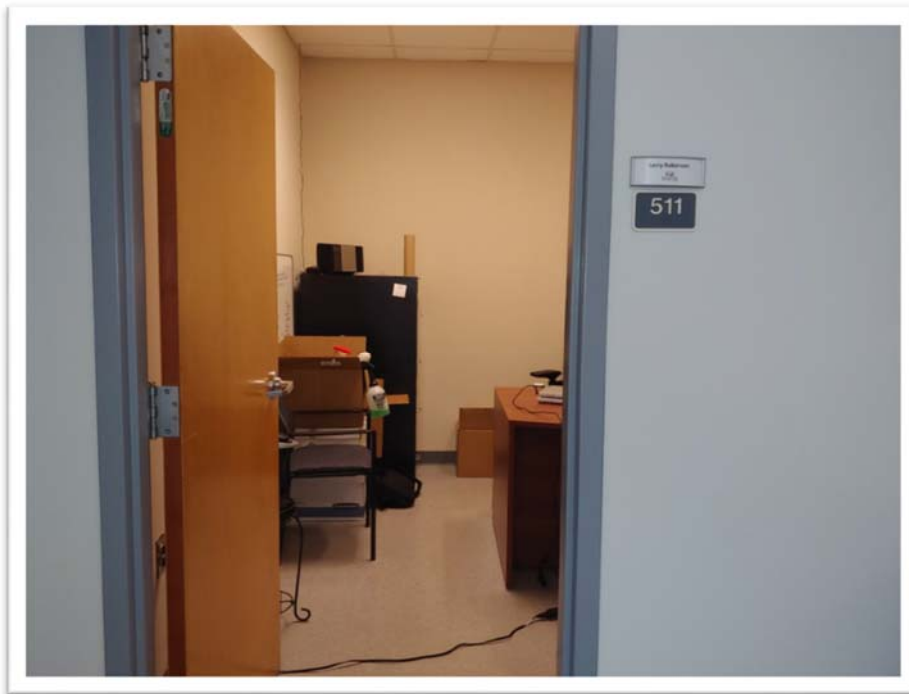
Photograph #003 View of Office 510 in the renovation area.



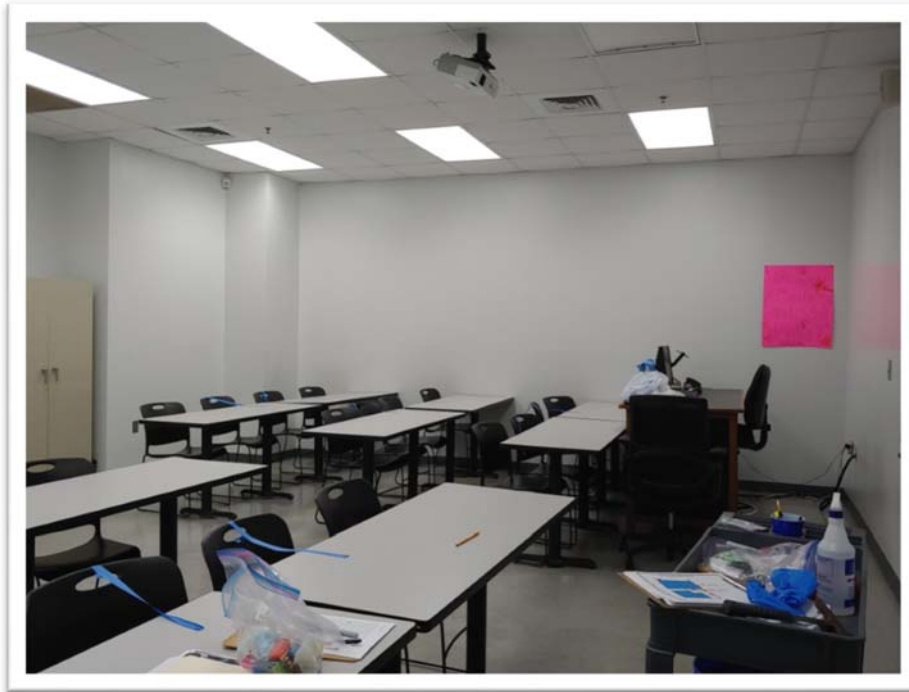
Photograph #004 View of Classroom 509 in the renovation area.



Photograph #005 View of above the drop type ceiling in the office and classroom renovation area.



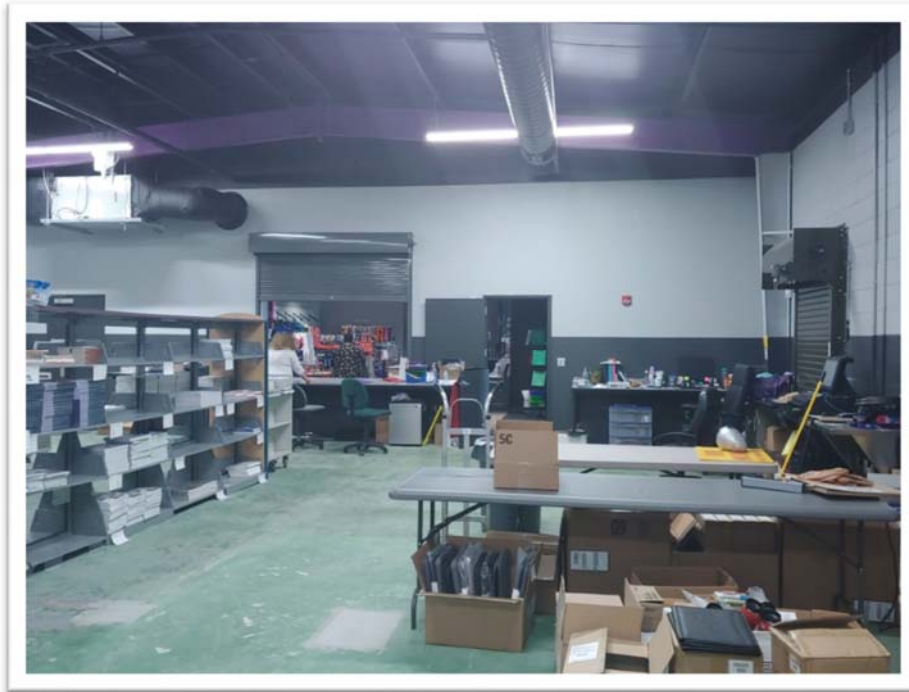
Photograph #006 View of Office 511 in the renovation area.



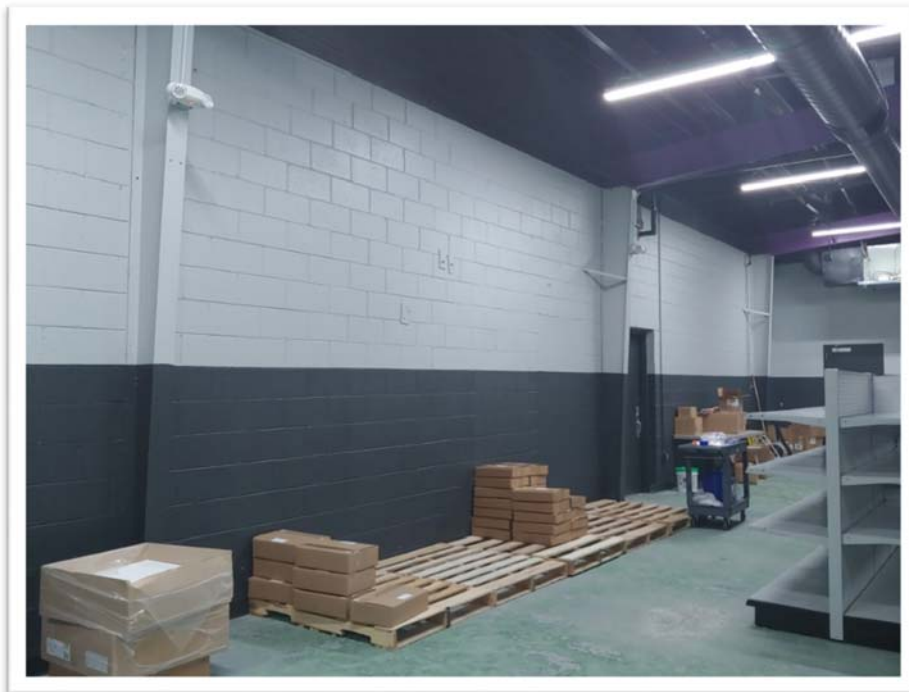
Photograph #007 View of Classroom 508 in the renovation area.



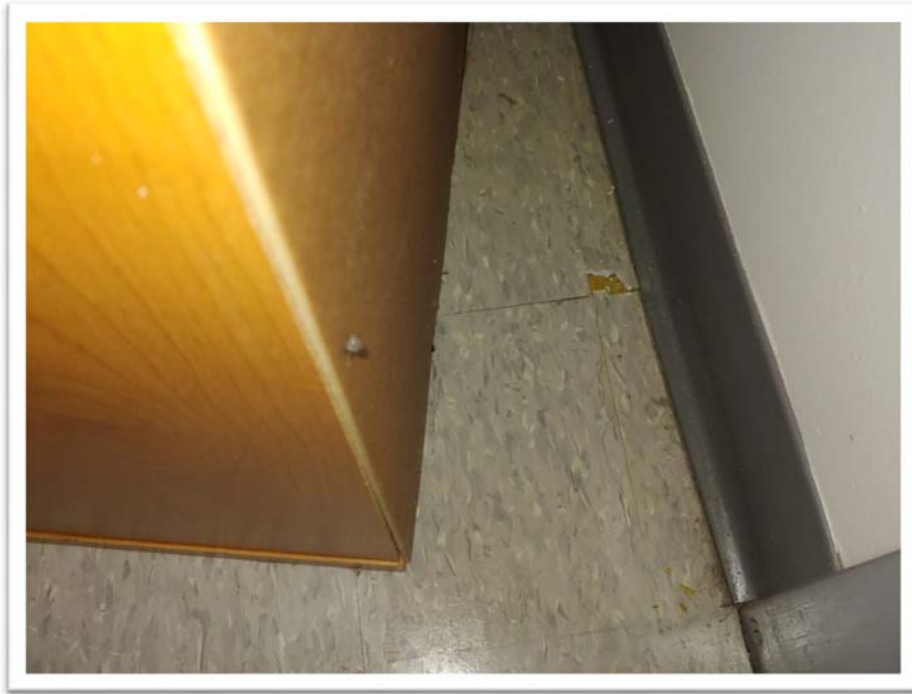
Photograph #008 View of the computer lab located in the machine shop area. A portion of the brick wall will be demolished to facilitate the installation of interior windows.



Photograph #009 View of the book storage area on the north end of the campus book store.



Photograph #010 View of the CMU wall to be demolished between the book storage area and the office, classroom, and computer lab areas.



Photograph #011 View of light gray vinyl floor tile/mastic sampling point VF-3 (None Detected).



Photograph #012 View of dark gray vinyl floor tile/mastic sampling point VF-6 (None Detected).



Photograph #013 View of the dark gray cove base sampling point (None Detected).



Photograph #014 View of ceiling tile sampling point (None Detected).



Photograph #015 View of brick and grout sampling point (None Detected).



Photograph #016 View of CMU block filler surface coating sampling point (None Detected).



Photograph #017 View CMU block and mortar sampling point (None Detected).

