



Memphis Housing Authority

Capital Improvements Department

700 Adams Avenue, Room 107
Memphis, Tennessee 38105-5029

ADDENDUM NO. 1

Issued: June 6, 2024

This addendum shall become and form a part of the following solicitation:

Solicitation #OR 24 B 00698

**MHA Central Office
Window, Lighting, and HVAC Renovation
Memphis, TN**

TO ALL POTENTIAL OFFERORS:

This Addendum, including all articles and corrections listed below, shall become a part of the original solicitation package, and shall be considered in preparing your proposals.

To ensure that all firms are given an equal opportunity to submit a competitive bid, copies of the Pre- Bid Conference meeting minutes, vendor's questions and responses and clarifications regarding Solicitation # OR 24 B 00698 for MHA Central Office Window, Lighting and HVAC Renovation, Memphis, Tennessee are included herein.

Please acknowledge receipt of this addendum by signing, dating, and including a copy of this addendum cover sheet in your proposal.

Name of Firm: _____

Signature: _____ Date: _____

Title: _____

MEETING MINUTES

Date: June 4, 2024

To: All Potential Offerors & Meeting Attendees (as listed below)

From: Kelitia Dickson, Director of Capital Improvements

RE: Pre-Bid Conference

Solicitation # OR 24 B 00698: MHA Central Office Window, Lighting and HVAC Renovation, Memphis, TN

CC: Dexter Washington, DW	CEO, MHA
Vickie Aldridge, VA	CFO, MHA
Leon Shead, LS	Director of IT, MHA
Latonia Young, LY	Director of Asset Management
Bradley Clark, BC	Senior Attorney, MHA
David Walker, DWalker	Contracting Officer, MHA
Kelitia Dickson, KD	Director of Capital Improvements, MHA
Kevin Pilate, KP	Senior Project Manager, MHA
Moshe Cole, MC	Project Manager, MHA
Colby Mitchell, CM	Self-Tucker Architects
Edith Washington, EW	Self-Tucker Architects (by phone)
Maggie Strom, MS	Tioga Environmental Consultants
Jack Griffith	IES Engineering (by phone)
Ryan Herter	IES Engineering
Jake MacFerran	IES Engineering

One Pre- Bid Meeting was held at the Memphis Housing Authority Central Office in room 216 on Tuesday, June 4, 2024, at 2:00 P.M. regarding Solicitation No. OR 24 B 00698 for the MHA Central Office Window, Lighting and HVAC Renovation, Memphis TN

KD welcomed and instructed all attendees to sign the meeting attendance sheet.

Meeting Attendees were as follows:

See attached Attendee Sign In Sheets

The items below were discussed in the Pre-Bid and are listed as follows:

KD: Welcome and Introductions

KD: Instructed attendees to sign the sign in sheet legibly.

CM/EW: Reviewed the architectural scope of the project which consists of selective demolition, the removal and replacement of exterior windows, drop in ceiling and ceiling grid, repair and painting of drywall and plaster walls damaged due to window removal, the additive alternate that includes the removal and replacement of existing entrance doors and framing as well as cleaning the stone portico.

MS: Reviewed the environmental scope of the project which consists of the removal of asbestos containing materials found in the caulking around the select existing windows.

RH/JG: Reviewed the mechanical and electrical scope of the project which consists of the removal and replacement of ductwork, air handling unit, roof top units, existing ceiling, lighting, and all related appurtenances.

KD discussed and explained the MHA Bid Process to Attendees.

KD explained that any questions and/or responses given in today's meetings are not binding and encouraged potential bidders to send all questions in writing.

KD discussed and explained the bid process, bids due date, MHA bid evaluation process, and the anticipated construction schedule.

KD discussed mandatory submittals, required documents for bid submission.

- Bid Form

- Bid Bond

- Representations, Certifications and Other Statements of Bidders

- Previous Participation Certification

- Qualifications Questionnaire.

- Non collusion Affidavit Certification

- Debarment or Suspension Certification

- Equal Opportunity Employer Certification

- Drug Free Workplace Certification

KD discussed and explained the HUD Section 3 Program

KD discussed and explained the MBE/WBE Program

KD discussed the HUD 5370 General Conditions for Construction Contracts

KD discussed the following.

- Form of Contract
- Special Conditions
- Weather Delays
- Davis Bacon Wage Rates
- Certified Payroll Requirements
- Special Conditions
 - Working hours
 - Weather delays
 - MHA Holiday Schedule
 - Project Logistics

KD discussed the following project closeout documents.

- Certificate and Release of Lien

- Waiver and Release of Lien

- Warranty Requirements/Substantial completion

- As-Built Drawing Requirements

DW discussed the importance and need for this project, the possibility of vacating the building during certain phases of construction and thanked all potential bidders for participating,

Meeting adjourned at 3:00 p.m.

A site visit followed the meeting.

REVISIONS:

1. The original Invitation for Bid have been revised. Revised sections are outlined below.
 - a. **Questions regarding this Invitation to Bid should be received in writing by 4:00 P.M. Central Standard Time no later than June 13, 2024. Questions may be sent via email to Kelitia Dickson at the Memphis Housing Authority at 700 Adams Avenue, Room 107, Memphis, TN 38105. Oral explanations or instructions will not be binding. Responses to inquiries will be made in the form of written addenda on or before June 14, 2024**
 - b. **Bids will be received until 10:00 A.M. Central Standard Time on Friday, June 21, 2024, at the offices of the Memphis Housing Authority, 700 Adams Avenue, Memphis TN at which time and place all bids will be publicly opened and read aloud.**
 - c. **Electronic Sealed bids are accepted can submitted on the STA Plan room at www.STAplanroom.com**
2. The Project Manual has been modified to include the documents listed below.
 - a. **ADDED:** Cover Sheet for Sealed Bid (This form is to be taped to the outside of the bid envelope.)
 - b. **ADDED:** Section 3 Self Certification
 - c. **ADDED:** Section 00 31 00 – Information Available to Bidders Hazardous Materials Survey

CLARIFICATIONS:

1. The existing freight elevator at MHA Central Office will be repaired and available for using during the construction phase of this project.

END OF ADDENDUM #1

**PRE-BID CONFERENCE
SOLICITATION OR 24 B 00698
MHA CENTRAL OFFICE
WINDOW, LIGHTING AND HVAC PACKAGE
SIGN IN SHEET**

June 4, 2024

2:00 p.m.

Print Name (DO NOT SIGN)	Name of Firm & Email Address	Phone Number
Kelitia Dickson <i>KD</i>	Memphis Housing Authority kdickson@memphisha.org	901.544.1311 901.337.2231
David Walker	Memphis Housing Authority dwalker@memphisha.org	901.544.1298
Moshe Cole	Memphis Housing Authority mcole@memphisha.org	901-544-1148
Kevin Pilate	Memphis Housing Authority kpilate@memphisha.org	901.544.1882
Joe Travis	Fef Construction jtravis@FandFconstruction.com	901-713-0116
Mike Watkins	Mike@McCMemphis.com McCabe Construction	901-481-4678
L.C. Cook	Coolc Development LLC. contact@coolcdevelopmentllc.com	662-936-4090
Ali AlQazwini	A+B construction ali@aacandbconstructionco.com	615-945-5636
Erick AVANT	AVANT Improvement AVANT Improvement @ BellSouth.net	901-603-5083
Chris Cockrell	Barnes & Brower, Inc cockrell@barnesandbrower.com	901.794.3481
Tim Kickham	Turnage Restoration time@turnagerestoration.com	901-482-4834
Brian Turnage	Turnage brian@turnagerestoration.com	901.387.8655

**PRE-BID CONFERENCE
SOLICITATION OR 24 B 00698
MHA CENTRAL OFFICE
WINDOW, LIGHTING AND HVAC PACKAGE
SIGN IN SHEET**

Colby C. Mitchell	Self + Tucker Architects cmitchell@selftucker.com	870.821.0569
Maggie Storn	Trojan Environmental	901-491-0001
NATHAN LUBIN JOHN CRUNCH	Lubin Enterprises NLUBIN@LUBENTINC.com Inc	901-485-4478
Jonathan Logan	Castle Black Construction jo.logan@castleblackinc.com	901-443-0151
CHRIS FORBIS	F + F Construction	901-412-6401
ERIE GENTRY	GENTRYSH.C@gmail.com GENTRY'S MECHANICAL	901-495-9389
Noah Gray	Nickson General Contractors noah@nicksongeneral.com	901-361-5078
Bobby Potts	Nickson general Contractors Bobby@nicksongeneral.com	901-456-0548
Bradley (Clt - MHA)	B. Clark & Murphy, Att. CNY	901-755-1862 901-544-1862
Seth Reeves	Wagner General Seth@wagnergeneral.com	386.0060
Ryan Hertter	Innovative Engineering Services, LLC	901-827-8016
SAAC BARRANTES	STA.	731-697-4834

**PRE-BID CONFERENCE
SOLICITATION OR 24 B 00698
MHA CENTRAL OFFICE
WINDOW, LIGHTING AND HVAC PACKAGE
SIGN IN SHEET**

**MEMPHIS HOUSING AUTHORITY
PUBLIC HOUSING OPERATIONS
PRE-BID MEETING AGENDA
JUNE 4, 2024, 2:00 p.m.
FOR
MHA CENTRAL OFFICE
WINDOW, LIGHTING, AND HVAC PACKAGE
SOLICITATION OR 24 B 00698**

- Attendance Sign-In Sheet
- Welcome and Introductions
- Review Scope of Work
- **Instructions to Bidders for Contracts**
 - Bid Schedule
 - Bid Preparation and Submission
 - Electronic Submission for Sealed Bids
 - Question and Answer Period
 - Addenda Receipt and Acknowledgement
 - MHA Bid Evaluation Process
 - Late Submission, Modifications and Withdrawal of Bids
 - Bid Form
 - Construction Duration
 - Liquidated Damages
 - Bid Guarantee/Bid Bond
 - Assurance of Completion
 - Performance and Payment Bond
 - Pre-Construction Conference
- **Review of Mandatory Submittals**
 - Representations, Certifications and Other Statements of Bidders Form [HUD 5369 A]
 - Instructions and Previous Participation Certification [HUD Form 2530]
 - Previous Participation Certification
 - Qualifications Questionnaire
 - Non-Collusion Affidavit
 - Debarment and Suspension Certificate
 - Equal Opportunity Certification
 - Drug Free Workplace Certification
- **MHA Section 3 Program**
 - MHA Section 3 Program Guidelines
 - Section 3 Business Concern Self Certification and Action Plan
- **MHA MBE/WBE Participation Goals**
 - MBE/WBE Bid Data Form/ Participation Report
 - Monthly MBE/WBE Utilization Report
- **Form of Contract**
- **General Conditions [HUD 5370]**

- Amendments to General Conditions
- **Special Conditions**
 - Work Week
 - MHA Holidays and Office Closures
- **Weather Delays**
 - Standard Baseline
 - Extension of Contract Time
 - Proper Reporting
- **MHA Section 3 Program**
 - MHA Section 3 Program Guidelines
 - Section 3 Business Concern Self Certification and Action Plan
- **Anticipated Project Schedule**
 - Division 1 Section 01 32 16
- **Wage Rate Requirements**
 - Davis Bacon Determination: Construction Type: Building, TN20240200
03/022/2024
- **Certified Payroll Requirements**
- **MHA Field Report**
- **Review of Division 1 Specifications**
 - Section 01 20 00 Coordination and Project Meetings
 - Section 01 23 00 Alternates
 - Section 01 33 00 Submittal Procedures
 - Section 01 77 00 Contract Closeout
- **Closeout Documents**
 - Certificate and Release Form
 - Waiver and Release of Lien
 - Labor and Material Certification
 - Closeout Submittals/As-Builts
- **Questions and Answers**

Site visit will be held immediately after this Pre-Bid Conference and can also be
scheduled with the Project Manager.

END OF MEETING AGENDA

SECTION 3 BUSINESS CONCERN SELF-CERTIFICATION

The Offeror/Bidder represents and certifies that it:

☐ is not a Section 3 business.

☐ is a Section 3 business as indicated below [check applicable category and subcategory]:

☐ **Category 1 Business**

- ☐ Fifty-one (51%) or more owned by residents of the specific community or communities for which the Section 3 covered assistance is expended; or
- ☐ Full-time, permanent workforce includes thirty percent (30%) of the above residents as employees.

☐ **Category 2 Business**

- ☐ Fifty-one (51%) or more owned by residents of other communities managed by the Memphis Housing Authority that is expending the Section 3 covered assistance; or
- ☐ Full-time, permanent workforce includes thirty percent (30%) of the above residents as employees.

☐ **Category 3 Business**

- ☐ An entity selected to carry out a HUD Youthbuild Program in the metropolitan area, or non-metropolitan county, in which the Section 3 covered assistance is expended.

☐ **Category 4 Business**

- ☐ Fifty-one (51%) or more owned by Section 3 residents; or
- ☐ Full-time, permanent workforce includes no less thirty percent (30%) Section 3 residents; or
- ☐ Will subcontract in excess of the twenty-five percent (25%) of the total amount of subcontracts to business concerns identified above.

Subscribed and sworn to
before me this _____ day
of _____, 200__.

Notary

My commission expires

Date

Company Name

Principal

Title

Date

Sealed Bid Cover Page – Complete and apply on the front of the sealed bid envelope.

Business Name: _____

Address (Full): _____

Contact Person: _____ Phone No: _____

Contractor's License No: _____ License Limit: _____

License Expiration Date: _____ Signature: _____

MHA Office Use Only

Date Bid Received: _____

Time Received: _____

Signature: _____

Print Name: _____

Project Name/Description: _____

Solicitation No: _____

Bid Opening Location, Date, Time: _____

Deliver to: _____

	Business Name	Trade	License number	License Limit
Sub Contractors or Consultants who provided a bid amount over \$25,000 to a General Contractor requires a Contractor's License registered with the State of Tennessee. Information must be listed on the front of the sealed bid envelope.				

*The Memphis Housing Authority reserves the right to reject any or all bids, to waive formalities, informalities, or irregularities in any bids, to advertise for new bids, or proceed to do this work by other means – as may be deemed to be in and for the best interest of the Authority.

DOCUMENT 00 31 00
INFORMATION AVAILABLE TO BIDDERS

PART 1 – GENERAL

1.1 HAZARDOUS MATERIALS SURVEY

- A. A hazardous materials survey has been prepared for this facility by Tioga Environmental Consultants, Inc. The survey follows this section.

Hazardous Materials Survey

Memphis Housing Authority
700 Adams Avenue
Memphis, Tennessee 38105
Project No. 251214.00
December 2021

- B. Neither the Architect, nor the Owner warrants the correctness of the report or of any interpretation, deduction, or conclusion given in the report.

- 1.2 Understanding of Limitations:** The Contractor, by receipt, acknowledges understanding the limitations of the documents made available as “Information Available to Contractor” and waives any and all rights of claim against the Owner and Architect or their agents, employees, and consultants, due to any errors or inconsistencies that may be contained in the documents provided.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 00 31 00



December 17, 2021

Mr. Jimmie Tucker
Self + Tucker Architects
480 Dr. M.L. King Jr. Ave, Suite 201
Memphis, TN 38126

**RE: Hazardous Material Survey
Memphis Housing Authority
700 Adams Avenue
Memphis, Tennessee 38105**

Dear Mr. Tucker,

At your request, Tioga Environmental Consultants, Inc. (Tioga) performed a survey of the above-referenced Property to identify the presence of hazardous materials. Specifically, a hazardous materials survey was performed to identify asbestos containing materials, lead-based paint, and miscellaneous hazardous materials that could be present on the Property. The purpose of this survey was to ensure that none of these materials would have an adverse environmental impact on the planned renovation of the existing facility.

On November 29th-December 2nd, 2021, Joe Littlefield, EPA/AHERA Asbestos Inspector and State of Tennessee Certified Lead-Based Paint Inspector, and Brandon King, a State of Tennessee Certified Lead-Based Paint Inspector surveyed the Property. The findings are contained in the attached report.

If you have any questions about our report or we may be of further service, please contact me at (901) 791-2432.

Sincerely,
TIOGA ENVIRONMENTAL CONSULTANTS, INC.

A handwritten signature in black ink, appearing to read "Joe Littlefield", with a stylized flourish at the end.

Joe Littlefield
Program Manager

Down-to-earth partners. Sky's-the-limit solutions.



Hazardous Materials Survey

Memphis Housing Authority

700 Adams Avenue

Memphis, Tennessee 38105

December 2021

Project No. 251214.00

Prepared For:

Self + Tucker Architects

480 Dr. M.L. King Jr. Ave, Suite 201

Memphis, TN 38126

Prepared By:



357 North Main St.
Memphis, Tennessee 38103

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APPENDICES

- Appendix 1 – Certifications and Licenses
- Appendix 2 – Photographic Log
- Appendix 3 – Building Floor Plans
- Appendix 4 – Asbestos Laboratory Results and Chain of Custody
- Appendix 5 – Lead Based Paint XRF Data
- Appendix 6 – Viken PCS Sheets

1.0 PROJECT SUMMARY

Self + Tucker Architects requested Tioga Environmental Consultants, Inc. (Tioga) prepare a survey to identify Hazardous Materials present at the building structure addressed as 700 Adams Avenue in Memphis, Shelby County, Tennessee.

The survey was performed on November 29th-December 2nd, 2021, by Joe Littlefield, an EPA/AHERA Asbestos Inspector and State of Tennessee Certified Lead-Based Paint Inspector and Brandon King, an EPA/AHERA Asbestos Inspector and a State of Tennessee Certified Lead-Based Paint Inspector.

1.1 Facility Description

The building, located at 700 Adams Avenue, is a two-story 42,500 square foot brick and concrete constructed building with a rubber membrane roof and concrete foundation. The building consists of a main lobby, waiting rooms, multiple offices, ten restrooms, corridors, break rooms, executive offices, open office areas, conference rooms, three stair wells, mechanical rooms, two elevators with associated elevator closets, warehouse area, and storage rooms. At the time of this survey, the Property was occupied. The building is utilized as the central office for the Memphis Housing Authority.

1.2 Scope of Services

Per the authorization of the City of Memphis, Tioga conducted a survey of 700 Adams Avenue in accordance with the following scope of work:

Asbestos Survey

- The Property was visually surveyed and samples of suspect asbestos containing materials (ACM) were collected by a State of Tennessee Certified Asbestos Inspector.
- A minimum of three samples were collected from each homogenous area. These samples were delivered to a NVLAP certified laboratory for analysis by polarized light microscopy (PLM).
- Additional analysis by PLM point counting and transmission electron microscopy was performed to confirm asbestos concentrations in some samples.
- Architectural drawings were used to mark sample locations and the extent of ACM and were transferred to digital building floor plans.

Lead-based Paint Inspection and Hazardous Materials Inventory

- Representative and accessible painted or coated surfaces, identified as lead-based paint during a previous survey, were retested for lead content by Tioga's State of Tennessee certified inspector/risk assessor using a Viken Pb200i Lead Paint X-ray Fluorescence Analyzer (XRF).
- An inventory of hazardous building materials was also performed at the Property.

Reporting

- Tioga has prepared a Hazardous Materials Survey Report containing site observations, chain-of-custody, sample results including types and locations of hazardous materials, a photographic log, and building floor plans noting sample locations, as well as locations of asbestos and lead-based paint.

1.3 Significant Assumptions

A Previous Asbestos survey was performed in 2008 by Fisher & Arnold Environmental. This survey identified Thermal Systems Insulation (TSI) in the form of pipe wrap insulation and Air O Cell insulation that contained ACM in two locations on the first floor and 12"x12" floor tile with black mastic in the MHA warehouse building. These three materials were observed to be in good condition and were not sampled during this survey. These materials are assumed to be positive for asbestos in this report. Additional information and photographs related to these materials is included in this report.

Additionally, the 2008 asbestos survey identified ACM in roof tar and multiple types of floor tile with mastic throughout the building. Due to the unknown abatement and renovation history of the building since the previous survey, all accessible types of roof tar and floor tile with mastic were sampled by Tioga.

A Previous Lead-Based Paint survey was performed by Pickering Environmental Consultants in 2002. This survey identified lead-based paint in interior stairway risers and stringers, and bathroom sinks, toilets, baseboards, and tile walls. These components were retested by Tioga to confirm lead content.

1.4 Deviations

Painted exterior surfaces were not tested for lead content during the 2002 survey. Tioga performed testing of painted exterior surfaces during this survey to provide a comprehensive survey of building components that may contain lead-based paint.

1.5 Inaccessible Areas

No inaccessible areas were encountered during the survey.

1.6 Limitations and Exceptions of Survey

The scope of this survey was limited to accessible materials only.

This survey report is not intended as a Hazardous Materials abatement specification document. Contractors or consultants should independently verify the location, condition and/or estimated quantities of asbestos containing materials, lead-based paint, and other Hazardous Materials as a component of their preparation of remediation bid documents.

2.0 ASBESTOS

The asbestos inspection was performed on November 29th-December 2nd, 2021, by Joe Littlefield of Tioga Environmental Consultants, Inc., a State of Tennessee Certified Asbestos Inspector (Certification Number A-I-48296-113354). A copy of this certification is included in Appendix 1.

Additionally, Tioga Environmental Consultants, Inc. is a State of Tennessee certified Asbestos Activities firm, Certification Number A-F-718-98022. A copy of this certification is also included in Appendix 1.

This survey was requested by Self + Tucker Architects (STA), for the purpose of having a comprehensive document that identifies and documents the presence of any asbestos-containing materials (ACM) in the building located at 700 Adams Avenue. Additionally, completing this comprehensive survey provides necessary documentation ensuring compliance with the U.S. Environmental Protection Agency (EPA), Tennessee Department of Environment & Conservation (TDEC), and Occupational Safety and Health Administration (OSHA) regulations. It is also essential information when considering any demolition or remodeling activities in areas with identified ACM to ensure compliance with National Emission Standards for Hazardous Air Pollutants (NESHAP) and OSHA regulations.

During the inspection, the inspector collected 272 individual samples from 92 different homogeneous areas and received a result for each individual material sampled. This report documents the findings of this comprehensive asbestos survey. The details regarding this survey and a list of sampled materials are contained in Section 2.3 of this Report. There were ACM identified, and the following summary in Table 1 provides an overview of the findings.

Table 1

Memphis Housing Authority Building CONFIRMED ASBESTOS CONTAINING MATERIALS			
Sample Number	Material	Estimated Quantity	Location/Condition
MHA-05	White 12"x12" Floor Tile with Colored Specks and Black Mastic	5,250 Sq. Ft.	1 st Floor HR Offices, Office 158, Storage Rm 143, Main Hallway Corridor, Waiting Room
MHA-06	Beige 12"x12" Floor Tile with Streaks and Yellow/Black Mastic	250 Sq. Ft.	HR Office 115
MHA-09	Brown Carpet and Yellow/Black Mastic	300 Sq. Ft.	HR Office 114
MHA-10	Grey 12"x12" Floor Tile with Streaks and Tan/Black Mastic	460 Sq. Ft.	Main Hallway Corridor, Waiting Room
MHA-14	Purple Carpet and Tan/Black Mastic	1000 Sq. Ft.	Offices 157, 150, 136, 134, & 133
MHA-16	Beige 12"x12" Floor Tile with Brown Specks and Black Mastic	180 Sq. Ft.	North Stairway

Memphis Housing Authority Building CONFIRMED ASBESTOS CONTAINING MATERIALS			
Sample Number	Material	Estimated Quantity	Location/Condition
MHA-32	Grey Exterior Window Caulk	128 Windows	Exterior 1 st (65) & 2 nd (63) Floor
MHA-45	Interior Window Caulk	3 Windows	Office 160 & 168
MHA-62	Beige 12"x12" Floor Tile with Brown Specks and Black Mastic	14,300 Sq. Ft.	2 nd Floor Offices and Hallways
MHA-64	White 12"x12" Floor Tile with Blue Streaks and Black Mastic	900 Sq. Ft.	2 nd Floor South Corridor 200 & 205 near Stairway
MHA-65	Grey Floor Grout with 1"x1" Tile and Black Mastic	650 Sq. Ft.	2 nd Floor Women's (250 & 203) & Men's (254) Restrooms
MHA-66	Aluminum Window Caulk	63 Windows	All 2 nd Floor Windows
MHA-72	Mauve 12"x12" Floor Tile and Black Mastic	2,550 Sq. Ft.	2 nd Floor North Offices
Previously Identified Confirmed ACM			
FA Survey 2008	Pipe Wrap Insulation	30 Ln. Ft.	1 st Floor Elevator Equipment Closet 121
FA Survey 2008	Air O Cell Pipe Insulation	3.5 Ln. Ft.	1 st Floor Storage 129
RTE Survey 2002	Light colored 12"x12" Floor Tile with Black Mastic	500 Sq. Ft.	MHA Warehouse
FA Survey 2008	Roof Tar	21,250 Sq. Ft.	Roof

2.1 Visual Observations

Tioga personnel conducted an examination of the building located at 700 Adams Avenue to identify suspect ACM. Observations included the type, condition, location, and estimated quantity of any suspect ACM.

Additionally, all suspect materials were evaluated for condition and friability, the ease with which the materials can be crushed with hand pressure. Asbestos materials determined to be friable, or that could be rendered friable during renovation activities are considered Regulated Asbestos Containing Materials (RACM) that must be removed prior to demolition.

2.2 Asbestos Sampling

Asbestos has been a widely used component of building materials throughout history due to its unique physical properties: poor heat and electrical conductor, fire resistance, and high tensile strength and low cost. Unfortunately, asbestos also poses potentially serious health concerns for people exposed to the material. Knowing where and how much ACM is in a building allows for proper managing of site activities and providing appropriate protection for building occupants and workers involved in maintenance, renovation, or demolition of asbestos containing materials.

This survey was conducted in general conformance with Asbestos Hazard Emergency Response Act (AHERA) and ASTM Standard E2356-18. It included a walkthrough of all accessible areas to identify suspect asbestos-containing materials, quantification of material amounts, collection of samples from each homogenous area, and assessment per functional space.

For these buildings, homogeneous areas of suspect Asbestos-Containing Materials (ACM) were defined for each material type sampled. A total of 92 homogeneous areas were identified and sampled. In each homogeneous area, Tioga identified, differentiated and sampled suspect materials based on color (i.e., color of tile), texture, and apparent application date. For samples with multiple layers (i.e., floor tile and mastic, thermal system insulations, sheetrock w/ joint compound, etc.), the laboratory assigns unique sample numbers designated with an A, B, C, and D to identify each layer.

Having identified the homogeneous areas, samples were collected from each for laboratory analysis. Photographs of each material sampled are included in the Photographic Log in Appendix 2.

2.3 Asbestos Findings

Samples were transported via FedEx to Eurofins CEI, an NVLAP certified laboratory, for PLM analysis on November 29th, December 1st, and December 2nd, 2021. Results were received on November 30th, December 2nd, and December 3rd, 2021. Two materials were further analyzed using Point Count methods and these results were received on December 6th and 7th, 2021. Materials identified containing greater than one percent (1%) asbestos are considered asbestos containing. A copy of the laboratory report is included in Appendix 4.

The laboratory analysis for samples collected as part of this survey found thirteen (13) building materials containing greater than one percent (1%) asbestos. Table 2 summarizes the homogenous areas and materials sampled during this inspection as well as the results of the analysis.

Table 2

Memphis Housing Authority Building ASBESTOS SAMPLE LOG SUMMARY			
Material	Homogeneous Area Number	Sample Identifier	Results
2'x4' White Fissure Ceiling Tile	MHA-01	A	None Detected
		B	None Detected
		C	None Detected
Drywall and Joint Compound*	MHA-02	A	None Detected
		B	None Detected
		C	None Detected
		D	None Detected
		E	PLM - Chrysotile <1% Point Count – 0.38%
Beige 4" Base Cove	MHA-03	A	None Detected
		B	None Detected
		C	None Detected
Interior Window Caulk	MHA-04	A	None Detected
		B	None Detected
		C	None Detected
White 12"x12" Floor Tile with Colored Specks & Black Mastic	MHA-05	A	Floor Tile-None Detected Mastic-Chrysotile 3%
		B	Floor Tile-None Detected Mastic- None Detected
		C	Floor Tile-None Detected Mastic- None Detected
		D	Floor Tile-None Detected Mastic- None Detected
		E	Floor Tile-None Detected Mastic- None Detected
Beige 12"x12" Floor Tile with Streaks & Black Mastic	MHA-06	A	Floor Tile-None Detected Mastic-Chrysotile 3%
		B	Floor Tile-None Detected Mastic- None Detected
		C	Floor Tile-None Detected Mastic- None Detected
Grey Base Cove	MHA-07	A	None Detected
		B	None Detected
		C	None Detected
Red Caulking on Pass-Through in Ceiling	MHA-08	A	None Detected
		B	None Detected
		C	None Detected
Brown Carpet with Yellow & Black Mastic	MHA-09	A	Carpet-None Detected Mastic-Chrysotile 3%
		B	Carpet-None Detected Mastic-Chrysotile 3%
		C	Carpet-None Detected Mastic-Chrysotile 3%
Grey 12"x12" Floor Tile with Streaks & Black Mastic	MHA-10	A	Floor Tile-None Detected Mastic- None Detected
		B	Floor Tile-None Detected Mastic-Chrysotile 2%
		C	Floor Tile-None Detected Mastic-Chrysotile 2%

Memphis Housing Authority Building ASBESTOS SAMPLE LOG SUMMARY			
Material	Homogeneous Area Number	Sample Identifier	Results
White 12"x12" Floor Tile with Blue Specks	MHA-11	A	None Detected
		B	None Detected
		C	None Detected
Blue Carpet with Red Specks	MHA-12	A	None Detected
		B	None Detected
		C	None Detected
		D	None Detected
		E	None Detected
Tan 12"x12" Floor Tile with Streaks	MHA-13	A	None Detected
		B	None Detected
		C	None Detected
		D	None Detected
		E	None Detected
Purple Carpet with Tan & Black Mastic	MHA-14	A	Carpet-None Detected Mastic- None Detected
		B	Carpet-None Detected Mastic-Chrysotile 2%
		C	Carpet-None Detected Mastic-Chrysotile 2%
Grey 12"x12" Floor Tile	MHA-15	A	None Detected
		B	None Detected
		C	None Detected
Beige 12"x12" Floor Tile with Brown Specks & Black Mastic	MHA-16	A	Floor Tile- Chrysotile 2% Mastic-Chrysotile 2%
		B	Floor Tile- Chrysotile 2% Mastic-Chrysotile 2%
		C	Floor Tile- Chrysotile 2% Mastic-Chrysotile 2%
Beige 12"x24" Floor Tile with Streaks	MHA-17	A	None Detected
		B	None Detected
		C	None Detected
Brown Carpet	MHA-18	A	None Detected
		B	None Detected
		C	None Detected
Tan Offset 12"x12" Floor Tile	MHA-19	A	None Detected
		B	None Detected
		C	None Detected
White 2'x4' Ceiling Tile with Fissures and Pin Holes	MHA-20	A	None Detected
		B	None Detected
		C	None Detected
		D	None Detected
		E	None Detected
12"x12" Acoustic Wall Tile	MHA-21	A	None Detected
		B	None Detected
		C	None Detected
Acoustic Wall Tile Glue Dot	MHA-22	A	None Detected
		B	None Detected
		C	None Detected
12"x12" Acoustic Ceiling Tile	MHA-23	A	None Detected
		B	None Detected
		C	None Detected
White Wall Grout with Black and White Tile	MHA-24	A	None Detected
		B	None Detected
		C	None Detected
Black Floor Grout with	MHA-25	A	None Detected

Memphis Housing Authority Building ASBESTOS SAMPLE LOG SUMMARY			
Material	Homogeneous Area Number	Sample Identifier	Results
White and Grey ¾" Tile		B	None Detected
		C	None Detected
Black Floor Grout with Grey 1" Tile	MHA-26	A	None Detected
		B	None Detected
		C	None Detected
White Wall Grout with Olive Tile	MHA-27	A	None Detected
		B	None Detected
		C	None Detected
Black Floor Grout with ½" Brown Tile	MHA-28	A	None Detected
		B	None Detected
		C	None Detected
White Wall Grout With Grey Tile	MHA-29	A	None Detected
		B	None Detected
		C	None Detected
Interior Window Glazing	MHA-30	A	None Detected
		B	None Detected
		C	None Detected
Exterior Window Glazing	MHA-31	A	None Detected
		B	None Detected
		C	None Detected
Exterior Window Caulk	MHA-32	A	Chrysotile 3%
		B	Chrysotile 3%
		C	Chrysotile 3%
6" TSI Pipe Insulation White	MHA-33	-	None Detected
6" TSI Pipe Insulation Pink	MHA-34	-	None Detected
6" TSI Pipe Insulation White	MHA-35	-	None Detected
8" TSI Pipe Insulation White	MHA-36	-	None Detected
10" TSI Pipe Insulation Pink	MHA-37	-	None Detected
2'x4' White Ceiling Tile with Fissures and Pin Holes	MHA-38	A	None Detected
		B	None Detected
		C	None Detected
2'x4' White Ceiling Tile with Fissures and Pin Holes #2	MHA-39	A	None Detected
		B	None Detected
		C	None Detected
Grey 12"x12" Floor Tile with Yellow Mastic	MHA-40	A	None Detected
		B	None Detected
		C	None Detected
4" Black Base Cove with Mastic	MHA-41	A	None Detected
		B	None Detected
		C	None Detected
4" Beige Base Cove with Mastic	MHA-42	A	None Detected
		B	None Detected
		C	None Detected
Drywall and Joint Compound	MHA-43	A	None Detected
		B	None Detected
		C	None Detected
Green Carpet	MHA-44	A	None Detected
		B	None Detected
		C	None Detected
Interior Window Caulk	MHA-45	A	Chrysotile 3%
		B	Chrysotile 3%
		C	Chrysotile 3%
4" Grey Base Cove with Mastic	MHA-46	A	None Detected
		B	None Detected

Memphis Housing Authority Building ASBESTOS SAMPLE LOG SUMMARY			
Material	Homogeneous Area Number	Sample Identifier	Results
		C	None Detected
4" Light Blue Base Cove with Mastic	MHA-47	A	None Detected
		B	None Detected
		C	None Detected
		C	None Detected
4" Navy Blue Base Cove with Mastic	MHA-48	A	None Detected
		B	None Detected
		C	None Detected
		C	None Detected
4" Black Base Cove with Mastic	MHA-49	A	None Detected
		B	None Detected
		C	None Detected
		C	None Detected
4" Light Brown Base Cove with Mastic	MHA-50	A	None Detected
		B	None Detected
		C	None Detected
		C	None Detected
6" Brown Base Cove with Mastic	MHA-51	A	None Detected
		B	None Detected
		C	None Detected
		C	None Detected
12"x12" Acoustic Ceiling Tile	MHA-52	A	None Detected
		B	None Detected
		C	None Detected
		C	None Detected
2'x4' White Ceiling Tile with Fissures and Pin Holes	MHA-53	A	None Detected
		B	None Detected
		C	None Detected
		C	None Detected
4" White Base Cove with Mastic	MHA-54	A	None Detected
		B	None Detected
		C	None Detected
		C	None Detected
Green Carpet with Yellow Mastic	MHA-55	A	None Detected
		B	None Detected
		C	None Detected
		C	None Detected
White Tile Grout with Beige 6" Tile	MHA-56	A	None Detected
		B	None Detected
		C	None Detected
		C	None Detected
White Floor Grout with 1"x1" Tile	MHA-57	A	None Detected
		B	None Detected
		C	None Detected
		C	None Detected
12"x12" Grey Floor Tile with Specks	MHA-58	A	None Detected
		B	None Detected
		C	None Detected
		C	None Detected
4" Dark Tan Base Cove with Mastic	MHA-59	A	None Detected
		B	None Detected
		C	None Detected
		C	None Detected
2'x4' White Ceiling Tile with Fissures	MHA-60	A	None Detected
		B	None Detected
		C	None Detected
		C	None Detected
4" Black Base Cove with Mastic	MHA-61	A	None Detected
		B	None Detected
		C	None Detected
		C	None Detected
Beige 12"x12" Floor Tile with Brown Specks & Black Mastic	MHA-62	A	Floor Tile- Chrysotile 2% Mastic-Chrysotile 3%
		B	Floor Tile- Chrysotile 2% Mastic-Chrysotile 3%
		C	Floor Tile- Chrysotile 2% Mastic-Chrysotile 3%
		D	Floor Tile- Chrysotile 2% Mastic-Chrysotile 3%

Memphis Housing Authority Building ASBESTOS SAMPLE LOG SUMMARY			
Material	Homogeneous Area Number	Sample Identifier	Results
		E	Floor Tile- Chrysotile 2% Mastic-Chrysotile 3%
Red Carpet	MHA-63	A	None Detected
		B	None Detected
		C	None Detected
12"x12" White Floor Tile with Blue Streaks & Black Mastic	MHA-64	A	Floor Tile-None Detected Mastic-Chrysotile 3%
		B	Floor Tile-None Detected Mastic-Chrysotile 3%
		C	Floor Tile-None Detected Mastic-None Detected
White Floor Grout with 1"x1" Tile & Black Mastic	MHA-65	A	Floor Tile-None Detected White Mastic-None Detected Grout-None Detected Mastic- Chrysotile 5%
		B	Floor Tile-None Detected White Mastic-None Detected Grout-None Detected Mastic- Chrysotile 5%
		C	Floor Tile-None Detected White Mastic-None Detected Grout-None Detected Mastic- Chrysotile 5%
Aluminum Interior Window Caulk	MHA-66	A	Chrysotile 2%
		B	Chrysotile 2%
		C	Chrysotile 2%
Tan Carpet with White Mastic	MHA-67	A	None Detected
		B	None Detected
		C	None Detected
6" Tan Base Cove with Yellow Mastic	MHA-68	A	None Detected
		B	None Detected
		C	None Detected
Blue Carpet with Beige Mastic	MHA-69	A	None Detected
		B	None Detected
		C	None Detected
White Wall Grout with Olive Tile	MHA-70	A	None Detected
		B	None Detected
		C	None Detected
White Wall Grout with Yellow Tile	MHA-71	A	None Detected
		B	None Detected
		C	None Detected
12"x12" Mauve Floor Tile with Black Mastic	MHA-72	A	Floor Tile-None Detected Mastic-Chrysotile 5%
		B	Floor Tile-None Detected Mastic-Chrysotile 5%
		C	Floor Tile-None Detected Mastic-Chrysotile 5%
6" TSI Pipe Run	MHA-73	-	None Detected
TSI Elbow	MHA-74	-	None Detected
TSI Elbow	MHA-75	-	None Detected
TSI Elbow	MHA-76	-	None Detected
HVAC Flashing / Caulk	MHA-77	A	None Detected
		B	None Detected
		C	None Detected
Blue Carpet	MHA-78	A	None Detected

Memphis Housing Authority Building ASBESTOS SAMPLE LOG SUMMARY			
Material	Homogeneous Area Number	Sample Identifier	Results
Tan High Pile Carpet	MHA-79	B	None Detected
		C	None Detected
		A	None Detected
		B	None Detected
		C	None Detected
4" Off-White Base Cove	MHA-80	A	None Detected
		B	None Detected
		C	None Detected
Drywall and Joint Compound*	MHA-81	A	PLM - Chrysotile <1% Point Count – 0.15%
		B	PLM - Chrysotile <1% Point Count – 0.20%
		C	PLM - Chrysotile <1% Point Count – 0.20%
		D	PLM - Chrysotile <1% Point Count – 0.15%
		E	PLM - Chrysotile <1% Point Count – 0.18%
Brown Stair Tread Cover	MHA-82	A	None Detected
		B	None Detected
		C	None Detected
Grey Stair Tread Cover	MHA-83	A	None Detected
		B	None Detected
		C	None Detected
Roofing Tar	MHA-84	A	None Detected
		B	None Detected
		C	None Detected
White Roof Flashing	MHA-85	A	None Detected
		B	None Detected
		C	None Detected
Old White Roof Flashing	MHA-86	A	None Detected
		B	None Detected
		C	None Detected
White Roof Caulk	MHA-87	A	None Detected
		B	None Detected
		C	None Detected
White HVAC Caulk	MHA-88	A	None Detected
		B	None Detected
		C	None Detected
Black HVAC Caulk	MHA-89	A	None Detected
		B	None Detected
		C	None Detected
HVAC Condensate Coating	MHA-90	A	None Detected
		B	None Detected
		C	None Detected
Ceiling Plaster	MHA-91	A	None Detected
		B	None Detected
		C	None Detected
Ceiling Tile Glue Dots	MHA-92	A	None Detected
		B	None Detected
		C	None Detected

*Drywall and joint compound composite samples were analyzed and determined to be <1% asbestos containing. Although this material is not considered “asbestos-containing material” under OSHA’s asbestos construction standard (29 CFR 1926.1101), certain precautions are universal and apply to all work with asbestos, regardless of airborne exposures. These

requirements are to utilize wet methods, to the extent feasible, and to promptly clean up and dispose in closed containers, waste and debris contaminated with asbestos.

Building floor plans in Appendix 3 show the sample locations at the Property.

There are three major categories used to classify asbestos-containing materials (ACM) found in buildings: Surfacing Materials, Thermal System Insulation (TSI), and Miscellaneous Materials. Materials in these broad categories are further classified as either friable or non-friable. Friable materials are materials that can be reduced to powder from hand pressure and may become an inhalation hazard. Non-friable asbestos materials are classified as either Category I or Category II Material.

Category I material is defined as asbestos-containing resilient floor covering, asphalt roofing products, packings and gaskets. Asbestos-containing mastic is also considered a Category I material (EPA determination – April 9, 1991). Category II material is defined as all remaining types of non-friable ACM not included in Category I that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable asbestos-cement products such as transite are an example of Category II material.

Table 3 below identifies homogenous areas within the Property that are positive for asbestos along with the category and location of each. The summary and recommendations related to these ACM Findings are included in Section 5.1.

Table 3
700 Adams Avenue
CONFIRMED ASBESTOS CONTAINING MATERIALS

Sample Number	Material	Estimated Quantity	Category Friable	Location/Condition	Figure
MHA-05	White 12"x12" Floor Tile with Colored Specks and Black Mastic	5,250 Sq. Ft.	Category I Non-Friable	1 st Floor HR Offices, Office 158, Storage Rm 143, Main Hallway Corridor, Waiting Room	1
MHA-06	Beige 12"x12" Floor Tile with Streaks and Yellow/Black Mastic	250 Sq. Ft.	Category I Non-Friable	HR Office 115	1
MHA-09	Brown Carpet and Yellow/Black Mastic	300 Sq. Ft.	Category I Non-Friable	HR Office 114	1
MHA-10	Grey 12"x12" Floor Tile with Streaks and Tan/Black Mastic	460 Sq. Ft.	Category I Non-Friable	Main Hallway Corridor, Waiting Room	1
MHA-14	Purple Carpet and Tan/Black Mastic	1000 Sq. Ft.	Category I Non-Friable	Offices 157, 150, 136, 134, & 133	1

700 Adams Avenue CONFIRMED ASBESTOS CONTAINING MATERIALS					
Sample Number	Material	Estimated Quantity	Category Friable	Location/Condition	Figure
MHA-16	Tan 12"x12" Floor Tile with Streaks #2 and Black Mastic	180 Sq. Ft.	Category I Non-Friable	North Stairway	1
MHA-32	Gray Exterior Window Caulk	128 Windows	Category I Non-Friable	Exterior 1 st (65) & 2 nd (63) Floor	1,2
MHA-45	Interior Window Caulk	3 Windows	Category I Non-Friable	Office 160 & 168	1
MHA-62	12"x12" Beige Floor Tile with Brown Specks and Black Mastic	14,300 Sq. Ft.	Category I Non-Friable	2 nd Floor Offices and Hallways	2
MHA-64	12"x12" White Floor Tile with Blue Streaks and Black Mastic	900 Sq. Ft.	Category I Non-Friable	2 nd Floor South Corridor 200 & 205 near Stairway	2
MHA-65	Gray Floor Grout with 1"x1" Tile and Black Mastic	650 Sq. Ft.	Category I Non-Friable	2 nd Floor Women's (250 & 203) & Men's (254) Restrooms	2
MHA-66	Aluminum Window Caulk	63 Windows	Category I Non-Friable	All 2 nd Floor Windows	2
MHA-72	12"x12" Mauve Floor Tile and Black Mastic	2,550 Sq. Ft.	Category I Non-Friable	2 nd Floor North Offices	2
Previously Identified Confirmed ACM					
FA Survey 2008	Pipe Wrap Insulation	30 Ln. Ft.	Friable TSI	1 st Floor Elevator Equipment Closet 121	1
FA Survey 2008	Air O Cell Pipe Insulation	3.5 Ln. Ft.	Friable TSI	1 st Floor Storage 129	1

700 Adams Avenue CONFIRMED ASBESTOS CONTAINING MATERIALS					
Sample Number	Material	Estimated Quantity	Category Friable	Location/Condition	Figure
RTE Survey 2002	Light colored 12"x12" Floor Tile with Black Mastic	500 Sq. Ft.	Category I Non-Friable	MHA Warehouse	-
FA Survey 2008	Roof Tar	21,250 Sq. Ft.	Category I Non-Friable	Roof	3

3.0 LEAD-BASED PAINT

The lead-based paint inspection was performed on November 30th and December 1st, 2021, by Brandon King of Tioga Environmental Consultants, Inc. Mr. King is a State of Tennessee Certified Lead-Based Paint Inspector, Certification Number TNLBP2021-3457-7729I. A copy of this certification is included in Appendix 1.

The inspection was performed using a Viken Model Pb200i X-Ray Fluorescence (XRF) spectrum analyzer instrument, serial number 2815. Brandon King has attended the manufacturer's radiation safety course for operation and handling of the instrument and completed an EPA sponsored curriculum in Lead Inspector and Risk Assessment Training qualifying them for State of Tennessee certification. A copy of Viken's equipment Performance Characteristic Sheets is included in Appendix 6.

Additionally, Tioga Environmental Consultants, Inc. is a State of Tennessee certified Lead-Based Paint Activity firm, Certification No. FTN-2009-1987-6833R. A copy of this certification is included in Appendix 1.

3.1 Visual Observations

Painted surfaces were visually examined prior to testing and their condition was noted. Tioga's evaluation of the painted surfaces condition, intact or deteriorated, was based on observations at the time of the inspection. Tioga is not responsible for changing conditions that may alter the relative exposure risk for future changes at the Property.

3.2 Lead-based Paint Sampling

The purpose of this testing was to serve as a followup investigation by determining the concentration of lead, if any, in painted interior surfaces previously identified to contain lead-based paint as well as painted exterior components of the 700 Adams Avenue building. It is also intended to comply with the US EPA and State of Tennessee regulations regarding identification of lead-based paint (LBP), and Occupational Safety and Health Administration (OSHA) regulations pertaining to worker protections from lead exposure. Painted and coated surfaces were sampled for lead using the Viken Pb200i XRF.

3.3 Lead-based Paint Findings

The State of Tennessee defines lead-based paint (LBP) as paint or other surface coatings that contain lead equal to or greater than 1.0 mg/cm² or 0.5% by weight. In total, one hundred and forty-one (141) painted or coated surfaces were tested via XRF assay at the property. As shown in Table 4, of the surfaces tested, thirty-eight (38) surfaces tested positive. Actual XRF data detailing all results is included in Appendix 5.

Appendix 3 contains building floor plans showing names given to rooms sampled during the lead-based paint survey. These names are used during the inspection to differentiate rooms and are included on the XRF data spreadsheet. The walls of the facility are referred to as "A" through "D" as follows: South wall "A", West wall "B", North wall "C", and East wall "D".

Table 4

**700 Adams Avenue
CONFIRMED LEAD-BASED PAINT COATED SURFACES**

Reading #	Concentration (mg/cm2)	Component	Feature	Substrate	Color	Side	Condition	Room
2645	6	Lower Wall	-	Tile	Black	A	Intact	Men's Restroom 108
2646	1.1	Lower Wall	-	Tile	White	A	Intact	Men's Restroom 108
2647	6.1	Lower Wall	-	Tile	Black	B	Intact	Men's Restroom 108
2648	1.1	Lower Wall	-	Tile	White	B	Intact	Men's Restroom 108
2649	6.6	Lower Wall	-	Tile	Black	C	Intact	Men's Restroom 108
2650	1	Lower Wall	-	Tile	White	C	Intact	Men's Restroom 108
2651	6.2	Lower Wall	-	Tile	Black	D	Intact	Men's Restroom 108
2652	1.2	Lower Wall	-	Tile	White	D	Intact	Men's Restroom 108
2653	6.7	Baseboard	-	Tile	Black	All	Intact	Men's Restroom 108
2660	6.4	Lower Wall	-	Tile	Black	A	Intact	Women's Restroom 109
2661	1.1	Lower Wall	-	Tile	White	A	Intact	Women's Restroom 109
2662	5.6	Lower Wall	-	Tile	Black	B	Intact	Women's Restroom 109
2663	1.1	Lower Wall	-	Tile	White	B	Intact	Women's Restroom 109
2664	6.7	Baseboard	-	Tile	Black	All	Intact	Women's Restroom 109
2668	6	Lower Wall	-	Tile	Black	All	Intact	Women's Restroom 120
2669	1	Lower Wall	-	Tile	White	All	Intact	Women's Restroom 120
2670	6.3	Baseboard	-	Tile	Black	All	Intact	Women's Restroom 120
2674	6.8	Lower Wall	-	Tile	Black	All	Intact	Men's Restroom 119
2675	1	Lower Wall	-	Tile	White	All	Intact	Men's Restroom 119
2676	5.7	Baseboard	-	Tile	Black	All	Intact	Men's Restroom 119
2700	4	Stair	Riser	Metal	Beige	All	Deteriorated	Lobby 101
2701	1.8	Stair	Riser	Metal	Beige	All	Deteriorated	Lobby 101
2702	7.2	Stair	Stringer	Metal	Beige	All	Deteriorated	Lobby 101
2705	5.7	Lower Wall	-	Tile	Black	All	Intact	Men's Restroom 204
2706	1.4	Lower Wall	-	Tile	White	All	Intact	Men's Restroom 204
2707	6.2	Baseboard	-	Tile	Black	All	Intact	Men's Restroom 204
2720	51	Sink	-	porcelain	White	B	Intact	Men's Restroom 254
2726	3.1	Stair	Riser	Metal	White	All	Deteriorated	Stairwell 156
2727	2.3	Stair	Riser	Metal	White	All	Deteriorated	Stairwell 156
2728	2.5	Stair	Riser	Metal	White	All	Deteriorated	Stairwell 156
2729	1.5	Stair	Stringer	Metal	White	All	Deteriorated	Stairwell 156
2763	4.6	Garage Door	Casing	Metal	Red	B	Deteriorated	Exterior
2764	2.4	Garage Door	Door	Wood	Red	B	Deteriorated	Exterior
2765	6.8	Garage Door	Casing	Metal	Red	C	Deteriorated	Exterior
2766	3.4	Garage Door	Door	Wood	Red	C	Deteriorated	Exterior
2767	1	Garage Door	Casing	Metal	Red	C	Deteriorated	Exterior
2768	3	Garage Door	Door	Wood	Red	C	Deteriorated	Exterior
2781	4.8	Wall	Trim	Metal	Red	D	Deteriorated	Exterior

4.0 HAZARDOUS MATERIALS

A survey of hazardous materials present at the Property was requested to identify materials which may have special handling and disposal requirements during the renovation of the building.

4.1 Visual Observations

The building was visually assessed for the presence of hazardous materials. Upon arrival, construction contractors were in the process of removing light fixtures and various components to prepare for renovation activity. Tioga was granted access to all areas of the subject Property for this survey.

4.2 Hazardous Material Findings

Mercury

Mercury containing fluorescent light bulbs were observed on the property. Thermostats observed were electronically controlled and did not appear to contain mercury. Prior to renovation, if these bulbs and thermostats are to be removed, mercury-containing bulbs and thermostats should be recycled or disposed of as universal waste as per federal regulations.

PCBs

The electrical ballasts for the fluorescent tube lights have the potential to contain hazardous polychlorinated biphenyls (PCBs). Some ballasts were visibly observed without the "Non PCB" labeling. Should any ballast be encountered without "Non PCB" labeling they should be removed and disposed of as hazardous waste.

Batteries

Powered Exit signs typically contain batteries as a back-up power source. If these signs are to be replaced as a component of the renovation, batteries must be properly disposed of as universal waste.

Refrigerants

Water fountains were observed at the property. These systems contain refrigerants and should be properly disposed of if they are to be removed or replaced during the renovation activity. Additionally, large HVAC units containing refrigerants are found throughout the property. If these units are to be replaced as a component of this renovation the refrigerants must be reclaimed prior to disconnecting.

Small window mounted HVAC units are also found throughout the building. Window mounted HVAC units are considered a small appliance.

Any refrigerant encountered must be captured and recovered for recycling by an EPA-certified technician prior to demolition. If the units are sent for disposal, it is the responsibility of the final disposal facility to ensure that refrigerant has been recovered in accordance with the EPA evacuation requirements for small appliances.

Table 5 and 6 below contain a list of identified materials with quantities and special disposal considerations prior to demolition.

**Table 5
Hazardous Material Survey Findings**

700 Adams Avenue	
Item	Quantity*
Mercury containing Fluorescent Bulbs	1,980
Mercury containing Thermostats	14**
Ballasts (possible PCBs if no "Non-PCB" label)	520
Water Fountain (potential to contain refrigerant)	7
HVAC Unit (potential to contain refrigerant)	40
Exit Signs with Batteries	19

* Numbers are approximate

**Electric Thermostats: mercury content could not be confirmed

**Table 6
Materials with Disposal Considerations**

700 Adams Avenue	
Material	Disposal
Mercury-Containing Bulbs/ Thermostats	Universal waste
PCB-Containing Oils in Ballasts (if present)	Hazardous waste
Batteries	Recommended disposal at proper recycling facility or as Universal Waste
Refrigerant	Recover refrigerant by EPA-certified technician onsite or at disposal site

The summary and recommendations related to hazardous materials are included in Section 5.3.

6.0 SUMMARY AND RECOMMENDATIONS

5.1 Asbestos

All materials identified as asbestos containing should be maintained in good condition to avoid potential fiber release due to disturbance. In the event of demolition, the State of Tennessee and NESHAP require that all friable ACM and non-friable ACM that could become friable during renovation or demolition activities must be removed by a certified Asbestos Abatement Contractor prior to disturbance.

In all instances, non-certified personnel should not disturb or attempt removal of any of the asbestos-containing materials identified in this survey. OSHA regulation 29 CFR 1926.1101 requires that a qualified, certified Asbestos Abatement Contractor must be retained to perform abatement of ACM prior to demolition activities at the Property. At no time are non-certified personnel allowed to disturb or remove ACM.

It is recommended that any Asbestos Abatement Contractor retained to perform abatement activities at the facility should be required to maintain proper engineering control measures prior to and during the disturbance of all ACM to ensure protection of human health and safety for personnel involved with this project. These control measures are also required for the protection of the surrounding environment by preventing the possibility of contamination outside of the abatement areas. Appropriate area air and/or personnel monitoring during the removal of these materials must be conducted as per federal, state, and local regulations.

The following recommendations are based on the findings as identified in Section 2.3 and are in general conformance with the State of Tennessee, EPA, NESHAP and OSHA requirements:

- All 12x12 floor tile with black mastic located in the 1st and 2nd floors of the building, brown and purple carpet with yellow, tan, and black mastic located in office 115, 150, 133, 134, and 135, and grey floor tile grout with black mastic in 2nd floor restrooms, are non-friable Category I materials. If the scope of the renovation will disturb asbestos containing floor tile and/or mastic, these materials must be removed by a licensed asbestos abatement contractor prior to renovation activities.
- Interior window caulk found in the 2nd floor windows, grey exterior window caulk found in all exterior windows, and black roof tar are non-friable Category I materials. If the scope of the renovation will disturb asbestos containing window caulk, these materials must be removed by a licensed asbestos abatement contractor prior to renovation activities.
- Previously identified pipe insulation located in the 1st floor elevator equipment closet and hallway, and Air-o-Cell insulation located in storage room 129 on the first floor are friable asbestos Thermal Systems Insulation (TSI). Because of the extent of this renovation these materials must be removed by a licensed asbestos abatement contractor prior to any renovation activities and disposed of as asbestos containing waste. Asbestos waste manifests should be kept for records.
- If suspect materials are identified behind walls, beneath floor tile or in any other accessible or inaccessible areas during demolition, additional testing should be performed to verify that these materials do not contain asbestos.

5.2 Lead-based Paint

The lead-based paint inspection identified thirty-eight (38) lead-based paint coated surface at the time of this inspection.

According to the Tennessee Department of Environment and Conservation, Division of Solid Waste Management Policy Number 115, lead-based paint debris, to include solid material coated wholly or partly with lead-based paint resulting from a demolition may go to a Class I, II (depending on permit conditions), III, or IV disposal facility. If the volume of waste makes it bulky or difficult to manage, the generator should get special waste approval. If the lead-based paint has been sanded or chipped off, this debris must be disposed of as hazardous waste and lead-based paint dust and chips should be handled properly prior to disposal to avoid health risks to the public.

The following recommendations are based on the findings as identified in Section 2.3.

- All deteriorated painted components that tested positive for lead-based paint must be stabilized or encapsulated to ensure that deteriorated paint will not chip or flake off during any renovation or demolition activities. It is recommended that they be either scraped clean of lead-based paint or encapsulated by a contractor licensed to perform lead-based paint activities and disposed of as construction debris along with other building components that are removed during any renovation or demolition activities.
- If the lead-based paint has been sanded or chipped off, a determination should be made for hazardous lead concentrations. Lead-based paint dust and chips should be handled properly prior to disposal to avoid health risks to the public.
- During demolition or renovation activities of lead-containing materials in these areas, employee exposure monitoring should be conducted per OSHA Lead Construction Standards (29 CFR 1926.62).

5.3 Hazardous Materials

The hazardous materials survey of the subject Property identified hazardous materials that must be removed from the property prior to demolition or require special handling during renovation activities.

- Mercury-containing bulbs and thermostats must be properly recycled or disposed of as universal waste.
- Refrigerants must be recovered for reuse or proper disposal by an EPA-certified technician prior to removal. Refrigerants contained in small appliances may be recovered at the final disposal facility.
- PCB-containing ballasts must be removed prior to demolition and will require proper disposal as hazardous wastes per federal regulations. Many observed ballasts appeared to be PCB free, however, ballast without “Non PCB” labelling found during renovation activities must be disposed of as hazardous waste.
- Batteries must be properly disposed of as universal waste.

Tioga recommends the proper documentation of the recovery and/or disposal of all hazardous materials. The documentation of this recovery and/or disposal must be kept for a minimum of three years.

Appendix 1

Certifications and Licenses

THE STATE OF TENNESSEE

Department of Environment and Conservation
Division of Solid Waste Management
Toxic Substances Program

53488-69141



Date Issued: 8/17/2021

Re-Accreditation

Joe D Littlefield III

DOB 21-Mar-1986 Sex M HGT 6'1" WGT 210

Discipline	Accreditation	Expiration
Inspector	A-I-48296-113354	Jun-30-2022
Project Monitor	A-PM-48296-118043	Aug-31-2022

Asbestos Accreditation

Is hereby Accredited pursuant to Rule 1200-01-20 Asbestos Accreditation Requirements to perform Asbestos Activities associated with the Discipline(s) listed on the front of this card.

A false statement pertaining to accreditation(s) is subject to the penalties of perjury.

Date Issued: 8/17/2021

Note: In order for this Tennessee issued accreditation to remain valid through the expiration date, the individual must maintain current applicable accredited asbestos refresher training course(s)

THIS CARD IS NOT TO BE USED FOR ANY OTHER IDENTIFICATION PURPOSES. IF FOUND, RETURN TO:
Department of Environment and Conservation
Division of Solid Waste Management
Toxic Substances Program
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 14th Floor
Nashville TN 37243

CN-1324

(Rev 6/13)

RDA-3020

THE STATE OF TENNESSEE



By virtue of the certification requirements in Rule Chapter 1200-01-18

Brandon King

357 N Main St
Memphis, TN 38103

Is hereby certified to conduct lead-based paint activities in the discipline(s) of:

Discipline	Type	Certification Number	Effective	Expires
Inspector	Initial	TNLBP2021-3457-7729I	7/14/2021	7/30/2023
Risk Assessor	Initial	TNLBP2021-3457-7730R	7/14/2021	7/30/2022



Under the Seal of the State of Tennessee

This 15 day of July 2021.

Department of Environment and Conservation



THE STATE OF TENNESSEE

Department of Environment and Conservation Division of Solid Waste Management
Toxic Substances Program

William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 14th Floor Nashville TN 37243

By virtue of the authority vested by the Division of Solid Waste Management, the
Company named below is hereby accredited to offer and/or conduct Asbestos activities
pursuant to Rule 1200-01-20:

Tioga Environmental Consultants, Inc.

357 N. Main Street Memphis TN, 38103

to conduct ASBESTOS ACTIVITIES in schools or public and commercial buildings in Tennessee.
This firm is responsible for compliance with the applicable requirements of Rule 1200-01-20.

Discipline	Type	Accreditation Number	Effective Date	Expiration Date
Accreditation	Re-Accreditation	A-F-718-98022	December 01, 2020	December 31, 2021



Given under the Seal of the State of Tennessee in Nashville.

This 1st Day of December 2020

Division of Solid Waste Management
Toxic Substance Program

CN-1324 (Rev 6/13)

RDA-3020

THE STATE OF TENNESSEE

By virtue of the certification requirements in Rule Chapter 1200-01-18
Tioga Environmental Consultants

357 North Main Street

Memphis, TN 38103

Is hereby certified as a lead-based paint activity firm:

Certification Number	Effective	Expires
Type: ReCertification		
FTN-2009-1987-6833R	12/31/2018	12/30/2021

Under the Seal of the State of Tennessee



This 18 day of December 2019 .

Department of Environment and Conservation



Appendix 2



Photographic Log

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 1	Date: 12/1/2021		
Description: General view of Front Entrance South facing side of the building "A" Side for Lead-Based Paint Survey			
Photo No. 2	Date: 12/1/2021		
Description: General View of West facing side of the building "B" Side for Lead-Based Paint Survey			



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 3	Date: 12/1/2021		
Description: General view of Rear of the building North facing side of the building "C" Side for Lead-Based Paint Survey			
Photo No. 4	Date: 12/1/2021		
Description: General View of East facing side of the building "D" Side for Lead-Based Paint Survey			


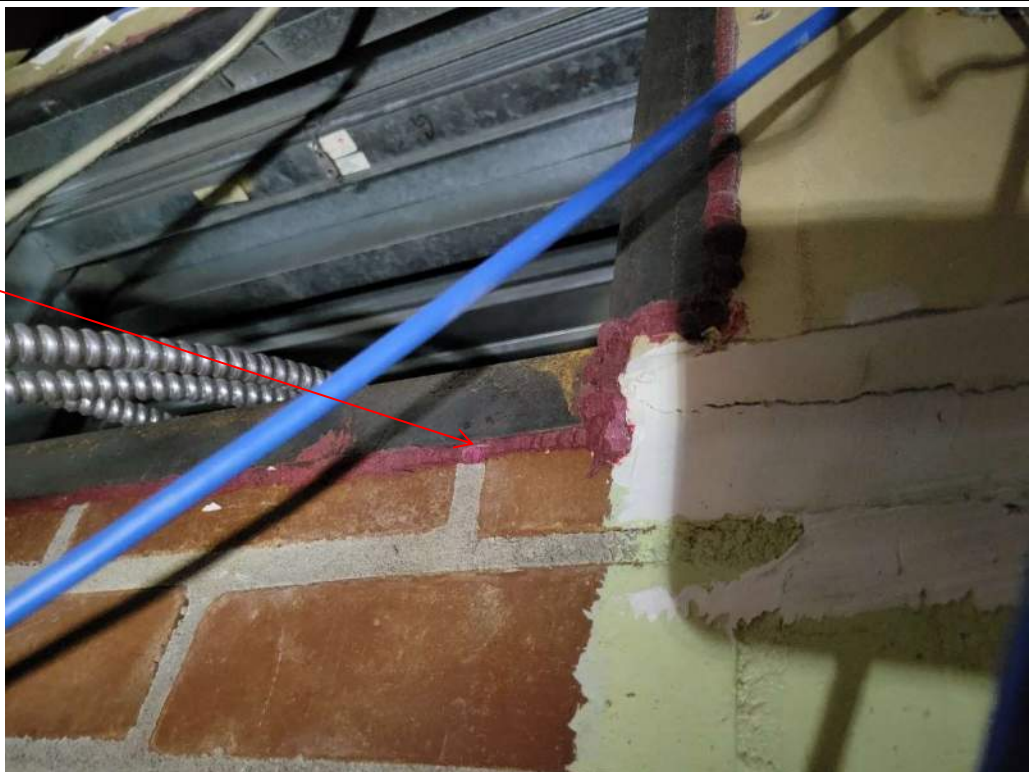
Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 5	Date: 12/1/2021		
Description: General Interior View 1 st Floor Main Hallway, Restroom, and Elevator Closet			
Photo No. 6	Date: 12/1/2021		
Description: General Interior View 1 st Floor Office Areas			



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 7	Date: 12/1/2021	 <p>Description:</p> <p>General Interior View</p> <p>1st Floor Mechanical Room</p> <p>Potential Hazardous Materials:</p> <p>HVAC Unit with Possible Refrigerants to Be Recovered</p>	
Photo No. 8	Date: 12/1/2021	 <p>Description:</p> <p>General Exterior View</p> <p>Roof</p>	



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 9	Date: 12/1/2021		
Description: Asbestos Sample MHA-01 White Fissure Ceiling Tile Tested Negative for Asbestos			
Photo No. 10	Date: 12/1/21		
Description: Asbestos Sample MHA-02 Dry Wall with Joint Compound Tested Negative for Asbestos			



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 11	Date: 12/1/2021		
Description: Asbestos Sample MHA-03 4" Beige Base Cove with Beige Mastic Tested Negative for Asbestos			
Photo No. 12	Date: 12/1/2021		
Description: Asbestos Sample MHA-04 Interior Window Caulk (Metal Frame) Tested Negative for Asbestos			

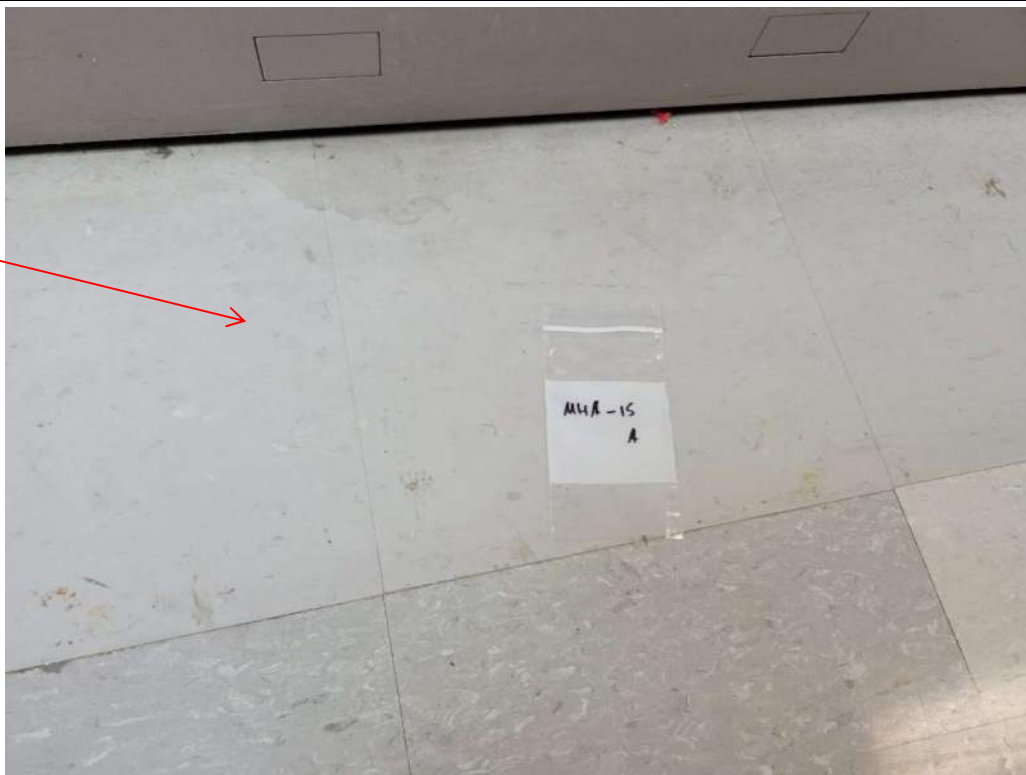
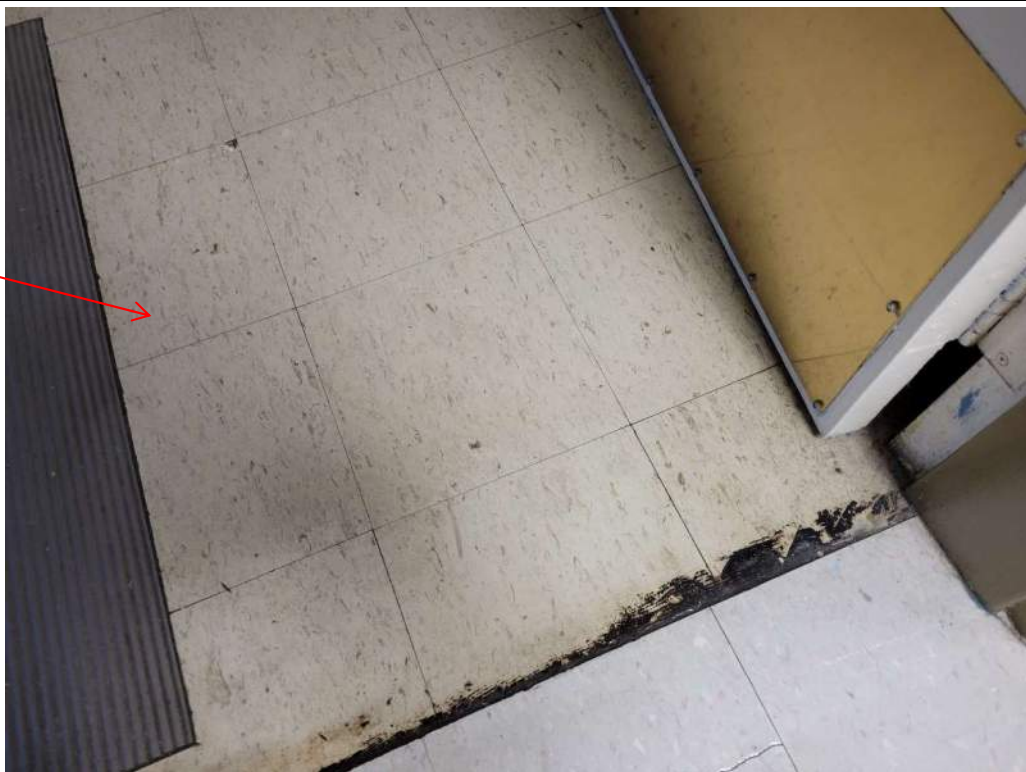
Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 13	Date: 12/1/2021		
Description: Asbestos Sample MHA-05 12"x 12" White Floor Tile w/ Colored Specs with Black Mastic and Tan Mastic Tested Positive for Asbestos			
Photo No. 14	Date: 9/27/2021		
Description: Asbestos Sample MHA-06 12"x12" Beige Floor Tile w/ Streaks with Yellow Mastic and Black Mastic Tested Positive for Asbestos			



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 15	Date: 12/1/2021		
Description: Asbestos Sample MHA-07 Gray Base Cove with Yellow Mastic Tested Negative for Asbestos			
Photo No. 16	Date: 12/1/2021		
Description: Asbestos Sample MHA-08 Red Caulk Tested Negative for Asbestos			


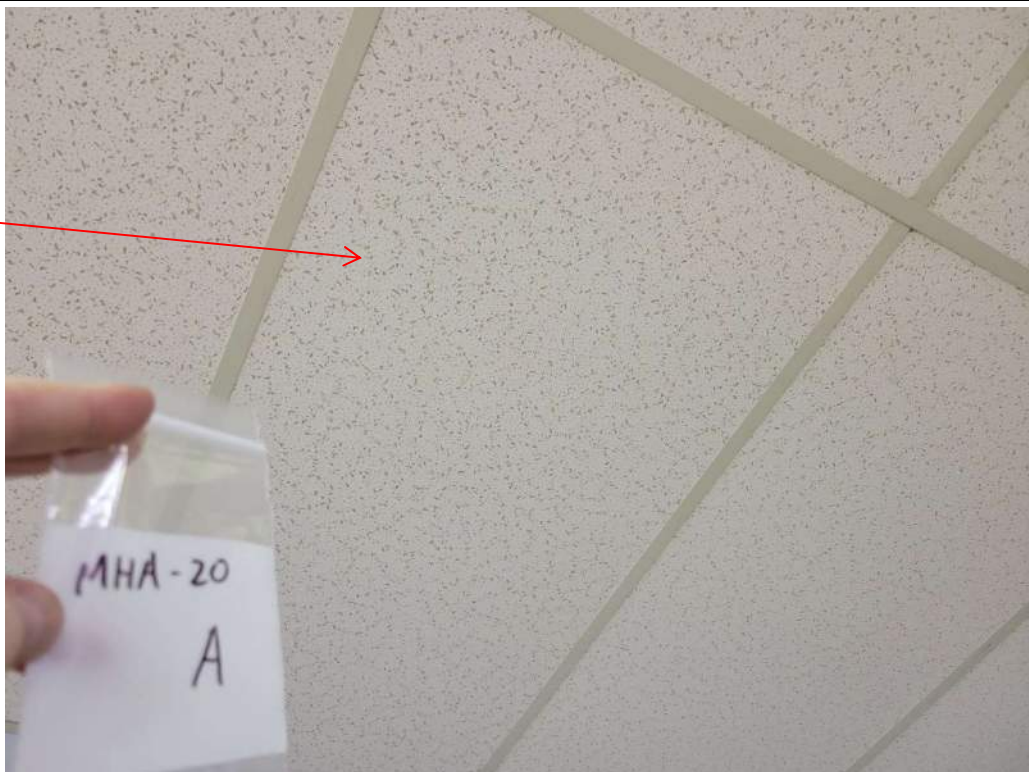
Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 17	Date: 12/1/2021		
Description: Asbestos Sample MHA-09 Brown Carpet with Yellow Mastic and Black Mastic Tested Positive for Asbestos			
Photo No. 18	Date: 12/1/2021		
Description: Asbestos Sample MHA-10 12"x12" Gray Floor Tile with Tan Mastic and Black Mastic Tested Positive for Asbestos			

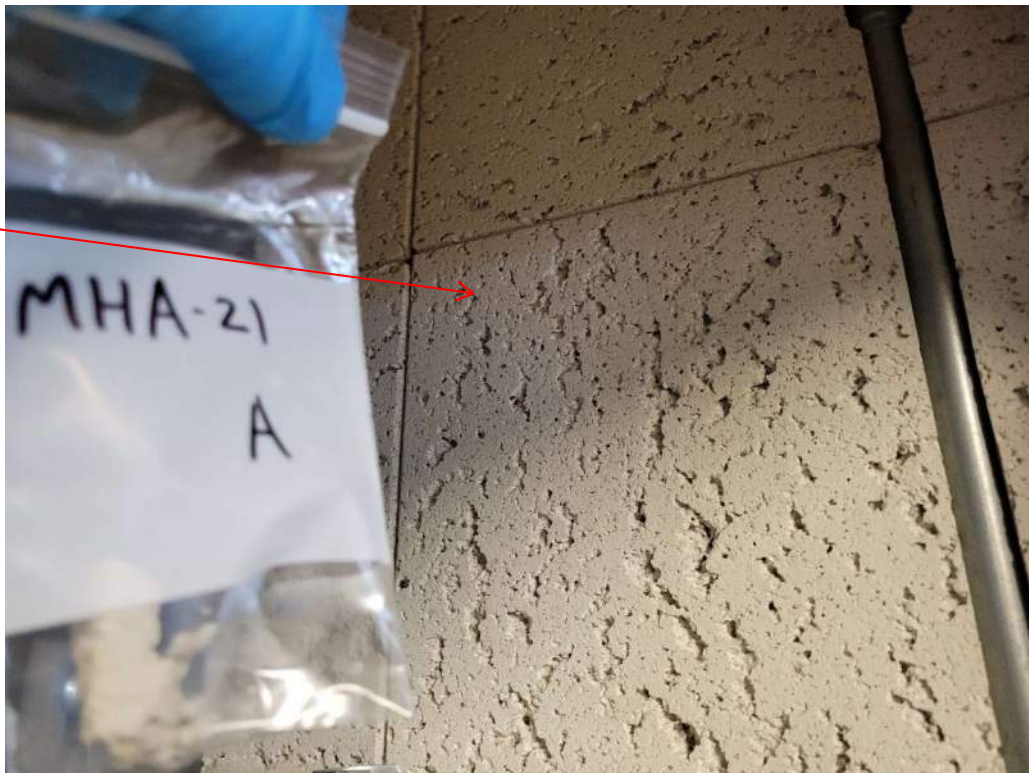
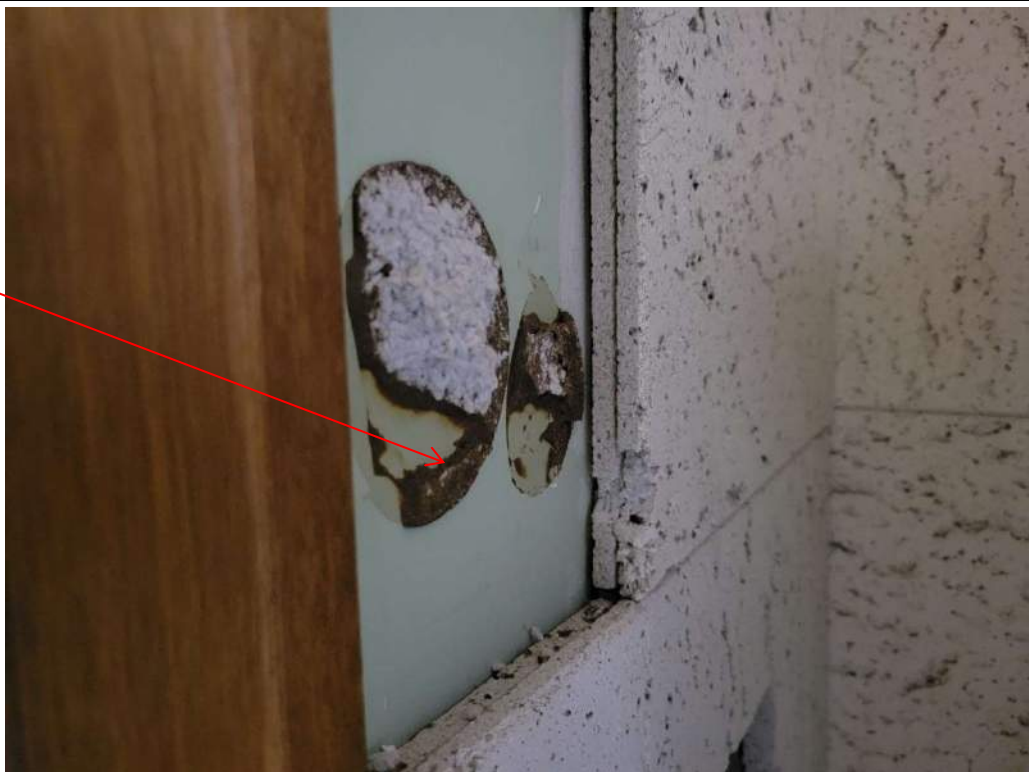
Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 19	Date: 12/1/2021		
Description: Asbestos Sample MHA-11 12"x12" White and Blue Floor Tile with Tan Mastic and Clear Mastic Tested Negative for Asbestos			
Photo No. 20	Date: 12/1/2021		
Description: Asbestos Sample MHA-12 Red and Blue Carpet with White Mastic Tested Negative for Asbestos			



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 21	Date: 12/1/2021		
Description: Asbestos Sample MHA-13 12"x12" Tan Floor Tile w/ Streaks & Clear Mastic, Tan Mastic, & Brown Mastic Tested Negative for Asbestos			
Photo No. 22	Date: 12/1/2021		
Description: Asbestos Sample MHA-14 Purple and Green Carpet with Tan Mastic and Black Mastic Tested Positive for Asbestos			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 23	Date: 12/1/2021		
Description: Asbestos Sample MHA-15 12"x12" Gray Floor Tile with Tan Mastic and Black Mastic Tested Negative for Asbestos			
Photo No. 24	Date: 12/1/2021		
Description: Asbestos Sample MHA-16 12"x12" Tan Streak Floor Tile with Black Mastic Tested Positive for Asbestos			


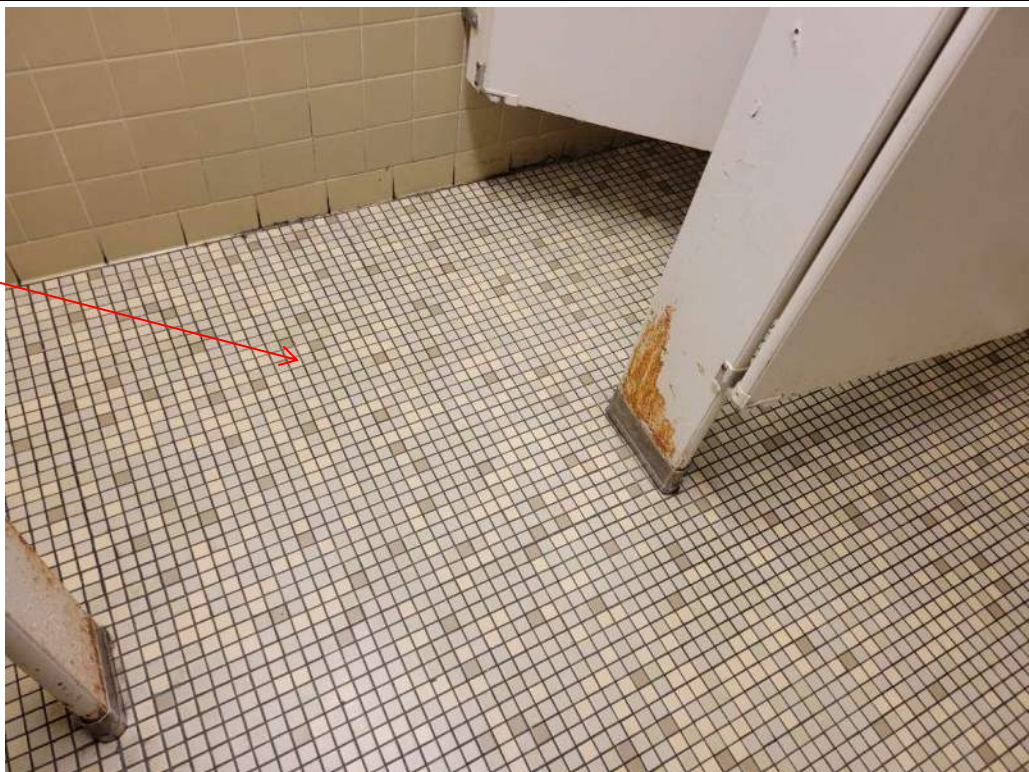
Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 25	Date: 12/1/2021		
Description: Asbestos Sample MHA-17 12"x24" Beige Streak Floor Tile with Yellow Mastic Tested Negative for Asbestos			
Photo No. 26	Date: 12/1/2021		
Description: Asbestos Sample MHA-18 Brown Carpet with Yellow Mastic Tested Negative for Asbestos			



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 27	Date: 12/1/2021		
Description: Asbestos Sample MHA-19 12"x12" Tan and Off-white Floor Tile with Yellow Mastic and Black Mastic Tested Negative for Asbestos			
Photo No. 28	Date: 12/1/2021		
Description: Asbestos Sample MHA-20 2'x 4' Fissure Ceiling Tile Tested Negative for Asbestos			



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 29	Date: 12/1/2021		
Description: Asbestos Sample MHA-21 White Acoustic Wall Tile Tested Negative for Asbestos			
Photo No. 30	Date: 12/1/2021		
Description: Asbestos Sample MHA-22 Brown Acoustic Tile Glue Dot Tested Negative for Asbestos			



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 31	Date: 12/1/2021		
Description: Asbestos Sample MHA-23 1'x1' Acoustic Ceiling Tile Tested Negative for Asbestos			
Photo No. 32	Date: 12/1/2021		
Description: Asbestos Sample MHA-24 6" Black and White Wall Tile; White Grout Tested Negative for Asbestos			



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 33	Date: 12/1/2021		
Description: Asbestos Sample MHA-25 ¾" White and Grey Floor Tile; Black Grout Tested Negative for Asbestos			
Photo No. 34	Date: 12/1/2021		
Description: Asbestos Sample MHA-26 1" Grey Ceramic Floor Tile with Black Floor Grout Tested Negative for Asbestos			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 35	Date: 12/1/2021		
Description: Asbestos Sample MHA-27 6" Olive Wall Tile with White Grout (1 st Floor) Tested Negative for Asbestos			
Photo No. 36	Date: 12/1/2021		
Description: Asbestos Sample MHA-28 1/2" Brown Ceramic Floor Tiles with Black Grout (1 st Floor) Tested Negative for Asbestos			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 37	Date: 12/1/2021		
Description: Asbestos Sample MHA-29 6" Grey Ceramic Wall Tile with White Grout Tested Negative for Asbestos			
Photo No. 38	Date: 12/1/2021		
Description: Asbestos Sample MHA-30 White Interior Window Glaze Tested Negative for Asbestos			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 39	Date: 12/1/2021		
Description: Asbestos Sample MHA-31 White Exterior Window Glaze Tested Negative for Asbestos			
Photo No. 40	Date: 12/1/2021		
Description: Asbestos Sample MHA-32 Grey Exterior Window Caulk Tested Positive for Asbestos			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 41	Date: 12/1/2021		
Description: Asbestos Sample MHA-33 6" White TSI Pipe Insulation Tested Negative for Asbestos			
Photo No. 42	Date: 12/1/2021		
Description: Asbestos Sample MHA-34 6" TSI Pink Pipe Insulation Tested Negative for Asbestos			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 43	Date: 9/27/2021		
Description: Asbestos Sample MHA-35 6" TSI White Pipe Insulation Tested Negative for Asbestos			
Photo No. 44	Date: 9/27/2021		
Description: Asbestos Sample MHA-36 8" TSI White Pipe Insulation Tested Negative for Asbestos			

Client Name: Memphis Housing Authority

Site Location: MHA Main Offices 700 North Adams Avenue

Project No.
 251214.00

Photo No.
45
Date:
 12/1/2021

Description:

Asbestos Sample

MHA-37

 10" TSI Pink Pipe
 Insulation

 Tested Negative for
 Asbestos

Photo No.
46
Date:
 12/1/2021


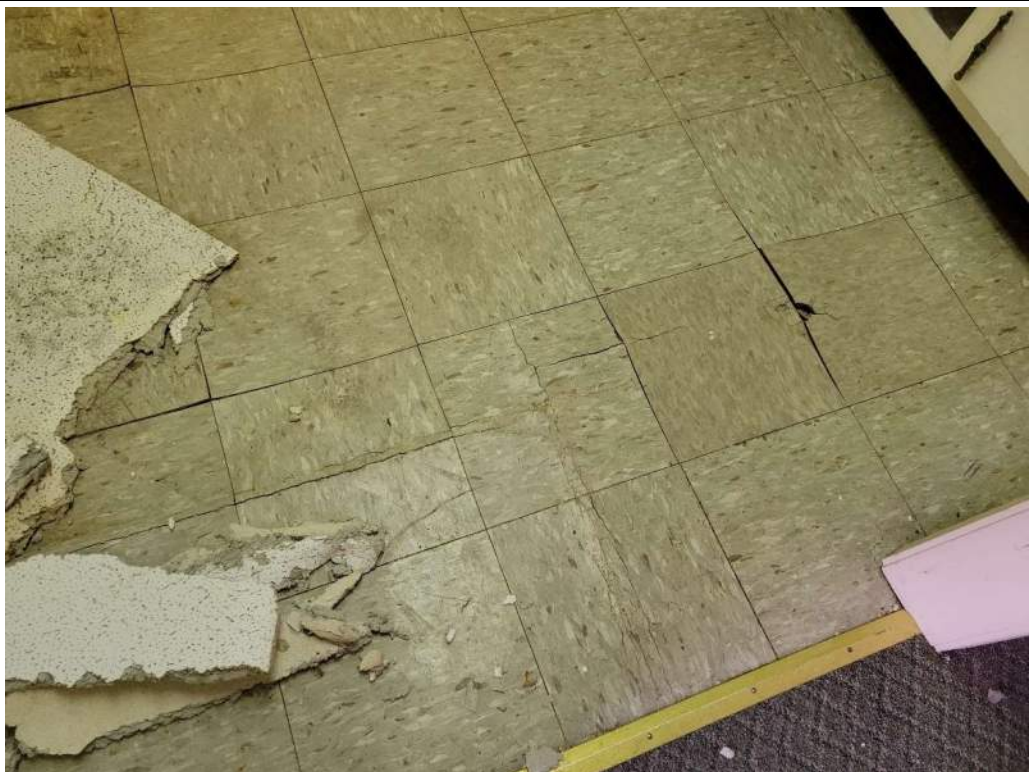
Description:



Asbestos Sample



MHA-38



 2'x4' White Fissure/Pinhole
 Ceiling Tile



 Tested Negative for
 Asbestos




Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 47	Date: 12/1/2021		
Description: Asbestos Sample MHA-39 2'x4' White Fissure/Pinhole Ceiling Tile #2 Tested Negative for Asbestos			
Photo No. 48	Date: 12/1/2021		
Description: Asbestos Sample MHA-40 12'x12' Grey Floor Tile with Yellow Mastic Tested Negative for Asbestos			



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 49	Date: 12/1/2021		
Description: Asbestos Sample MHA-41 4" Black Base Cove with Yellow with Off-white mastic Tested Negative for Asbestos			
Photo No. 50	Date: 12/1/2021		
Description: Asbestos Sample MHA-42 4" Beige Base Cove with Yellow with Off-white Mastic Tested Negative for Asbestos			



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 51	Date: 12/1/2021		
Description: Asbestos Sample MHA-43 Drywall with Joint Compound Tested Negative for Asbestos			
Photo No. 52	Date: 12/1/2021		
Description: Asbestos Sample MHA-44 Green Carpet; Yellow Mastic Tested Negative for Asbestos			



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 53	Date: 12/1/2021		
Description: Asbestos Sample MHA-45 Grey Interior Window Caulk Tested Positive for Asbestos			
Photo No. 54	Date: 12/1/2021		
Description: Asbestos Sample MHA-46 4" Grey Base Cove with Beige Mastic Tested Negative for Asbestos			



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 55	Date: 12/1/2021		
Description: Asbestos Sample MHA-47 4" Light Blue Base Cove with Beige Mastic Tested Negative for Asbestos			
Photo No. 56	Date: 12/1/2021		
Description: Asbestos Sample MHA-48 4" Navy Blue Base Cove with Beige Mastic Tested Negative for Asbestos			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 57	Date: 12/1/2021		
Description: Asbestos Sample MHA-49 4" Black Base Cove with Beige Mastic Tested Negative for Asbestos			
Photo No. 58	Date: 12/1/201		
Description: Asbestos Sample MHA-50 4" Light Brown Base Cove with Beige Mastic Tested Negative for Asbestos			



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 59	Date: 12/1/2021		
Description: Asbestos Sample MHA-51 6" Brown Base Cove with Beige Mastic Tested Negative for Asbestos			
Photo No. 60	Date: 12/1/2021		
Description: Asbestos Sample MHA-52 1'x' 1' White Acoustic Ceiling Tile (Peg Board) Tested Negative for Asbestos			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 61	Date: 12/1/2021		
Description: Asbestos Sample MHA-53 2'x4' Fissure/Pinhole Ceiling Tile Tested Negative for Asbestos			
Photo No. 62	Date: 12/1/2021		
Description: Asbestos Sample MHA-54 4" White Base Cove with Tan Mastic and Brown Mastic Tested Negative for Asbestos			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 63	Date: 12/1/2021		
Description: Asbestos Sample MHA-55 Green Carpet with Yellow Mastic Tested Negative for Asbestos			
Photo No. 64	Date: 12/1/2021		
Description: Asbestos Sample MHA-56 6" Ceramic Tile with White Grout Tested Negative for Asbestos			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 65	Date: 12/1/2021		
Description: Asbestos Sample MHA-57 1"x1" Brown, Light Brown, and White Floor Tile with Grey Grout Tested Negative for Asbestos			
Photo No. 66	Date: 9/27/2021		
Description: Asbestos Sample MHA-58 12"x12" Grey Spec Floor Tile with Tan Mastic Tested Negative for Asbestos			

PHOTOGRAPHIC LOG

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 67	Date: 12/1/2021		
Description: Asbestos Sample MHA-59 4" Dark Tan Base Cove with Off-white Mastic Tested Negative for Asbestos			
Photo No. 68	Date: 12/1/2021		
Description: Asbestos Sample MHA-60 2'x4' White Fissure Ceiling Tile Tested Negative for Asbestos			

Client Name: Memphis Housing Authority

Site Location: MHA Main Offices 700 North Adams Avenue

Project No.
251214.00

Photo No.
69

Date:
12/1/2021

Description:

Asbestos Sample

MHA-61

4" Black Base Cove

Tested Negative for
Asbestos



Photo No.
70

Date:
12/1/2021

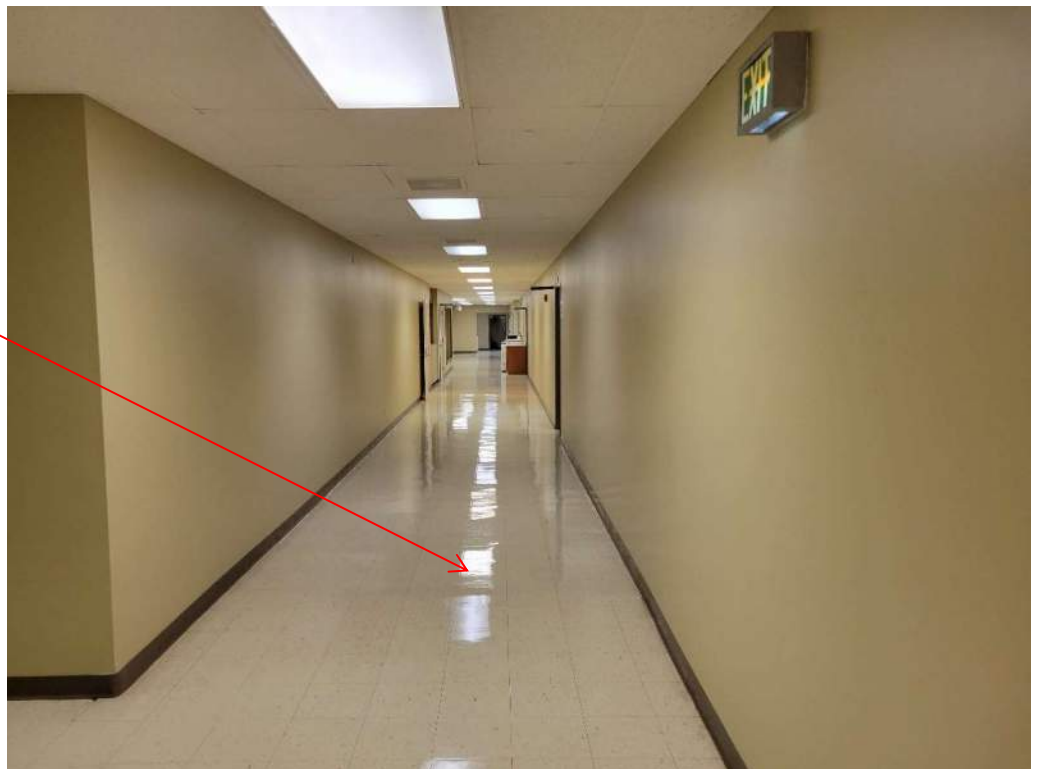
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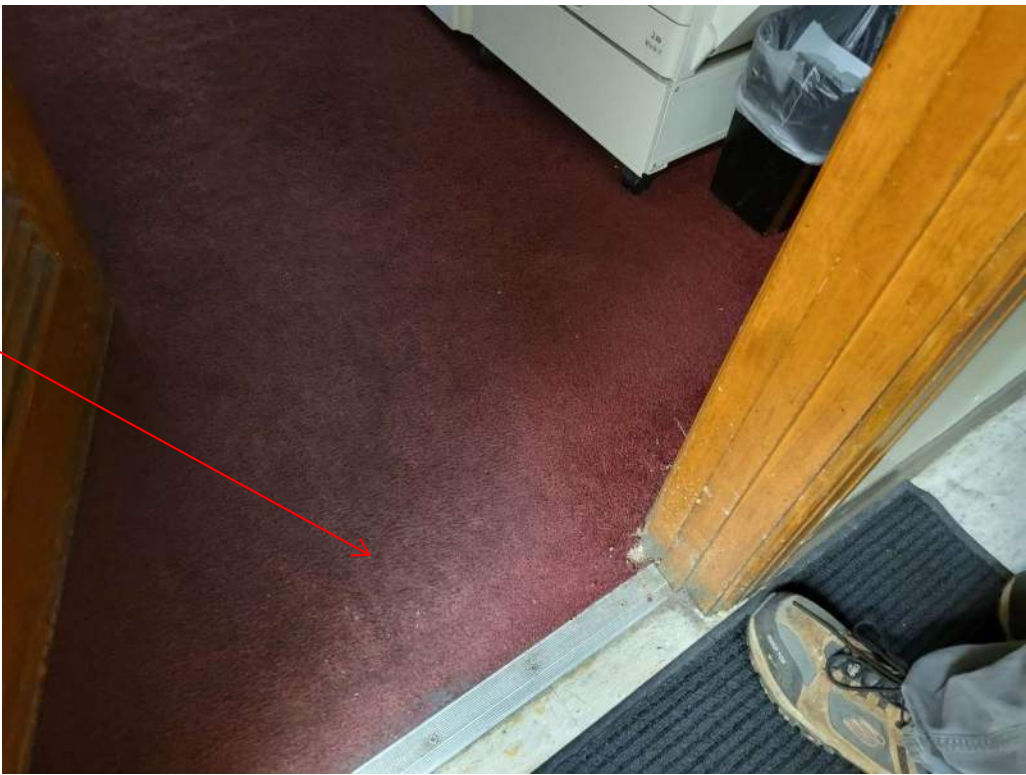

Asbestos Sample

MHA-62

12'x12' Beige Floor Tile
with Brown Specs with
Black Mastic

Tested Positive for
Asbestos



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 71	Date: 12/1/2021		
Description: Asbestos Sample MHA-63 Red Carpet with Yellow Mastic Tested Negative for Asbestos			
Photo No. 72	Date: 12/1/2021		
Description: Asbestos Sample MHA-64 12'x12' White Floor Tile w/ Blue Streaks with Black Mastic Tested Positive for Asbestos			

Client Name: Memphis Housing Authority

Site Location: MHA Main Offices 700 North
Adams Avenue

Project No.
251214.00

Photo No.
73

Date:
12/1/2021

Description:

Asbestos Sample

MHA-65

1'x1' Beige Ceramic Floor
Tile with Gray Gout & Black
Mastic (2nd Floor)

Tested Positive for
Asbestos

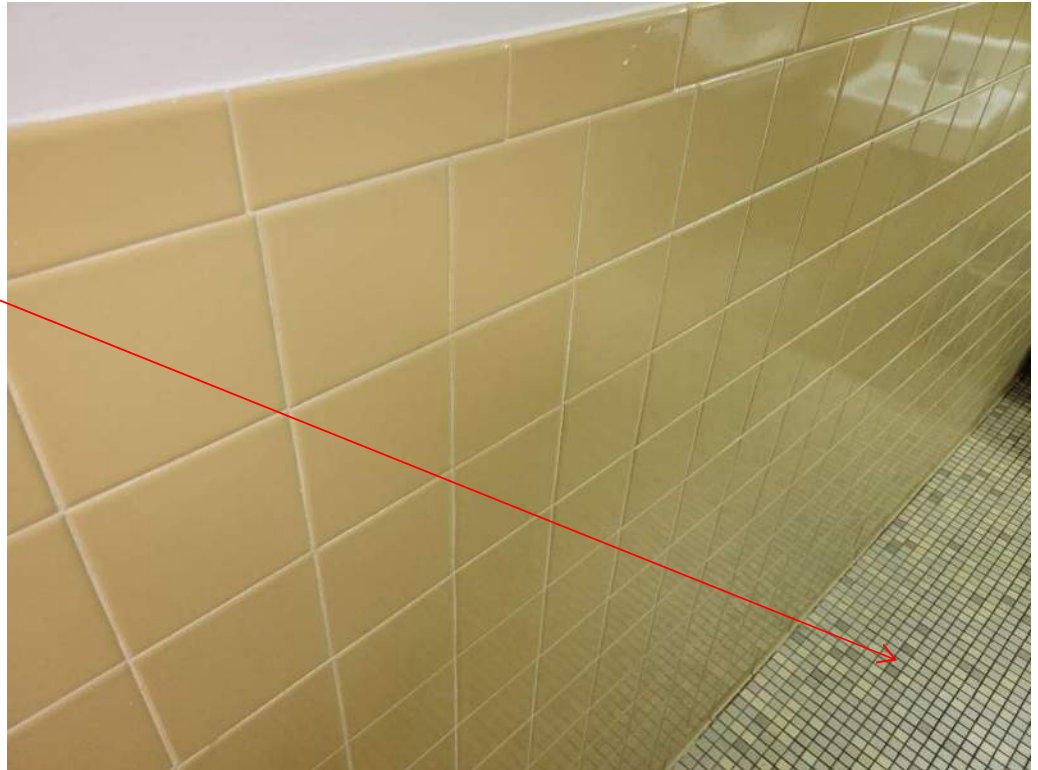


Photo No.
74

Date:
12/1/2021

Description:



Asbestos Sample



MHA-66



Interior Aluminum Window
Caulk (2nd Floor)



Tested Positive for
Asbestos



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 75	Date: 12/1/2021		
Description: Asbestos Sample MHA-67 Tan Carpet with White Mastic Tested Negative for Asbestos			
Photo No. 76	Date: 12/1/2021		
Description: Asbestos Sample MHA-68 6" Tan Base Cove with Yellow Mastic Tested Negative for Asbestos			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 77	Date: 12/1/2021		
Description: Asbestos Sample MHA-69 Blue Carpet with Beige Mastic Tested Negative for Asbestos			
Photo No. 78	Date: 12/1/2021		
Description: Asbestos Sample MHA-70 4" Olive Ceramic Wall Tile with White Grout (2 nd Floor) Tested Negative for Asbestos			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 79	Date: 12/1/2021		
Description: Asbestos Sample MHA-71 4" Yellow Ceramic Wall Tile with White Grout (2 nd Floor) Tested Negative for Asbestos			
Photo No. 80	Date: 12/1/2021		
Description: Asbestos Sample MHA-72 12"x12" Mauve Floor Tile; Black Mastic Tested Positive for Asbestos			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 81	Date: 12/1/2021		
Description: Asbestos Sample MHA-73 6" White TSI Pipe Run Tested Negative for Asbestos			
Photo No. 82	Date: 12/1/2021		
Description: Asbestos Sample MHA-74 White TSI Elbow Tested Negative for Asbestos			

Client Name: Memphis Housing Authority

Site Location: MHA Main Offices 700 North
Adams Avenue

Project No.
251214.00

Photo No.
83

Date:
12/1/2021

Description:

Asbestos Sample

MHA-75

White TSI Elbow

Tested Negative for
Asbestos



Photo No.
84

Date:
12/1/2021

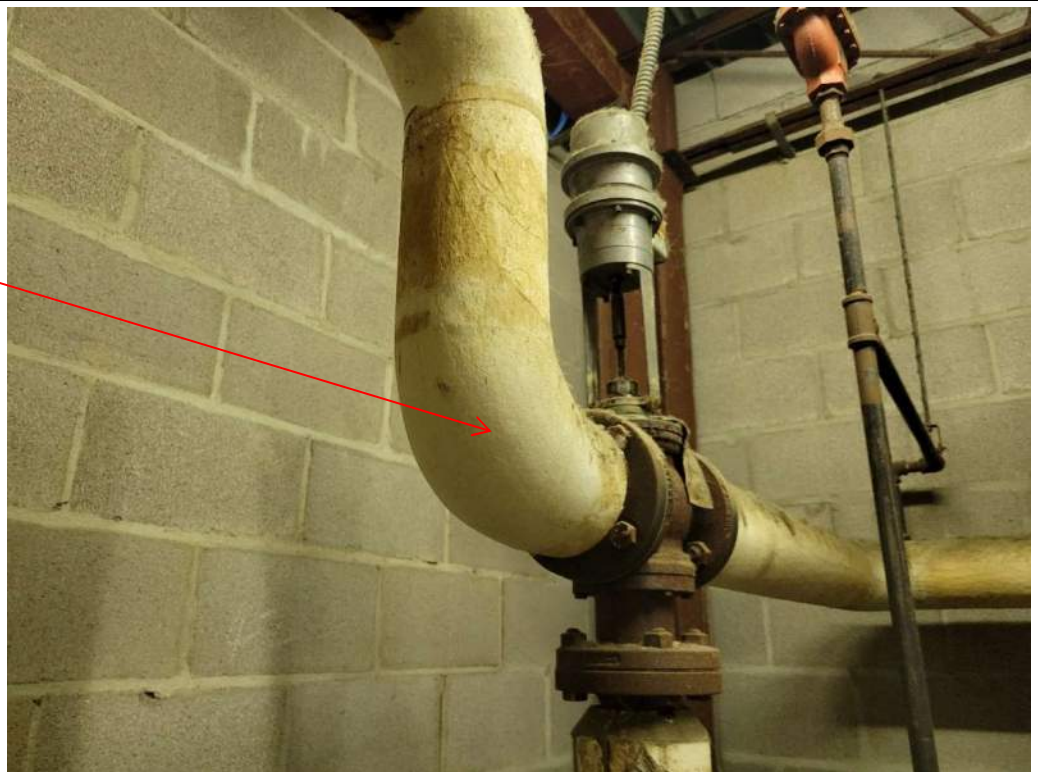
Description:



Asbestos Sample

MHA-76

White TSI Elbow

Tested Negative for
Asbestos



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 85	Date: 12/1/2021		
Description: Asbestos Sample MHA-77 Gray HVAC Flashing and Caulk Tested Negative for Asbestos			
Photo No. 86	Date: 12/1/2021		
Description: Asbestos Sample MHA-78 Blue Carpet with Beige Mastic (2 nd Floor) Tested Negative for Asbestos			

Client Name: Memphis Housing Authority

Site Location: MHA Main Offices 700 North Adams Avenue

Project No.
251214.00

Photo No.
87

Date:
12/1/2021

Description:

Asbestos Sample

MHA-79

Tan High Pile Carpet with Gray Mastic (2nd Floor)

Tested Negative for Asbestos



Photo No.
88

Date:
12/1/2021

Description:

Asbestos Sample

MHA-80

4" Off-white Base Cove with Tan Mastic

Tested Negative for Asbestos



Client Name: Memphis Housing Authority

Site Location: MHA Main Offices 700 North Adams Avenue

Project No.
251214.00

Photo No.
89

Date:
12/1/2021

Description:

Asbestos Sample

MHA-81

Drywall and Joint Compound

Tested Negative for Asbestos



Photo No.
90

Date:
12/1/2021

Description:



Asbestos Sample

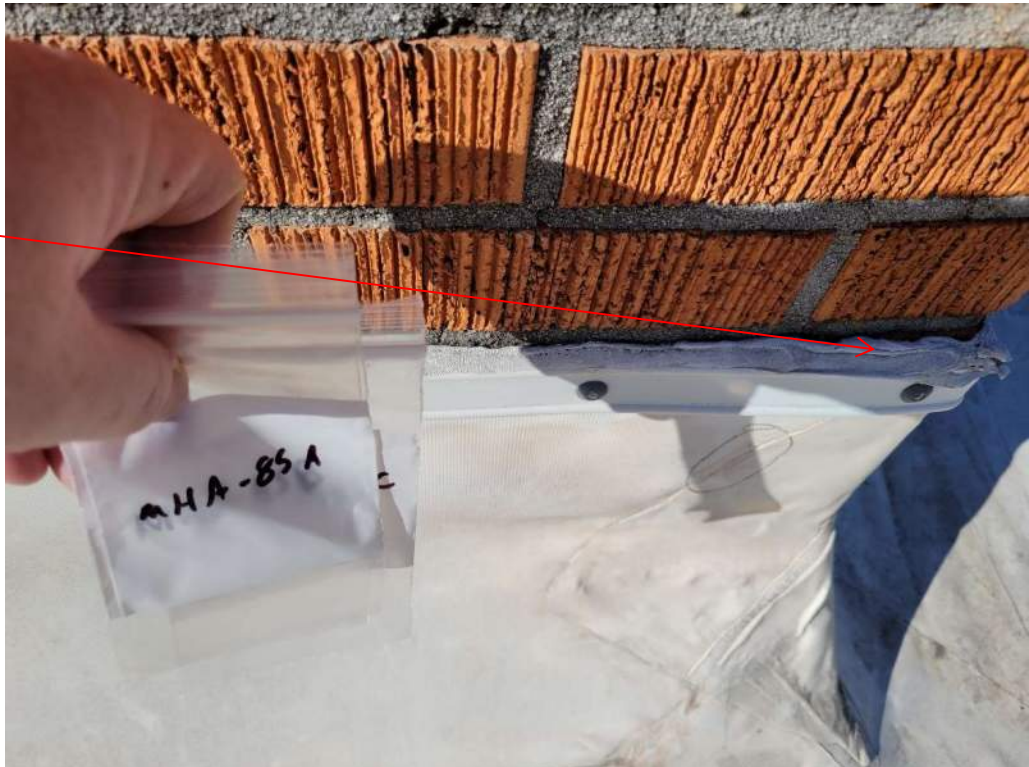

MHA-82



Brown Stair Tread with Yellow Mastic



Tested Negative for Asbestos







Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 91	Date: 12/1/2021		
Description: Asbestos Sample MHA-83 Grey Stair Tread with Yellow Mastic Tested Negative for Asbestos			
Photo No. 92	Date: 12/1/2021		
Description: Asbestos Sample MHA-84 Roof Tar Tested Negative for Asbestos Identified as ACM during 2008 Survey			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 93	Date: 12/1/2021		
Description: Asbestos Sample MHA-85 White Roof Flashing Tested Negative for Asbestos			
Photo No. 94	Date: 12/1/2021		
Description: Asbestos Sample MHA-86 White Roof Flashing #2 (older in appearance) Tested Negative for Asbestos			



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 95	Date: 12/1/2021		
Description: Asbestos Sample MHA-87 White Roof Caulk Tested Negative for Asbestos			
Photo No. 96	Date: 12/1/2021		
Description: Asbestos Sample MHA-88 White HVAC Caulk Tested Negative for Asbestos HVAC Unit with Possible Refrigerants to Be Recovered			



Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 97	Date: 12/1/2021		
Description: Asbestos Sample MHA-89 Black and Grey HVAC Caulk Tested Negative for Asbestos			
Photo No. 98	Date: 12/1/2021		
Description: Asbestos Sample MHA-90 Black HVAC Condensate Coating Tested Negative for Asbestos			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 99	Date: 12/1/2021		
Description: Asbestos Sample MHA-91 White Ceiling Plaster Tested Negative for Asbestos			
Photo No. 100	Date: 12/1/2021		
Description: Asbestos Sample MHA-92 Brown Ceiling Tile Glue Dots Tested Negative for Asbestos			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 101	Date: 12/1/2021		
Description: 1 st Floor Pipe Wrap Insulation Located in 1 st Floor Elevator Closet Identified as ACM during 2008 Survey			
Photo No. 102	Date: 12/1/2021		
Description: 1 st Floor Pipe Wrap Insulation leading from elevator closet across hallway to Mechanical Room (picture taken above drop ceiling in main hallway) Identified as ACM during 2008 Survey			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 103	Date: 12/1/2021		
Description: 1 st Floor Air-o-Cell Pipe Insulation in Storage Room 129 Identified as ACM during 2008 Survey			
Photo No. 104	Date: 12/1/2021		
Description: Light colored 12"x12" Floor Tile with Black Mastic located in MHA Warehouse Identified as ACM during 2008 Survey			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 105	Date: 12/1/2021		
Description: Example Black and White Ceramic Bathroom Tile Found in Men's Restrooms 108, 119, & 204 and Women's Restrooms 109 & 120 Tested Positive for Lead Based Paint			
Photo No. 106	Date: 12/1/2021		
Description: Lobby 101 Stair Riser Stair Stringer Tested Positive for Lead Based Paint			

Client Name: Memphis Housing Authority		Site Location: MHA Main Offices 700 North Adams Avenue	Project No. 251214.00
Photo No. 107	Date: 12/1/2021		
Description: Stairwell 159 Stair Riser Stair Stringer Tested Positive for Lead Based Paint			
Photo No. 108	Date: 12/1/2021		
Description: "B" Side Exterior Garage Door & Garage Casing Tested Positive for Lead Based Paint			

Client Name: Memphis Housing Authority

Site Location: MHA Main Offices 700 North
Adams Avenue

Project No.
251214.00

Photo No.
109

Date:
12/1/2021

Description:

"C" Side Garage Door &
Casing

Tested Positive for Lead
Based Paint



Photo No.
110

Date:
12/1/2021

Description:

"D" Side Wall Trim

Tested Positive for Lead
Based Paint



Client Name: Memphis Housing Authority

Site Location: MHA Main Offices 700 North Adams Avenue

Project No.
 251214.00

Photo No.
111
Date:
 12/1/2021

Description:

 Example of Mercury
 Containing Fluorescent
 Light Bulbs

 Potentially Hazardous
 Material

Photo No.
112
Date:
 12/1/2021

Description:

 Example of Fluorescent
 Light Fixture Electric
 Ballast

 Possible PCBs if no "Non-
 PCB" Label


Client Name: Memphis Housing Authority

Site Location: MHA Main Offices 700 North Adams Avenue

Project No.
 251214.00

Photo No.
113
Date:
 12/1/2021

Description:

Example of Thermostats with Potential to Contain Mercury


Photo No.
114
Date:
 12/1/2021

Description:

Example of Water Fountain with Possible Refrigerants to Be Recovered



Client Name: Memphis Housing Authority

Site Location: MHA Main Offices 700 North Adams Avenue

Project No.
251214.00

Photo No.
115

Date:
12/1/2021

Description:

Example of HVAC Window Unit with Possible Refrigerants to Be Recovered



Photo No.
116

Date:
12/1/2021

Description:

2nd Floor HVAC Unit with Possible Refrigerants to Be Recovered



Client Name: Memphis Housing Authority

Site Location: MHA Main Offices 700 North Adams Avenue

Project No.
251214.00

Photo No.
117

Date:
12/1/2021

Description:

Example Exit Sign with Backup Battery



Photo No.
118

Date:
12/1/2021

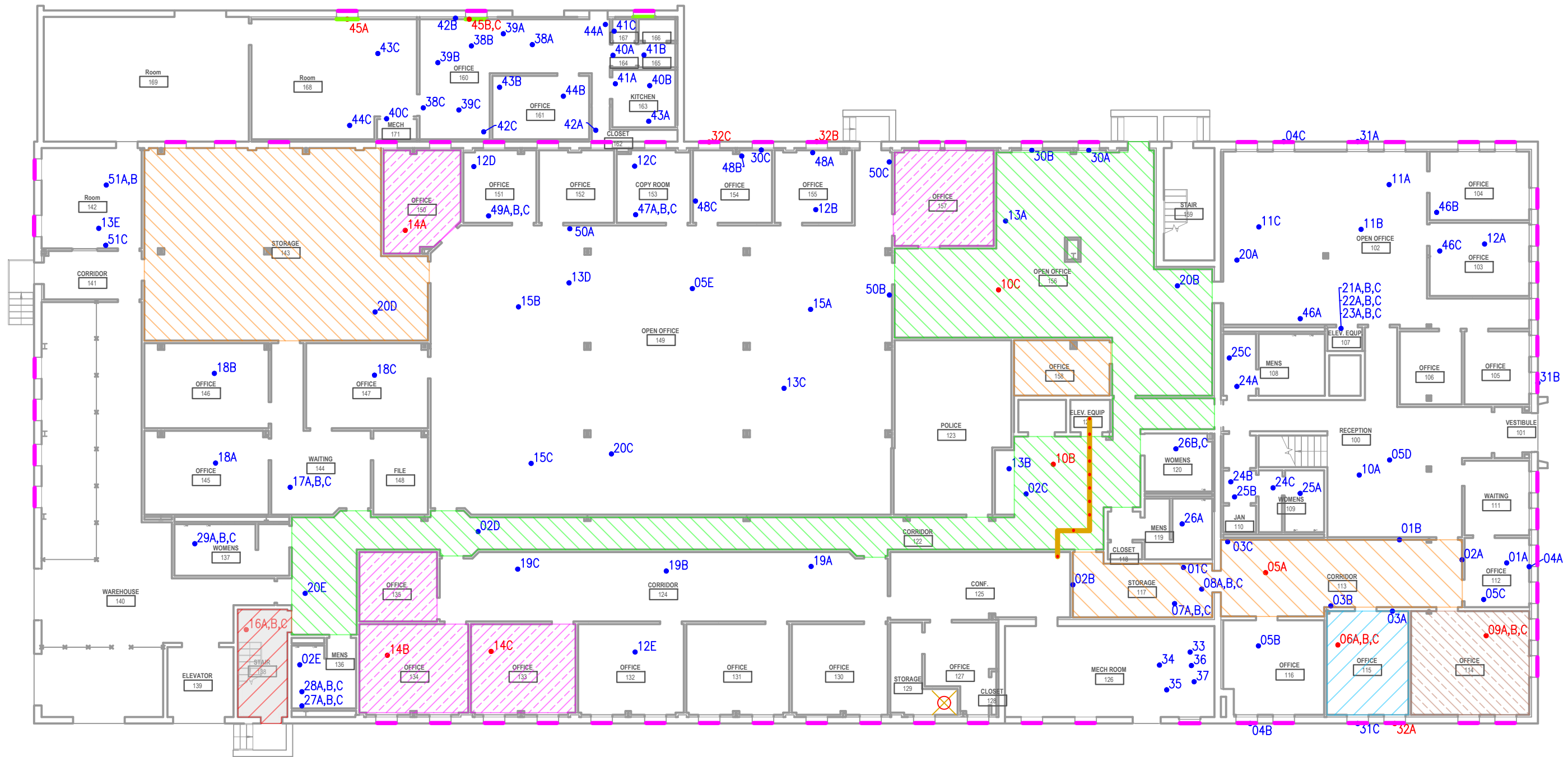
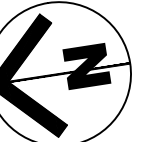
Description:







View of MHA Warehouse



Appendix 3

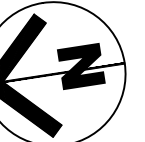
Building Floor Plans



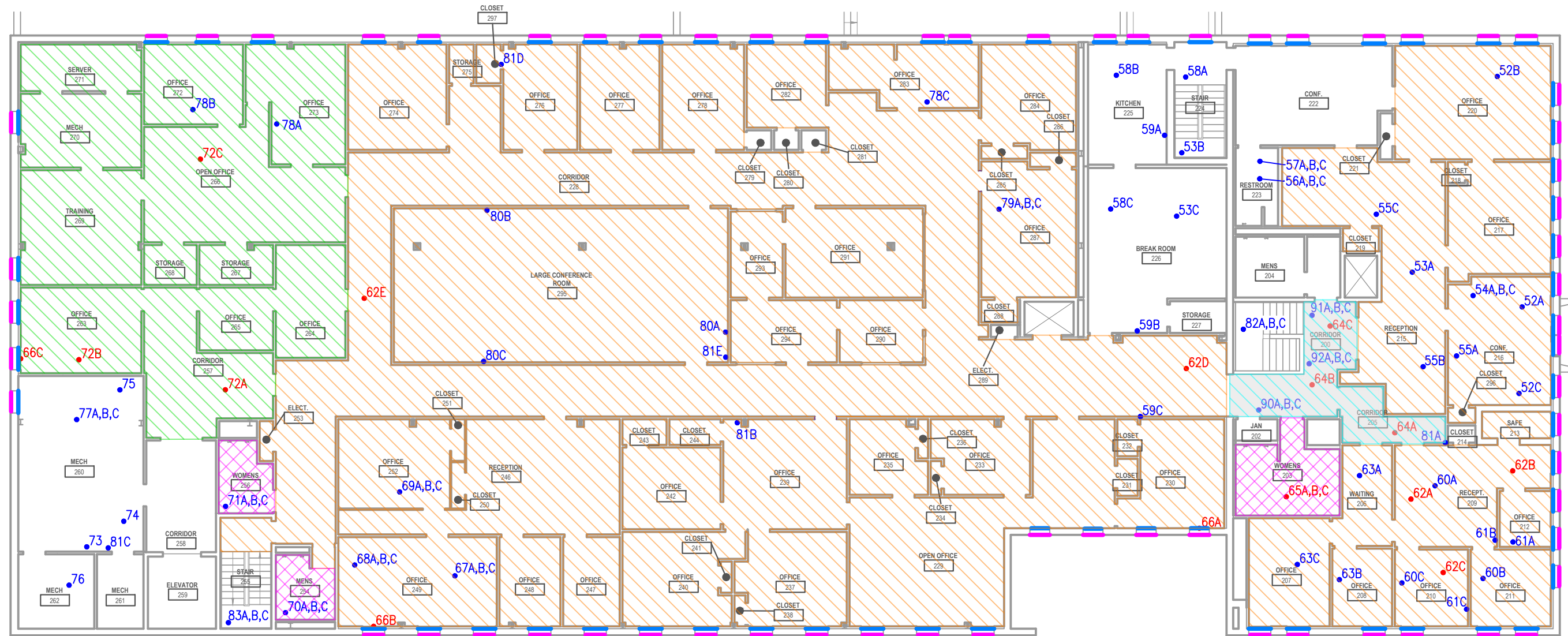
- | | | |
|---|---|----------------------------|
|  | = | NEGATIVE SAMPLE LOCATION |
|  | = | POSITIVE SAMPLE LOCATION |
|  | = | INTERIOR WINDOW CAULK |
|  | = | GREY EXTERIOR WINDOW CAULK |
|  | = | TSI PIPE INSULATION |
|  | = | AIR-O-CELL PIPE INSULATION |

LEGEND









- | | | | |
|---|--|---|--|
|  | = WHITE 12"x12" FLOOR TILE W/
COLORED SPECKS AND BLACK MASTIC |  | = BEIGE 12"x12" FLOOR TILE W/
BROWN SPECKS AND BLACK MASTIC |
|  | = BEIGE 12"x12" FLOOR TILE W/
STREAKS AND YELLOW/BLACK MASTIC |  | = BROWN CARPET AND
YELLOW/BLACK MASTIC |
|  | = GREY 12"x12" FLOOR TILE W/ STREAKS AND
TAN/BLACK MASTIC – COMMINGLED WITH
WHITE 12"x12" FLOOR TILE W/ COLORED
SPECKS AND BLACK MASTIC |  | = PURPLE CARPET AND
TAN/BLACK MASTIC |

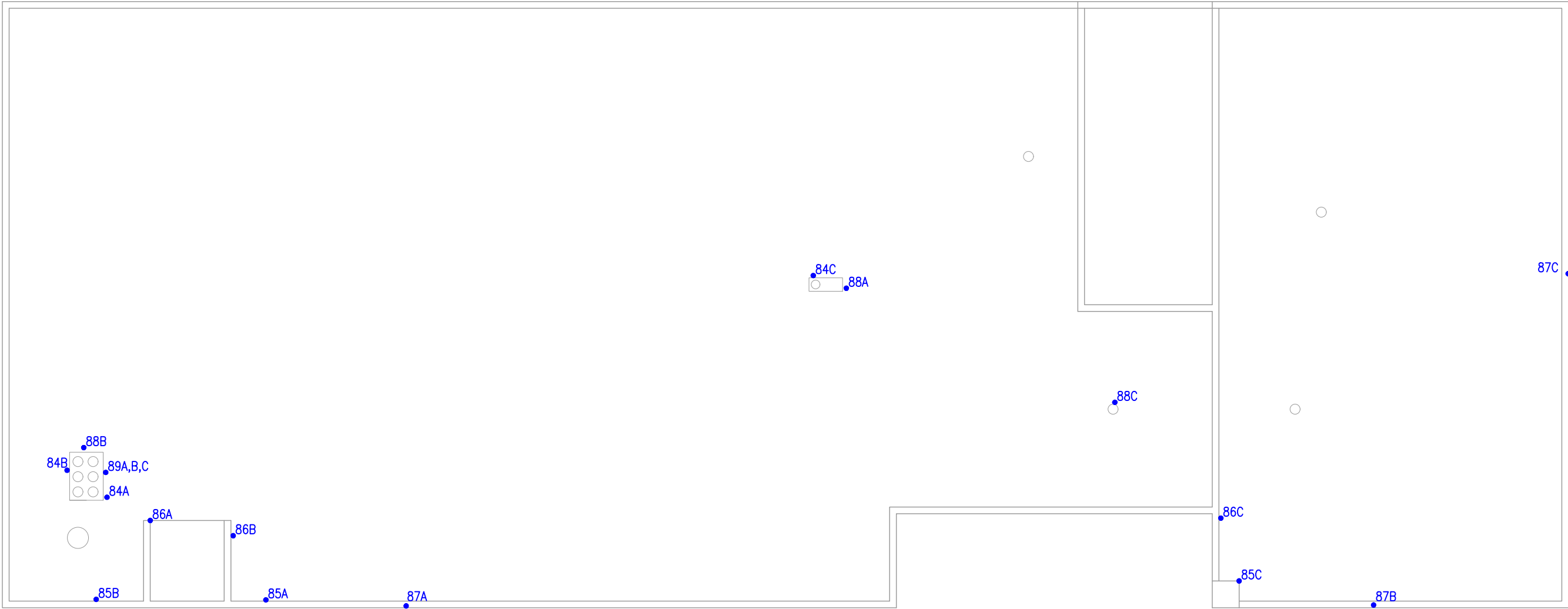


NOT TO SCALE



LEGEND

- | | | | | | |
|---|---|-----------------------------------|---|---|--|
|  01A | = | NEGATIVE SAMPLE LOCATION |  | = | BEIGE 12"x12" FLOOR TILE W/
BROWN SPECKS AND BLACK MASTIC |
|  01A | = | POSITIVE SAMPLE LOCATION |  | = | WHITE 12"x12" FLOOR TILE W/
BLUE STREAKS AND BLACK MASTIC |
|  | = | INTERIOR ALUMINUM WINDOW
CAULK |  | = | MAUVE 12"x12" FLOOR TILE
AND BLACK MASTIC |
|  | = | EXTERIOR WINDOW CAULK |  | = | GREY FLOOR GROUT W/ 1"x1"
TILE AND BLACK MASTIC |



LEGEND

●01A

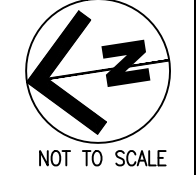
=

NEGATIVE SAMPLE LOCATION

●01A

=

POSITIVE SAMPLE LOCATION



Appendix 4
Asbestos Laboratory Results and Chain of Custody

November 30, 2021

Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

CLIENT PROJECT: MHA 700 Adams, 251214.00
CEI LAB CODE: B2112340

Dear Customer:

Enclosed are asbestos analysis results for PLM Bulk samples received at our laboratory on November 30, 2021. 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

ASBESTOS ANALYTICAL REPORT

By: Polarized Light Microscopy

Prepared for

Tioga Environmental Consultants

CLIENT PROJECT: MHA 700 Adams, 251214.00

LAB CODE: B2112340

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

REPORT DATE: 11/30/21

TOTAL SAMPLES ANALYZED: 88

SAMPLES >1% ASBESTOS: 18

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: MHA 700 Adams, 251214.00

LAB CODE: B2112340

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
MHA-01A		B197865	White	Ceiling Tile	None Detected
MHA-01B		B197866	White	Ceiling Tile	None Detected
MHA-01C		B197867	White	Ceiling Tile	None Detected
MHA-02A		B197868	White	Drywall/Joint Compound	None Detected
MHA-02B		B197869	White	Drywall/Joint Compound	None Detected
MHA-02C		B197870	White	Drywall/Joint Compound	None Detected
MHA-02D		B197871	White	Drywall	None Detected
MHA-02E		B197872	White,Tan	Drywall/Joint Compound	Chrysotile <1%
MHA-03A		B197873A	Beige	Base Cove	None Detected
		B197873B	Beige	Mastic	None Detected
MHA-03B		B197874A	Beige	Base Cove	None Detected
		B197874B	Beige	Mastic	None Detected
MHA-03C		B197875A	Beige	Base Cove	None Detected
		B197875B	Beige	Mastic	None Detected
MHA-04A		B197876	White	Interior Window Caulk	None Detected
MHA-04B		B197877	White	Interior Window Caulk	None Detected
MHA-04C		B197878	White	Interior Window Caulk	None Detected
MHA-05A		B197879A	White,Specks	Floor Tile	None Detected
		B197879B	Black	Mastic	Chrysotile 3%
MHA-05B		B197880A	White,Specks	Floor Tile	None Detected
		B197880B	Tan,Black	Mastic	None Detected
MHA-05C		B197881A	White,Specks	Floor Tile	None Detected
		B197881B	Tan	Mastic	None Detected
MHA-05D		B197882A	White,Specks	Floor Tile	None Detected
		B197882B	Tan,Black	Mastic	None Detected
MHA-05E		B197883A	White,Specks	Floor Tile	None Detected
		B197883B	Tan,Black	Mastic	None Detected
MHA-06A		B197884A	Beige,Streaks	Floor Tile	None Detected
		B197884B	Yellow,Black	Mastic	Chrysotile 3%
MHA-06B		B197885A	Beige,Streaks	Floor Tile	None Detected
		B197885B	Yellow	Mastic	None Detected

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: MHA 700 Adams, 251214.00

LAB CODE: B2112340

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
MHA-06C		B197886A	Beige,Streaks	Floor Tile	None Detected
		B197886B	Yellow	Mastic	None Detected
MHA-07A		B197887A	Gray	Base Cove	None Detected
		B197887B	Yellow	Mastic	None Detected
MHA-07B		B197888A	Gray	Base Cove	None Detected
		B197888B	Yellow	Mastic	None Detected
MHA-07C		B197889A	Gray	Base Cove	None Detected
		B197889B	Yellow	Mastic	None Detected
MHA-08A		B197890	Red	Caulk	None Detected
MHA-08B		B197891	Red	Caulk	None Detected
MHA-08C		B197892	Red	Caulk	None Detected
MHA-09A		B197893A	Brown	Carpet	None Detected
		B197893B	Yellow,Black	Mastic	Chrysotile 3%
MHA-09B		B197894A	Brown	Carpet	None Detected
		B197894B	Yellow,Black	Mastic	Chrysotile 3%
MHA-09C		B197895A	Brown	Carpet	None Detected
		B197895B	Yellow,Black	Mastic	Chrysotile 3%
MHA-10A		B197896A	Gray	Floor Tile	None Detected
		B197896B	Tan	Mastic	None Detected
MHA-10B		B197897A	Gray	Floor Tile	None Detected
		B197897B	Tan,Black	Mastic	Chrysotile 2%
MHA-10C		B197898A	Gray	Floor Tile	None Detected
		B197898B	Tan,Black	Mastic	Chrysotile 2%
MHA-11A		B197899A	White,Blue	Floor Tile	None Detected
		B197899B	Tan,Clear	Mastic	None Detected
MHA-11B		B197900A	White,Blue	Floor Tile	None Detected
		B197900B	Tan,Clear	Mastic	None Detected
MHA-11C		B197901A	White,Blue	Floor Tile	None Detected
		B197901B	Tan,Clear	Mastic	None Detected
MHA-12A		B197902A	Blue,Red	Carpet	None Detected
		B197902B	White	Mastic	None Detected

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: MHA 700 Adams, 251214.00

LAB CODE: B2112340

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
MHA-12B		B197903A	Blue,Red	Carpet	None Detected
		B197903B	White	Mastic	None Detected
MHA-12C		B197904A	Blue,Red	Carpet	None Detected
		B197904B	White	Mastic	None Detected
MHA-12D		B197905A	Blue,Red	Carpet	None Detected
		B197905B	White	Mastic	None Detected
MHA-12E		B197906A	Blue,Red	Carpet	None Detected
		B197906B	White	Mastic	None Detected
MHA-13A		B197907A	Tan	Floor Tile	None Detected
		B197907B	Brown,Clear	Mastic	None Detected
MHA-13B		B197908A	Tan	Floor Tile	None Detected
		B197908B	Tan	Mastic	None Detected
MHA-13C		B197909A	Tan	Floor Tile	None Detected
		B197909B	Tan	Mastic	None Detected
MHA-13D		B197910	Tan	Floor Tile	None Detected
MHA-13E		B197911A	Tan	Floor Tile	None Detected
		B197911B	Brown,Clear	Mastic	None Detected
MHA-14A		B197912A	Purple,Green	Carpet	None Detected
		B197912B	Tan	Mastic	None Detected
MHA-14B		B197913A	Purple,Green	Carpet	None Detected
		B197913B	Tan,Black	Mastic	Chrysotile 2%
MHA-14C		B197914A	Purple,Green	Carpet	None Detected
		B197914B	Tan,Black	Mastic	Chrysotile 2%
MHA-15A		B197915A	Gray	Floor Tile	None Detected
		B197915B	Black,Tan	Mastic	None Detected
MHA-15B		B197916A	Gray	Floor Tile	None Detected
		B197916B	Black,Tan	Mastic	None Detected
MHA-15C		B197917A	Gray	Floor Tile	None Detected
		B197917B	Black,Tan	Mastic	None Detected
MHA-16A		B197918A	Tan	Floor Tile	Chrysotile 2%
		B197918B	Black	Mastic	Chrysotile 2%

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: MHA 700 Adams, 251214.00

LAB CODE: B2112340

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
MHA-16B		B197919A	Tan	Floor Tile	Chrysotile 2%
		B197919B	Black	Mastic	Chrysotile 2%
MHA-16C		B197920A	Tan	Floor Tile	Chrysotile 2%
		B197920B	Black	Mastic	Chrysotile 2%
MHA-17A		B197921A	Beige	Floor Tile	None Detected
		B197921B	Yellow	Mastic	None Detected
MHA-17B		B197922A	Beige	Floor Tile	None Detected
		B197922B	Yellow	Mastic	None Detected
MHA-17C		B197923A	Beige	Floor Tile	None Detected
		B197923B	Yellow	Mastic	None Detected
MHA-18A		B197924A	Brown	Carpet	None Detected
		B197924B	Yellow	Mastic	None Detected
MHA-18B		B197925A	Brown	Carpet	None Detected
		B197925B	Yellow	Mastic	None Detected
MHA-18C		B197926A	Brown	Carpet	None Detected
		B197926B	Yellow	Mastic	None Detected
MHA-19A		B197927A	Tan	Floor Tile	None Detected
		B197927B	Off-white	Floor Tile	None Detected
MHA-19B		B197928A	Tan	Floor Tile	None Detected
		B197928B	Yellow	Mastic	None Detected
		B197928C	Off-white	Floor Tile	None Detected
		B197928D	Black	Mastic	None Detected
MHA-19C		B197929A	Tan	Floor Tile	None Detected
		B197929B	Yellow	Mastic	None Detected
		B197929C	Off-white	Floor Tile	None Detected
		B197929D	Black	Mastic	None Detected
MHA-20A		B197930	White	Ceiling Tile	None Detected
MHA-20B		B197931	White	Ceiling Tile	None Detected
MHA-20C		B197932	White	Ceiling Tile	None Detected
MHA-20D		B197933	White	Ceiling Tile	None Detected
MHA-20E		B197934	White	Ceiling Tile	None Detected

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: MHA 700 Adams, 251214.00

LAB CODE: B2112340

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
MHA-21A		B197935	White	Acoustic Wall Tile	None Detected
MHA-21B		B197936	White	Acoustic Wall Tile	None Detected
MHA-21C		B197937	White	Acoustic Wall Tile	None Detected
MHA-22A		B197938	Brown	Glue Dot	None Detected
MHA-22B		B197939	Brown	Glue Dot	None Detected
MHA-22C		B197940	Brown	Glue Dot	None Detected
MHA-23A		B197941	White	Acoustic Ceiling Tile	None Detected
MHA-23B		B197942	White	Acoustic Ceiling Tile	None Detected
MHA-23C		B197943	White	Acoustic Ceiling Tile	None Detected
MHA-30A		B197944	White	Interior Window Glaze	None Detected
MHA-30B		B197945	White	Interior Window Glaze	None Detected
MHA-30C		B197946	White	Interior Window Glaze	None Detected
MHA-31A		B197947	White	Exterior Window Glaze	None Detected
MHA-31B		B197948	White	Exterior Window Glaze	None Detected
MHA-31C		B197949	White	Exterior Window Glaze	None Detected
MHA-32A		B197950	Gray	Exterior Window Caulk	Chrysotile 3%
MHA-32B		B197951	Gray	Exterior Window Caulk	Chrysotile 3%
MHA-32C		B197952	Gray	Exterior Window Caulk	Chrysotile 3%

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

Lab Code: B2112340

Date Received: 11-30-21

Date Analyzed: 11-30-21

Date Reported: 11-30-21

Project: MHA 700 Adams, 251214.00

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
MHA-01A B197865	Ceiling Tile	Heterogeneous	35%	Cellulose	5%	Paint	None Detected
		White	35%	Fiberglass	25%	Perlite	
		Fibrous					
		Loosely Bound					
Lab Notes: Samples B197865-B197892 analyzed by Greg Ruff							
MHA-01B B197866	Ceiling Tile	Heterogeneous	35%	Cellulose	5%	Paint	None Detected
		White	35%	Fiberglass	25%	Perlite	
		Fibrous					
		Loosely Bound					
MHA-01C B197867	Ceiling Tile	Heterogeneous	35%	Cellulose	5%	Paint	None Detected
		White	35%	Fiberglass	25%	Perlite	
		Fibrous					
		Loosely Bound					
MHA-02A B197868	Drywall/Joint Compound	Heterogeneous	10%	Cellulose	5%	Paint	None Detected
		White			10%	Calc Carb	
		Fibrous			75%	Gypsum	
		Bound					
MHA-02B B197869	Drywall/Joint Compound	Heterogeneous	10%	Cellulose	10%	Calc Carb	None Detected
		White			80%	Gypsum	
		Fibrous					
		Bound					
MHA-02C B197870	Drywall/Joint Compound	Heterogeneous	10%	Cellulose	5%	Paint	None Detected
		White			10%	Calc Carb	
		Fibrous			75%	Gypsum	
		Bound					
MHA-02D B197871	Drywall	Heterogeneous	10%	Cellulose	5%	Paint	None Detected
		White			85%	Gypsum	
		Fibrous					
		Bound					

Lab Notes: No joint compound present

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

Lab Code: B2112340
Date Received: 11-30-21
Date Analyzed: 11-30-21
Date Reported: 11-30-21

Project: MHA 700 Adams, 251214.00

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
MHA-02E B197872	Drywall/Joint Compound	Heterogeneous	10%	Cellulose	5%	Paint	<1% Chrysotile
		White,Tan			10%	Calc Carb	
		Fibrous			75%	Gypsum	
		Bound					
Lab Notes: 2% chrysotile found in joint compound only, <1% overall							
MHA-03A B197873A	Base Cove	Homogeneous			100%	Vinyl	None Detected
		Beige					
		Non-fibrous					
		Bound					
B197873B	Mastic	Homogeneous			100%	Mastic	None Detected
		Beige					
		Non-fibrous					
		Bound					
MHA-03B B197874A	Base Cove	Homogeneous			100%	Vinyl	None Detected
		Beige					
		Non-fibrous					
		Bound					
B197874B	Mastic	Homogeneous			100%	Mastic	None Detected
		Beige					
		Non-fibrous					
		Bound					
MHA-03C B197875A	Base Cove	Homogeneous			100%	Vinyl	None Detected
		Beige					
		Non-fibrous					
		Bound					
B197875B	Mastic	Homogeneous			100%	Mastic	None Detected
		Beige					
		Non-fibrous					
		Bound					

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ASBESTOS BULK PLM, EPA 600 METHOD

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			Fibrous	Non-Fibrous	
MHA-04A B197876	Interior Window Caulk	Homogeneous White Non-fibrous Bound		100% Caulk	None Detected
MHA-04B B197877	Interior Window Caulk	Homogeneous White Non-fibrous Bound		100% Caulk	None Detected
MHA-04C B197878	Interior Window Caulk	Homogeneous White Non-fibrous Bound		100% Caulk	None Detected
MHA-05A B197879A	Floor Tile	Homogeneous White, Specks Non-fibrous Bound		90% Vinyl 10% Calc Carb	None Detected
B197879B	Mastic	Homogeneous Black Fibrous Bound		97% Mastic	3% Chrysotile
MHA-05B B197880A	Floor Tile	Homogeneous White, Specks Non-fibrous Bound		90% Vinyl 10% Calc Carb	None Detected
B197880B	Mastic	Homogeneous Tan, Black Non-fibrous Bound		100% Mastic	None Detected

Lab Notes: Unable to separate mastics for analysis

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ASBESTOS BULK PLM, EPA 600 METHOD

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			Fibrous	Non-Fibrous	
MHA-05C B197881A	Floor Tile	Homogeneous	90%	Vinyl	None Detected
		White, Specks Non-fibrous Bound	10%	Calc Carb	
B197881B	Mastic	Homogeneous Tan Non-fibrous Bound	100%	Mastic	None Detected
MHA-05D B197882A	Floor Tile	Homogeneous	90%	Vinyl	None Detected
		White, Specks Non-fibrous Bound	10%	Calc Carb	
B197882B	Mastic	Homogeneous Tan, Black Non-fibrous Bound	100%	Mastic	None Detected
Lab Notes: Unable to separate mastics for analysis					
MHA-05E B197883A	Floor Tile	Homogeneous	90%	Vinyl	None Detected
		White, Specks Non-fibrous Bound	10%	Calc Carb	
B197883B	Mastic	Homogeneous Tan, Black Non-fibrous Bound	100%	Mastic	None Detected
Lab Notes: Unable to separate mastics for analysis					
MHA-06A B197884A	Floor Tile	Homogeneous	90%	Vinyl	None Detected
		Beige, Streaks Non-fibrous Bound	10%	Calc Carb	

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ASBESTOS BULK PLM, EPA 600 METHOD

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			Fibrous	Non-Fibrous	
B197884B	Mastic	Homogeneous Yellow,Black Non-fibrous Bound	97%	Mastic	3% Chrysotile
Lab Notes: Unable to separate mastics for analysis					
MHA-06B B197885A	Floor Tile	Homogeneous Beige,Streaks Non-fibrous Bound	90% 10%	Vinyl Calc Carb	None Detected
B197885B	Mastic	Homogeneous Yellow Non-fibrous Bound	100%	Mastic	None Detected
Lab Notes: No black mastic present					
MHA-06C B197886A	Floor Tile	Homogeneous Beige,Streaks Non-fibrous Bound	90% 10%	Vinyl Calc Carb	None Detected
B197886B	Mastic	Homogeneous Yellow Non-fibrous Bound	100%	Mastic	None Detected
Lab Notes: No black mastic present					
MHA-07A B197887A	Base Cove	Homogeneous Gray Non-fibrous Bound	100%	Vinyl	None Detected
B197887B	Mastic	Homogeneous Yellow Non-fibrous Bound	100%	Mastic	None Detected

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			Fibrous		Non-Fibrous		
MHA-07B B197888A	Base Cove	Homogeneous Gray Non-fibrous Bound			100%	Vinyl	None Detected
B197888B	Mastic	Homogeneous Yellow Non-fibrous Bound			100%	Mastic	None Detected
MHA-07C B197889A	Base Cove	Homogeneous Gray Non-fibrous Bound			100%	Vinyl	None Detected
B197889B	Mastic	Homogeneous Yellow Non-fibrous Bound			100%	Mastic	None Detected
MHA-08A B197890	Caulk	Homogeneous Red Fibrous Bound	10%	Cellulose	90%	Caulk	None Detected
MHA-08B B197891	Caulk	Homogeneous Red Fibrous Bound	10%	Cellulose	90%	Caulk	None Detected
MHA-08C B197892	Caulk	Homogeneous Red Fibrous Bound	10%	Cellulose	90%	Caulk	None Detected

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Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
MHA-09A B197893A	Carpet	Heterogeneous Brown Fibrous Bound	90%	Synthetic Fiber	10%	Binder	None Detected
Lab Notes: Samples B197893-B197920 analyzed by JS.							
B197893B	Mastic	Heterogeneous Yellow,Black Fibrous Bound			77% 20%	Mastic Tar	3% Chrysotile
Lab Notes: Unable to separate mastics.							
MHA-09B B197894A	Carpet	Heterogeneous Brown Fibrous Bound	90%	Synthetic Fiber	10%	Binder	None Detected
B197894B	Mastic	Heterogeneous Yellow,Black Fibrous Bound			77% 20%	Mastic Tar	3% Chrysotile
Lab Notes: Unable to separate mastics.							
MHA-09C B197895A	Carpet	Heterogeneous Brown Fibrous Bound	90%	Synthetic Fiber	10%	Binder	None Detected
B197895B	Mastic	Heterogeneous Yellow,Black Fibrous Bound			77% 20%	Mastic Tar	3% Chrysotile
Lab Notes: Unable to separate mastics.							

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			Fibrous	Non-Fibrous	
MHA-10A B197896A	Floor Tile	Heterogeneous		65% Vinyl	None Detected
		Gray		20% Binder	
		Non-fibrous		15% Calc Carb	
		Bound			
B197896B	Mastic	Heterogeneous		85% Mastic	None Detected
		Tan		15% Binder	
		Non-fibrous			
		Bound			
Lab Notes: No black mastic present.					
MHA-10B B197897A	Floor Tile	Heterogeneous		65% Vinyl	None Detected
		Gray		20% Binder	
		Non-fibrous		15% Calc Carb	
		Bound			
B197897B	Mastic	Heterogeneous		78% Mastic	2% Chrysotile
		Tan,Black		20% Tar	
		Fibrous			
		Bound			
Lab Notes: Unable to separate mastics.					
MHA-10C B197898A	Floor Tile	Heterogeneous		65% Vinyl	None Detected
		Gray		20% Binder	
		Non-fibrous		15% Calc Carb	
		Bound			
B197898B	Mastic	Heterogeneous		78% Mastic	2% Chrysotile
		Tan,Black		20% Tar	
		Fibrous			
		Bound			
Lab Notes: Unable to separate mastics.					
MHA-11A B197899A	Floor Tile	Heterogeneous		65% Vinyl	None Detected
		White,Blue		20% Binder	
		Non-fibrous		15% Calc Carb	
		Bound			

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			Fibrous	Non-Fibrous	
B197899B	Mastic	Homogeneous Tan, Clear Non-fibrous Bound	100%	Mastic	None Detected
MHA-11B B197900A	Floor Tile	Heterogeneous White, Blue Non-fibrous Bound	65% 20% 15%	Vinyl Binder Calc Carb	None Detected
B197900B	Mastic	Homogeneous Tan, Clear Non-fibrous Bound	100%	Mastic	None Detected
MHA-11C B197901A	Floor Tile	Heterogeneous White, Blue Non-fibrous Bound	65% 20% 15%	Vinyl Binder Calc Carb	None Detected
B197901B	Mastic	Homogeneous Tan, Clear Non-fibrous Bound	100%	Mastic	None Detected
MHA-12A B197902A	Carpet	Heterogeneous Blue, Red Fibrous Bound	90%	Synthetic Fiber 10% Binder	None Detected
B197902B	Mastic	Homogeneous White Non-fibrous Bound	100%	Mastic	None Detected

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			Fibrous		Non-Fibrous		
MHA-12B B197903A	Carpet	Heterogeneous Blue,Red Fibrous Bound	90%	Synthetic Fiber	10%	Binder	None Detected
B197903B	Mastic	Homogeneous White Non-fibrous Bound			100%	Mastic	None Detected
MHA-12C B197904A	Carpet	Heterogeneous Blue,Red Fibrous Bound	90%	Synthetic Fiber	10%	Binder	None Detected
B197904B	Mastic	Homogeneous White Non-fibrous Bound			100%	Mastic	None Detected
MHA-12D B197905A	Carpet	Heterogeneous Blue,Red Fibrous Bound	90%	Synthetic Fiber	10%	Binder	None Detected
B197905B	Mastic	Homogeneous White Non-fibrous Bound			100%	Mastic	None Detected
MHA-12E B197906A	Carpet	Heterogeneous Blue,Red Fibrous Bound	90%	Synthetic Fiber	10%	Binder	None Detected

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Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS		ASBESTOS %
			Fibrous	Non-Fibrous	
B197906B	Mastic	Homogeneous White Non-fibrous Bound	100%	Mastic	None Detected
MHA-13A B197907A	Floor Tile	Heterogeneous Tan Non-fibrous Bound	65% 20% 15%	Vinyl Binder Calc Carb	None Detected
B197907B	Mastic	Homogeneous Brown, Clear Non-fibrous Bound	100%	Mastic	None Detected
MHA-13B B197908A	Floor Tile	Heterogeneous Tan Non-fibrous Bound	65% 20% 15%	Vinyl Binder Calc Carb	None Detected
B197908B	Mastic	Homogeneous Tan Non-fibrous Bound	100%	Mastic	None Detected
MHA-13C B197909A	Floor Tile	Heterogeneous Tan Non-fibrous Bound	65% 20% 15%	Vinyl Binder Calc Carb	None Detected
B197909B	Mastic	Homogeneous Tan Non-fibrous Bound	100%	Mastic	None Detected

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Client ID	Lab	Lab	NON-ASBESTOS COMPONENTS				ASBESTOS
Lab ID	Description	Attributes	Fibrous		Non-Fibrous		%
MHA-13D B197910	Floor Tile	Heterogeneous			65%	Vinyl	None Detected
		Tan		20%	Binder		
		Non-fibrous		15%	Calc Carb		
		Bound					
Lab Notes: No mastic present.							
MHA-13E B197911A	Floor Tile	Heterogeneous			65%	Vinyl	None Detected
		Tan		20%	Binder		
		Non-fibrous		15%	Calc Carb		
		Bound					
B197911B	Mastic	Homogeneous			100%	Mastic	None Detected
		Brown,Clear					
		Non-fibrous					
		Bound					
MHA-14A B197912A	Carpet	Heterogeneous	90%	Synthetic Fiber	10%	Binder	None Detected
		Purple,Green					
		Fibrous					
		Bound					
B197912B	Mastic	Homogeneous			100%	Mastic	None Detected
		Tan					
		Non-fibrous					
		Bound					
MHA-14B B197913A	Carpet	Heterogeneous	90%	Synthetic Fiber	10%	Binder	None Detected
		Purple,Green					
		Fibrous					
		Bound					
B197913B	Mastic	Heterogeneous			78%	Mastic	2% Chrysotile
		Tan,Black			20%	Tar	
		Fibrous					
		Bound					

Lab Notes: Unable to separate mastics.

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			Fibrous		Non-Fibrous		
MHA-14C B197914A	Carpet	Heterogeneous Purple,Green Fibrous Bound	90%	Synthetic Fiber	10%	Binder	None Detected
B197914B	Mastic	Heterogeneous Tan,Black Fibrous Bound			78% 20%	Mastic Tar	2% Chrysotile
Lab Notes: Unable to separate mastics.							
MHA-15A B197915A	Floor Tile	Heterogeneous Gray Non-fibrous Bound			65% 20% 15%	Vinyl Binder Calc Carb	None Detected
B197915B	Mastic	Heterogeneous Black,Tan Non-fibrous Bound			85% 15%	Mastic Tar	None Detected
Lab Notes: Unable to separate mastics.							
MHA-15B B197916A	Floor Tile	Heterogeneous Gray Non-fibrous Bound			65% 20% 15%	Vinyl Binder Calc Carb	None Detected
B197916B	Mastic	Heterogeneous Black,Tan Non-fibrous Bound			85% 15%	Mastic Tar	None Detected
Lab Notes: Unable to separate mastics.							
MHA-15C B197917A	Floor Tile	Heterogeneous Gray Non-fibrous Bound			65% 20% 15%	Vinyl Binder Calc Carb	None Detected

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			Fibrous	Non-Fibrous	
B197917B	Mastic	Heterogeneous Black, Tan Non-fibrous Bound	85% 15%	Mastic Tar	None Detected
Lab Notes: Unable to separate mastics.					
MHA-16A B197918A	Floor Tile	Heterogeneous Tan Non-fibrous Bound	63% 20% 15%	Vinyl Binder Calc Carb	2% Chrysotile
B197918B	Mastic	Heterogeneous Black Non-fibrous Bound	98%	Tar	2% Chrysotile
MHA-16B B197919A	Floor Tile	Heterogeneous Tan Non-fibrous Bound	63% 20% 15%	Vinyl Binder Calc Carb	2% Chrysotile
B197919B	Mastic	Heterogeneous Black Non-fibrous Bound	98%	Tar	2% Chrysotile
MHA-16C B197920A	Floor Tile	Heterogeneous Tan Non-fibrous Bound	63% 20% 15%	Vinyl Binder Calc Carb	2% Chrysotile
B197920B	Mastic	Heterogeneous Black Non-fibrous Bound	98%	Tar	2% Chrysotile

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			Fibrous	Non-Fibrous	
MHA-17A B197921A	Floor Tile	Homogeneous Beige Non-fibrous Tightly Bound		100% Vinyl	None Detected
Lab Notes: Samples B197921- B197952 analyzed by R.Steele.					
B197921B	Mastic	Homogeneous Yellow Non-fibrous Bound		100% Mastic	None Detected
MHA-17B B197922A	Floor Tile	Homogeneous Beige Non-fibrous Tightly Bound		100% Vinyl	None Detected
B197922B	Mastic	Homogeneous Yellow Non-fibrous Bound		100% Mastic	None Detected
MHA-17C B197923A	Floor Tile	Homogeneous Beige Non-fibrous Tightly Bound		100% Vinyl	None Detected
B197923B	Mastic	Homogeneous Yellow Non-fibrous Bound		100% Mastic	None Detected
MHA-18A B197924A	Carpet	Heterogeneous Brown Fibrous Bound	80%	Synthetic Fiber 20% Binder	None Detected

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			Fibrous		Non-Fibrous		
B197924B	Mastic	Homogeneous Yellow Non-fibrous Bound	<1%	Synthetic Fiber	100%	Mastic	None Detected
MHA-18B B197925A	Carpet	Heterogeneous Brown Fibrous Bound	80%	Synthetic Fiber	20%	Binder	None Detected
B197925B	Mastic	Homogeneous Yellow Non-fibrous Bound	<1%	Synthetic Fiber	100%	Mastic	None Detected
MHA-18C B197926A	Carpet	Heterogeneous Brown Fibrous Bound	80%	Synthetic Fiber	20%	Binder	None Detected
B197926B	Mastic	Homogeneous Yellow Non-fibrous Bound	<1%	Synthetic Fiber	100%	Mastic	None Detected
MHA-19A B197927A	Floor Tile	Homogeneous Tan Non-fibrous Tightly Bound			100%	Vinyl	None Detected
Lab Notes: No mastic present.							
B197927B	Floor Tile	Homogeneous Off-white Non-fibrous Tightly Bound			100%	Vinyl	None Detected

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			Fibrous	Non-Fibrous	
MHA-19B B197928A	Floor Tile	Homogeneous Tan Non-fibrous Tightly Bound		100% Vinyl	None Detected
B197928B	Mastic	Homogeneous Yellow Non-fibrous Bound		100% Mastic	None Detected
B197928C	Floor Tile	Homogeneous Off-white Non-fibrous Tightly Bound		100% Vinyl	None Detected
B197928D	Mastic	Homogeneous Black Non-fibrous Bound		100% Mastic	None Detected
MHA-19C B197929A	Floor Tile	Homogeneous Tan Non-fibrous Tightly Bound		100% Vinyl	None Detected
B197929B	Mastic	Homogeneous Yellow Non-fibrous Bound		100% Mastic	None Detected
B197929C	Floor Tile	Homogeneous Off-white Non-fibrous Tightly Bound		100% Vinyl	None Detected

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			Fibrous		Non-Fibrous		
B197929D	Mastic	Homogeneous Black Non-fibrous Bound			100%	Mastic	None Detected
MHA-20A B197930	Ceiling Tile	Heterogeneous White Fibrous Loosely Bound	40%	Cellulose	30%	Perlite	None Detected
			25%	Fiberglass	5%	Binder	
MHA-20B B197931	Ceiling Tile	Heterogeneous White Fibrous Loosely Bound	40%	Cellulose	30%	Perlite	None Detected
			25%	Fiberglass	5%	Binder	
MHA-20C B197932	Ceiling Tile	Heterogeneous White Fibrous Loosely Bound	40%	Cellulose	30%	Perlite	None Detected
			25%	Fiberglass	5%	Binder	
MHA-20D B197933	Ceiling Tile	Heterogeneous White Fibrous Loosely Bound	40%	Cellulose	30%	Perlite	None Detected
			25%	Fiberglass	5%	Binder	
MHA-20E B197934	Ceiling Tile	Heterogeneous White Fibrous Loosely Bound	40%	Cellulose	30%	Perlite	None Detected
			25%	Fiberglass	5%	Binder	
MHA-21A B197935	Acoustic Wall Tile	Heterogeneous White Fibrous Loosely Bound	20%	Fiberglass	70%	Binder	None Detected
			10%	Mineral Wool			

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Project: MHA 700 Adams, 251214.00

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
MHA-21B B197936	Acoustic Wall Tile	Heterogeneous	20%	Fiberglass	70%	Binder	None Detected
		White	10%	Mineral Wool			
		Fibrous					
		Loosely Bound					
MHA-21C B197937	Acoustic Wall Tile	Heterogeneous	20%	Fiberglass	70%	Binder	None Detected
		White	10%	Mineral Wool			
		Fibrous					
		Loosely Bound					
MHA-22A B197938	Glue Dot	Homogeneous			100%	Mastic	None Detected
		Brown					
		Non-fibrous Bound					
MHA-22B B197939	Glue Dot	Homogeneous			100%	Mastic	None Detected
		Brown					
		Non-fibrous Bound					
MHA-22C B197940	Glue Dot	Homogeneous			100%	Mastic	None Detected
		Brown					
		Non-fibrous Bound					
MHA-23A B197941	Acoustic Ceiling Tile	Heterogeneous	95%	Cellulose	5%	Paint	None Detected
		White					
		Fibrous					
		Loosely Bound					
MHA-23B B197942	Acoustic Ceiling Tile	Heterogeneous	95%	Cellulose	5%	Paint	None Detected
		White					
		Fibrous					
		Loosely Bound					

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

Lab Code: B2112340
Date Received: 11-30-21
Date Analyzed: 11-30-21
Date Reported: 11-30-21

Project: MHA 700 Adams, 251214.00

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
MHA-23C B197943	Acoustic Ceiling Tile	Heterogeneous White Fibrous Loosely Bound	95%	Cellulose	5%	Paint	None Detected
MHA-30A B197944	Interior Window Glaze	Heterogeneous White Non-fibrous Bound			78% 20% 2%	Binder Calc Carb Paint	None Detected
MHA-30B B197945	Interior Window Glaze	Heterogeneous White Non-fibrous Bound			78% 20% 2%	Binder Calc Carb Paint	None Detected
MHA-30C B197946	Interior Window Glaze	Heterogeneous White Non-fibrous Bound			78% 20% 2%	Binder Calc Carb Paint	None Detected
MHA-31A B197947	Exterior Window Glaze	Heterogeneous White Non-fibrous Bound			80% 20%	Binder Calc Carb	None Detected
MHA-31B B197948	Exterior Window Glaze	Heterogeneous White Non-fibrous Bound			80% 20%	Binder Calc Carb	None Detected
MHA-31C B197949	Exterior Window Glaze	Heterogeneous White Non-fibrous Bound			80% 20%	Binder Calc Carb	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

Lab Code: B2112340
Date Received: 11-30-21
Date Analyzed: 11-30-21
Date Reported: 11-30-21

Project: MHA 700 Adams, 251214.00

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS		ASBESTOS %
			Fibrous	Non-Fibrous	
MHA-32A B197950	Exterior Window Caulk	Heterogeneous		77% Binder	3% Chrysotile
		Gray		20% Calc Carb	
		Non-fibrous			
		Bound			
MHA-32B B197951	Exterior Window Caulk	Heterogeneous		77% Binder	3% Chrysotile
		Gray		20% Calc Carb	
		Non-fibrous			
		Bound			
MHA-32C B197952	Exterior Window Caulk	Heterogeneous		77% Binder	3% Chrysotile
		Gray		20% Calc Carb	
		Non-fibrous			
		Bound			

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:


Greg Ruff

APPROVED BY:


Tianbao Bai, Ph.D., CIH
Laboratory Director



Justin Shu



CEI

CHAIN OF CUSTODY

48

730 SE Maynard Road, Cary, NC 27511

Tel: 866-481-1412; Fax: 919-481-1442

LAB USE ONLY:

CEI Lab Code:

B2112340

CEI Lab I.D. Range:

B197865-B197952

COMPANY INFORMATION		PROJECT INFORMATION	
CEI CLIENT #:		Job Contact:	Joe Littlefield
Company:	Tioga Environmental	Email / Tel:	j.littlefield@tiogaenv.com
Address:	357 N. Main Street Memphis TN 38103	Project Name:	MHA 700 Adams
Email:	j.littlefield@tiogaenv.com	Project ID#:	251214.CO
Tel:	901-791-2432	PO #:	
Fax:		STATE SAMPLES COLLECTED IN:	TN

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 checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>
TEM DUST WIPE	ASTM D6430-05 (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"/>

*Blanks should be taken from the same sample lot as field samples.

REMARKS / SPECIAL INSTRUCTIONS:

Analyze Drywall/Joint Compound samples as Composite

BMB

Accept Samples

☐

Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
	11/29/21 1700	BMB	11/30/21 1040

Samples will be disposed of 30 days after analysis

Page 1 of 5

COMPANY CONTACT INFORMATION

Company: Tioga Environmental

Job Contact: Joe Littlefield

Project Name: MHA 700 Adams

Email: j.littlefield@tiogaenv.com

Project ID #: 251209.00 251214.00

Tel: 901-791-2432

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
MHA-01 A	2x4 White Fissure		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	Ceiling Tile ↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-02 A	Dry wall / Joint Compound		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ D			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ E			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-03 A	Beige 4" Base Cove		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-04 A	Interior Window Caulk		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-05 A	White 12"x12" Floor Tile		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	with color specks		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ D			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ E			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-06 A	Beige 12"x12" Floor Tile		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	with streaks		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-07 A	Grey Base Cove		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-08 A	Red Caulk on Pass Through		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>

COMPANY CONTACT INFORMATION

Company: <u>Tioga Environmental</u>	Job Contact: <u>Joe Littlefield</u>
Project Name: <u>MHA 700 Adams</u>	<u>jlittlefield@tiogaenv.com</u>
Project ID #: <u>251214.00 251214.00</u>	Tel: <u>901-791-2432</u>

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST
MHA-09 A	Brown Carpet	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-10 A	Grey 12"x12" Floor Tile	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	with streaks	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-11 A	White 12"x12" Floor Tile	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	with Blue specks	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-12 A	Blue Carpet	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	with Red specks	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ D	↓	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ E	↓	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-13 A	Tan Streaks 12"x12" Floor Tile	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ D	↓	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ E	↓	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-14 A	Purple Carpet	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-15 A	Grey Solid 12"x12" Floor Tile	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-16 A	Tan Streak 12"x12" Floor Tile	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓ #2	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓	PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>

COMPANY CONTACT INFORMATION

Company: Tioga Environmental

Job Contact: Joe Littlefield

Project Name: MHA 700 Adams

j.littlefield@tiogaenv.com

Project ID #: ~~251214.00~~ 251214.00

Tel: 901-791-2432

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST
MHA - 17 A	Beige 12"x24" Floor Tile		PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ B	streak ↓		PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
MHA - 18 A	Brown Carpet		PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
MHA - 19 A	Tan Offset 12"x12" Floor Tile		PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
MHA - 20 A	White Fissure Ceiling Tile with Pen Holes		PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ D			PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ E			PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
MHA - 21 A	Acoustic Wall Tile		PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
MHA - 22 A	Acoustic Wall Tile Glue Dot		PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
MHA - 23 A	Acoustic 12"x12" Ceiling Tile		PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
MHA - 30 A	Interior Window Glaze		PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
MHA - 31 A	Exterior Window Glaze		PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/> TEM <input type="checkbox"/>

↓ cont.



SAMPLING FORM

B21123 40

COMPANY CONTACT INFORMATION	
Company: <i>Tioga Environmental</i>	Job Contact: <i>Joe Littlefield</i>
Project Name: <i>MHA Adams</i>	<i>j.littlefield@tiogaenv.com</i>
Project ID #: 251214.00 <i>251214.00</i>	Tel: <i>901-791-2432</i>

Job Contact: Joe Littlefield

littlefield@tiogaenv.com

Tel: 901-791-2432

[illegible]

Page 5 of 5

December 6, 2021

Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

CLIENT PROJECT: MHA 700 Adams, 251214.00 (Point Count)
CEI LAB CODE: B2112340A

Dear Customer:

Enclosed are asbestos analysis results for PLM bulk samples received at our laboratory on December 1, 2021. The samples were analyzed for asbestos using polarized light microscopy (PLM) point count per the EPA 600 Method.

Sample results containing > 1% asbestos are considered asbestos-containing materials (ACMs) per the EPA regulatory requirements. The detection limit for the EPA 600 method is 0.25% for 400 point counts, or 0.1% for 1,000 point counts.

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

Kind Regards,



Tianbao Bai, Ph.D., CIH
Laboratory Director



ASBESTOS ANALYTICAL REPORT

By: Polarized Light Microscopy

Prepared for

Tioga Environmental Consultants

CLIENT PROJECT: MHA 700 Adams, 251214.00 (Point Count)

LAB CODE: B2112340A

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

REPORT DATE: 12/06/21

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

Lab Code: B2112340A
Date Received: 12-01-21
Date Analyzed: 12-02-21
Date Reported: 12-06-21

Project: MHA 700 Adams, 251214.00 (Point Count)

ASBESTOS POINT COUNT PLM, EPA 600 METHOD

Client ID	Lab ID	Material Description	POINTS		ASBESTOS	
			Total	Asbestos	%	
MHA-02E	B197872	Joint Compound	400	15	3.8%	Chrysotile
	B197872	Drywall/Joint Compound (Composite Result from Point Count)			0.38%	Chrysotile

Joint compound comprises 10% of overall sample

LEGEND: None

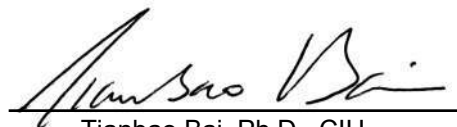
METHOD: EPA 600 / M4 / 82 / 020 (40 CFR Part 763, Sub. E, App. E)

REPORTING LIMIT: 0.25% by 400 points or 0.1% by 1,000 points

REGULATORY LIMIT: >1% by weight

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. *Estimated measurement of uncertainty is available on request.* 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, location, volume and area as well as date and time of sampling.

ANALYST:
Greg Ruff**APPROVED BY:**
Tianbao Bai, Ph.D., CIH
Laboratory Director

Bunting, Connor

From: Joe Littlefield <jlittlefield@tiogaenv.com>
Sent: Wednesday, December 01, 2021 10:37 AM
To: CEI - Reporting; Maggie Strom
Subject: RE: Laboratory Report for MHA 700 Adams, 251214.00 (B2112340)

Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL EMAIL*

Please run a point count 400 on sample MHA-02E

Thanks

Joe Littlefield
Program Manager
Tioga Environmental Consultants, Inc.
357 North Main Street
Memphis, TN 38103
Phone: 901.791.2432 Fax: 901.791.2442
Cell: 901.299.5252 Email: jlittlefield@tiogaenv.com
Web: http://secure-web.cisco.com/1H5qK3hPU_VsX23YV5Z9qKmNI5G08N6zD9lpa25icdkYFWYZH4dRrkEYsxCG3iZy-rQjH30P4lhNjLGeSHqks_ZQU0OmnQqSy-CBN6-TNT0DcYC-ILKik0vUbOoIBKOUu-G2fRyECFXQDnxjrBWzI_9cZmnC7NgSY2_EUOC_f1j-LcdUA7_3U73xlctot6zw3mYxYhvZmRN4l2G0Lpe4H6IA3BuwVEgnKsTEo8zqTYwGp2pR0JldgpYzpyva3LM4TZbg-y6yhJdLoMD0EsphNScbzBYiJ16YC4hwVftDI2yELu6-epLTsg53gT5hY3r-9/http%3A%2F%2Fwww.tiogaenv.com
Follow Tioga on and Like us on

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

From: cei@mg.eurofinset.com <cei@mg.eurofinset.com>
Sent: Tuesday, November 30, 2021 12:29 PM
To: Maggie Strom <mstrom@tiogaenv.com>; Aaron Bennett <abennett@tioganenv.onmicrosoft.com>; Joe Littlefield <jlittlefield@tiogaenv.com>
Subject: Laboratory Report for MHA 700 Adams, 251214.00 (B2112340)

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

Bunting, Connor

From: Joe Littlefield <jlittlefield@tiogaenv.com>
Sent: Wednesday, December 01, 2021 10:43 AM
To: CEI - Reporting; Maggie Strom
Subject: RE: Laboratory Report for MHA 700 Adams, 251214.00 (B2112340)

EXTERNAL EMAIL*

Standard is fine

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

From: CEI - Reporting <cei-reporting@eurofinset.com>
Sent: Wednesday, December 1, 2021 9:42 AM
To: Joe Littlefield <jlittlefield@tiogaenv.com>; CEI - Reporting <cei-reporting@eurofinset.com>; Maggie Strom <mstrom@tiogaenv.com>
Subject: RE: Laboratory Report for MHA 700 Adams, 251214.00 (B2112340)

Hello Joe!

I can certainly have this sample point counted.

What TAT would you like on this analysis?

All the Best,
Connor Bunting
Client Relationship Manager

Eurofins CEI
730 SE Maynard Rd
Cary, NC 27511
USA

Phone: +1 919-481-1413
Fax: +1 919-481-1442

E-mail: Connor.Bunting@EurofinsET.com

Follow us! Facebook | LinkedIn

**** Please Note****

As of February 1st, 2021, all roofing samples submitted in core tubes will accrue an additional \$10 charge per sample. This is due to the additional time and resource cost associated with extracting the samples from the tube, which can be quite labor intensive. If you have any questions, please contact our Client Account Manager Danielle.Carrier@EurofinsET.com or give us a call at 919-481-1413.

Thank you for your understanding

December 2, 2021

Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

CLIENT PROJECT: MHA 700 Adams, 251214.00
CEI LAB CODE: B2112560

Dear Customer:

Enclosed are asbestos analysis results for PLM Bulk samples received at our laboratory on December 2, 2021. 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

ASBESTOS ANALYTICAL REPORT

By: Polarized Light Microscopy

Prepared for

Tioga Environmental Consultants

CLIENT PROJECT: MHA 700 Adams, 251214.00

LAB CODE: B2112560

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

REPORT DATE: 12/02/21

TOTAL SAMPLES ANALYZED: 157

SAMPLES >1% ASBESTOS: 24

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: MHA 700 Adams, 251214.00

LAB CODE: B2112560

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
MHA-24A		B200802	White	Grout	None Detected
MHA-24B		B200803	White	Grout	None Detected
MHA-24C		B200804	White	Grout	None Detected
MHA-25A		B200805	Black	Grout	None Detected
MHA-25B		B200806	Gray	Ceramic Tile	None Detected
MHA-25C		B200807	Gray	Ceramic Tile	None Detected
MHA-26A	Layer 1	B200808	Black	Grout	None Detected
	Layer 2	B200808	Gray	Ceramic Tile	None Detected
MHA-26B		B200809	Gray	Grout	None Detected
MHA-26C		B200810	Gray	Grout	None Detected
MHA-27A		B200811	White	Grout	None Detected
MHA-27B		B200812	White	Grout	None Detected
MHA-27C		B200813	White	Grout	None Detected
MHA-28A		B200814	Gray,Black	Grout	None Detected
MHA-28B		B200815	Gray,Black	Grout	None Detected
MHA-28C		B200816	Gray,Black	Grout	None Detected
MHA-29A		B200817	White	Grout	None Detected
MHA-29B		B200818	White	Grout	None Detected
MHA-29C		B200819	White	Grout	None Detected
MHA-33		B200820	White	Insulation	None Detected
MHA-34		B200821	Pink	Insulation	None Detected
MHA-35		B200822	White,Gray	Insulation	None Detected
MHA-36		B200823	White	Insulation	None Detected
MHA-37		B200824	Pink	Insulation	None Detected
MHA-38A		B200825	White,Tan	Ceiling Tile	None Detected
MHA-38B		B200826	White,Tan	Ceiling Tile	None Detected
MHA-38C		B200827	White,Tan	Ceiling Tile	None Detected
MHA-39A		B200828	White,Tan	Ceiling Tile	None Detected
MHA-39B		B200829	White,Tan	Ceiling Tile	None Detected
MHA-39C		B200830	White,Tan	Ceiling Tile	None Detected
MHA-40A		B200831A	Gray,Tan	Floor Tile	None Detected

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: MHA 700 Adams, 251214.00

LAB CODE: B2112560

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
		B200831B	Yellow	Mastic	None Detected
MHA-40B		B200832A	Gray,Tan	Floor Tile	None Detected
		B200832B	Yellow	Mastic	None Detected
MHA-40C		B200833A	Gray,Tan	Floor Tile	None Detected
		B200833B	Yellow	Mastic	None Detected
MHA-41A		B200834A	Black	Base Cove	None Detected
		B200834B	Yellow,Off-white	Mastic	None Detected
MHA-41B		B200835A	Black	Base Cove	None Detected
		B200835B	Yellow,Off-white	Mastic	None Detected
MHA-41C		B200836A	Black	Base Cove	None Detected
		B200836B	Yellow,Off-white	Mastic	None Detected
MHA-42A		B200837A	Beige	Base Cove	None Detected
		B200837B	Yellow,Off-white	Mastic	None Detected
MHA-42B		B200838A	Beige	Base Cove	None Detected
		B200838B	Yellow,Off-white	Mastic	None Detected
MHA-42C		B200839A	Beige	Base Cove	None Detected
		B200839B	Yellow,Off-white	Mastic	None Detected
MHA-43A		B200840	White	Drywall/Joint Compound	None Detected
MHA-43B		B200841	White	Drywall/Joint Compound	None Detected
MHA-43C		B200842	White	Drywall/Joint Compound	None Detected
MHA-44A		B200843	Green	Carpet	None Detected
MHA-44B		B200844A	Green	Carpet	None Detected
		B200844B	Yellow	Mastic	None Detected
MHA-44C		B200845A	Green	Carpet	None Detected
		B200845B	Yellow	Mastic	None Detected
MHA-45A		B200846	Gray	Interior Window Caulk	Chrysotile 3%
MHA-45B		B200847	Gray	Interior Window Caulk	Chrysotile 3%

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: MHA 700 Adams, 251214.00

LAB CODE: B2112560

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
MHA-45C		B200848	Gray	Interior Window Caulk	Chrysotile 3%
MHA-46A		B200849A	Gray	Base Cove	None Detected
		B200849B	Beige	Mastic	None Detected
MHA-46B		B200850A	Gray	Base Cove	None Detected
		B200850B	Beige	Mastic	None Detected
MHA-46C		B200851A	Gray	Base Cove	None Detected
		B200851B	Beige	Mastic	None Detected
MHA-47A		B200852A	Light Blue	Base Cove	None Detected
		B200852B	Beige	Mastic	None Detected
MHA-47B		B200853A	Light Blue	Base Cove	None Detected
		B200853B	Beige	Mastic	None Detected
MHA-47C		B200854A	Light Blue	Base Cove	None Detected
		B200854B	Beige	Mastic	None Detected
MHA-48A		B200855A	Navy Blue	Base Cove	None Detected
		B200855B	Beige	Mastic	None Detected
MHA-48B		B200856A	Navy Blue	Base Cove	None Detected
		B200856B	Beige	Mastic	None Detected
MHA-48C		B200857A	Navy Blue	Base Cove	None Detected
		B200857B	Beige	Mastic	None Detected
MHA-49A		B200858A	Black	Base Cove	None Detected
		B200858B	Beige	Mastic	None Detected
MHA-49B		B200859A	Black	Base Cove	None Detected
		B200859B	Beige	Mastic	None Detected
MHA-49C		B200860A	Black	Base Cove	None Detected
		B200860B	Beige	Mastic	None Detected
MHA-50A		B200861A	Light Brown	Base Cove	None Detected
		B200861B	Beige	Mastic	None Detected
MHA-50B		B200862	Light Brown	Base Cove	None Detected
MHA-50C		B200863	Light Brown	Base Cove	None Detected
MHA-51A		B200864A	Brown	Base Cove	None Detected
		B200864B	Beige	Mastic	None Detected

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: MHA 700 Adams, 251214.00

LAB CODE: B2112560

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
MHA-51B		B200865A	Brown	Base Cove	None Detected
		B200865B	Beige	Mastic	None Detected
MHA-51C		B200866A	Brown	Base Cove	None Detected
		B200866B	Beige	Mastic	None Detected
MHA-52A		B200867	White	Acoustic Ceiling Tile	None Detected
MHA-52B		B200868	White	Acoustic Ceiling Tile	None Detected
MHA-52C		B200869	White	Acoustic Ceiling Tile	None Detected
MHA-53A		B200870	White	Ceiling Tile	None Detected
MHA-53B		B200871	White	Ceiling Tile	None Detected
MHA-53C		B200872	White	Ceiling Tile	None Detected
MHA-54A		B200873A	White	Base Cove	None Detected
	Layer 1	B200873B	Tan	Mastic	None Detected
	Layer 2	B200873B	Brown	Mastic	None Detected
MHA-54B		B200874A	White	Base Cove	None Detected
		B200874B	Tan	Mastic	None Detected
MHA-54C		B200875	White	Base Cove	None Detected
MHA-55A		B200876	Green	Carpet	None Detected
MHA-55B		B200877	Green	Carpet	None Detected
MHA-55C		B200878A	Green	Carpet	None Detected
		B200878B	Yellow	Mastic	None Detected
MHA-56A		B200879	Beige	Ceramic Tile Grout	None Detected
MHA-56B		B200880	Beige	Ceramic Tile Grout	None Detected
MHA-56C		B200881	Beige	Ceramic Tile Grout	None Detected
MHA-57A	Layer 1	B200882	Brown,White	Floor Tile	None Detected
	Layer 2	B200882	Gray	Grout	None Detected
MHA-57B		B200883	Brown,White	Floor Tile	None Detected
MHA-57C		B200884	Brown,White	Floor Tile	None Detected
MHA-58A		B200885A	Gray	Floor Tile	None Detected
		B200885B	Tan	Mastic	None Detected
MHA-58B		B200886A	Gray	Floor Tile	None Detected
		B200886B	Tan	Mastic	None Detected

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: MHA 700 Adams, 251214.00

LAB CODE: B2112560

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
MHA-58C		B200887A	Gray	Floor Tile	None Detected
		B200887B	Tan	Mastic	None Detected
MHA-59A		B200888A	Dark Tan	Base Cove	None Detected
		B200888B	Off-white	Mastic	None Detected
MHA-59B		B200889A	Dark Tan	Base Cove	None Detected
		B200889B	Off-white	Mastic	None Detected
MHA-59C		B200890A	Dark Tan	Base Cove	None Detected
		B200890B	Off-white	Mastic	None Detected
MHA-60A		B200891	Gray,White	Ceiling Tile	None Detected
MHA-60B		B200892	Gray,White	Ceiling Tile	None Detected
MHA-60C		B200893	Gray,White	Ceiling Tile	None Detected
MHA-61A		B200894A	Black	Base Cove	None Detected
		B200894B	White	Mastic	None Detected
MHA-61B		B200895A	Black	Base Cove	None Detected
		B200895B	White	Mastic	None Detected
MHA-61C		B200896A	Black	Base Cove	None Detected
		B200896B	White	Mastic	None Detected
MHA-62A		B200897A	Beige,Brown	Floor Tile	Chrysotile 2%
		B200897B	Black	Mastic	Chrysotile 3%
MHA-62B		B200898A	Beige,Brown	Floor Tile	Chrysotile 2%
		B200898B	Black	Mastic	Chrysotile 3%
MHA-62C		B200899A	Beige,Brown	Floor Tile	Chrysotile 2%
		B200899B	Black	Mastic	Chrysotile 3%
MHA-62D		B200900A	Beige,Brown	Floor Tile	Chrysotile 2%
		B200900B	Black	Mastic	Chrysotile 3%
MHA-62E		B200901A	Beige,Brown	Floor Tile	Chrysotile 2%
		B200901B	Black	Mastic	Chrysotile 3%
MHA-63A		B200902A	Red	Carpet	None Detected
		B200902B	Yellow	Mastic	None Detected
MHA-63B		B200903A	Red	Carpet	None Detected
		B200903B	Yellow	Mastic	None Detected

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: MHA 700 Adams, 251214.00

LAB CODE: B2112560

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
MHA-63C		B200904A	Red	Carpet	None Detected
		B200904B	Yellow	Mastic	None Detected
MHA-64A		B200905A	White,Blue	Floor Tile	None Detected
		B200905B	Black	Mastic	Chrysotile 3%
MHA-64B		B200906A	White,Blue	Floor Tile	None Detected
		B200906B	Black	Mastic	Chrysotile 3%
MHA-64C		B200907A	White,Blue	Floor Tile	None Detected
	Layer 1	B200907B	Yellow	Mastic	None Detected
	Layer 2	B200907B	White	Mud	None Detected
MHA-65A		B200908A	Beige	Floor Tile	None Detected
	Layer 1	B200908B	Off-white	Mastic	None Detected
	Layer 2	B200908B	Gray	Grout	None Detected
	Layer 3	B200908B	Black	Mastic	Chrysotile 5%
MHA-65B		B200909A	Beige	Floor Tile	None Detected
	Layer 1	B200909B	Off-white	Mastic	None Detected
	Layer 2	B200909B	Gray	Grout	None Detected
	Layer 3	B200909B	Black	Mastic	Chrysotile 5%
MHA-65C		B200910A	Beige	Floor Tile	None Detected
	Layer 1	B200910B	Off-white	Mastic	None Detected
	Layer 2	B200910B	Gray	Grout	None Detected
	Layer 3	B200910B	Black	Mastic	Chrysotile 5%
MHA-66A		B200911	Gray	Aluminum Window Caulk	Chrysotile 2%
MHA-66B		B200912	Gray	Aluminum Window Caulk	Chrysotile 2%
MHA-66C		B200913	Gray	Aluminum Window Caulk	Chrysotile 2%
MHA-67A		B200914A	Brown	Carpet	None Detected
		B200914B	White	Mastic	None Detected
MHA-67B		B200915A	Brown	Carpet	None Detected
		B200915B	White	Mastic	None Detected
MHA-67C		B200916A	Brown	Carpet	None Detected
		B200916B	White	Mastic	None Detected
MHA-68A		B200917A	Tan	Base Cove	None Detected

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: MHA 700 Adams, 251214.00

LAB CODE: B2112560

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
		B200917B	Yellow	Mastic	None Detected
MHA-68B		B200918A	Tan	Base Cove	None Detected
		B200918B	Yellow	Mastic	None Detected
MHA-68C		B200919A	Tan	Base Cove	None Detected
		B200919B	Yellow	Mastic	None Detected
MHA-69A		B200920A	Blue	Carpet	None Detected
		B200920B	Beige	Mastic	None Detected
MHA-69B		B200921A	Blue	Carpet	None Detected
		B200921B	Beige	Mastic	None Detected
MHA-69C		B200922A	Blue	Carpet	None Detected
		B200922B	Beige	Mastic	None Detected
MHA-70A		B200923	White	Grout	None Detected
MHA-70B		B200924	White	Grout	None Detected
MHA-70C		B200925	White	Grout	None Detected
MHA-71A		B200926	White	Grout	None Detected
MHA-71B		B200927	White	Grout	None Detected
MHA-71C		B200928	White	Grout	None Detected
MHA-72A		B200929A	Mauve	Floor Tile	None Detected
		B200929B	Black	Mastic	Chrysotile 5%
MHA-72B		B200930A	Mauve	Floor Tile	None Detected
		B200930B	Black	Mastic	Chrysotile 5%
MHA-72C		B200931A	Mauve	Floor Tile	None Detected
		B200931B	Black	Mastic	Chrysotile 5%
MHA-73		B200932	Yellow	Tsi Pipe Run	None Detected
MHA-74		B200933	White	Tsi Elbow	None Detected
MHA-75		B200934	White	Tsi Elbow	None Detected
MHA-76		B200935	White	Tsi Elbow	None Detected
MHA-77A		B200936	Gray	Hvac Flashing/ Caulk	None Detected
MHA-77B		B200937	Gray	Hvac Flashing/ Caulk	None Detected
MHA-77C		B200938	Gray	Hvac Flashing/ Caulk	None Detected
MHA-78A		B200939A	Blue	Carpet	None Detected

Asbestos Report Summary

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PROJECT: MHA 700 Adams, 251214.00

LAB CODE: B2112560

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
		B200939B	Beige	Mastic	None Detected
MHA-78B		B200940A	Blue	Carpet	None Detected
		B200940B	Beige	Mastic	None Detected
MHA-78C		B200941A	Blue	Carpet	None Detected
		B200941B	Beige	Mastic	None Detected
MHA-79A		B200942A	Tan	Carpet	None Detected
		B200942B	Gray	Mastic	None Detected
MHA-79B		B200943A	Tan	Carpet	None Detected
		B200943B	Gray	Mastic	None Detected
MHA-79C		B200944A	Tan	Carpet	None Detected
		B200944B	Gray	Mastic	None Detected
MHA-80A		B200945A	Off-white	Base Cove	None Detected
		B200945B	White	Mastic	None Detected
MHA-80B		B200946A	Off-white	Base Cove	None Detected
		B200946B	Tan	Mastic	None Detected
MHA-80C		B200947A	Off-white	Base Cove	None Detected
		B200947B	Tan	Mastic	None Detected
MHA-81A		B200948	White,Off-white	Drywall/Joint Compound	Chrysotile <1%
MHA-81B		B200949	White,Off-white	Drywall/Joint Compound	Chrysotile <1%
MHA-81C		B200950	White,Off-white	Drywall/Joint Compound	Chrysotile <1%
MHA-81D		B200951	White,Off-white	Drywall/Joint Compound	Chrysotile <1%
MHA-81E		B200952	White,Off-white	Drywall/Joint Compound	Chrysotile <1%
MHA-82A		B200953	Brown	Stair Tread	None Detected
MHA-82B		B200954A	Brown	Stair Tread	None Detected
		B200954B	Yellow	Mastic	None Detected
MHA-82C		B200955	Green	Stair Tread	None Detected
MHA-83A		B200956A	Gray	Stair Tread	None Detected
		B200956B	Yellow	Mastic	None Detected
MHA-83B		B200957A	Gray	Stair Tread	None Detected
		B200957B	Yellow	Mastic	None Detected
MHA-83C		B200958A	Gray	Stair Tread	None Detected

Asbestos Report Summary

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PROJECT: MHA 700 Adams, 251214.00

LAB CODE: B2112560

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
		B200958B	Yellow	Mastic	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

Lab Code: B2112560
Date Received: 12-02-21
Date Analyzed: 12-02-21
Date Reported: 12-02-21

Project: MHA 700 Adams, 251214.00

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
MHA-24A B200802	Grout	Homogeneous	<1%	Cellulose	90%	Binder	None Detected
		White			10%	Silicates	
		Non-fibrous					
		Bound					
Lab Notes: Samples B200802 - B200839 analyzed by K. Wescott. No tile present.							
MHA-24B B200803	Grout	Homogeneous	<1%	Cellulose	90%	Binder	None Detected
		White			10%	Silicates	
		Non-fibrous					
		Bound					
Lab Notes: No tile present.							
MHA-24C B200804	Grout	Homogeneous	<1%	Cellulose	90%	Binder	None Detected
		White			10%	Silicates	
		Non-fibrous					
		Bound					
Lab Notes: No tile present.							
MHA-25A B200805	Grout	Homogeneous	<1%	Cellulose	60%	Binder	None Detected
		Black			40%	Silicates	
		Non-fibrous					
		Bound					
Lab Notes: No tile present.							
MHA-25B B200806	Ceramic Tile	Homogeneous			70%	Silicates	None Detected
		Gray			30%	Binder	
		Non-fibrous					
		Bound					
Lab Notes: Sample appears to be a ceramic tile. No grout present.							
MHA-25C B200807	Ceramic Tile	Homogeneous			70%	Silicates	None Detected
		Gray			30%	Binder	
		Non-fibrous					
		Bound					
Lab Notes: Sample appears to be a ceramic tile. No grout present.							

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

Lab Code: B2112560
Date Received: 12-02-21
Date Analyzed: 12-02-21
Date Reported: 12-02-21

Project: MHA 700 Adams, 251214.00

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
MHA-26A Layer 1 B200808	Grout	Homogeneous	<1%	Cellulose	60%	Binder	None Detected
		Black			40%	Silicates	
		Non-fibrous					
		Bound					
Layer 2 B200808	Ceramic Tile	Homogeneous			70%	Silicates	None Detected
		Gray			30%	Binder	
		Non-fibrous					
		Bound					
MHA-26B B200809	Grout	Homogeneous	<1%	Cellulose	60%	Binder	None Detected
		Gray			40%	Silicates	
		Non-fibrous					
		Bound					
Lab Notes: No tile present.							
MHA-26C B200810	Grout	Homogeneous	<1%	Cellulose	60%	Binder	None Detected
		Gray			40%	Silicates	
		Non-fibrous					
		Bound					
Lab Notes: No tile present.							
MHA-27A B200811	Grout	Homogeneous	<1%	Cellulose	90%	Binder	None Detected
		White			10%	Silicates	
		Non-fibrous					
		Bound					
Lab Notes: No tile present.							
MHA-27B B200812	Grout	Homogeneous	<1%	Cellulose	90%	Binder	None Detected
		White			10%	Silicates	
		Non-fibrous					
		Bound					
Lab Notes: No tile present.							

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

Lab Code: B2112560
Date Received: 12-02-21
Date Analyzed: 12-02-21
Date Reported: 12-02-21

Project: MHA 700 Adams, 251214.00

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
MHA-27C B200813	Grout	Homogeneous White Non-fibrous Bound	<1%	Cellulose	90% 10%	Binder Silicates	None Detected
Lab Notes: No tile present.							
MHA-28A B200814	Grout	Homogeneous Gray,Black Non-fibrous Bound	<1%	Cellulose	60% 40%	Binder Silicates	None Detected
Lab Notes: No tile present.							
MHA-28B B200815	Grout	Homogeneous Gray,Black Non-fibrous Bound	<1%	Cellulose	60% 40%	Binder Silicates	None Detected
Lab Notes: No tile present.							
MHA-28C B200816	Grout	Homogeneous Gray,Black Non-fibrous Bound	<1%	Cellulose	60% 40%	Binder Silicates	None Detected
Lab Notes: No tile present.							
MHA-29A B200817	Grout	Homogeneous White Non-fibrous Bound	<1%	Cellulose	90% 10%	Binder Silicates	None Detected
Lab Notes: No tile present.							
MHA-29B B200818	Grout	Homogeneous White Non-fibrous Bound	<1%	Cellulose	90% 10%	Binder Silicates	None Detected
Lab Notes: No tile present.							

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

Lab Code: B2112560
Date Received: 12-02-21
Date Analyzed: 12-02-21
Date Reported: 12-02-21

Project: MHA 700 Adams, 251214.00

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
MHA-29C B200819	Grout	Homogeneous White Non-fibrous Bound	<1%	Cellulose	90% 10%	Binder Silicates	None Detected
Lab Notes: No tile present.							
MHA-33 B200820	Insulation	Heterogeneous White Fibrous Loosely Bound	25%	Cellulose	70% 5%	Binder Metal Foil	None Detected
MHA-34 B200821	Insulation	Heterogeneous Pink Fibrous Loosely Bound	25%	Cellulose	70% 5%	Binder Metal Foil	None Detected
MHA-35 B200822	Insulation	Heterogeneous White,Gray Fibrous Loosely Bound	25%	Fiberglass	70% 5%	Binder Metal Foil	None Detected
MHA-36 B200823	Insulation	Heterogeneous White Fibrous Loosely Bound	25%	Cellulose	70% 5%	Binder Metal Foil	None Detected
MHA-37 B200824	Insulation	Heterogeneous Pink Fibrous Loosely Bound	25%	Cellulose	70% 5%	Binder Metal Foil	None Detected
MHA-38A B200825	Ceiling Tile	Heterogeneous White,Tan Fibrous Loosely Bound	60% 20%	Cellulose Fiberglass	15% 5%	Perlite Paint	None Detected

ASBESTOS BULK ANALYSIS

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Client: Tioga Environmental Consultants
357 North Main Street
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Date Analyzed: 12-02-21
Date Reported: 12-02-21

Project: MHA 700 Adams, 251214.00

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
MHA-38B B200826	Ceiling Tile	Heterogeneous	60%	Cellulose	15%	Perlite	None Detected
		White,Tan	20%	Fiberglass	5%	Paint	
		Fibrous					
		Loosely Bound					
MHA-38C B200827	Ceiling Tile	Heterogeneous	60%	Cellulose	15%	Perlite	None Detected
		White,Tan	20%	Fiberglass	5%	Paint	
		Fibrous					
		Loosely Bound					
MHA-39A B200828	Ceiling Tile	Heterogeneous	60%	Cellulose	15%	Perlite	None Detected
		White,Tan	20%	Fiberglass	5%	Paint	
		Fibrous					
		Loosely Bound					
MHA-39B B200829	Ceiling Tile	Heterogeneous	60%	Cellulose	15%	Perlite	None Detected
		White,Tan	20%	Fiberglass	5%	Paint	
		Fibrous					
		Loosely Bound					
MHA-39C B200830	Ceiling Tile	Heterogeneous	60%	Cellulose	15%	Perlite	None Detected
		White,Tan	20%	Fiberglass	5%	Paint	
		Fibrous					
		Loosely Bound					
MHA-40A B200831A	Floor Tile	Homogeneous			100%	Vinyl	None Detected
		Gray,Tan					
		Non-fibrous					
		Tightly Bound					
B200831B	Mastic	Homogeneous			100%	Mastic	None Detected
		Yellow					
		Non-fibrous					
		Bound					

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ASBESTOS BULK PLM, EPA 600 METHOD

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			Fibrous	Non-Fibrous	
MHA-40B B200832A	Floor Tile	Homogeneous Gray,Tan Non-fibrous Tightly Bound		100% Vinyl	None Detected
B200832B	Mastic	Homogeneous Yellow Non-fibrous Bound		100% Mastic	None Detected
MHA-40C B200833A	Floor Tile	Homogeneous Gray,Tan Non-fibrous Tightly Bound		100% Vinyl	None Detected
B200833B	Mastic	Homogeneous Yellow Non-fibrous Bound		100% Mastic	None Detected
MHA-41A B200834A	Base Cove	Homogeneous Black Non-fibrous Bound		100% Vinyl	None Detected
B200834B	Mastic	Heterogeneous Yellow,Off-white Non-fibrous Bound	<1% Cellulose	95% Mastic 5% Binder <1% Paint	None Detected
MHA-41B B200835A	Base Cove	Homogeneous Black Non-fibrous Bound		100% Vinyl	None Detected

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ASBESTOS BULK PLM, EPA 600 METHOD

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			Fibrous		Non-Fibrous		
B200835B	Mastic	Heterogeneous Yellow,Off-white Non-fibrous Bound	<1%	Cellulose	95% 5% <1%	Mastic Binder Paint	None Detected
MHA-41C B200836A	Base Cove	Homogeneous Black Non-fibrous Bound			100%	Vinyl	None Detected
B200836B	Mastic	Heterogeneous Yellow,Off-white Non-fibrous Bound	<1%	Cellulose	95% 5% <1%	Mastic Binder Paint	None Detected
MHA-42A B200837A	Base Cove	Homogeneous Beige Non-fibrous Bound			100%	Vinyl	None Detected
B200837B	Mastic	Heterogeneous Yellow,Off-white Non-fibrous Bound	<1%	Cellulose	95% 5% <1%	Mastic Binder Paint	None Detected
MHA-42B B200838A	Base Cove	Homogeneous Beige Non-fibrous Bound			100%	Vinyl	None Detected
B200838B	Mastic	Heterogeneous Yellow,Off-white Non-fibrous Bound	<1%	Cellulose	95% 5% <1%	Mastic Binder Paint	None Detected

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			Fibrous		Non-Fibrous		
MHA-42C B200839A	Base Cove	Homogeneous Beige Non-fibrous Bound			100%	Vinyl	None Detected
B200839B	Mastic	Heterogeneous Yellow, Off-white Non-fibrous Bound	<1%	Cellulose	95% 5% <1%	Mastic Binder Paint	None Detected
MHA-43A B200840	Drywall/Joint Compound	Heterogeneous White Fibrous Bound	15%	Cellulose	73% 10% 2%	Gypsum Calc Carb Paint	None Detected
Lab Notes: Samples B200840 - B200878 analyzed by R.Steele.							
MHA-43B B200841	Drywall/Joint Compound	Heterogeneous White Fibrous Bound	15%	Cellulose	73% 10% 2%	Gypsum Calc Carb Paint	None Detected
MHA-43C B200842	Drywall/Joint Compound	Heterogeneous White Fibrous Bound	15%	Cellulose	73% 10% 2%	Gypsum Calc Carb Paint	None Detected
MHA-44A B200843	Carpet	Heterogeneous Green Fibrous Bound	80%	Synthetic Fiber	20%	Binder	None Detected
Lab Notes: No mastic present.							
MHA-44B B200844A	Carpet	Heterogeneous Green Fibrous Bound	80%	Synthetic Fiber	20%	Binder	None Detected

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			Fibrous		Non-Fibrous		
B200844B	Mastic	Homogeneous Yellow Non-fibrous Bound	<1%	Synthetic Fiber	100%	Mastic	None Detected
MHA-44C B200845A	Carpet	Heterogeneous Green Fibrous Bound	80%	Synthetic Fiber	20%	Binder	None Detected
B200845B	Mastic	Homogeneous Yellow Non-fibrous Bound	<1%	Synthetic Fiber	100%	Mastic	None Detected
MHA-45A B200846	Interior Window Caulk	Heterogeneous Gray Non-fibrous Bound			77% 20%	Binder Calc Carb	3% Chrysotile
MHA-45B B200847	Interior Window Caulk	Heterogeneous Gray Non-fibrous Bound			77% 20%	Binder Calc Carb	3% Chrysotile
MHA-45C B200848	Interior Window Caulk	Heterogeneous Gray Non-fibrous Bound			77% 20%	Binder Calc Carb	3% Chrysotile
MHA-46A B200849A	Base Cove	Homogeneous Gray Non-fibrous Bound			100%	Vinyl	None Detected

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ASBESTOS BULK PLM, EPA 600 METHOD

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			Fibrous	Non-Fibrous	
B200849B	Mastic	Homogeneous Beige Non-fibrous Bound	100%	Mastic	None Detected
MHA-46B B200850A	Base Cove	Homogeneous Gray Non-fibrous Bound	100%	Vinyl	None Detected
B200850B	Mastic	Homogeneous Beige Non-fibrous Bound	100%	Mastic	None Detected
MHA-46C B200851A	Base Cove	Homogeneous Gray Non-fibrous Bound	100%	Vinyl	None Detected
B200851B	Mastic	Homogeneous Beige Non-fibrous Bound	100%	Mastic	None Detected
MHA-47A B200852A	Base Cove	Homogeneous Light Blue Non-fibrous Bound	100%	Vinyl	None Detected
B200852B	Mastic	Homogeneous Beige Non-fibrous Bound	100%	Mastic	None Detected

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			Fibrous	Non-Fibrous	
MHA-47B B200853A	Base Cove	Homogeneous Light Blue Non-fibrous Bound		100% Vinyl	None Detected
B200853B	Mastic	Homogeneous Beige Non-fibrous Bound		100% Mastic	None Detected
MHA-47C B200854A	Base Cove	Homogeneous Light Blue Non-fibrous Bound		100% Vinyl	None Detected
B200854B	Mastic	Homogeneous Beige Non-fibrous Bound		100% Mastic	None Detected
MHA-48A B200855A	Base Cove	Homogeneous Navy Blue Non-fibrous Bound		100% Vinyl	None Detected
B200855B	Mastic	Homogeneous Beige Non-fibrous Bound		100% Mastic	None Detected
MHA-48B B200856A	Base Cove	Homogeneous Navy Blue Non-fibrous Bound		100% Vinyl	None Detected

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			Fibrous	Non-Fibrous	
B200856B	Mastic	Homogeneous Beige Non-fibrous Bound	100%	Mastic	None Detected
MHA-48C B200857A	Base Cove	Homogeneous Navy Blue Non-fibrous Bound	100%	Vinyl	None Detected
B200857B	Mastic	Homogeneous Beige Non-fibrous Bound	100%	Mastic	None Detected
MHA-49A B200858A	Base Cove	Homogeneous Black Non-fibrous Bound	100%	Vinyl	None Detected
B200858B	Mastic	Homogeneous Beige Non-fibrous Bound	100%	Mastic	None Detected
MHA-49B B200859A	Base Cove	Homogeneous Black Non-fibrous Bound	100%	Vinyl	None Detected
B200859B	Mastic	Homogeneous Beige Non-fibrous Bound	100%	Mastic	None Detected

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			Fibrous	Non-Fibrous	
MHA-49C B200860A	Base Cove	Homogeneous Black Non-fibrous Bound		100% Vinyl	None Detected
	B200860B	Mastic Homogeneous Beige Non-fibrous Bound		100% Mastic	None Detected
MHA-50A B200861A	Base Cove	Homogeneous Light Brown Non-fibrous Bound		100% Vinyl	None Detected
	B200861B	Mastic Homogeneous Beige Non-fibrous Bound		100% Mastic	None Detected
MHA-50B B200862	Base Cove	Homogeneous Light Brown Non-fibrous Bound		100% Vinyl	None Detected
	Lab Notes: No mastic present.				
MHA-50C B200863	Base Cove	Homogeneous Light Brown Non-fibrous Bound		100% Vinyl	None Detected
	Lab Notes: No mastic present.				
MHA-51A B200864A	Base Cove	Homogeneous Brown Non-fibrous Bound		100% Vinyl	None Detected

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ASBESTOS BULK PLM, EPA 600 METHOD

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			Fibrous		Non-Fibrous		
B200864B	Mastic	Homogeneous Beige Non-fibrous Bound			100%	Mastic	None Detected
MHA-51B B200865A	Base Cove	Homogeneous Brown Non-fibrous Bound			100%	Vinyl	None Detected
B200865B	Mastic	Homogeneous Beige Non-fibrous Bound			100%	Mastic	None Detected
MHA-51C B200866A	Base Cove	Homogeneous Brown Non-fibrous Bound			100%	Vinyl	None Detected
B200866B	Mastic	Homogeneous Beige Non-fibrous Bound			100%	Mastic	None Detected
MHA-52A B200867	Acoustic Ceiling Tile	Heterogeneous White Fibrous Loosely Bound	95%	Cellulose	5%	Paint	None Detected
MHA-52B B200868	Acoustic Ceiling Tile	Heterogeneous White Fibrous Loosely Bound	95%	Cellulose	5%	Paint	None Detected

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ASBESTOS BULK PLM, EPA 600 METHOD

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			Fibrous		Non-Fibrous		
MHA-52C B200869	Acoustic Ceiling Tile	Heterogeneous White Fibrous Loosely Bound	95%	Cellulose	5%	Paint	None Detected
MHA-53A B200870	Ceiling Tile	Heterogeneous White Fibrous Loosely Bound	40% 25%	Cellulose Fiberglass	30% 5%	Perlite Binder	None Detected
MHA-53B B200871	Ceiling Tile	Heterogeneous White Fibrous Loosely Bound	40% 25%	Cellulose Fiberglass	30% 5%	Perlite Binder	None Detected
MHA-53C B200872	Ceiling Tile	Heterogeneous White Fibrous Loosely Bound	40% 25%	Cellulose Fiberglass	30% 5%	Perlite Binder	None Detected
MHA-54A B200873A	Base Cove	Homogeneous White Non-fibrous Bound			100%	Vinyl	None Detected
Layer 1 B200873B	Mastic	Homogeneous Tan Non-fibrous Bound			100%	Mastic	None Detected
Layer 2 B200873B	Mastic	Homogeneous Brown Non-fibrous Bound			100%	Mastic	None Detected

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			Fibrous		Non-Fibrous	
MHA-54B B200874A	Base Cove	Homogeneous White Non-fibrous Bound		100%	Vinyl	None Detected
B200874B	Mastic	Homogeneous Tan Non-fibrous Bound		100%	Mastic	None Detected
MHA-54C B200875	Base Cove	Homogeneous White Non-fibrous Bound		100%	Vinyl	None Detected
Lab Notes: No mastic present.						
MHA-55A B200876	Carpet	Heterogeneous Green Fibrous Bound	80%	Synthetic Fiber 20%	Binder	None Detected
Lab Notes: No mastic present.						
MHA-55B B200877	Carpet	Heterogeneous Green Fibrous Bound	80%	Synthetic Fiber 20%	Binder	None Detected
Lab Notes: No mastic present.						
MHA-55C B200878A	Carpet	Heterogeneous Green Fibrous Bound	80%	Synthetic Fiber 20%	Binder	None Detected
B200878B	Mastic	Homogeneous Yellow Non-fibrous Bound	<1%	Synthetic Fiber 100%	Mastic	None Detected

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			Fibrous	Non-Fibrous	
MHA-56A B200879	Ceramic Tile Grout	Heterogeneous Beige Non-fibrous Bound	70% 30%	Binder Calc Carb	None Detected
Lab Notes: Samples B200879 - B200916 analyzed by JS.					
MHA-56B B200880	Ceramic Tile Grout	Heterogeneous Beige Non-fibrous Bound	70% 30%	Binder Calc Carb	None Detected
MHA-56C B200881	Ceramic Tile Grout	Heterogeneous Beige Non-fibrous Bound	70% 30%	Binder Calc Carb	None Detected
MHA-57A Layer 1 B200882	Floor Tile	Heterogeneous Brown,White Non-fibrous Tightly Bound	100%	Binder	None Detected
Layer 2 B200882	Grout	Heterogeneous Gray Non-fibrous Bound	60% 40%	Binder Silicates	None Detected
MHA-57B B200883	Floor Tile	Heterogeneous Brown,White Non-fibrous Tightly Bound	100%	Binder	None Detected
Lab Notes: Sample appears to be floor tile. No floor tile grout present.					
MHA-57C B200884	Floor Tile	Heterogeneous Brown,White Non-fibrous Tightly Bound	100%	Binder	None Detected
Lab Notes: Sample appears to be floor tile. No floor tile grout present.					

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			Fibrous	Non-Fibrous	
MHA-58A B200885A	Floor Tile	Heterogeneous		65% Vinyl	None Detected
		Gray		20% Binder	
		Non-fibrous		15% Calc Carb	
		Bound			
B200885B	Mastic	Heterogeneous		100% Mastic	None Detected
		Tan			
		Non-fibrous			
		Bound			
MHA-58B B200886A	Floor Tile	Heterogeneous		65% Vinyl	None Detected
		Gray		20% Binder	
		Non-fibrous		15% Calc Carb	
		Bound			
B200886B	Mastic	Heterogeneous		100% Mastic	None Detected
		Tan			
		Non-fibrous			
		Bound			
MHA-58C B200887A	Floor Tile	Heterogeneous		65% Vinyl	None Detected
		Gray		20% Binder	
		Non-fibrous		15% Calc Carb	
		Bound			
B200887B	Mastic	Heterogeneous		100% Mastic	None Detected
		Tan			
		Non-fibrous			
		Bound			
MHA-59A B200888A	Base Cove	Homogeneous		100% Vinyl	None Detected
		Dark Tan			
		Non-fibrous			
		Bound			

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			Fibrous		Non-Fibrous		
B200888B	Mastic	Homogeneous Off-white Non-fibrous Bound			100%	Mastic	None Detected
MHA-59B B200889A	Base Cove	Homogeneous Dark Tan Non-fibrous Bound			100%	Vinyl	None Detected
B200889B	Mastic	Homogeneous Off-white Non-fibrous Bound			100%	Mastic	None Detected
MHA-59C B200890A	Base Cove	Homogeneous Dark Tan Non-fibrous Bound			100%	Vinyl	None Detected
B200890B	Mastic	Homogeneous Off-white Non-fibrous Bound			100%	Mastic	None Detected
MHA-60A B200891	Ceiling Tile	Heterogeneous Gray,White Fibrous Bound	65%	Cellulose	2%	Paint	None Detected
			10%	Fiberglass	23%	Perlite	
MHA-60B B200892	Ceiling Tile	Heterogeneous Gray,White Fibrous Bound	65%	Cellulose	2%	Paint	None Detected
			10%	Fiberglass	23%	Perlite	

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			Fibrous		Non-Fibrous		
MHA-60C B200893	Ceiling Tile	Heterogeneous	65%	Cellulose	2%	Paint	None Detected
		Gray,White Fibrous Bound	10%	Fiberglass	23%	Perlite	
MHA-61A B200894A	Base Cove	Homogeneous Black Non-fibrous Bound			100%	Vinyl	None Detected
B200894B	Mastic	Homogeneous White Non-fibrous Bound			100%	Mastic	None Detected
MHA-61B B200895A	Base Cove	Homogeneous Black Non-fibrous Bound			100%	Vinyl	None Detected
B200895B	Mastic	Homogeneous White Non-fibrous Bound			100%	Mastic	None Detected
MHA-61C B200896A	Base Cove	Homogeneous Black Non-fibrous Bound			100%	Vinyl	None Detected
B200896B	Mastic	Homogeneous White Non-fibrous Bound			100%	Mastic	None Detected

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			Fibrous	Non-Fibrous	
MHA-62A B200897A	Floor Tile	Heterogeneous		63% Vinyl	2% Chrysotile
		Beige,Brown		20% Binder	
		Non-fibrous		15% Calc Carb	
		Bound			
B200897B	Mastic	Heterogeneous		97% Tar	3% Chrysotile
		Black			
		Non-fibrous			
		Bound			
MHA-62B B200898A	Floor Tile	Heterogeneous		63% Vinyl	2% Chrysotile
		Beige,Brown		20% Binder	
		Non-fibrous		15% Calc Carb	
		Bound			
B200898B	Mastic	Heterogeneous		97% Tar	3% Chrysotile
		Black			
		Non-fibrous			
		Bound			
MHA-62C B200899A	Floor Tile	Heterogeneous		63% Vinyl	2% Chrysotile
		Beige,Brown		20% Binder	
		Non-fibrous		15% Calc Carb	
		Bound			
B200899B	Mastic	Heterogeneous		97% Tar	3% Chrysotile
		Black			
		Non-fibrous			
		Bound			
MHA-62D B200900A	Floor Tile	Heterogeneous		63% Vinyl	2% Chrysotile
		Beige,Brown		20% Binder	
		Non-fibrous		15% Calc Carb	
		Bound			

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

Lab Code: B2112560
Date Received: 12-02-21
Date Analyzed: 12-02-21
Date Reported: 12-02-21

Project: MHA 700 Adams, 251214.00

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS		ASBESTOS %
			Fibrous	Non-Fibrous	
B200900B	Mastic	Heterogeneous Black Non-fibrous Bound		97% Tar	3% Chrysotile
MHA-62E B200901A	Floor Tile	Heterogeneous Beige,Brown Non-fibrous Bound		63% Vinyl 20% Binder 15% Calc Carb	2% Chrysotile
B200901B	Mastic	Heterogeneous Black Non-fibrous Bound		97% Tar	3% Chrysotile
MHA-63A B200902A	Carpet	Heterogeneous Red Fibrous Bound	90%	Synthetic Fiber 10% Binder	None Detected
B200902B	Mastic	Heterogeneous Yellow Non-fibrous Bound		100% Mastic	None Detected
MHA-63B B200903A	Carpet	Heterogeneous Red Fibrous Bound	90%	Synthetic Fiber 10% Binder	None Detected
B200903B	Mastic	Heterogeneous Yellow Non-fibrous Bound		100% Mastic	None Detected

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
MHA-63C B200904A	Carpet	Heterogeneous Red Fibrous Bound	90%	Synthetic Fiber	10%	Binder	None Detected
B200904B	Mastic	Heterogeneous Yellow Non-fibrous Bound			100%	Mastic	None Detected
MHA-64A B200905A	Floor Tile	Heterogeneous White,Blue Non-fibrous Bound			65% 20% 15%	Vinyl Binder Calc Carb	None Detected
B200905B	Mastic	Heterogeneous Black Non-fibrous Bound			97%	Tar	3% Chrysotile
MHA-64B B200906A	Floor Tile	Heterogeneous White,Blue Non-fibrous Bound			65% 20% 15%	Vinyl Binder Calc Carb	None Detected
B200906B	Mastic	Heterogeneous Black Non-fibrous Bound			97%	Tar	3% Chrysotile
MHA-64C B200907A	Floor Tile	Heterogeneous White,Blue Non-fibrous Bound			65% 20% 15%	Vinyl Binder Calc Carb	None Detected

ASBESTOS BULK ANALYSIS

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS		ASBESTOS %
			Fibrous	Non-Fibrous	
Layer 1 B200907B	Mastic	Heterogeneous Yellow Non-fibrous Bound	100%	Mastic	None Detected
Layer 2 B200907B	Mud	Heterogeneous White Non-fibrous Bound	80% 20%	Binder Calc Carb	None Detected
MHA-65A B200908A	Floor Tile	Homogeneous Beige Non-fibrous Tightly Bound	100%	Binder	None Detected
Layer 1 B200908B	Mastic	Heterogeneous Off-white Non-fibrous Bound	100%	Mastic	None Detected
Layer 2 B200908B	Grout	Heterogeneous Gray Non-fibrous Bound	90% 10%	Binder Silicates	None Detected
Layer 3 B200908B	Mastic	Heterogeneous Black Fibrous Bound	95%	Tar	5% Chrysotile
MHA-65B B200909A	Floor Tile	Homogeneous Beige Non-fibrous Tightly Bound	100%	Binder	None Detected

ASBESTOS BULK ANALYSIS

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS		ASBESTOS %
			Fibrous	Non-Fibrous	
Layer 1 B200909B	Mastic	Heterogeneous Off-white Non-fibrous Bound	100%	Mastic	None Detected
Layer 2 B200909B	Grout	Heterogeneous Gray Non-fibrous Bound	90% 10%	Binder Silicates	None Detected
Layer 3 B200909B	Mastic	Heterogeneous Black Fibrous Bound	95%	Tar	5% Chrysotile
MHA-65C B200910A	Floor Tile	Homogeneous Beige Non-fibrous Tightly Bound	100%	Binder	None Detected
Layer 1 B200910B	Mastic	Heterogeneous Off-white Non-fibrous Bound	100%	Mastic	None Detected
Layer 2 B200910B	Grout	Heterogeneous Gray Non-fibrous Bound	90% 10%	Binder Silicates	None Detected
Layer 3 B200910B	Mastic	Heterogeneous Black Fibrous Bound	95%	Tar	5% Chrysotile

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS		ASBESTOS %
			Fibrous	Non-Fibrous	
MHA-66A B200911	Aluminum Window Caulk	Heterogeneous		60% Binder	2% Chrysotile
		Gray		23% Caulk	
		Non-fibrous		15% Calc Carb	
		Bound			
MHA-66B B200912	Aluminum Window Caulk	Heterogeneous		60% Binder	2% Chrysotile
		Gray		23% Caulk	
		Non-fibrous		15% Calc Carb	
		Bound			
MHA-66C B200913	Aluminum Window Caulk	Heterogeneous		60% Binder	2% Chrysotile
		Gray		23% Caulk	
		Non-fibrous		15% Calc Carb	
		Bound			
MHA-67A B200914A	Carpet	Heterogeneous	90%	Synthetic Fiber 10%	None Detected
		Brown			
		Fibrous			
		Bound			
B200914B	Mastic	Heterogeneous		100% Mastic	None Detected
		White			
		Non-fibrous			
		Bound			
MHA-67B B200915A	Carpet	Heterogeneous	90%	Synthetic Fiber 10%	None Detected
		Brown			
		Fibrous			
		Bound			
B200915B	Mastic	Heterogeneous		100% Mastic	None Detected
		White			
		Non-fibrous			
		Bound			

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous	Non-Fibrous			
MHA-67C B200916A	Carpet	Heterogeneous Brown Fibrous Bound	90%	Synthetic Fiber	10%	Binder	None Detected
B200916B	Mastic	Heterogeneous White Non-fibrous Bound		100%	Mastic		None Detected
MHA-68A B200917A	Base Cove	Homogeneous Tan Non-fibrous Bound		100%	Vinyl		None Detected
B200917B	Mastic	Homogeneous Yellow Non-fibrous Bound		100%	Mastic		None Detected
Lab Notes: Samples B200917-B200958 analyzed by Greg Ruff							
MHA-68B B200918A	Base Cove	Homogeneous Tan Non-fibrous Bound		100%	Vinyl		None Detected
B200918B	Mastic	Homogeneous Yellow Non-fibrous Bound		100%	Mastic		None Detected
MHA-68C B200919A	Base Cove	Homogeneous Tan Non-fibrous Bound		100%	Vinyl		None Detected

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Project: MHA 700 Adams, 251214.00

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
B200919B	Mastic	Homogeneous Yellow Non-fibrous Bound			100%	Mastic	None Detected
MHA-69A B200920A	Carpet	Heterogeneous Blue Fibrous Loosely Bound	90%	Synthetic Fiber	10%	Binder	None Detected
B200920B	Mastic	Homogeneous Beige Fibrous Bound	5%	Cellulose	95%	Mastic	None Detected
MHA-69B B200921A	Carpet	Heterogeneous Blue Fibrous Loosely Bound	90%	Synthetic Fiber	10%	Binder	None Detected
B200921B	Mastic	Homogeneous Beige Fibrous Bound	5%	Cellulose	95%	Mastic	None Detected
MHA-69C B200922A	Carpet	Heterogeneous Blue Fibrous Loosely Bound	90%	Synthetic Fiber	10%	Binder	None Detected
B200922B	Mastic	Homogeneous Beige Fibrous Bound	5%	Cellulose	95%	Mastic	None Detected

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS		ASBESTOS %
			Fibrous	Non-Fibrous	
MHA-70A B200923	Grout	Homogeneous	50%	Binder	None Detected
		White	50%	Calc Carb	
		Non-fibrous			
		Bound			
Lab Notes: No ceramic tile present					
MHA-70B B200924	Grout	Homogeneous	50%	Binder	None Detected
		White	50%	Calc Carb	
		Non-fibrous			
		Bound			
Lab Notes: No ceramic tile present					
MHA-70C B200925	Grout	Homogeneous	50%	Binder	None Detected
		White	50%	Calc Carb	
		Non-fibrous			
		Bound			
Lab Notes: No ceramic tile present					
MHA-71A B200926	Grout	Homogeneous	50%	Binder	None Detected
		White	50%	Calc Carb	
		Non-fibrous			
		Bound			
Lab Notes: No ceramic tile present					
MHA-71B B200927	Grout	Homogeneous	50%	Binder	None Detected
		White	50%	Calc Carb	
		Non-fibrous			
		Bound			
Lab Notes: No ceramic tile present					
MHA-71C B200928	Grout	Homogeneous	50%	Binder	None Detected
		White	50%	Calc Carb	
		Non-fibrous			
		Bound			
Lab Notes: No ceramic tile present					

ASBESTOS BULK ANALYSIS

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
MHA-72A B200929A	Floor Tile	Homogeneous			80%	Vinyl	None Detected
		Mauve Non-fibrous Bound			20%	Calc Carb	
B200929B	Mastic	Homogeneous Black Fibrous Bound			95%	Mastic	5% Chrysotile
MHA-72B B200930A	Floor Tile	Homogeneous			80%	Vinyl	None Detected
		Mauve Non-fibrous Bound			20%	Calc Carb	
B200930B	Mastic	Homogeneous Black Fibrous Bound			95%	Mastic	5% Chrysotile
MHA-72C B200931A	Floor Tile	Homogeneous			80%	Vinyl	None Detected
		Mauve Non-fibrous Bound			20%	Calc Carb	
B200931B	Mastic	Homogeneous Black Fibrous Bound			95%	Mastic	5% Chrysotile
MHA-73 B200932	Tsi Pipe Run	Heterogeneous	85%	Fiberglass	5%	Metal Foil	None Detected
		Yellow Fibrous Loosely Bound	5%	Cellulose	5%	Binder	

ASBESTOS BULK ANALYSIS

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Project: MHA 700 Adams, 251214.00

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
MHA-74 B200933	Tsi Elbow	Heterogeneous	15%	Fiberglass	80%	Binder	None Detected
		White	5%	Cellulose			
		Fibrous					
		Bound					
MHA-75 B200934	Tsi Elbow	Heterogeneous	15%	Fiberglass	80%	Binder	None Detected
		White	5%	Cellulose			
		Fibrous					
		Bound					
MHA-76 B200935	Tsi Elbow	Heterogeneous	15%	Fiberglass	80%	Binder	None Detected
		White	5%	Cellulose			
		Fibrous					
		Bound					
MHA-77A B200936	Hvac Flashing/ Caulk	Homogeneous			100%	Caulk	None Detected
		Gray					
		Non-fibrous					
		Bound					
MHA-77B B200937	Hvac Flashing/ Caulk	Homogeneous			100%	Caulk	None Detected
		Gray					
		Non-fibrous					
		Bound					
MHA-77C B200938	Hvac Flashing/ Caulk	Homogeneous			100%	Caulk	None Detected
		Gray					
		Non-fibrous					
		Bound					
MHA-78A B200939A	Carpet	Heterogeneous	90%	Synthetic Fiber	10%	Binder	None Detected
		Blue					
		Fibrous					
		Loosely Bound					

ASBESTOS BULK ANALYSIS

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS			ASBESTOS %
			Fibrous	Non-Fibrous		
B200939B	Mastic	Homogeneous Beige Fibrous Bound	5%	Synthetic Fiber 95%	Mastic	None Detected
MHA-78B B200940A	Carpet	Heterogeneous Blue Fibrous Loosely Bound	90%	Synthetic Fiber 10%	Binder	None Detected
B200940B	Mastic	Homogeneous Beige Fibrous Bound	5%	Synthetic Fiber 95%	Mastic	None Detected
MHA-78C B200941A	Carpet	Heterogeneous Blue Fibrous Loosely Bound	90%	Synthetic Fiber 10%	Binder	None Detected
B200941B	Mastic	Homogeneous Beige Fibrous Bound	5%	Synthetic Fiber 95%	Mastic	None Detected
MHA-79A B200942A	Carpet	Heterogeneous Tan Fibrous Loosely Bound	90%	Synthetic Fiber 10%	Binder	None Detected
B200942B	Mastic	Homogeneous Gray Fibrous Bound	5%	Synthetic Fiber 95%	Mastic	None Detected

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
MHA-79B B200943A	Carpet	Heterogeneous Tan Fibrous Loosely Bound	90%	Synthetic Fiber	10%	Binder	None Detected
B200943B	Mastic	Homogeneous Gray Fibrous Bound	5%	Synthetic Fiber	95%	Mastic	None Detected
MHA-79C B200944A	Carpet	Heterogeneous Tan Fibrous Loosely Bound	90%	Synthetic Fiber	10%	Binder	None Detected
B200944B	Mastic	Homogeneous Gray Fibrous Bound	5%	Synthetic Fiber	95%	Mastic	None Detected
MHA-80A B200945A	Base Cove	Homogeneous Off-white Non-fibrous Bound			100%	Vinyl	None Detected
B200945B	Mastic	Homogeneous White Non-fibrous Bound			100%	Mastic	None Detected
MHA-80B B200946A	Base Cove	Homogeneous Off-white Non-fibrous Bound			100%	Vinyl	None Detected

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS			ASBESTOS %
			Fibrous		Non-Fibrous	
B200946B	Mastic	Homogeneous Tan Non-fibrous Bound		100%	Mastic	None Detected
MHA-80C B200947A	Base Cove	Homogeneous Off-white Non-fibrous Bound		100%	Vinyl	None Detected
B200947B	Mastic	Homogeneous Tan Non-fibrous Bound		100%	Mastic	None Detected
MHA-81A B200948	Drywall/Joint Compound	Heterogeneous White, Off-white Fibrous Bound	10%	Cellulose	5% 10% 75%	Paint Calc Carb Gypsum
Lab Notes: 2% chrysotile found in joint compound only, <1% overall						
MHA-81B B200949	Drywall/Joint Compound	Heterogeneous White, Off-white Fibrous Bound	10%	Cellulose	5% 10% 75%	Paint Calc Carb Gypsum
Lab Notes: 2% chrysotile found in joint compound only, <1% overall						
MHA-81C B200950	Drywall/Joint Compound	Heterogeneous White, Off-white Fibrous Bound	10%	Cellulose	5% 10% 75%	Paint Calc Carb Gypsum
Lab Notes: 2% chrysotile found in joint compound only, <1% overall						

ASBESTOS BULK ANALYSIS

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
MHA-81D B200951	Drywall/Joint Compound	Heterogeneous	10%	Cellulose	5%	Paint	<1% Chrysotile
		White, Off-white			10%	Calc Carb	
		Fibrous			75%	Gypsum	
		Bound					
Lab Notes: 2% chrysotile found in joint compound only, <1% overall							
MHA-81E B200952	Drywall/Joint Compound	Heterogeneous	10%	Cellulose	5%	Paint	<1% Chrysotile
		White, Off-white			10%	Calc Carb	
		Fibrous			75%	Gypsum	
		Bound					
Lab Notes: 2% chrysotile found in joint compound only, <1% overall							
MHA-82A B200953	Stair Tread	Homogeneous			100%	Vinyl	None Detected
		Brown					
		Non-fibrous					
		Bound					
Lab Notes: No mastic present							
MHA-82B B200954A	Stair Tread	Homogeneous			100%	Vinyl	None Detected
		Brown					
		Non-fibrous					
		Bound					
B200954B	Mastic	Homogeneous			100%	Mastic	None Detected
		Yellow					
		Non-fibrous					
		Bound					
MHA-82C B200955	Stair Tread	Homogeneous			100%	Binder	None Detected
		Green					
		Non-fibrous					
		Bound					
Lab Notes: No mastic present							

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS		ASBESTOS %
			Fibrous	Non-Fibrous	
MHA-83A B200956A	Stair Tread	Homogeneous Gray Non-fibrous Bound		100% Vinyl	None Detected
B200956B	Mastic	Homogeneous Yellow Non-fibrous Bound		100% Mastic	None Detected
MHA-83B B200957A	Stair Tread	Homogeneous Gray Non-fibrous Bound		100% Vinyl	None Detected
B200957B	Mastic	Homogeneous Yellow Non-fibrous Bound		100% Mastic	None Detected
MHA-83C B200958A	Stair Tread	Homogeneous Gray Non-fibrous Bound		100% Vinyl	None Detected
B200958B	Mastic	Homogeneous Yellow Non-fibrous Bound		100% Mastic	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.*

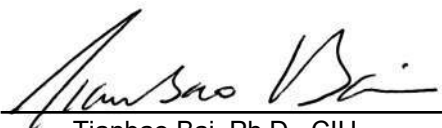
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Information provided by customer includes customer sample ID and sample description.

ANALYST:


 Ryan Steele

APPROVED BY:


 Tianbao Bai, Ph.D., CIH
 Laboratory Director





CEI

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

CHAIN OF CUSTODY

B2112560
B200802-B200958

(157)

LAB USE ONLY:

CEI Lab Code:

CEI Lab I.D. Range:

COMPANY INFORMATION		PROJECT INFORMATION	
CEI CLIENT #:		Job Contact:	Joe Littlefield
Company:	Tiga Environmental	Email / Tel:	j.littlefield@tigaenv.com
Address:	357 N. Main Street	Project Name:	MHA 700 Adams
	Memphis TN 38103	Project ID#:	251214.00
Email:	j.littlefield@tigaenv.com	PO #:	
Tel:	901-791-2432	STATE SAMPLES COLLECTED IN:	TN

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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 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"/>

*Blanks should be taken from the same sample lot as field samples.

REMARKS / SPECIAL INSTRUCTIONS:

Analyzer Drywall and Joint compound as composite sample

- ☐ Accept Samples
☐ Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
		JB	12/2 11:00

Samples will be disposed of 30 days after analysis

Page 1 of 7

Version: CCOC.01.18.1/2.LD

COMPANY CONTACT INFORMATION

Company: <u>Tioga Environmental</u>	Job Contact: <u>Joe Littlefield</u>
Project Name: <u>MHA 700 Adams</u>	<u>j.littlefield@tiogaenv.com</u>
Project ID #: <u>251209.00 251214.00</u>	Tel: <u>901-791-2432</u>

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME / AREA	TEST	
MHA-24 A	White ceramic tile grout		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	with white and black tile		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-25 A	Black floor grout with		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	white and grey 3/4" tile		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-26 A	Black floor grout with		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	grey 1" tile		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-27 A	White wall grout with		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	olive tile		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-28 A	Black floor grout with		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	1/2" brown tiles		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-29 A	White wall tile grout with		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	grey tile		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-33	6" TSI Pipe insulation white		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-34	6" TSI Pink pipe insulation		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-35	6" TSI white pipe insulation		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-36	8" TSI white pipe insulation		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-37	10" TSI Pink pipe insulation		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-38 A	2'x4' white fissure		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	with penhole ceiling tile		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		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"/>

COMPANY CONTACT INFORMATION

Company: Tioga Environmental

Job Contact: Joe Littlefield

Project Name: MHA 700 Adams

j.littlefield@tiogaenv.com

Project ID #: ~~251214.00~~ 251214.00

Tel: 901-791-2432

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME / AREA	TEST	
MHA-39 A	2'x4' White Fissure with		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	penhole #2 ceiling tile		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-40 A	12"x12" Grey Floor Tile		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-41 A	Black Base Cove		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-42 A	Beige Base Cove		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-43 A	Dry wall and joint compound		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-44 A	Green Carpet		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-45 A	Interior Window Caulk		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	office #'s 160/168		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-46 A	Grey 4" Base Cove		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-47 A	Light Blue Base Cove		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>

COMPANY CONTACT INFORMATION

Company: <u>Tiega Environmental</u>	Job Contact: <u>Joe Littlefield</u>
Project Name: <u>MHA 700 Adams</u>	<u>j.littlefield@tiegaenv.com</u>
Project ID #: <u>251214.00 251214.00</u>	Tel: <u>901-791-2432</u>

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME / AREA	TEST	
MHA-48 A	Navy Blue Base Core		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-49 A	Black Base Core		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-50 A	light Brown Base Core		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-51 A	5 3/4" Brown Base Core		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-52 A	12" x 12" Acoustic Ceiling tile		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-53 A	2' x 4' Fissure with Penhole ceiling tile		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-54 A	4" White Base Core		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-55 A	Green Carpet		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-56 A	6" Beige Ceramic tile Grout		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>

COMPANY CONTACT INFORMATION

Company: Tioga Environmental

Job Contact: Joe Littlefield

Project Name: MHA 700 Adams

j.littlefield@tiogaenv.com

Project ID #: ~~251214.00~~ 251214.00

Tel: 901-791-2432

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME / AREA	TEST	
MHA - 57 A	1"x1" Floor tile Grout		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA - 58 A	12"x12" Grey Speck Floor tile		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA - 59 A	4" Dark Tan Base Cove		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA - 60 A	2"x4" Fissure Ceiling Tile		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA - 61 A	4" Black Base Cove		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA - 62 A	12"x12" Beige Floor tile with Brown specks		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA - 63 A	Red Carpet		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA - 64 A	12"x12" white Floor tile with Blue Streaks		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA - 65 A	1"x1" Beige Floor tile grout		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>

62D
62E

COMPANY CONTACT INFORMATION

Company: <u>Tioga Environmental</u>	Job Contact: <u>Joe Littlefield</u>
Project Name: <u>MHA 700 Adams</u>	<u>j.littlefield@tiogaenv.com</u>
Project ID #: <u>251214.00 251214.00</u>	Tel: <u>901-791-2432</u>

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME / AREA	TEST	
MHA-66 A	Aluminum Window Caulk		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-67 A	Tan Carpet		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-68 A	6" Tan Base Core		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-69 A	Blue Carpet		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-70 A	Olive ceramic wall tile with white grout		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-71 A	Yellow ceramic wall tile with white grout		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-72 A	MAUVE 12"x12" Floor Tile		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-73	TSI Pipe Run 6"		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-74	TSI Elbow - mech. 2 nd floor		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-75	TSI Elbow - mech. 2 nd floor		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-76	TSI Elbow - Boiler 2 nd floor		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-77 A	HVAC Flashing /Caulk		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>

COMPANY CONTACT INFORMATION

Company: <u>Tioga Environmental</u>	Job Contact: <u>Joe Littlefield</u>
Project Name: <u>MHA 700 Adams</u>	<u>jlittlefield@tiogaenv.com</u>
Project ID #: <u>251214.00 251214.00</u>	Tel: <u>901-791-2432</u>

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME / AREA	TEST	
MHA-78 A	Blue Carpet		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-79 A	Tan High Pile Carpet		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-80 A	off-white Base Cove		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-81 A	Dry wall and Joint Compound		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ D			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ E			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-82 A	Brown Stair tread (south)		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-83 A	Grey Stair tread (north)		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B			PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C			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"/>
			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"/>

Carrier, Danielle

From: Joe Littlefield <jlittlefield@tiogaenv.com>
Sent: Thursday, December 02, 2021 1:09 PM
To: Carrier, Danielle
Subject: Re: MHA 700 Adams - COC

EXTERNAL EMAIL*

Yes pleas add those to the COC

Sent from my Verizon, Samsung Galaxy smartphone
Get [Outlook for Android](#)

From: Carrier, Danielle <Danielle.Carrier@eurofinset.com>
Sent: Thursday, December 2, 2021 11:31:56 AM
To: Joe Littlefield <jlittlefield@tiogaenv.com>
Subject: MHA 700 Adams - COC

Joe,

Per our phone conversation, I will change the TAT on your 155 sample 4-hour PLM project to an 8-hour same-day turn.

Please confirm at your convenience.

Also, we do have two extra samples, 62D & 62E. Should we add those to the COC and analyze?

Best,

Dani Carrier
Client Account Manager
Senior PLM Analyst



Eurofins Built Environment CEI
730 SE Maynard Rd
Cary, NC 27511
USA

Cell: +1 (919)-239-0668
Phone: +1 919-481-1413
Fax: +1 919-481-1442

E-mail: Danielle.Carrier@EurofinsET.com
www.EurofinsUS.com/CEI

December 7, 2021

Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

CLIENT PROJECT: MHA 700 Adams, 251214.00 (Point Count)
CEI LAB CODE: B2112560A

Dear Customer:

Enclosed are asbestos analysis results for PLM bulk samples received at our laboratory on December 6, 2021. The samples were analyzed for asbestos using polarized light microscopy (PLM) point count per the EPA 600 Method.

Sample results containing > 1% asbestos are considered asbestos-containing materials (ACMs) per the EPA regulatory requirements. The detection limit for the EPA 600 method is 0.25% for 400 point counts, or 0.1% for 1,000 point counts.

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

Kind Regards,



Tianbao Bai, Ph.D., CIH
Laboratory Director



ASBESTOS ANALYTICAL REPORT

By: Polarized Light Microscopy

Prepared for

Tioga Environmental Consultants

CLIENT PROJECT: MHA 700 Adams, 251214.00 (Point Count)

LAB CODE: B2112560A

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

REPORT DATE: 12/07/21



CEI

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

Lab Code: B2112560A
Date Received: 12-06-21
Date Analyzed: 12-06-21
Date Reported: 12-07-21

Project: MHA 700 Adams, 251214.00 (Point Count)

ASBESTOS POINT COUNT PLM, EPA 600 METHOD

Client ID	Lab ID	Material Description	POINTS		ASBESTOS	
			Total	Asbestos	%	
MHA-81A	B200948	Joint Compound	400	6	1.5%	Chrysotile
	B200948	Drywall/Joint Compound (Composite Result from Point Count)			0.15%	Chrysotile
Joint compound comprises 10% of overall sample						
MHA-81B	B200949	Joint Compound	400	8	2.0%	Chrysotile
	B200949	Drywall/Joint Compound (Composite Result from Point Count)			0.20%	Chrysotile
Joint compound comprises 10% of overall sample						
MHA-81C	B200950	Joint Compound	400	8	2.0%	Chrysotile
	B200950	Drywall/Joint Compound (Composite Result from Point Count)			0.20%	Chrysotile
Joint compound comprises 10% of overall sample						
MHA-81D	B200951	Joint Compound	400	6	1.5%	Chrysotile
	B200951	Drywall/Joint Compound (Composite Result from Point Count)			0.15%	Chrysotile
Joint compound comprises 10% of overall sample						
MHA-81E	B200952	Joint Compound	400	7	1.8%	Chrysotile
	B200952	Drywall/Joint Compound (Composite Result from Point Count)			0.18%	Chrysotile
Joint compound comprises 10% of overall sample						

LEGEND: None

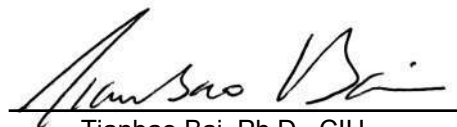
METHOD: EPA 600 / M4 / 82 / 020 (40 CFR Part 763, Sub. E, App. E)

REPORTING LIMIT: 0.25% by 400 points or 0.1% by 1,000 points

REGULATORY LIMIT: >1% by weight

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. *Estimated measurement of uncertainty is available on request.* 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, location, volume and area as well as date and time of sampling.

ANALYST:
Greg Ruff**APPROVED BY:**
Tianbao Bai, Ph.D., CIH
Laboratory Director

RS GR

Bunting, Connor

From: Joe Littlefield <jlittlefield@tiogaenv.com>
Sent: Monday, December 06, 2021 9:14 AM
To: CEI - Reporting
Subject: RE: Laboratory Report for MHA 700 Adams, 251214.00 (B2112560)

Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL EMAIL*

1-Day

Please run a Point Count 400 on the following samples. Standard Tat Please MHA-81A, B, C, D, E

Thanks

Joe Littlefield
Program Manager
Tioga Environmental Consultants, Inc.
357 North Main Street
Memphis, TN 38103
Phone: 901.791.2432 Fax: 901.791.2442
Cell: 901.299.5252 Email: jlittlefield@tiogaenv.com
Web: http://secure-web.cisco.com/1-B1sJSpsb873nxscU90cBJJnj8ZsrCaF90xh_yWVclRiv-rR18r7TJxPP-SBJW5__ybkXq7tzbXg8FlbgT3m7gn9AlhusxHugU15asUrm9AXKLiwyoSMmhxYzVDfZsdBv14BBKbS8DliffXvZvbcavc6CGP86GYCW6ffilW8AbuwPevhBNDu5L3sgPwYyZPwzopH6CUw5nJ-gDzR4iUPPz_nltwqAZv1-De0TND7XUi9Fop8UKp3uu0PGn5WVkpIFrFnCnUgnoXsnC8X7ffjKu7O08sw7mLa6akY05XGggBf0n-86lZyj6VzElhJ6q/http%3A%2F%2Fwww.tiogaenv.com
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-----Original Message-----

From: cei@mg.eurofinset.com <cei@mg.eurofinset.com>
Sent: Thursday, December 2, 2021 4:30 PM
To: Maggie Strom <mstrom@tiogaenv.com>; Aaron Bennett <abennett@tioganenv.onmicrosoft.com>; Joe Littlefield <jlittlefield@tiogaenv.com>
Subject: Laboratory Report for MHA 700 Adams, 251214.00 (B2112560)

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

December 6, 2021

Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

CLIENT PROJECT: MHA 700 Adams, 251214.00
CEI LAB CODE: B2112651

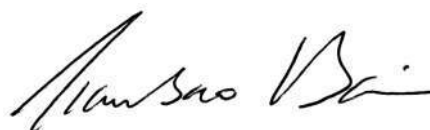
Dear Customer:

Enclosed are asbestos analysis results for PLM Bulk samples received at our laboratory on December 3, 2021. 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

ASBESTOS ANALYTICAL REPORT

By: Polarized Light Microscopy

Prepared for

Tioga Environmental Consultants

CLIENT PROJECT: MHA 700 Adams, 251214.00

LAB CODE: B2112651

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

REPORT DATE: 12/06/21

TOTAL SAMPLES ANALYZED: 27

SAMPLES >1% ASBESTOS:

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: MHA 700 Adams, 251214.00

LAB CODE: B2112651

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
MHA-84A		B201999	Black	Roof Tar	None Detected
MHA-84B		B202000	Black	Roof Tar	None Detected
MHA-84C		B202001	Black	Roof Tar	None Detected
MHA-85A		B202002	White	Roof Flashing	None Detected
MHA-85B		B202003	White	Roof Flashing	None Detected
MHA-85C		B202004	White	Roof Flashing	None Detected
MHA-86A		B202005	White	Roof Flashing	None Detected
MHA-86B		B202006	White	Roof Flashing	None Detected
MHA-86C		B202007	White	Roof Flashing	None Detected
MHA-87A		B202008	White	Caulking	None Detected
MHA-87B		B202009	White	Caulking	None Detected
MHA-87C		B202010	White	Caulking	None Detected
MHA-88A		B202011	White	Caulking	None Detected
MHA-88B		B202012	White	Caulking	None Detected
MHA-88C		B202013	White	Caulking	None Detected
MHA-89A		B202014	Black,Gray	Caulking	None Detected
MHA-89B		B202015	Black,Gray	Caulking	None Detected
MHA-89C		B202016	Black,Gray	Caulking	None Detected
MHA-90A		B202017	Black	Coating	None Detected
MHA-90B		B202018	Black	Coating	None Detected
MHA-90C		B202019	Black	Coating	None Detected
MHA-91A		B202020	White	Plaster	None Detected
MHA-91B		B202021	White	Plaster	None Detected
MHA-91C		B202022	White	Plaster	None Detected
MHA-92A		B202023	Brown	Glue	None Detected
MHA-92B		B202024	Brown	Glue	None Detected
MHA-92C		B202025	Brown	Glue	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

Lab Code: B2112651
Date Received: 12-03-21
Date Analyzed: 12-06-21
Date Reported: 12-06-21

Project: MHA 700 Adams, 251214.00

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
MHA-84A B201999	Roof Tar	Homogeneous Black Non-fibrous Bound			100%	Tar	None Detected
MHA-84B B202000	Roof Tar	Homogeneous Black Non-fibrous Bound			100%	Tar	None Detected
MHA-84C B202001	Roof Tar	Homogeneous Black Fibrous Bound	10%	Cellulose	90%	Tar	None Detected
MHA-85A B202002	Roof Flashing	Heterogeneous White Non-fibrous Bound			100% <1%	Caulk Paint	None Detected
MHA-85B B202003	Roof Flashing	Heterogeneous White Non-fibrous Bound			100% <1%	Caulk Paint	None Detected
MHA-85C B202004	Roof Flashing	Heterogeneous White Non-fibrous Bound			100% <1%	Caulk Paint	None Detected
MHA-86A B202005	Roof Flashing	Heterogeneous White Non-fibrous Bound			100% <1%	Caulk Paint	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

Lab Code: B2112651
Date Received: 12-03-21
Date Analyzed: 12-06-21
Date Reported: 12-06-21

Project: MHA 700 Adams, 251214.00

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS		ASBESTOS %
			Fibrous	Non-Fibrous	
MHA-86B B202006	Roof Flashing	Heterogeneous White Non-fibrous Bound	100% <1%	Caulk Paint	None Detected
MHA-86C B202007	Roof Flashing	Heterogeneous White Non-fibrous Bound	100% <1%	Caulk Paint	None Detected
MHA-87A B202008	Caulking	Heterogeneous White Non-fibrous Bound	100% <1%	Caulk Paint	None Detected
MHA-87B B202009	Caulking	Heterogeneous White Non-fibrous Bound	100% <1%	Caulk Paint	None Detected
MHA-87C B202010	Caulking	Heterogeneous White Non-fibrous Bound	100% <1%	Caulk Paint	None Detected
MHA-88A B202011	Caulking	Heterogeneous White Non-fibrous Bound	100% <1%	Caulk Paint	None Detected
MHA-88B B202012	Caulking	Heterogeneous White Non-fibrous Bound	100% <1%	Caulk Paint	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

Lab Code: B2112651
Date Received: 12-03-21
Date Analyzed: 12-06-21
Date Reported: 12-06-21

Project: MHA 700 Adams, 251214.00

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
MHA-88C B202013	Caulking	Heterogeneous White Non-fibrous Bound			100% <1%	Caulk Paint	None Detected
MHA-89A B202014	Caulking	Homogeneous Black,Gray Non-fibrous Bound			100%	Caulk	None Detected
MHA-89B B202015	Caulking	Homogeneous Black,Gray Non-fibrous Bound			100%	Caulk	None Detected
MHA-89C B202016	Caulking	Homogeneous Black,Gray Non-fibrous Bound			100%	Caulk	None Detected
MHA-90A B202017	Coating	Heterogeneous Black Fibrous Bound	35%	Fiberglass	60% 5%	Tar Binder	None Detected
MHA-90B B202018	Coating	Heterogeneous Black Fibrous Bound	35%	Fiberglass	60% 5%	Tar Binder	None Detected
MHA-90C B202019	Coating	Heterogeneous Black Fibrous Bound	35%	Fiberglass	60% 5%	Tar Binder	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Tioga Environmental Consultants
357 North Main Street
Memphis, TN 38103

Lab Code: B2112651
Date Received: 12-03-21
Date Analyzed: 12-06-21
Date Reported: 12-06-21

Project: MHA 700 Adams, 251214.00

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
MHA-91A B202020	Plaster	Homogeneous White Non-fibrous Bound	<1%	Cellulose	60% 40%	Silicates Binder	None Detected
MHA-91B B202021	Plaster	Homogeneous White Non-fibrous Bound	<1%	Cellulose	60% 40%	Silicates Binder	None Detected
MHA-91C B202022	Plaster	Homogeneous White Non-fibrous Bound	<1%	Cellulose	60% 40%	Silicates Binder	None Detected
MHA-92A B202023	Glue	Homogeneous Brown Non-fibrous Bound	<1%	Cellulose	100%	Mastic	None Detected
MHA-92B B202024	Glue	Homogeneous Brown Non-fibrous Bound	<1%	Cellulose	100%	Mastic	None Detected
MHA-92C B202025	Glue	Homogeneous Brown Non-fibrous Bound	<1%	Cellulose	100%	Mastic	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.*

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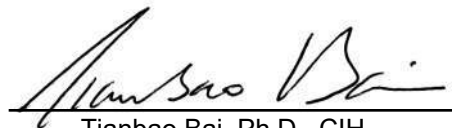
Information provided by customer includes customer sample ID and sample description.

ANALYST:



Kathryn Wescott

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:

B2112651

CEI Lab I.D. Range:

B201999-B202025

(27)

COMPANY INFORMATION		PROJECT INFORMATION	
CEI CLIENT #:		Job Contact:	Joe Littlefield
Company:	Tioga Environmental	Email / Tel:	j.littlefield@tiogaenv.com
Address:	357 N. Main Street	Project Name:	MHA 700 Adams
	Memphis TN 38103	Project ID#:	251214.00
Email:	j.littlefield@tiogaenv.com	PO #:	
Tel:	901-791-2432	STATE SAMPLES COLLECTED IN:	TN

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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 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"/>

*Blanks should be taken from the same sample lot as field samples.

REMARKS / SPECIAL INSTRUCTIONS:

JB

Accept Samples

☐

Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
<i>[Signature]</i>	12/2/21/1800	JB	12/3 10:50

Samples will be disposed of 30 days after analysis

Page 1 of 2

Version: CCOC.01.18.1/2.LD

COMPANY CONTACT INFORMATION

Company: Tioga Environmental

Job Contact: Joe Littlefield

Project Name: MHA 700 Adams

j.littlefield@tiogaenv.com

Project ID #: ~~251209.00~~ 251214.00

Tel: 901-791-2432

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
MHA-84 A	Root Tar		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-85 A	White Roof Flashing		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-86 A	Old White Roof Flashing		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-87 A	White Roof Caulk (Perimeter)		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-88 A	White HVAC Caulk		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-89 A	Black HVAC Caulk		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-90 A	HVAC Condensate Coating		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	2nd Floor Ceiling		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-91 A	Ceiling Plaster		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
MHA-92 A	Ceiling Tile Glue Dots		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ B	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
↓ C	↓		PLM <input checked="" type="checkbox"/>	TEM <input type="checkbox"/>
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>

Appendix 5
Lead Based Paint XRF Data

Job Id	Reading #	Concentration	Units	Result	Calibration Reading	Action Level	Date	Time	User	Mode	Analytic Mode	Component	Feature	Substrate	Color	Side	Condition	Room
700 Adams	2635	1	mg/cm2		TRUE	1	11/30/2021	16:41:49	King	Action Level	Lead Paint							
700 Adams	2636	1.1	mg/cm2		TRUE	1	11/30/2021	16:42:08	King	Action Level	Lead Paint							
700 Adams	2637	0.9	mg/cm2		TRUE	1	11/30/2021	16:42:26	King	Action Level	Lead Paint							
700 Adams	2638	-0.2	mg/cm2		TRUE	1	11/30/2021	16:42:49	King	Action Level	Lead Paint							
700 Adams	2639	-0.1	mg/cm2		TRUE	1	11/30/2021	16:42:58	King	Action Level	Lead Paint							
700 Adams	2640	-0.2	mg/cm2		TRUE	1	11/30/2021	16:43:07	King	Action Level	Lead Paint							
700 Adams	2641	0.5	mg/cm2	Negative	FALSE	1	11/30/2021	16:45:23	King	Action Level	Lead Paint	Wall		Drywall	Gray	A	Intact	Men's restroom 108
700 Adams	2642	0.3	mg/cm2	Negative	FALSE	1	11/30/2021	16:45:39	King	Action Level	Lead Paint	Wall		Drywall	Gray	B	Intact	Men's restroom 108
700 Adams	2643	0.3	mg/cm2	Negative	FALSE	1	11/30/2021	16:45:56	King	Action Level	Lead Paint	Wall		Drywall	Gray	C	Intact	Men's restroom 108
700 Adams	2644	0.3	mg/cm2	Negative	FALSE	1	11/30/2021	16:46:14	King	Action Level	Lead Paint	Wall		Drywall	Gray	D	Intact	Men's restroom 108
700 Adams	2645	6	mg/cm2	Positive	FALSE	1	11/30/2021	16:47:11	King	Action Level	Lead Paint	Lower Wall		Tile	Black	A	Intact	Men's restroom 108
700 Adams	2646	1.1	mg/cm2	Positive	FALSE	1	11/30/2021	16:47:29	King	Action Level	Lead Paint	Lower Wall		Tile	White	A	Intact	Men's restroom 108
700 Adams	2647	6.1	mg/cm2	Positive	FALSE	1	11/30/2021	16:48:01	King	Action Level	Lead Paint	Lower Wall		Tile	Black	B	Intact	Men's restroom 108
700 Adams	2648	1.1	mg/cm2	Positive	FALSE	1	11/30/2021	16:48:17	King	Action Level	Lead Paint	Lower Wall		Tile	White	B	Intact	Men's restroom 108
700 Adams	2649	6.6	mg/cm2	Positive	FALSE	1	11/30/2021	16:48:51	King	Action Level	Lead Paint	Lower Wall		Tile	Black	C	Intact	Men's restroom 108
700 Adams	2650	1	mg/cm2	Positive	FALSE	1	11/30/2021	16:49:33	King	Action Level	Lead Paint	Lower Wall		Tile	White	C	Intact	Men's restroom 108
700 Adams	2651	6.2	mg/cm2	Positive	FALSE	1	11/30/2021	16:50:16	King	Action Level	Lead Paint	Lower Wall		Tile	Black	D	Intact	Men's restroom 108
700 Adams	2652	1.2	mg/cm2	Positive	FALSE	1	11/30/2021	16:50:33	King	Action Level	Lead Paint	Lower Wall		Tile	White	D	Intact	Men's restroom 108
700 Adams	2653	6.7	mg/cm2	Positive	FALSE	1	11/30/2021	16:51:33	King	Action Level	Lead Paint	Baseboard		Tile	Black	All	Intact	Men's restroom 108
700 Adams	2654	-0.1	mg/cm2	Negative	FALSE	1	11/30/2021	16:52:59	King	Action Level	Lead Paint	sink		porcelain	White	D	Intact	Men's restroom 108
700 Adams	2655	-0.1	mg/cm2	Negative	FALSE	1	11/30/2021	16:53:49	King	Action Level	Lead Paint	toilet		porcelain	White	D	Intact	Men's restroom 108
700 Adams	2656	0.2	mg/cm2	Negative	FALSE	1	11/30/2021	16:56:08	King	Action Level	Lead Paint	Wall		Drywall	Gray	A	Intact	Women's Restroom 109
700 Adams	2657	0.2	mg/cm2	Negative	FALSE	1	11/30/2021	16:56:45	King	Action Level	Lead Paint	Wall		Drywall	Gray	B	Intact	Women's Restroom 109
700 Adams	2658	0.3	mg/cm2	Negative	FALSE	1	11/30/2021	16:57:10	King	Action Level	Lead Paint	Wall		Drywall	Gray	C	Intact	Women's Restroom 109
700 Adams	2659	0.4	mg/cm2	Negative	FALSE	1	11/30/2021	16:57:27	King	Action Level	Lead Paint	Wall		Drywall	Gray	D	Intact	Women's Restroom 109
700 Adams	2660	6.4	mg/cm2	Positive	FALSE	1	11/30/2021	16:58:12	King	Action Level	Lead Paint	Lower Wall		Tile	Black	A	Intact	Women's Restroom 109
700 Adams	2661	1.1	mg/cm2	Positive	FALSE	1	11/30/2021	16:58:52	King	Action Level	Lead Paint	Lower Wall		Tile	White	A	Intact	Women's Restroom 109
700 Adams	2662	5.6	mg/cm2	Positive	FALSE	1	11/30/2021	17:01:08	King	Action Level	Lead Paint	Lower Wall		Tile	Black	B	Intact	Women's Restroom 109
700 Adams	2663	1.1	mg/cm2	Positive	FALSE	1	11/30/2021	17:01:26	King	Action Level	Lead Paint	Lower Wall		Tile	White	B	Intact	Women's Restroom 109
700 Adams	2664	6.7	mg/cm2	Positive	FALSE	1	11/30/2021	17:02:10	King	Action Level	Lead Paint	Baseboard		Tile	Black	All	Intact	Women's Restroom 109
700 Adams	2665	-0.3	mg/cm2	Negative	FALSE	1	11/30/2021	17:02:44	King	Action Level	Lead Paint	sink		porcelain	White	B	Intact	Women's Restroom 109
700 Adams	2666	0	mg/cm2	Negative	FALSE	1	11/30/2021	17:03:04	King	Action Level	Lead Paint	toilet		porcelain	White	B	Intact	Women's Restroom 109
700 Adams	2667	0.3	mg/cm2	Negative	FALSE	1	11/30/2021	17:06:16	King	Action Level	Lead Paint	Wall		Drywall	Gray	All	Intact	Women's Restroom 120
700 Adams	2668	6	mg/cm2	Positive	FALSE	1	11/30/2021	17:06:52	King	Action Level	Lead Paint	Lower Wall		Tile	Black	All	Intact	Women's Restroom 120
700 Adams	2669	1	mg/cm2	Positive	FALSE	1	11/30/2021	17:07:20	King	Action Level	Lead Paint	Lower Wall		Tile	White	All	Intact	Women's Restroom 120
700 Adams	2670	6.3	mg/cm2	Positive	FALSE	1	11/30/2021	17:07:52	King	Action Level	Lead Paint	Baseboard		Tile	Black	All	Intact	Women's Restroom 120
700 Adams	2671	-0.3	mg/cm2	Negative	FALSE	1	11/30/2021	17:08:33	King	Action Level	Lead Paint	sink		porcelain	White	B	Intact	Women's Restroom 120
700 Adams	2672	-0.2	mg/cm2	Negative	FALSE	1	11/30/2021	17:08:54	King	Action Level	Lead Paint	toilet		porcelain	White	B	Intact	Women's Restroom 120
700 Adams	2673	0.3	mg/cm2	Negative	FALSE	1	11/30/2021	17:11:08	King	Action Level	Lead Paint	Wall		Drywall	Gray	All	Intact	Men's Restroom 119
700 Adams	2674	6.8	mg/cm2	Positive	FALSE	1	11/30/2021	17:11:37	King	Action Level	Lead Paint	Lower Wall		Tile	Black	All	Intact	Men's Restroom 119
700 Adams	2675	1	mg/cm2	Positive	FALSE	1	11/30/2021	17:11:57	King	Action Level	Lead Paint	Lower Wall		Tile	White	All	Intact	Men's Restroom 119
700 Adams	2676	5.7	mg/cm2	Positive	FALSE	1	11/30/2021	17:12:54	King	Action Level	Lead Paint	Baseboard		Tile	Black	All	Intact	Men's Restroom 119
700 Adams	2677	-0.3	mg/cm2	Negative	FALSE	1	11/30/2021	17:13:26	King	Action Level	Lead Paint	toilet		porcelain	White	All	Intact	Men's Restroom 119
700 Adams	2678	-0.2	mg/cm2	Negative	FALSE	1	11/30/2021	17:13:54	King	Action Level	Lead Paint	sink		porcelain	White	D	Intact	Men's Restroom 119
700 Adams	2679	0.1	mg/cm2	Negative	FALSE	1	11/30/2021	17:16:09	King	Action Level	Lead Paint	Wall		Drywall	White	A	Intact	Men's Restroom 136
700 Adams	2680	0	mg/cm2	Negative	FALSE	1	11/30/2021	17:16:27	King	Action Level	Lead Paint	Wall		Drywall	White	B	Intact	Men's Restroom 136
700 Adams	2681	0.1	mg/cm2	Negative	FALSE	1	11/30/2021	17:16:44	King	Action Level	Lead Paint	Wall		Drywall	White	C	Intact	Men's Restroom 136
700 Adams	2682	0.1	mg/cm2	Negative	FALSE	1	11/30/2021	17:17:04	King	Action Level	Lead Paint	Wall		Drywall	White	D	Intact	Men's Restroom 136
700 Adams	2683	-0.4	mg/cm2	Negative	FALSE	1	11/30/2021	17:17:50	King	Action Level	Lead Paint	Lower Wall		Tile	lime	A	Intact	Men's Restroom 136
700 Adams	2684	-0.2	mg/cm2	Negative	FALSE	1	11/30/2021	17:18:07	King	Action Level	Lead Paint	Lower Wall		Tile	lime	B	Intact	Men's Restroom 136
700 Adams	2685	0	mg/cm2	Negative	FALSE	1	11/30/2021	17:18:23	King	Action Level	Lead Paint	Lower Wall		Tile	lime	C	Intact	Men's Restroom 136
700 Adams	2686	-0.5	mg/cm2	Negative	FALSE	1	11/30/2021	17:18:40	King	Action Level	Lead Paint	Lower Wall		Tile	lime	D	Intact	Men's Restroom 136
700 Adams	2687	-0.1	mg/cm2	Negative	FALSE	1	11/30/2021	17:19:09	King	Action Level	Lead Paint	sink		porcelain	lime	B	Intact	Men's Restroom 136
700 Adams	2688	0.2	mg/cm2	Negative	FALSE	1	11/30/2021	17:19:38	King	Action Level	Lead Paint	toilet		porcelain	lime	D	Intact	Men's Restroom 136
700 Adams	2689	0.1	mg/cm2	Negative	FALSE	1	11/30/2021	17:20:50	King	Action Level	Lead Paint	Wall		Drywall	White	A	Intact	Women's Restroom 137
700 Adams	2690	0	mg/cm2	Negative	FALSE	1	11/30/2021	17:21:07	King	Action Level	Lead Paint	Wall		Drywall	White	B	Intact	Women's Restroom 137
700 Adams	2691	0	mg/cm2	Negative	FALSE	1	11/30/2021	17:21:23	King	Action Level	Lead Paint	Wall		Drywall	White	C	Intact	Women's Restroom 137
700 Adams	2692	0	mg/cm2	Negative	FALSE	1	11/30/2021	17:21:40	King	Action Level	Lead Paint	Wall		Drywall	White	D	Intact	Women's Restroom 137
700 Adams	2693	-0.4	mg/cm2	Negative	FALSE	1	11/30/2021	17:23:30	King	Action Level	Lead Paint	Lower Wall		Tile	Gray	A	Intact	Women's Restroom 137
700 Adams	2694	-0.3	mg/cm2	Negative	FALSE	1	11/30/2021	17:23:46	King	Action Level	Lead Paint	Lower Wall		Tile	Gray	B	Intact	Women's Restroom 137
700 Adams	2695	-0.3	mg/cm2	Negative	FALSE	1	11/30/2021	17:24:01	King	Action Level	Lead Paint	Lower Wall		Tile	Gray	C	Intact	Women's Restroom 137
700 Adams	2696	-0.2	mg/cm2	Negative	FALSE	1	11/30/2021	17:24:18	King	Action Level	Lead Paint	Lower Wall		Tile	Gray	D	Intact	Women's Restroom 137
700 Adams	2697	-0.4	mg/cm2	Negative	FALSE	1	11/30/2021	17:24:52	King	Action Level	Lead Paint	sink		porcelain	White	D	Intact	Women's Restroom 137
700 Adams	2698	-0.2	mg/cm2	Negative	FALSE	1	11/30/2021	17:25:17	King	Action Level	Lead Paint	toilet		porcelain	White	D	Intact	Women's Restroom 137
700 Adams	2699	0.9	mg/cm2	Negative	FALSE	1	11/30/2021	17:28:01	King	Action Level	Lead Paint	Stair	Riser	Metal	Beige	All	Intact	lobby 101
700 Adams	2700	4	mg/cm2	Positive	FALSE	1	11/30/2021	17:28:26	King	Action Level	Lead Paint	Stair	Riser	Metal	Beige	All	Deteriorated	lobby 101
700 Adams	2701	1.8	mg/cm2	Positive	FALSE	1	11/30/2021	17:28:40	King	Action Level	Lead Paint	Stair	Riser	Metal	Beige	All	Deteriorated	lobby 101
700 Adams	2702	7.2	mg/cm2	Positive	FALSE	1	11/30/2021	17:30:58	King	Action Level	Lead Paint	Stair	Stringer	Metal	Beige	All	Deteriorated	lobby 101
700 Adams	2703	0.5	mg/cm2	Negative	FALSE	1	11/30/2021	17:41:15	King	Action Level	Lead Paint	Stair	Riser	Concrete	White	All	Intact	Stairwell 136
700 Adams	2704	0.4	mg/cm2	Negative	FALSE	1	11/30/2021	17:50:56	King	Action Level	Lead Paint	Wall		Drywall	White	All	Intact	men's restroom 204
700 Adams	2705	5.7	mg/cm2	Positive	FALSE	1	11/30/2021	17:51:21	King	Action Level	Lead Paint	Lower Wall		Tile	Black	All	Intact	men's restroom 204
700 Adams	2706	1.4	mg/cm2	Positive	FALSE	1	11/30/2021	17:51:42	King	Action Level	Lead Paint	Lower Wall		Tile	White	All	Intact	men's restroom 204
700 Adams	2707	6.2	mg/cm2	Positive	FALSE	1	11/30/2021	17:52:11	King	Action Level	Lead Paint	Baseboard		Tile	Black	All	Intact	men's restroom 204
700 Adams	2708	0	mg/cm2	Negative	FALSE	1	11/30/2021	17:52:51	King	Action Level	Lead Paint	toilet		porcelain	White	D	Intact	men's restroom 204

Job Id	Reading #	Concentration	Units	Result	Calibration Reading	Action Level	Date	Time	User	Mode	Analytic Mode	Component	Feature	Substrate	Color	Side	Condition	Room
700 Adams	2709	0	mg/cm2	Negative	FALSE	1	11/30/2021	17:53:15	King	Action Level	Lead Paint	sink		porcelain	White	D	Intact	men's restroom 204
700 Adams	2710	0.1	mg/cm2	Negative	FALSE	1	11/30/2021	17:55:16	King	Action Level	Lead Paint	Wall		Drywall	White	All	Intact	women's restroom 203
700 Adams	2711	0.2	mg/cm2	Negative	FALSE	1	11/30/2021	17:55:37	King	Action Level	Lead Paint	Lower Wall		Tile	Brown	All	Intact	women's restroom 203
700 Adams	2712	0.1	mg/cm2	Negative	FALSE	1	11/30/2021	17:56:09	King	Action Level	Lead Paint	toilet		porcelain	White	D	Intact	women's restroom 203
700 Adams	2713	-0.1	mg/cm2	Negative	FALSE	1	11/30/2021	17:56:37	King	Action Level	Lead Paint	sink		porcelain	White	D	Intact	women's restroom 203
700 Adams	2714	0.1	mg/cm2	Negative	FALSE	1	11/30/2021	17:58:44	King	Action Level	Lead Paint	Wall		Drywall	Brown	All	Intact	restroom 223
700 Adams	2715	-0.3	mg/cm2	Negative	FALSE	1	11/30/2021	17:59:07	King	Action Level	Lead Paint	Lower Wall		Tile	Brown	All	Intact	restroom 223
700 Adams	2716	-0.1	mg/cm2	Negative	FALSE	1	11/30/2021	17:59:36	King	Action Level	Lead Paint	toilet		porcelain	White	B	Intact	restroom 223
700 Adams	2717	-0.1	mg/cm2	Negative	FALSE	1	11/30/2021	17:59:58	King	Action Level	Lead Paint	sink		porcelain	Brown	A	Intact	restroom 223
700 Adams	2718	0.1	mg/cm2	Negative	FALSE	1	11/30/2021	18:02:02	King	Action Level	Lead Paint	Wall		Drywall	White	All	Intact	men's restroom 254
700 Adams	2719	-0.3	mg/cm2	Negative	FALSE	1	11/30/2021	18:02:29	King	Action Level	Lead Paint	Lower Wall		Tile	Brown	All	Intact	men's restroom 254
700 Adams	2720	51	mg/cm2	Positive	FALSE	1	11/30/2021	18:03:12	King	Action Level	Lead Paint	sink		porcelain	White	B	Intact	men's restroom 254
700 Adams	2721	-0.2	mg/cm2	Negative	FALSE	1	11/30/2021	18:03:39	King	Action Level	Lead Paint	toilet		porcelain	White	D	Intact	men's restroom 254
700 Adams	2722	0.2	mg/cm2	Negative	FALSE	1	11/30/2021	18:05:32	King	Action Level	Lead Paint	Wall		Drywall	White	All	Intact	women's restroom 256
700 Adams	2723	-0.1	mg/cm2	Negative	FALSE	1	11/30/2021	18:06:01	King	Action Level	Lead Paint	Lower Wall		Tile	lime	All	Intact	women's restroom 256
700 Adams	2724	0	mg/cm2	Negative	FALSE	1	11/30/2021	18:06:35	King	Action Level	Lead Paint	toilet		porcelain	White	All	Intact	women's restroom 256
700 Adams	2725	-0.3	mg/cm2	Negative	FALSE	1	11/30/2021	18:06:56	King	Action Level	Lead Paint	sink		porcelain	White	A	Intact	women's restroom 256
700 Adams	2726	3.1	mg/cm2	Positive	FALSE	1	11/30/2021	18:09:31	King	Action Level	Lead Paint	Stair	Riser	Metal	White	All	Deteriorated	stairwell 156
700 Adams	2727	2.3	mg/cm2	Positive	FALSE	1	11/30/2021	18:09:47	King	Action Level	Lead Paint	Stair	Riser	Metal	White	All	Deteriorated	stairwell 156
700 Adams	2728	2.5	mg/cm2	Positive	FALSE	1	11/30/2021	18:10:11	King	Action Level	Lead Paint	Stair	Riser	Metal	White	All	Deteriorated	stairwell 156
700 Adams	2729	1.5	mg/cm2	Positive	FALSE	1	11/30/2021	18:15:14	King	Action Level	Lead Paint	Stair	Stringer	Metal	White	All	Deteriorated	stairwell 156
700 Adams	2730	1	mg/cm2		TRUE	1	11/30/2021	18:20:25	King	Action Level	Lead Paint							
700 Adams	2731	0.9	mg/cm2		TRUE	1	11/30/2021	18:20:45	King	Action Level	Lead Paint							
700 Adams	2732	0.8	mg/cm2		TRUE	1	11/30/2021	18:21:04	King	Action Level	Lead Paint							
700 Adams	2733	-0.3	mg/cm2		TRUE	1	11/30/2021	18:21:25	King	Action Level	Lead Paint							
700 Adams	2734	-0.2	mg/cm2		TRUE	1	11/30/2021	18:21:34	King	Action Level	Lead Paint							
700 Adams	2735	-0.2	mg/cm2		TRUE	1	11/30/2021	18:21:43	King	Action Level	Lead Paint							
700 adams	2742	0.5	mg/cm2		TRUE	1	12/1/2021	16:13:55	King	Action Level	Lead Paint							
700 adams	2743	1	mg/cm2		TRUE	1	12/1/2021	16:14:17	King	Action Level	Lead Paint							
700 adams	2744	0.5	mg/cm2		TRUE	1	12/1/2021	16:14:40	King	Action Level	Lead Paint							
700 adams	2745	0	mg/cm2		TRUE	1	12/1/2021	16:14:57	King	Action Level	Lead Paint							
700 adams	2746	0	mg/cm2		TRUE	1	12/1/2021	16:15:08	King	Action Level	Lead Paint							
700 adams	2747	-0.1	mg/cm2		TRUE	1	12/1/2021	16:15:20	King	Action Level	Lead Paint							
700 adams	2748	0.1	mg/cm2	Negative	FALSE	1	12/1/2021	16:16:15	King	Action Level	Lead Paint	Stair	Railing		Black	A	Deteriorated	Exterior
700 adams	2749	0.1	mg/cm2	Negative	FALSE	1	12/1/2021	16:18:30	King	Action Level	Lead Paint	Downspout		Metal	Red	B	Deteriorated	Exterior
700 adams	2750	0.1	mg/cm2	Negative	FALSE	1	12/1/2021	16:19:07	King	Action Level	Lead Paint	Downspout		Metal	Red	B	Deteriorated	Exterior
700 adams	2751	0	mg/cm2	Negative	FALSE	1	12/1/2021	16:19:28	King	Action Level	Lead Paint	Downspout		Metal	Red	B	Deteriorated	Exterior
700 adams	2752	0	mg/cm2	Negative	FALSE	1	12/1/2021	16:20:01	King	Action Level	Lead Paint	Downspout		Metal	Red	B	Deteriorated	Exterior
700 adams	2753	0	mg/cm2	Negative	FALSE	1	12/1/2021	16:20:27	King	Action Level	Lead Paint	Downspout		Metal	Red	B	Deteriorated	Exterior
700 adams	2754	0	mg/cm2	Negative	FALSE	1	12/1/2021	16:20:47	King	Action Level	Lead Paint	Downspout		Metal	Red	B	Deteriorated	Exterior
700 adams	2755	0.2	mg/cm2	Negative	FALSE	1	12/1/2021	16:21:07	King	Action Level	Lead Paint	Downspout		Metal	Red	B	Deteriorated	Exterior
700 adams	2756	0.1	mg/cm2	Negative	FALSE	1	12/1/2021	16:21:27	King	Action Level	Lead Paint	Downspout		Metal	Red	B	Deteriorated	Exterior
700 adams	2757	-0.2	mg/cm2	Negative	FALSE	1	12/1/2021	16:23:18	King	Action Level	Lead Paint	Door	Casing	Metal	Red	B	Deteriorated	Exterior
700 adams	2758	0	mg/cm2	Negative	FALSE	1	12/1/2021	16:23:42	King	Action Level	Lead Paint	Door	Door	Metal	Red	B	Deteriorated	Exterior
700 adams	2759	-0.4	mg/cm2	Negative	FALSE	1	12/1/2021	16:27:06	King	Action Level	Lead Paint	Door	Casing	Metal	Red	B	Deteriorated	Exterior
700 adams	2760	0	mg/cm2	Negative	FALSE	1	12/1/2021	16:27:24	King	Action Level	Lead Paint	Door	Door	Metal	Red	B	Deteriorated	Exterior
700 adams	2761	0.2	mg/cm2	Negative	FALSE	1	12/1/2021	16:28:08	King	Action Level	Lead Paint	Garage Door	Casing	Metal	Red	B	Deteriorated	Exterior
700 adams	2762	0.5	mg/cm2	Negative	FALSE	1	12/1/2021	16:28:34	King	Action Level	Lead Paint	Garage Door	Door	Metal	Red	B	Deteriorated	Exterior
700 adams	2763	4.6	mg/cm2	Positive	FALSE	1	12/1/2021	16:29:05	King	Action Level	Lead Paint	Garage Door	Casing	Metal	Red	B	Deteriorated	Exterior
700 adams	2764	2.4	mg/cm2	Positive	FALSE	1	12/1/2021	16:29:40	King	Action Level	Lead Paint	Garage Door	Door	Wood	Red	B	Deteriorated	Exterior
700 adams	2765	6.8	mg/cm2	Positive	FALSE	1	12/1/2021	16:31:11	King	Action Level	Lead Paint	Garage Door	Casing	Metal	Red	C	Deteriorated	Exterior
700 adams	2766	3.4	mg/cm2	Positive	FALSE	1	12/1/2021	16:32:12	King	Action Level	Lead Paint	Garage Door	Door	Wood	Red	C	Deteriorated	Exterior
700 adams	2767	1	mg/cm2	Positive	FALSE	1	12/1/2021	16:33:24	King	Action Level	Lead Paint	Garage Door	Casing	Metal	Red	C	Deteriorated	Exterior
700 adams	2768	3	mg/cm2	Positive	FALSE	1	12/1/2021	16:34:39	King	Action Level	Lead Paint	Garage Door	Door	Wood	Red	C	Deteriorated	Exterior
700 adams	2769	0.1	mg/cm2	Negative	FALSE	1	12/1/2021	16:35:35	King	Action Level	Lead Paint	Stair	Railing	Metal	Red	C	Deteriorated	Exterior
700 adams	2770	-0.2	mg/cm2	Negative	FALSE	1	12/1/2021	16:36:19	King	Action Level	Lead Paint	Door	Casing	Metal	Red	C	Deteriorated	Exterior
700 adams	2771	0	mg/cm2	Negative	FALSE	1	12/1/2021	16:36:45	King	Action Level	Lead Paint	Door	Door	Metal	Red	C	Deteriorated	Exterior
700 adams	2772	0.1	mg/cm2	Negative	FALSE	1	12/1/2021	16:38:34	King	Action Level	Lead Paint	Downspout		Metal	Tan	D	Deteriorated	Exterior
700 adams	2773	0.1	mg/cm2	Negative	FALSE	1	12/1/2021	16:39:15	King	Action Level	Lead Paint	Downspout		Metal	Tan	D	Deteriorated	Exterior
700 adams	2774	0.1	mg/cm2	Negative	FALSE	1	12/1/2021	16:39:40	King	Action Level	Lead Paint	Downspout		Metal	Tan	D	Deteriorated	Exterior
700 adams	2775	0	mg/cm2	Negative	FALSE	1	12/1/2021	16:40:15	King	Action Level	Lead Paint	Downspout		Metal	Tan	D	Deteriorated	Exterior
700 adams	2776	0.1	mg/cm2	Negative	FALSE	1	12/1/2021	16:40:40	King	Action Level	Lead Paint	Downspout		Metal	Tan	D	Deteriorated	Exterior
700 adams	2777	0.2	mg/cm2	Negative	FALSE	1	12/1/2021	16:41:40	King	Action Level	Lead Paint	Door	Casing	Metal	Red	D	Deteriorated	Exterior
700 adams	2778	0.1	mg/cm2	Negative	FALSE	1	12/1/2021	16:42:01	King	Action Level	Lead Paint	Door	Door	Metal	Red	D	Deteriorated	Exterior
700 adams	2779	0.1	mg/cm2	Negative	FALSE	1	12/1/2021	16:42:30	King	Action Level	Lead Paint	Door	Casing	Metal	Red	D	Deteriorated	Exterior
700 adams	2780	0	mg/cm2	Negative	FALSE	1	12/1/2021	16:42:52	King	Action Level	Lead Paint	Door	Door	Metal	Red	D	Deteriorated	Exterior
700 adams	2781	4.8	mg/cm2	Positive	FALSE	1	12/1/2021	16:44:15	King	Action Level	Lead Paint	Wall	Trim	Metal	Red	D	Deteriorated	Exterior
700 adams	2782	0.1	mg/cm2	Negative	FALSE	1	12/1/2021	16:45:26	King	Action Level	Lead Paint	Wall		Wood	Red	D	Deteriorated	Exterior
700 adams	2783	0.1	mg/cm2	Negative	FALSE	1	12/1/2021	16:46:16	King	Action Level	Lead Paint	Door	Casing	Metal	Red	D	Deteriorated	Exterior
700 adams	2784	0	mg/cm2	Negative	FALSE	1	12/1/2021	16:46:52	King	Action Level	Lead Paint	Door	Door	Metal	Red	D	Deteriorated	Exterior
700 adams	2785	0	mg/cm2	Negative	FALSE	1	12/1/2021	16:48:00	King	Action Level	Lead Paint	Stair	Railing	Metal	Black	D	Deteriorated	Exterior
700 adams	2786	0.2	mg/cm2	Negative	FALSE	1	12/1/2021	16:49:22	King	Action Level	Lead Paint	Pipe		Vinyl	Red	D	Deteriorated	Exterior
700 adams	2787	0.1	mg/cm2	Negative	FALSE	1	12/1/2021	16:50:23	King	Action Level	Lead Paint	Door	Casing	Metal	Red	D	Deteriorated	Exterior
700 adams	2788	0	mg/cm2	Negative	FALSE	1	12/1/2021	16:50:40	King	Action Level	Lead Paint	Door	Door	Metal	Red	D	Deteriorated	Exterior

Job Id	Reading #	Concentration	Units	Result	Calibration Reading	Action Level	Date	Time	User	Mode	Analytic Mode	Component	Feature	Substrate	Color	Side	Condition	Room
700 adams	2789	0.4	mg/cm2	Negative	FALSE	1	12/1/2021	16:51:24	King	Action Level	Lead Paint	Door	Casing	Metal	Red	D	Deteriorated	Exterior
700 adams	2790	-0.1	mg/cm2	Negative	FALSE	1	12/1/2021	16:51:47	King	Action Level	Lead Paint	Door	Door	Metal	Red	D	Deteriorated	Exterior
700 adams	2791	0.4	mg/cm2	Negative	FALSE	1	12/1/2021	16:52:25	King	Action Level	Lead Paint	Garage Door	Casing	Metal	Red	D	Deteriorated	Exterior
700 adams	2792	0.1	mg/cm2	Negative	FALSE	1	12/1/2021	16:52:44	King	Action Level	Lead Paint	Garage Door	Door	Metal	Red	D	Deteriorated	Exterior
700 adams	2793	0.5	mg/cm2	Negative	FALSE	1	12/1/2021	16:53:13	King	Action Level	Lead Paint	Garage Door	Casing	Metal	Red	D	Deteriorated	Exterior
700 adams	2794	0	mg/cm2	Negative	FALSE	1	12/1/2021	16:53:35	King	Action Level	Lead Paint	Garage Door	Door	Metal	Red	D	Deteriorated	Exterior
700 adams	2795	0.3	mg/cm2	Negative	FALSE	1	12/1/2021	16:54:47	King	Action Level	Lead Paint	safety post		Metal	Red	D	Deteriorated	Exterior
700 adams	2796	0.3	mg/cm2	Negative	FALSE	1	12/1/2021	16:55:02	King	Action Level	Lead Paint	safety post		Metal	Red	D	Deteriorated	Exterior
700 adams	2797	0.1	mg/cm2	Negative	FALSE	1	12/1/2021	16:55:14	King	Action Level	Lead Paint	safety post		Metal	Red	D	Deteriorated	Exterior
700 adams	2798	0.3	mg/cm2	Negative	FALSE	1	12/1/2021	16:55:42	King	Action Level	Lead Paint	safety post		Metal	Red	D	Deteriorated	Exterior
700 adams	2799	0.4	mg/cm2	Negative	FALSE	1	12/1/2021	16:56:00	King	Action Level	Lead Paint	safety post		Metal	Red	D	Deteriorated	Exterior
700 adams	2800	1.1	mg/cm2		TRUE	1	12/1/2021	16:58:36	King	Action Level	Lead Paint							
700 adams	2801	1	mg/cm2		TRUE	1	12/1/2021	16:58:57	King	Action Level	Lead Paint							
700 adams	2802	1	mg/cm2		TRUE	1	12/1/2021	16:59:17	King	Action Level	Lead Paint							
700 adams	2803	0	mg/cm2		TRUE	1	12/1/2021	16:59:41	King	Action Level	Lead Paint							
700 adams	2804	-0.1	mg/cm2		TRUE	1	12/1/2021	16:59:50	King	Action Level	Lead Paint							
700 adams	2805	0.1	mg/cm2		TRUE	1	12/1/2021	17:00:00	King	Action Level	Lead Paint							

Appendix 6
Viken PCS Sheets

Performance Characteristic Sheet

EFFECTIVE DATE: December 1, 2020

MANUFACTURER AND MODEL:

Make: ***Viken Detection*** (previously Heuresis)
Models: ***Model Pb200i***
Source: ***⁵⁷Co, 5 mCi (nominal – new source)***

FIELD OPERATION GUIDANCE

ACTION LEVEL SETTING:

0.5 mg/cm²

OPERATING PARAMETERS:

Action Level mode

XRF CALIBRATION CHECK LIMITS:

0.8 to 1.2 mg/cm² (inclusive) at Action Level setting = 1.0 mg/cm²

SUBSTRATE CORRECTION:

Not applicable

INCONCLUSIVE RANGE OR THRESHOLD:

ACTION LEVEL MODE READING DESCRIPTION	SUBSTRATE	INCONCLUSIVE RANGE (mg/cm ²)
Results not corrected for substrate bias on any substrate	Brick	0.4 – 0.6
	Concrete	0.4 – 0.6
	Drywall	0.4 – 0.6
	Metal	0.4 – 0.6
	Plaster	0.4 – 0.6
	Wood	0.4 – 0.6

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*, 2012 Edition ("HUD Guidelines"). Performance parameters shown on this sheet are calculated using test results on building components in the HUD archive. Testing was conducted on 146 test samples in January 2020, with two separate instruments running software version Pb200i 5.0 (DEBUG version) in Action Level test mode. The actual source strength of each instrument on the day of testing was approximately 2.9 mCi; source ages were approximately 9 months.

OPERATING PARAMETERS

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

XRF CALIBRATION CHECK:

The calibration of the XRF instrument should be checked with the Action Level set to 1.0 mg/cm² using the paint film nearest 1.0 mg/cm² in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm² film; for NIST SRM 2579a, use the 1.04 mg/cm² film).

If the average (rounded to 1 decimal place) of three readings is outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instrument into control before XRF testing proceeds.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing.

Conduct XRF re-testing at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below. Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. In single-family and multi-family housing, a result is defined as a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and the retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF readings.

Compute the average of all ten re-test XRF readings.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

TESTING TIMES:

The instrument time to take a reading varied within a narrow range from 5 to 6 seconds, with a small number (3%) of longer times from 7 to 11 seconds. The longer readings were almost all on wood substrates. This range of reading times applies only to instruments with the same source strength as those tested (2.9 mCi at the time of PCS testing). Instruments with stronger sources will have shorter reading times and those with weaker sources, longer reading times.

CLASSIFICATION OF RESULTS:

XRF results are classified as **positive** if they are **greater than or equal** to 0.6 mg/cm², **negative** if they are **less than or equal** to 0.4 mg/cm² and **inconclusive** if they are **equal** to 0.5 mg/cm².

DOCUMENTATION:

This XRF Performance Characteristic Sheet (PCS) was developed by QuanTech, Inc., under a contract with the U.S. Department of Housing and Urban Development, Office of Lead Hazard Control and Healthy Homes.

A report titled *Methodology for XRF Performance Characteristic Sheets* (EPA 747-R-95-008) provides an explanation of the statistical methodology used to develop Performance Characteristic Sheets at the Federal standard (Action Level) of 1.0 mg/cm², and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. The report may be downloaded at <http://www2.epa.gov/lead/methodology-xrf-performance-characteristic-sheets-epa-747-r-95-008-september-1997>. The methodology was subsequently generalized by QuanTech for application to other Action Levels.