ETOWAH ENVIRONMENTAL SERVICES



9 Bedford Court Cartersville, Georgia 30120 Phone 770.547.7854 Email dennispopham81@comcast.net

March 29, 2021

Mr. Ken Paige Director of Maintenance Cartersville City Schools 15 Nelson Street Cartersville, Georgia 30120

RE: Report of a Pre-Demolition Asbestos Inspection Old Gymnasium and Fieldhouse Building at Cartersville High School Cartersville, Georgia 30120 Etowah Project No. 2021-13A

Dear Mr. Paige

1.0 Introduction

Please find attached the results of the Pre-Demolition Asbestos Inspection that Etowah Environmental Services, Inc. (Etowah) completed at the Old Gymnasium and Fieldhouse Building at Cartersville High School in Cartersville, Georgia. We understand that the school system is planning to demolish these buildings in the near future in preparation for an expansion of the high school.

The purpose of our asbestos inspection was to identify the various types of regulated asbestoscontaining materials (RACMs) used on the two buildings that must be removed in accordance with the US EPA's National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations (40 CFR 61 Part M) prior to demolition of the buildings.

2.0 Building Descriptions

The Old Gymnasium (Building 5010) was constructed in the mid-1950s part of the original Cartersville High School. The gym building was expanded in the 1970s to include the western bleacher area with locker rooms beneath the bleachers. The gym building is brick and cinderblock structure built on a concrete slab foundation. The building includes the basketball court and bleachers, an entrance lobby, boys and girls locker rooms, two classrooms, restrooms, storage rooms and teacher's offices.

The Old Gym Building originally had a radiant heat system. That system was removed when the school was extensively remodeled in the early 2000s. All of the asbestos-containing thermal

system insulation (TSI) that had been on the hot water piping in the gym building and within a steam tunnel beneath the southern portion of the building was removed in the 1980s and early 2000s. The original asbestos-containing floor tile was also removed from the building during the previous projects.

The original roofing materials were also removed in the early 2000s renovation project. Currently the building has a single membrane, rubberized roofing system installed over foam board insulation. The lower sections of the building roof have been covered by metal roofing.

The Old Fieldhouse Building was reportedly constructed in the mid-1980s. That building is a steel-framed structure with cinderblock and metal exterior walls and a metal roof. The building contains a locker room, a temporary cafeteria, two ROTC classrooms and various storage rooms and offices. The building is hearted and cooled by central HVAC systems located above the ceilings and on the building exterior.

3.0 Asbestos Sample Collection and Analysis

Etowah Environmental Services completed the pre-demolition asbestos inspection of the subject buildings on March 15 and 16, 2021. Etowah's pre-demolition inspection focused on the following areas of the buildings.

- Roofing systems on the Old Gym Building,
- The various types of floor tile and floor tile mastics in the buildings,
- Ceiling tiles,
- Wallboard and joint compounds, and
- Other miscellaneous caulks and sealants used on the building exteriors.

During our inspection Etowah collected thirty-seven (37) samples of potential asbestoscontaining materials used in and one the site buildings. The samples were collected by Mr. Dennis Popham who is an AHERA certified asbestos inspector. Mr. Popham's accreditation certificate is attached to this report.

The samples were submitted to Bureau Veritas Laboratory of Kennesaw, Georgia. At the laboratory, the samples were analyzed for asbestos content using a polarized light microscope in accordance with EPA Method 600/R-93/116. The complete laboratory report is attached to this report.

A description of the materials sampled and the results of analytical testing are provided on the attached Table 1. As is indicated on the table, asbestos was detected in the following materials at this location:

• The black mastic used beneath non-asbestos containing vinyl floor tiles the Old Gymnasium Building contained from less than 1% to 3% chrysotile asbestos. The tile

and mastic were found in the entrance lobby of the gymnasium, in the corridors and offices of the locker room area, and in the corridors, classrooms and offices in the eastern portion of the building. It is estimated that 3,950 square feet of the mastic is used in the Old Gymnasium Building.

- Two percent (2%) chrysotile asbestos was detected in brown "glue dots" found above the ceiling in the corridor outside of the eastern portion of the gym. The glue dots are used on the concrete ceiling and formerly held spline ceiling tiles to the ceiling. It is estimated that the glue dots are used on approximately 675 square feet of the concrete ceiling deck above the east hallway of the Old Gym Building.
- Two percent (2%) chrysotile asbestos was detected in a grayish white caulk material used to fill expansion joints between the original gymnasium building and the western addition to the gym building. It is estimated that the asbestos containing calk is used on approximately 150 linear feet of the expansion joint on the building exterior.

Other notable findings of this pre-demolition asbestos inspection are as follows:

- None of the samples collected from the Fieldhouse Building contained asbestos.
- Remnants of old pipe insulation and soil in the pipe tunnel were tested and not asbestos was reported in the samples.
- No asbestos was detected in a mesh covering used on the gymnasium roof.

Representative photographs of the detected asbestos materials are provided in the attachments to this report. A figure showing the locations of the asbestos-containing materials is also provided in the attachments.

4.0 Conclusions and Recommendations

Etowah Environmental Services has completed a Pre-Demolition Asbestos Inspection of the Old Gymnasium and Fieldhouse Building at Cartersville High School in Cartersville, Georgia. The findings of the inspection indicate that regulated asbestos-containing materials (RACM) remain in the Old Gymnasium Building. The types of RACM detected during the asbestos inspection included:

- Black floor tile mastic found beneath non-asbestos floor tile in the corridors, entrance lobby, locker room areas and classrooms in the Old Gym Building.
- Brown "glue dots" used on the concrete ceiling in the eastern corridor of the Old Gym Building.
- Grayish white caulk material used to fill expansion joints between the original gymnasium building and the western addition to the gym building

The United States Environmental Protection Agency's (EPA's) National Emission Standard for Hazardous Air Pollutants (NESHAP) regulations and the Georgia Environmental Protection Division (EPD) regulate the removal and disposal of asbestos-containing materials. The regulations of these agencies require the removal of friable asbestos-containing materials prior to extensive renovation or demolition projects, and the removal of non-friable asbestos-containing materials that may be rendered friable in the course of renovation or demolition projects. Asbestos waste requires disposal at an approved solid waste disposal facility.

Only a licensed asbestos contractor using properly trained, certified, and licensed asbestos workers can perform asbestos removal projects in Georgia. The Georgia EPD regulations require the supervision of asbestos removal projects by a qualified and properly licensed asbestos supervisor. A 10-Day Notification to the EPD is required prior to the demolition of a structure or prior to a major renovation involving the removal of structural/load-bearing members.

Etowah recommends that a licensed asbestos contractor be retained to remove the RACMs from the Old Gym Building prior to demolition.

5.0 Limitations

Etowah Environmental Services, Inc. has made a reasonable effort to perform sampling and testing for asbestos-containing building materials in substantial conformance with applicable EPA, and Georgia EPD guidance documents and regulations for the performance of asbestos surveys and in accordance with the requested Scope of Work. The conclusions presented in this report are based on our field observations and on the laboratory results obtained from a qualified analytical sub-contractor.

This report has been prepared on behalf of the Cartersville City Schools. The scope of services performed in the execution of this sampling and testing program may not be appropriate to satisfy the needs of other users.

We also note that inaccessible asbestos-containing materials may exist in areas where full demolition is warranted for access. In the event that previously inaccessible suspect asbestos-containing building materials are encountered during demolition, Etowah reserves the opportunity to re-visit the subject property and to collect the requisite bulk samples for testing.

Closing

We appreciate the opportunity to work for you on this project. Please contact us if you have any questions or if we can be of further assistance.

Sincerely,

ETOWAH ENVIRONMENTAL SERVICES, INC.

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Dennis P. Popham, P.G. Principal Environmental Consultant

Attachments: Table 1 Asbestos Sample Results Figures Photographs Asbestos Sample Analysis Reports Personnel Qualification **TABLES**

Table 1Asbestos Sample ResultsCartersville High SchoolOld Gym and Fieldhouse BuildingsCartersville, Georgia

Sample No.	Material and Location	Asbestos Content	Estimated Quantity
CHS-1	Pipe insulation on the northwest wall of the Old Gym	NAD	NA
CHS-2	2x2-ft ceiling tile in the Old Gym lobby area	NAD	NA
CHS-3	Tectum ceiling panels in the Old Gym west building addition	NAD	NA
CHS-4	12x12-inch floor tile in the Old Gym lobby	NAD	NA
CHS-5	White leveling compound used beneath stair treads leading to the locker rooms	NAD	NA
CHS-6	White leveling compound used beneath stair treads leading to the locker rooms	NAD	NA
CHS-7	Cove base mastic used on rubber cove base in the locker room corridor	NAD	NA
CHS-8	Cove base mastic used on rubber cove base in the locker room corridor	NAD	NA
CHS-9	Older, lower level of tan colored floor tile	Tile NAD	3,950 total in Old
	used in the locker room corridor	Mastic-3% Chrysotile	Gym
CHS-10	Gray caulk used on seams of the standing metal roof of the Old Gym	NAD	NA
CHS-11	Gray caulk used on seams of the standing metal roof of the Old Gym	NAD	NA
CHS-12	Reddish caulk used on seams of the standing metal roof of the Old Gym	NAD	NA
CHS-13	Insulation debris mixed with soil in steam tunnel beneath the Old Gym	NAD	NA
CHS-14	Insulation debris in steam tunnel beneath the Old Gym	NAD	NA
CHS-15	Older, lower level of tan colored floor tile	Tile NAD	3,950 total in Old
	used in the locker room corridor	Mastic-3% Chrysotile	Gym
CHS-16	Drywall joint compound used in boy's locker room shower area	NAD	NA
CHS-17	Drywall joint compound used in boy's locker room shower area	NAD	NA
CHS-18	Drywall joint compound used in boy's locker room	NAD	NA
CHS-19	Brown glue "dots" above the drop ceiling in the hallway just outside the Old Gym	2% Chrysotile	On 675 Square feet of ceiling deck in east hallway
CHS-20	Brown glue "dots" above the drop ceiling in the hallway just outside the Old Gym	2% Chrysotile	On 675 Square feet of ceiling deck in east hallway
CHS-21	Drywall joint compound used in the main lobby of the Old Gym	NAD	NA
CHS-22	12x12-inch floor tile in the Old Gym lobby	Tile NAD Mastic-2% Chrysotile	3,950 total in Old Gym

CHS-23	Older, lower level of tan colored floor tile	Tile NAD	3,950 total in Old
	used in the locker room corridor	Mastic-3% Chrysotile	Gym
CHS-24	Insulation in the core of a fire door in the Old Fieldhouse	NAD	NA
CHS-25	Insulation in the core of a fire door in the Old Fieldhouse	NAD	NA
CHS-26	Glue beneath rubber flooring in the Old Fieldhouse	NAD	NA
CHS-27	Glue beneath rubber flooring in the Old Fieldhouse	NAD	NA
CHS-28	12x12-inch floor tile in the former sports medicine room in the Old Fieldhouse	NAD	NA
CHS-29	12x12-inch floor tile in the former sports medicine room in the Old Fieldhouse	NAD	NA
CHS-30	2x2-foot ceiling tile in the Old Fieldhouse locker room	NAD	NA
CHS-31	Black caulk used around doors and windows of the Old Fieldhouse Building	NAD	NA
CHS-32	Black caulk used around doors and windows of the Old Fieldhouse Building	NAD	NA
CHS-33	12x12-inch floor tile in the teacher restroom	Tile NAD	3,950 total in Old
	corridor of the Old Gym	Yellow Mastic - NAD Black Mastic-<1% Chrysotile	Gym
CHS-34	12x12-inch floor tile in the Old Gym east corridor	Tile NAD Yellow Mastic - NAD Black Mastic-<1% Chrysotile	3,950 total in Old Gym
CHS-35	Grayish white caulk used in the vertical expansion joints on the exterior of the Old Gym between the original section and the western addition	2% Chrysotile	150 linear feet in expansion joints
CHS-36	Black mesh roofing on the Old Gym	NAD	NA
CHS-37	Black mesh roofing on the Old Gym	NAD	NA

FIGURES



PHOTOGRAPHS

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2. Shows the Old Fieldhouse Building. No asbestos was detected in the samples from

this building.

1. Shows a view of Old Gymnasium Building.





3. Shows a view of asbestoscontaining floor tile mastic beneath two layers of tile in the locker room corridor.

PROPERTY PHOTOGRAPHS

Old Gym and	Field House Buildings
Catersv	ille High School
Job No: 2021-13A	Etowah Environmental Services



4. Shows asbestos-containing brown "glue dots" on the concrete ceiling of the east hallway in the Old Gym.

5. Shows asbestos-containing floor tile mastic beneath non-asbestos floor tile in the teacher's restrooms in the east hallway.





6. Shows the lobby area of the gym with non-asbestos floor tile over asbestos-containing black mastic.

PROPERTY PHOTOGRAPHS

Old Gym and	Field House Buildings
Catersv	ville High School
Job No: 2021-12A	Etowah Environmental Services



7. Shows an expansion joint between the original part of the Old gym and a section added in the 1970s. The caulk in the expansion joint contains asbestos.



8. View of the roof detected and heaters in the old gym. No asbestos detected in those materials.



9. Shows non-asbestos containing insulation in a fire door in the old fieldhouse building.

PROPERTY PHOTOGRAPHS

Old Gym and Field House Buildings Catersville High School Etowah

Job No: 2021-12A

Environmental Services LABORATORY REPORT



March 23, 2021

Mr. Dennis Popham ETOWAH ENVIRONMENTAL SERVICES 9 Bedford Court Cartersville, GA 30120-

Bureau Veritas Work Order No. A2103119

Reference 2021-13A

Dear Mr. Dennis Popham:

Bureau Veritas North America, Inc. received 37 samples on March 16, 2021 for the analyses presented in the following report.

The results apply only to the samples analyzed in this project. Please note that any unused portion of the samples will be discarded after a sixty-day holding period, unless you have requested otherwise.

This material is confidential and is intended solely for the person to whom it is addressed. If this is received in error, please contact the number provided below.

We appreciate the opportunity to assist you. If you have any questions concerning the report, please contact the analyst whose name appears on the report or myself at (770) 499-7701.

Sincerely, duntal Parilch.

Kuntal Parikh Senior Microscopist Electronic signature authorized through password protection

Bureau Veritas North America, Inc.

Industrial Hygiene Laboratory 3380 Chastain Meadows Parkway, Suite 300 Kennesaw, GA 30144 Main: (770) 499-7701 Fax: (770) 499-7511 www.bvlabs.com



CASE NARRATIVE

Date: 23-Mar-21

CLIENT:	ETOWAH ENVIRONMENTAL SERVICES
Project:	2021-13A
Work Order No	A2103119

ANALYTICAL METHOD FOR ASBESTOS IN BULK SAMPLES USING POLARIZED LIGHT MICROSCOPY (PLM)

The results of this report relate only to the samples listed in the body of this report.

Unless otherwise noted below, the following statements apply: 1) all samples were received in acceptable condition, 2) all quality control results associated with this sample set were within acceptable limits and/or do not adversely affect the reported results, and 3) the industrial hygiene results have not been blank corrected unless otherwise noted.

Use of EPA/600/R-93/116 satisfies applicable requirements of the USEPA's "Interim Method for the Determination of Asbestos in Bulk Insulation Sample", EPA-600/M4-82-020, December 1982, published as Appendix E to Subpart E of 40CFR763. Bulk samples analyzed by New York State methods follow stratified point counting methods (198.1) or Method 198.6 for PLM non-friable organically bound materials (NYSDOH Lab Code -11645). Percentages are visual estimations of asbestos >3:1 aspect ratio. The reliable limit of quantitation of the method is 1%, although asbestos may be qualitatively detected at concentrations less than 1%. Samples for which asbestos is detected at <1% are reported as trace, "<1%". "None Detected" indicates that no asbestos fibers were observed. NESHAP requires point counting of a bulk sample when the result is <10% by a method other than point counting. EPA, however states that if 3 mounts of the sample are analyzed and the asbestos percentage is <10% by visual estimation, the client may elect to assume the amount to be greater than 1% or require verification by point counting. If the result by point counting is different than the result obtained by visual estimation, the point count result will be used. Sample friability or non-friability noted on the report is a requirement for the State of California and refers only to the condition of the sample under macroscopic examination. It does not imply friability or non-friability for the sample as collected or observed in the field as determined by the person collecting the sample. The Kennesaw, Georgia lab is accredited by NVLAP -Lab Code 101125-0.

(a)Polarized- light microscopy is not consistently reliable in detecting asbestos in floor coverings, similar non-friable organically bound materials, soil and vermiculite. Quantitative electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing. When analysis of such materials by PLM yields results negative for the presence of asbestos, Bureau Veritas recommends utilizing quantitative transmission electron microscopy (TEM). For more information, contact the laboratory.

References



CLIENT:ETOWAH ENVIRONMENTAL SERVICESProject:2021-13AWork Order NoA2103119

McCrone, Walter C. 1980. The Asbestos Particle Atlas. Ann Arbor, MI: Ann Arbor Science Publishers, Inc.

United States Environmental Protection Agency. Environmental Monitoring Systems Laboratory. 1982. Interim Method for the Determination of Asbestos in Bulk Insulation Samples. EPA-600/M4-82-020. Washington: GPO, December.

United States Environmental Protection Agency. Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993 (PLM)

Fed. Reg. Vol. 55, No.224, 11/20/90, p.48415 (NESHAP) EPA Memorandum 5/8/1991 –NESHAP Clarifications

NYSDOH Methods 198.1/198.6.

Note: The attached chain-of-custody form shows the sample data that was provided by the client.



ANALYTICAL RESULTS

CLIF	ENT:	ETOWAH ENVIRONMENTAL SEF	RVICES		Sample	Type:	Bulk	
Worl	Gorder No.:	A2103119			Date Rec	eived:	3/16/2021	
Clien	t Reference:	2021-13A			Report	Date:	23-Mar-21	
Meth	od Reference:	EPA-600/M4-82-020/EPA/600/R-93/	/116/NYELAP 19	8.1				
Lab I	D CI	ient Sample ID		Analyst	Date Sampled	d	Date Analyzed	
<u>001A</u>	CHS-1			HA	03/15/2021		03/22/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 100 No Ins	n-homogeneous White/Silver ulation Covering	None Detected		Cellulose fiber Fibrous glass	45% 5%	Binder/Filler Foil Adhesive	
<u>002A</u>	CHS-2			HA	03/15/2021		03/22/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 100 Not Tile	n-homogeneous White/Tan Ceiling	None Detected		Cellulose fiber Fibrous glass	30% 15%	Binder/Filler Paint	
<u>003A</u>	CHS-3			HA	03/15/2021		03/22/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 100 No	n-homogeneous White/Beige Debris	None Detected		Cellulose fiber Wood Fiber	3% 1%	Binder/Filler Paint	
<u>004A</u>	CHS-4			HA	03/15/2021		03/22/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 100 Ho	mogeneous Brown Tile	None Detected		Non-Detected		Binder/Filler	
<u>005A</u>	CHS-5			HA	03/15/2021		03/22/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 100 Ho	mogeneous White Mineral Mixture	None Detected		Non-Detected		Binder/Filler	
<u>006A</u>	CHS-6			HA	03/15/2021		03/23/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 100 Ho	mogeneous White Mineral Mixture	None Detected		Non-Detected		Binder/Filler	
<u>007A</u>	CHS-7			HA	03/15/2021		03/23/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 100 No Ma	n-homogeneous Off-White/Pink stic	None Detected		Cellulose fiber	< 1%	Binder/Filler Paint	

The reliable limit of quantitation of the method is 1%, although asbestos may be qualitatively detected at concentrations less than 1%. Samples for which asbestos is detected at <1% are reported as trace, "<1%". "None Detected" indicates that no asbestos fibers were observed.



____3/23/2021



ANALYTICAL RESULTS

CLIF	ENT:	ETOWAH ENVIRONMENTAL SH	ERVICES		Sample	Type:	Bulk	
Worl	Gorder No.:	A2103119			Date Rec	eived:	3/16/2021	
Clien	t Reference:	2021-13A			Report	Date:	23-Mar-21	
Meth	od Reference:	EPA-600/M4-82-020/EPA/600/R-9	3/116/NYELAP 19	8.1				
Lab I	D C	lient Sample ID		Analyst	Date Sampled	d	Date Analyzed	_
<u>008A</u>	CHS-8	*		HA	03/15/2021		03/23/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 100 No Ma	n-homogeneous Off-White/Pink Istic	None Detected		Cellulose fiber	< 1%	Binder/Filler Paint	
<u>009A</u>	CHS-9			HA	03/15/2021		03/23/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 99 Ho	mogeneous Tan Tile	None Detected		Cellulose fiber	< 1%	Binder/Filler	
	(2) 1 Ho	mogeneous Black Mastic	Chrysotile	3%	Non-Detected		Binder/Filler	
			lot	al <1%				
<u>010A</u>	CHS-10			HA	03/15/2021		03/23/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 100 Ho	mogeneous Gray Sealant	None Detected		Non-Detected		Binder/Filler	
<u>011A</u>	CHS-11			HA	03/15/2021		03/23/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 100 Ho	mogeneous Gray Sealant	None Detected		Non-Detected		Binder/Filler	
<u>012A</u>	CHS-12			HA	03/15/2021		03/23/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 100 Ho	mogeneous Brown Sealant	None Detected		Non-Detected		Binder/Filler	
<u>013A</u>	CHS-13			HA	03/15/2021		03/23/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 100 Ho	mogeneous Red Sealant	None Detected		Non-Detected		Binder/Filler	
<u>014A</u>	CHS-14			HA	03/15/2021		03/23/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 100 No Ins	n-homogeneous Off-White/Grey ulation Material	None Detected		Fibrous glass Glass Wool	7% 5%	Binder/Filler	

The reliable limit of quantitation of the method is 1%, although asbestos may be qualitatively detected at concentrations less than 1%. Samples for which asbestos is detected at <1% are reported as trace, "<1%". "None Detected" indicates that no asbestos fibers were observed.



3/23/2021



ANALYTICAL RESULTS

CLIF	ENT:		ETOWAH ENVIRONMENTAL SER	VICES		Sample	Type:	Bulk	
Worl	s Ord	er No	A2103119			Date Rec	eived:	3/16/2021	
Clien	t Refe	erenc	e: 2021-13A			Report	Date:	23-Mar-21	
Meth	od Ref	erenc	e: EPA-600/M4-82-020/EPA/600/R-93/	116/NYELAP 19	8.1				
Lab I	D		Client Sample ID		Analyst	Date Sampled	l	Date Analyzed	
<u>015A</u>	СН	S-15			HA	03/15/2021		03/23/2021	
	Layer	PO	3 Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1)	1	Homogeneous Yellow Mastic	None Detected		Non-Detected		Binder/Filler	
	(2)	97	Homogeneous Tan Tile	None Detected		Cellulose fiber	2%	Binder/Filler	
	(3)	2	Homogeneous Black Mastic	Chrysotile	3%	Non-Detected		Binder/Filler	
				Tot	al <1%				
<u>016A</u>	СН	S-16			HA	03/15/2021		03/23/2021	
	Layer	PO	3 Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1)	50	Non-homogeneous White/Off-White Paint/Joint Compound	None Detected		Non-Detected		Binder/Filler	
	(2)	50	Homogeneous Off-White Tape	None Detected		Cellulose fiber	95%	Binder/Filler	
<u>017A</u>	СН	S-17			HA	03/15/2021		03/23/2021	
	Layer	PO	3 Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1)	100	Non-homogeneous White/Off-White Paint/Joint Compound	None Detected		Non-Detected		Binder/Filler	
<u>018A</u>	СН	S-18			HA	03/15/2021		03/23/2021	
	Layer	PO	3 Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1)	100	Homogeneous White Joint Compound	None Detected		Non-Detected		Binder/Filler	
<u>019A</u>	СН	S-19			HA	03/15/2021		03/23/2021	
	Layer	PO	3 Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1)	20	Non-homogeneous White/Tan Fibrous Material	None Detected		Cellulose fiber	95%	Binder/Filler Paint	
	(2)	80	Homogeneous Brown Mastic	Chrysotile Tot	2% al 2%	Non-Detected		Binder/Filler	

The reliable limit of quantitation of the method is 1%, although asbestos may be qualitatively detected at concentrations less than 1%. Samples for which asbestos is detected at <1% are reported as trace, "<1%". "None Detected" indicates that no asbestos fibers were observed.

Alley

Analyst(s) Name/Date:



ANALYTICAL RESULTS

AN	AL	ΥT	ICAL RESULTS				Date:	23-Mar-21
CLIF	ENT:		ETOWAH ENVIRONMENTAL SE	RVICES		Sample	Type:	Bulk
Worl	s Ord	er No	A2103119			Date Rec	eived:	3/16/2021
Clien	t Refe	erenc	e: 2021-13A			Report	Date:	23-Mar-21
Meth	od Ref	erenc	e: EPA-600/M4-82-020/EPA/600/R-93	3/116/NYELAP 19	8.1	•		
Lab I	D		Client Sample ID		Analyst	Date Sampled	1	Date Analyzed
<u>020A</u>	СН	S-20			HA	03/15/2021		03/23/2021
	Layer	PO	3 Sample Morphology	Asbestos	%	Other Fibers	%	Particulate
	(1)	20	Homogeneous Tan Fibrous Material	None Detected		Cellulose fiber	95%	Binder/Filler
	(2)	80	Homogeneous Brown Mastic	Chrysotile	2%	Non-Detected		Binder/Filler
				Tot	al 2%			
<u>021A</u>	СН	S-21			HA	03/15/2021		03/23/2021
	Layer	PO	3 Sample Morphology	Asbestos	%	Other Fibers	%	Particulate
	(1)	100	Non-homogeneous White/Off-White Paint/Joint Compound	None Detected		Non-Detected		Binder/Filler
<u>022A</u>	СН	S-22			HA	03/15/2021		03/23/2021
	Layer	PO	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate
	(1)	92	Homogeneous Beige Tile	None Detected		Non-Detected		Binder/Filler
	(2)	8	Non-homogeneous Black/Brown	Chrysotile	2%	Cellulose fiber	10%	Binder/Filler
			Mastic/Fibers			Fibrous glass	2%	
				Tot	al <1%			
<u>023A</u>	СН	S-23			HA	03/15/2021		03/23/2021
	Layer	PO	3 Sample Morphology	Asbestos	%	Other Fibers	%	Particulate
	(1)	98	Homogeneous Brown Tile	None Detected		Cellulose fiber	2%	Binder/Filler
	(2)	2	Homogeneous Black Mastic	Chrysotile	3%	Non-Detected		Binder/Filler
				Tot	al <1%			
<u>024A</u>	СН	S-24			SH	03/15/2021		03/23/2021
	Layer	PO	3 Sample Morphology	Asbestos	%	Other Fibers	%	Particulate
	(1)	100	Homogeneous White Fiber and Mineral	None Detected		Cellulose fiber	15%	Binder/Filler
			Mixture	None Detected		Cellulose fiber	15%	Binder/Filler

The reliable limit of quantitation of the method is 1%, although asbestos may be qualitatively detected at concentrations less than 1%. Samples for which asbestos is detected at <1% are reported as trace, "<1%". "None Detected" indicates that no asbestos fibers were observed.

Analyst(s) Name/Date:

_____3/23/2021



ANALYTICAL RESULTS

CLIF	ENT:	ETOWAH ENVIRONMENTAL SE	RVICES		Sample	Type:	Bulk	
Worl	x Order No.:	A2103119			Date Rec	eived:	3/16/2021	
Clien	t Reference:	2021-13A			Report	Date:	23-Mar-21	
Meth	od Reference:	EPA-600/M4-82-020/EPA/600/R-93	/116/NYELAP 19	8.1				
Lab I	D Cli	ent Sample ID		Analyst	Date Sampled	1	Date Analyzed	
<u>025</u> A	CHS-25	•		SH	03/16/2021		03/23/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 100 Hor Min	nogeneous Off-White Fiber and eral Mixture	None Detected		Cellulose fiber	20%	Binder/Filler	
<u>026A</u>	CHS-26			SH	03/16/2021		03/23/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 100 Hor	nogeneous Tan Mastic	None Detected		Non-Detected		Binder/Filler	
<u>027A</u>	CHS-27			SH	03/16/2021		03/23/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 100 Hor	nogeneous Tan Mastic	None Detected		Non-Detected		Binder/Filler	
<u>028A</u>	CHS-28			SH	03/16/2021		03/23/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 98 Hor	nogeneous Beige Tile	None Detected		Non-Detected		Binder/Filler	
	(2) 2 Hor	nogeneous Yellow Mastic	None Detected		Non-Detected		Binder/Filler	
<u>029A</u>	CHS-29			SH	03/16/2021		03/23/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 99 Hor	nogeneous Beige Tile	None Detected		Non-Detected		Binder/Filler	
	(2) 1 Hor	nogeneous Yellow Mastic	None Detected		Non-Detected		Binder/Filler	
<u>030A</u>	CHS-30			SH	03/16/2021		03/23/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 100 Nor	h-homogeneous Tan/White Ceiling	None Detected		Cellulose fiber	40%	Binder/Filler	
	Tile				Fibrous glass	10%	Paint	
<u>031A</u>	CHS-31			SH	03/16/2021		03/23/2021	
	Layer POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1) 100 Nor Cau	n-homogeneous White/Red/Black Ilk	None Detected		Non-Detected		Binder/Filler Paint	

The reliable limit of quantitation of the method is 1%, although asbestos may be qualitatively detected at concentrations less than 1%. Samples for which asbestos is detected at <1% are reported as trace, "<1%". "None Detected" indicates that no asbestos fibers were observed.

Analyst(s) Name/Date:

____3/23/2021



ANALYTICAL RESULTS

CLIF	ENT:		ETOWAH ENV	VIRONMENTAL SEF	RVICES		Sample '	Туре:	Bulk	
Worl	s Orde	er No	A2103119				Date Reco	eived:	3/16/2021	
Clien	t Refe	erenc	e: 2021-13A				Report	Date:	23-Mar-21	
Meth	od Ref	erenc	e: EPA-600/M4-8	2-020/EPA/600/R-93/	/116/NYELAP 198	8.1				
Lab I	D		Client Sample ID			Analyst	Date Sampled		Date Analyzed	
<u>032</u> A	СН	S-32	-			SH	03/16/2021		03/23/2021	
	Layer	PO	B Sample	Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1)	100	Non-homogeneous Caulk	White/Red/Black	None Detected		Non-Detected		Binder/Filler Paint	
<u>033A</u>	CHS	S-33				SH	03/16/2021		03/23/2021	
	Layer	PO	B Sample	Morphology	Asbestos	%	Other Fibers	%	Particulate	_
	(1)	94	Homogeneous Tan	Tile	None Detected		Non-Detected		Binder/Filler	
	(2)	5	Non-homogeneous Mastic	Brown/Yellow	None Detected		Non-Detected		Binder/Filler	
	(3)	1	Non-homogeneous	Black Mastic	Chrysotile	< 1%	Non-Detected		Binder/Filler	
					Tot	al <1%				
<u>034A</u>	СН	S-34				SH	03/16/2021		03/23/2021	
	Layer	PO	B Sample	Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1)	98	Homogeneous Tan	Tile	None Detected		Non-Detected		Binder/Filler	
	(2)	2	Non-homogeneous	Black/Yellow Mastic	Chrysotile	< 1%	Non-Detected		Binder/Filler	
					Tot	al <1%				
<u>035A</u>	CHS	S-35				SH	03/16/2021		03/23/2021	
	Layer	PO	B Sample	Morphology	Asbestos	%	Other Fibers	%	Particulate	
	(1)	100	Homogeneous Whi	te Sealant	Chrysotile Tot	2% al 2%	Non-Detected		Binder/Filler	
<u>036A</u>	СН	S-36				SH	03/16/2021		03/23/2021	
	Layer	PO	B Sample	Morphology	Asbestos	%	Other Fibers	%	Particulate	_
	(1)	100	Homogeneous Blac	k Insulation	None Detected		Synthetic fiber	90%	Binder/Filler	
<u>037A</u>	СН	S-37				SH	03/16/2021		03/23/2021	
	Layer	PO	B Sample	Morphology	Asbestos	%	Other Fibers	%	Particulate	_
	(1)	100	Homogeneous Blac	k Insulation	None Detected		Synthetic fiber	95%	Binder/Filler	

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Analyst(s) Name/Date:

____3/23/2021



	Lat	ooratory Limits
Heather Alley (HA)		
Range	R Limit	Quartile Limit
0.1-1	100	+/- 1.482
10-100	100	+/- 26.676
1-10	100	+/- 5.928
Trace	100	+/- 1.482
Laboratory		
Range	R Limit	Quartile Limit
0.1-1	100	+/- 1.482
10-100	100	+/- 22.23
1-10	100	+/- 7.41
Trace	100	+/- 1.482
Susan Hannigan (SH)		
Range	R Limit	Quartile Limit
0.1-1	100	+/- 1.482
10-100	100	+/- 26.676
1-10	100	+/- 5.928
Trace	100	+/- 1.482

The reliable limit of quantitation of the method is 1%, although asbestos may be qualitatively detected at concentrations less than 1%. Samples for which asbestos is detected at <1% are reported as trace, "<1%". "None Detected" indicates that no asbestos fibers were observed.

Analyst(s) Name/Date: ____

_3/23/2021

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ompany Etowah E	invironment	al Services				Company	North		
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CHS	2-	JULIN		Bulk		24	Asbestos by PLM		
CHSHS	5-3	2/11/2				2			
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Novi, Michil	3en, 48375 344 2652 T	All frac RON RON	5007	http://labonline.	claytongrp.cc	m	Kennesew, Georgia, 30	7144	
Fax: 248-	344-2655		1000.0				Frone: //0.499.7511 Fax: 770.499.7511	l oll-tree 800.252.99	919

PERSONNEL QUALIFICATIONS

