AHERA - THREE YEAR REINSPECTION



WILLIAM RAMSEY ES

5700 SANGER AVENUE
ALEXANDRIA, VIRGINIA 22311

ECS PROJECT NO. 47:11652-E4-23

FOR: ALEXANDRIA CITY PUBLIC SCHOOLS

SEPTEMBER 8, 2025

September 8, 2025

Mr. Lee Conroy
Alexandria City Public Schools
1723 North Beauregard Street
Alexandria, Virginia 22311

ECS Project No. 47:11652-E4-23

Reference: AHERA - Three Year Reinspection, William Ramsey ES, 5700 Sanger Avenue, Alexandria, Virginia

Dear Mr. Conroy:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Alexandria City Public Schools with the results of the above referenced AHERA - Three Year Reinspection performed at William Ramsey ES located at 5700 Sanger Avenue in Alexandria, Virginia.

Previous asbestos surveys of the school identified asbestos-containing materials. ECS performed a walk through of the school to observe present conditions. The following materials were observed to be damaged at the time of the site visit:

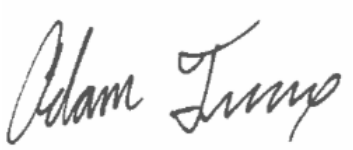
- **9" x 9" Green Floor Tile and associated Mastic located in the doorways of Rooms 11, 15, and 19 were observed as damaged.**

This report summarizes our observations, findings, and recommendations related to the work performed. The work described in this report was performed by ECS in general accordance with the Scope of Services described in ECS Proposal Number 47:39012-EP and the terms and conditions of the agreement authorizing those services.

ECS appreciates this opportunity to provide Alexandria City Public Schools with our services. If we can be of further assistance to you, please do not hesitate to contact us.

Sincerely,

ECS Mid-Atlantic, LLC



Adam Truax
Environmental Senior Project Manager
atruax@ecslimited.com
540-667-3750



Christopher J. Chapman, CIH
Director of Industrial Hygiene
cchapman@ecslimited.com
804-767-5102

TABLE OF CONTENTS

PAGE

1.0 SITE DESCRIPTION 1

2.0 PURPOSE 1

3.0 METHODOLOGY 1

3.1 Asbestos Re-Inspection 1

4.0 RESULTS 2

4.1 Asbestos-Containing Materials 2

5.0 RECOMMENDATIONS AND REGULATORY REQUIREMENTS 2

5.1 Asbestos-Containing Materials 3

6.0 LIMITATIONS 3

TABLE OF APPENDICES

Appendix I: AHERA ACBM Tables

Appendix II: Floor Plan

Appendix III: Site Photographs

Appendix IV: Certifications/Licenses

Appendix V: Previous Reports

1.0 SITE DESCRIPTION

The subject property consists of William Ramsey ES, a two-story brick school building located at 5700 Sanger Avenue in Alexandria, Virginia. The school was originally constructed in 1958. Building finishes observed included concrete sub-floors, vinyl floor tiles, carpet, and/or ceramic tiles; the wall systems appeared to generally consist of concrete masonry unit (CMU) block walls, drywall wallboard, and/or ceramic wall tiles; and the ceiling systems appeared to generally consist of suspended drop ceilings with ceiling tiles and some plaster finishes.

Based on historical documentation reviewed, the following materials were previously identified as asbestos-containing and have since been abated.

- Asbestos-containing Floor Tile and Mastic in the Cafeteria area and serving area (ECS Project NO. 01:10976-A), the 1st and 2nd floor hallway (ECS Project NO.47:11652-N/N1), Classrooms within the K wing (Classrooms 1-9 and the associated storage room) (ECS Project NO. 47:1519-E2), Cafeteria Stairwell and the Stair Landing on the 2nd Floor (included stair thread), and in the Kitchen (included select pipe fittings) (ECS Project NO. 47:11652-N7).

Note: Based on the age of the structure, it is likely that asbestos insulation on piping and ductwork is present and concealed behind solid walls/above solid ceilings. Floor tile and mastic is also assumed to be also present throughout the school, even in areas where it was reported abated (concealed under fixtures such as cabinets etc.).

2.0 PURPOSE

The purpose of this Asbestos Hazard Emergency Response Act (AHERA) three-year re-inspection of asbestos-containing materials was to assess previously identified asbestos-containing building materials (ACBMs) present on the subject property. The survey was performed on the interior areas of the subject building. This survey is intended to provide a supporting document for the AHERA management plan.

3.0 METHODOLOGY

ECS performed the authorized Scope of Services in general accordance with our proposal, standard industry practice(s) and methods specified by regulation(s) for the identification of Asbestos-Containing Materials (ACMs).

3.1 Asbestos Re-Inspection

The AHERA re-inspection survey was performed by David Stambaugh, a Virginia licensed asbestos inspector (license number 3303005057) who has received EPA-accredited training.

Before conducting the re-inspection, ECS reviewed existing inspection reports and then walked through areas where previously friable or non-friable ACBM were reported to be located, including assumed materials.

The scope of work for the re-inspection included the following items:

- Review the existing management plan to determine the areas requiring re-inspection.
- Visually reinspect and reassess the condition of known or assumed friable ACBM.
- Visually reinspect known or assumed non-friable ACBM and determine if it has become friable.
- Identify homogeneous areas that have changed conditions since previous re-inspections.
- Identify renovations or new materials that have been added to the building since the previous inspection.

At the request of the client, ECS did not sample additional materials during this inspection.

4.0 RESULTS

The following is a summary of laboratory results, findings and observations.

4.1 Asbestos-Containing Materials

An Asbestos-Containing Material (ACM) is defined as any material containing more than one percent (>1%) asbestos as determined using the method specified in Appendix E, Subpart E, 40 CFR Part 763, Section 1, PLM. Materials are categorized by the U.S. EPA in the following categories:

- Friable ACMs are defined as any ACM that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure.
- Non-friable ACMs are defined as any ACM that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.
    - Category I non-friable ACM are listed as following: packings, gaskets, resilient floor coverings, and asphalt roofing products containing more than one percent (>1%) asbestos.
    - Category II non-friable ACM are listed as any material, excluding Category I non-friable ACM, containing more than one percent (>1%) asbestos.

Regulated Asbestos Containing Materials (RACM) are friable ACM or non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading or has crumbled, been pulverized, or reduced to powder in the course of renovation and/or demolition operations.

A table of previously identified ACBM in the building is appended to this report. ECS notes the following ACMs were observed to be damaged during the site reconnaissance.

- **9" x 9" Green Floor Tile and associated Mastic located in the doorways of Rooms 11, 15, and 19 were observed as damaged.**

5.0 RECOMMENDATIONS AND REGULATORY REQUIREMENTS

Based on our understanding of the purpose of the AHERA - Three Year Reinspection, the results of laboratory analysis, and our findings and observations, ECS presents the following recommendations.

5.1 Asbestos-Containing Materials

ECS recommends the damaged 9" x 9" Green Floor Tile and associated Mastic observed in the doorways of Rooms 11, 15, and 19 be abated by a Virginia licensed asbestos abatement contractor.

If ACMs are to be removed, it is recommended that an industrial hygienist monitor the project. This involves collecting air samples from within and outside abatement work areas to monitor the asbestos abatement contractor's work practices over the course of the project. Only after the industrial hygienist has determined the identified ACMs have been removed should final clearance air samples be collected.

For any future renovation project, a more in-depth survey should be performed for asbestos in the path of construction. Where asbestos is found, an asbestos abatement plan should be prepared by an accredited professional as outlined in AHERA prior to performing any asbestos removal work.

The results of this survey should be added to the school's AHERA management plan.

6.0 LIMITATIONS

The conclusions and recommendations presented within this report are based upon a reasonable level of assessment within normal bounds and standards of professional practice for a site in this particular geographic setting. ECS is not responsible or liable for the discovery and elimination of hazards that may potentially cause damage, accidents, or injuries.

The observations, conclusions, and recommendations pertaining to environmental conditions at the subject site are necessarily limited to conditions observed, and/or materials reviewed at the time this study was undertaken. No warranty, expressed or implied, is made with regard to the conclusions and recommendations presented within this report. This report is provided for the exclusive use of the client. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties without the written consent of ECS and the client.

Our recommendations are in part based on federal, state, and local regulations and guidelines. ECS does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state, or federal public agencies, any conditions at the site that may present a potential danger to public health, safety, or the environment. Under this scope of services, ECS assumes no responsibility regarding any response actions initiated as a result of these findings. General compliance with regulations and response actions are the sole responsibility of the Client and should be conducted in accordance with local, state, and/or federal requirements.

Appendix I: AHERA ACBM Tables

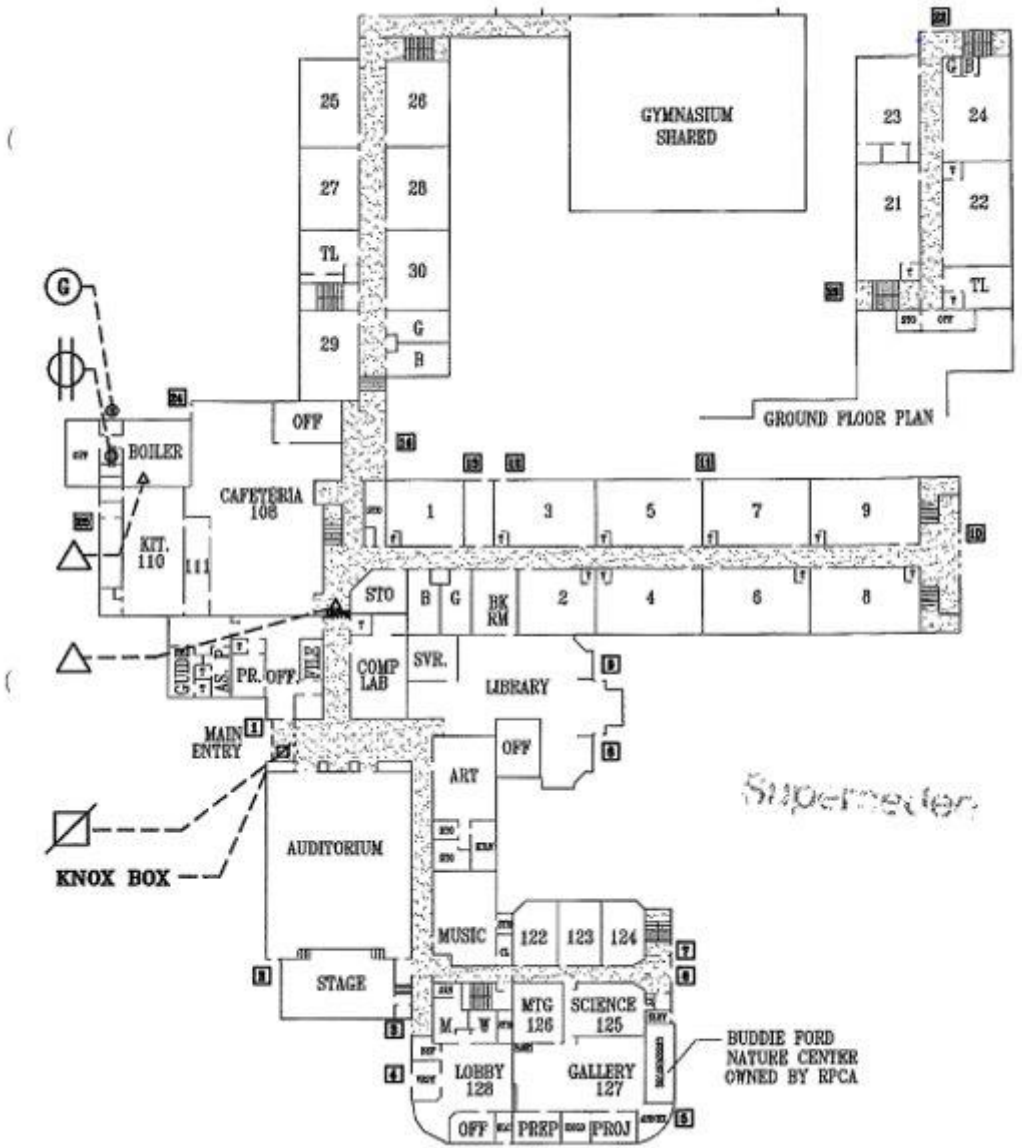
MATERIAL	LOCATION	FRIABILITY	CONDITION	COMMENTS	LAST INSPECTION DATE	RECOMMENDATION	SEMI-ANNUAL INSPECTION DATE	REMARKS
MATERIALS REPORTED AS ASBESTOS-CONTAINING MATERIALS ON PRIOR SURVEYS								
White Ceiling Tiles Large Pinhole Pattern	1st Floor Book Storage, Assumed to be present in other areas	RACM	Intact	Assumed to be in other areas throughout the building.	20-Jun-25	Maintain in O & M Plan		(7) Any remaining friable ACBM or friable suspected ACBM.
9" x 9" Green Floor Tiles and associated Mastic	Teacher Lounge and Rooms 11, 15, 19, and 33 on 2nd Floor (assumed under carpet in other areas)	NF	Damaged	Observed in doorways of Rooms 11, 15, and 19	20-Jun-25	Remove or Repair ASAP		Verify Analytical Results
Fire Door Insulation	Hallways (assumed in other areas)	RACM	Intact	None	20-Jun-25	Maintain in O & M Plan		(5) ACBM with potential for damage.
MATERIALS REPORTED AS ASBESTOS-CONTAINING MATERIALS ON PRIOR SURVEYS THAT WERE NOT IDENTIFIED/OBSERVED BY ECS ON JUNE 20, 2025 SURVEY								
12" X 12" Old/Damaged Off-White Floor Tile and associated Brown Mastic	Cafeteria Kitchen	NF	N/A	Assumed to have been abated in ECS Project No. 47:11652-N7	20-Jun-25	Remove from O & M Plan pending verification of removal		Verify Removal
Black Sink Undercoat	Kiln Closet Sink - Art Room	NF	N/A	Inaccessable during Survey, Assumed to be Present	20-Jun-25	Maintain in O & M Plan		Sample if proposed disturbance.
Black Unknown Size Floor Tile, Under Carpet	2nd Floor Trash Room, Under Capet Throughout Rooms 10-20	NF	N/A	This material is reported as ACM; however it was not observed in these areas.	20-Jun-25	Maintain in O & M Plan		4% Chrysotile
12" x 12" Brown Floor Tiles and associated Mastic	Art Room on First Floor, assumed to be present in other areas	NF	N/A	This material is reported as ACM; however it was not observed in this area.	20-Jun-25	Maintain in O & M Plan		Verify Analytical Results
9" x 9" Reddish Brown Floor Tiles and associated Black Mastic	1st Floor Book Storage, assumed to be present in other areas	NF	N/A	This material is reported as ACM; however it was not observed in this area.	20-Jun-25	Maintain in O & M Plan		Verify Analytical Results
Floor Tiles	Rooms 14, 17, and 18 on 2nd Floor and Teacher Lounge (reported under existing Flooring Materials)	NF	N/A	This material is reported as ACM; however it was not observed in this area.	20-Jun-25	Maintain in O & M Plan		Verify Analytical Results
Wire Insulation	Trash Closets on 1st and 2nd Floor, (assumed above plaster)	RACM	N/A	Inaccessable during Survey, Assumed to be Present	20-Jun-25	Maintain in O & M Plan		(7) Any remaining friable ACBM or friable suspected ACBM.
Black with Black Trim Floor Tiles	Hallway Rooms 16 and 20 on 2nd Floor (Assumed under existing flooring materials)	NF	N/A	This material is reported as ACM; however it was not observed in this area.	20-Jun-25	Maintain in O & M Plan		Verify Analytical Results
Light Brown Floor Tiles	Cafeteria on 1st Floor (assumed under existing flooring materials)	NF	N/A	Assumed to have been abated in ECS Project No. 01:10976-A.	20-Jun-25	Remove from O & M Plan pending verification of removal		Verify Removal
9" x 9" Maroon Floor Tiles and associated Mastic	Cafeteria on 1st Floor (assumed under existing flooring materials)	NF	N/A	Assumed to have been abated in ECS Project No. 01:10976-A.	20-Jun-25	Remove from O & M Plan pending verification of removal		Verify Analytical Results
TSI-Mudded Elbows/Joints	Crawlspaces in 1st Floor Boiler Room and Ground Floor (Assumed in other areas)	RACM	N/A	Inaccessable during Survey, Assumed to be Present	20-Jun-25	Maintain in O & M Plan		(1) Damaged or significantly damaged thermal system insulation ACBM
9" x 9" Gray Floor Tiles and associated Mastic	Hallways (assumed under existing floooring materials)	NF	N/A	Assumed to have been abated in ECS Project No. 47:11652-N/N1	20-Jun-25	Remove from O & M Plan pending verification of removal		Verify Removal

9" x 9" Brown Floor Tile	Kitchen Offices on 1st Floor (assumed on existing flooring material	NF	N/A	Assumed to have been abated in ECS Project No. 01:10976-A.	20-Jun-25	Remove from O & M Plan pending verification of removal		Verify Removal
1' x 1' Ceiling Tiles	Food Storage in Kitchen on 1st Floor	RACM	N/A	Inaccessable during Survey, Assumed to be Present	20-Jun-25	Maintain in O & M Plan		(6) ACBM with potential for significant damage.
Light Brown Floor Tiles	Library on 1st Floor (assumed under carpet in other areas)	NF	N/A	This material is reported as ACM; however it was not observed in this area.	20-Jun-25	Maintain in O & M Plan		Verify Analytical Results
12" x 12" White Floor Tiles and associated Mastic	Room 22 on Ground Floor (assumed under carpet in other areas)	NF	N/A	This material is reported as ACM; however it was not observed in this area.	20-Jun-25	Maintain in O & M Plan		Verify Analytical Results
Wallboard	Room 23 on Grond Floor (assumed in other areas)	NF	N/A	Inaccessable during Survey, Assumed to be Present	20-Jun-25	Maintain in O & M Plan		Verify Analytical Results
Black Floor Tile	Classrooms 4, 6, 8	NF	N/A	Assumed to have been abated in ECS Project No. 47:11652-E2.	20-Jun-25	Remove from O & M Plan pending verification of removal		Verify Removal
9" x 9" Gray Floor Tiles with white flecks and associated Mastic	Stage Stair Landing on First Floor and Janitor Closet on Ground Floor	NF	N/A	Assumed to have been abated in ECS Project No. 47:11652-E7.	20-Jun-25	Remove from O & M Plan pending verification of removal		Verify Removal
Black with White Flecks and associated Black Mastic	Janitor Closet on Ground Floor	NF	N/A	Assumed to have been abated in ECS Project No. 47:11652-E7.	20-Jun-25	Remove from O & M Plan pending verification of removal		Verify Removal
6" Pipe Fitting Insulation	Janitor Closet on Ground Floor	NF	N/A	Assumed to have been abated in ECS Project No. 47:11652-E7.	20-Jun-25	Remove from O & M Plan pending verification of removal		Verify Removal
MATERIALS ASSUMED TO CONTAIN ASBESTOS								
Hardwood Underlayment and associated Mastic	Stage and Gymnasium on 1st Floor	NF	Intact	PACM until tested	20-Jun-25	Maintain in O & M Plan		Sampling if encountered/uncovered
Boards and associated Mastic	Classrooms and Hallways	NF	Intact	PACM until tested	20-Jun-25	Maintain in O & M Plan		Sampling if encountered/uncovered
Fountain and Radiator Coil Wrap	Throughout Building	NF	Intact	PACM until tested	20-Jun-25	Maintain in O & M Plan		Sampling if encountered/uncovered
Black Window Sill	Classrooms	NF	Intact	PACM until tested	20-Jun-25	Add to O & M Plan		Sampling if encountered/uncovered
Boards above Windows	Classrooms	NF	Intact	PACM until tested	20-Jun-25	Add to O & M Plan		Sampling if encountered/uncovered
Ceiling Tiles and Materials above Drop Ceiling Tiles	Library and Auditorium on 1st Floor	F	Intact	PACM until tested	20-Jun-25	Add to O & M Plan		Sampling if encountered/uncovered
Exterior and Interior Caulk associated with Glass Window Panels	Library and Gymnasium on 1st Floor	NF	Intact	PACM until tested	20-Jun-25	Add to O & M Plan		Sampling if encountered/uncovered
Pipe Flange Gaskets	Throughout the Building	Unknown	Intact	PACM until tested	20-Jun-25	Add to O & M Plan		Sampling if encountered/uncovered
Electrical Panels: Transite Components	Mechanical Rooms	NF	Intact	PACM until tested	20-Jun-25	Add to O & M Plan		Sampling if encountered/uncovered
Thermal System Insulation (TSI)	Pipes within Chases behind Walls and above Ceiling throughout Building	F	Not Observed	PACM Until Tested	20-Jun-25	Maintain in O & M Plan		Sampling if encountered/uncovered
Mirror Mastic	Bathrooms	NF	Intact	PACM until tested	20-Jun-25	Add to O & M Plan		Sampling if encountered/uncovered
Waterproofing Membranes/Mastics	Behind Interior Finishes, Exterior Veneer and/or Subgrade Walls, and Under Ceramic Flooring	NF	Intact	PACM until tested	20-Jun-25	Add to O & M Plan		Sampling if encountered/uncovered

Asphalt-Based Roofing Material and Caulks/Sealants	Roof	NF	Intact	PACM until tested	20-Jun-25	Add to O & M Plan		Sampling if encountered/uncovered
Switch Deflector Plate, Brakes, Cab and Doors	Elevator	Unknown	Intact	PACM until tested	20-Jun-25	Add to O & M Plan		Sampling if encountered/uncovered
Gypsum Roof Boards	Throughout Building	NF	Intact	PACM until tested	20-Jun-25	Add to O & M Plan		Sampling if encountered/uncovered
Notes: F = Friable; NF = Non-Friable; PACM = Presumed Asbestos Containing Material; O & M Plan = Operations and Maintenance Plan; NAD = No Asbestos Detected.								

Appendix II: Floor Plan

First Floor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LOBBY
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GALLERY
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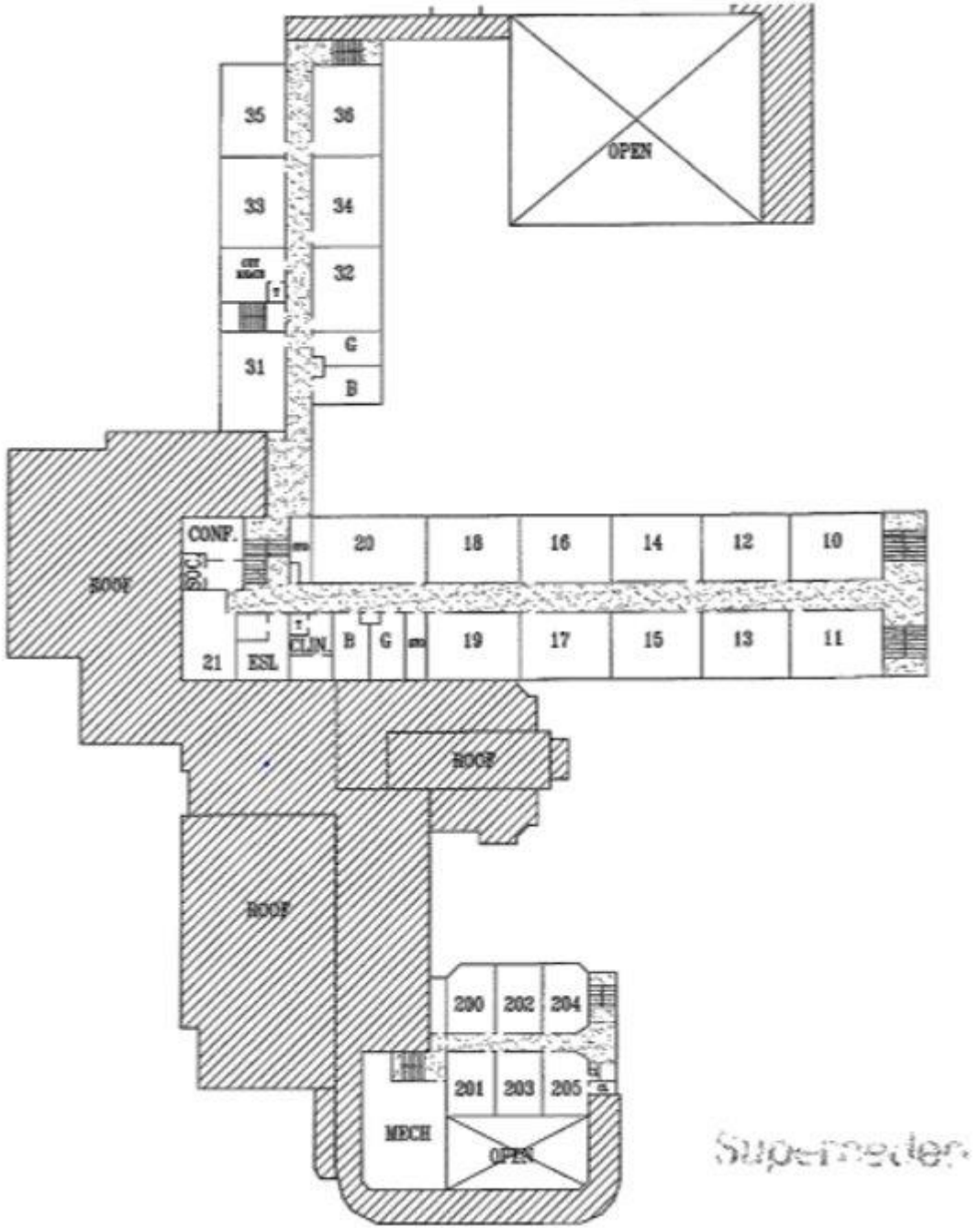
PREP
PROJ
BUDDIE FORD
NATURE CENTER
OWNED BY RPCA

Second Floor



Appendix III: Site Photographs



1 - 9x9 Flooring under Carpet - Classrooms

Appendix IV: Certifications/ Licenses

DPOR License Lookup License Number 3303005057

License Details

Name	STAMBAUGH, DAVID
License Number	3303005057
License Description	Asbestos Inspector License
Rank	Asbestos Inspector
Address	CLEAR BROOK, VA 22624
Initial Certification Date	2023-12-19
Expiration Date	2025-12-31

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DPOR License Lookup build 1,524 (built 2025-04-18 11:59:26).

DPOR License Lookup License Number 3304001722

License Details

Name	TRUAX, ADAM MICHAEL
License Number	3304001722
License Description	Asbestos Management Planner License
Rank	Asbestos Management Planner
Address	RANSON, WV 25438
Initial Certification Date	2023-03-30
Expiration Date	2026-03-31

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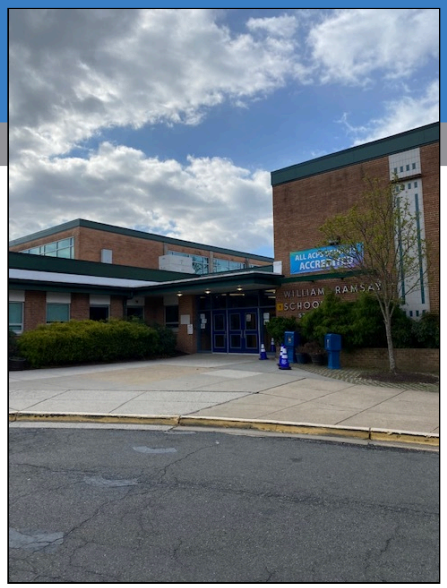
Appendix V: Previous Reports

AHERA ASBESTOS-CONTAINING MATERIALS SURVEY



WILLIAM RAMSEY ELEMENTARY SCHOOL

5700 SANGER AVENUE
ALEXANDRIA, VIRGINIA 22311

ECS PROJECT NO. 47:11652-E2

FOR: ALEXANDRIA CITY PUBLIC SCHOOLS

APRIL 4, 2022

April 4, 2022

Mr. John Contreras
Alexandria City Public Schools
1340 Braddock Place
Alexandria, Virginia 22314
john.contreras@acps.k12.va.us

ECS Project No. 47:11652-E2

Reference: AHERA Asbestos-Containing Materials Survey, William Ramsey Elementary School, 5700 Sanger Avenue, Alexandria, Virginia

Dear Mr. Contreras:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Alexandria City Public Schools with the results of the above referenced AHERA Asbestos-Containing Materials Survey performed at William Ramsey Elementary School located at 5700 Sanger Avenue in Alexandria, Virginia. This report summarizes our observations, analytical results, findings, and recommendations related to the work performed. The work described in this report was performed by ECS in general accordance with the Scope of Services described in ECS Proposal Number 47:16069-EP and the terms and conditions of the agreement authorizing those services.

ECS appreciates this opportunity to provide Alexandria City Public Schools with our services. If we can be of further assistance to you, please do not hesitate to contact us.

Sincerely,

ECS Mid-Atlantic, LLC

Zach Harrell
Environmental Technician
zharrell@ecslimited.com
571-334-3350

Christopher J. Chapman, CIH
Director of Industrial Hygiene
cchapman@ecslimited.com
804-258-2101

EXECUTIVE SUMMARY

The subject property consists of William Ramsey Elementary School, a two-story brick school building located at 5700 Sanger Avenue, in Alexandria, Virginia. The school was originally constructed in 1958. Building finishes observed included concrete sub-floors, vinyl floor tiles, carpet, and/or ceramic tiles; the wall systems appeared to generally consist of concrete masonry unit (CMU) block walls, drywall wallboard, and/or ceramic wall tiles; and the ceiling systems appeared to generally consist of suspended drop ceilings with ceiling tiles and some plaster finishes.

The purpose of the survey was to determine if asbestos-containing building materials (ACBMs) present on the subject property. The survey was performed within interior areas of the school building excluding the roofs and exterior materials. This survey is intended to provide a supporting document for the Asbestos Hazard Emergency Response Act (AHERA) management plan.

Based on the laboratory analysis of the bulk samples collected during the most recent survey, the following materials were reported to contain asbestos:

- 12" x 12" Old/damaged Off-White Floor Tile and associated Brown Mastic present in a residual application within the Cafeteria Kitchen.
- Black Sink Undercoat associated with the Kiln Closet Sink in the Art Room. Also observed and sampled in the Library Office.
- Black Unknown Size Floor Tile present in the 2nd Floor Trash Room and observed under carpet throughout Rooms 10-20.

Based on a review of historical documentation, the following materials were previously identified as asbestos-containing and ECS does not have records of them being abated.

- 1' x 1' White Ceiling Tiles Large Pinhole Pattern present in the Book Storage Room on the 1st Floor.
- TSI-Mudded Elbows/Joints present in the Crawl Spaces in the 1st Floor Boiler Room and Ground Floor (Assumed in other Areas).
- 1' x 1' Ceiling Tiles present in Food Storage and offices in the Kitchen on the 1st Floor
- 9" x 9" Gray with White Flecks and associated Black Mastic present in the Stage Stair Landing on the 1st Floor.
- 12" x 12" Brown Floor Tiles and Associated Mastic present in the Art Room.
- Older wiring and lighting components present in closets.
- Various colors and sizes of asbestos containing floor tile and/or associated mastics that were previously reported in areas that have since been concealed with newer flooring applications, deeming them inaccessible due to the non-destructive means of this survey

Based on a review of historical documentation the following materials were previously identified as asbestos-containing and have since been abated.

- Floor Mastic in the Cafeteria (reference ECS Job #01:10976-A).
- Floor Tile and Associated Mastic in the First and Second Floor Hallway (reference ECS PROJECT NO. 47:47:11652-N/N1).

- Floor Tile and Associated Mastic in the K Wing Classrooms 1, 1A, 2, 3, 4, 5, 6, 7, 8, 9, and the Associated Storage Room (reference ECS Job #1519-E2).

Recommendations regarding the removal and disposal of the ACMs identified by ECS can be found in Section 5.0 of this report. The executive summary is an integral portion of this report, however, ECS recommends the report be read in its entirety.

TABLE OF CONTENTS

PAGE

1.0 SITE DESCRIPTION 1

2.0 PURPOSE 1

3.0 METHODOLOGY 1

3.1 Asbestos-Containing Materials 1

4.0 RESULTS 2

4.1 Asbestos-Containing Materials 2

4.2 Suspect or Assumed Asbestos-Containing Materials 11

5.0 RECOMMENDATIONS AND REGULATORY REQUIREMENTS 12

5.1 Asbestos-Containing Materials 12

6.0 LIMITATIONS 13

TABLE OF APPENDICES

Appendix I: Figures

Appendix II: Site Photographs

Appendix III: Asbestos Bulk Sample Results

Appendix IV: Laboratory Report(s)

Appendix V: Certifications/Licenses

Appendix VI: AHERA ACBM and Suspect ACBM Categories Document

Appendix VII: Previous Reports

1.0 SITE DESCRIPTION

The subject property consists of William Ramsey Elementary School, a two-story brick school building located at 5700 Sanger Avenue, in Alexandria, Virginia. The school was originally constructed in 1958. Building finishes observed included concrete sub-floors, vinyl floor tiles, carpet, and/or ceramic tiles; the wall systems appeared to generally consist of concrete masonry unit (CMU) block walls, drywall wallboard, and/or ceramic wall tiles; and the ceiling systems appeared to generally consist of suspended drop ceilings with ceiling tiles and some plaster finishes.

2.0 PURPOSE

The purpose of this Asbestos Hazard Emergency Response Act (AHERA) asbestos re-inspection was to determine if asbestos-containing building materials (ACBMs) are present on the subject building that had not been previously identified, to account for the ACMs previously identified with regards to their general location and condition, and finally to generally identify if any of the previously noted ACMs had been abated. The survey was performed within interior areas of the subject building. Exterior and roofing materials were not included in this survey. This survey is intended to provide a supporting document for the AHERA management plan for the school.

US EPA AHERA regulations requires all public and private schools to survey school buildings and associated support school buildings for ACMs, and to prepare management plans for identified ACMs.

3.0 METHODOLOGY

ECS performed the authorized Scope of Services in general accordance with our proposal, standard industry practice(s) and methods specified by regulation(s) for the identification of Asbestos-Containing Materials (ACMs).

3.1 Asbestos-Containing Materials

The non-invasive asbestos survey was performed by asbestos inspectors who have received EPA accredited training and are licensed by the Commonwealth of Virginia. Samples of suspect ACMs were collected utilizing hand tools and placed into individual, labeled plastic bags. Unique bulk suspect ACM samples were submitted to Scientific Analytical Institute, Inc. (SAI) in Greensboro, North Carolina for analysis via Polarized Light Microscopy (PLM) in accordance with current EPA-600 methodology. Materials consisting of additional layers were analyzed separately. Scientific Analytical Institute, Inc. (SAI) is listed as an accredited laboratory by the National Voluntary Laboratory Accreditation Plan (NVLAP) managed by the National Institute of Standards and Technology (NIST) for bulk sample analysis by currently approved EPA methodology by PLM.

During the survey, ECS attempted to identify suspect ACMs in readily accessible areas. However, due to the destructive means required to identify some materials, certain areas were deemed inaccessible (i.e. behind walls or sub grade materials) and were not surveyed for suspect ACMs. It is important to note that due to the COVID-19 pandemic, extra precautions were taken in order to avoid contact

with students and staff, increasing the number of areas deemed inaccessible. Classrooms in use and select closets were inaccessible. Unidentified suspect ACMs may be located in these and/or other inaccessible areas.

Samples were collected in general accordance with EPA Standard 40 CFR 763 Subpart E, Asbestos Hazard Emergency Response Act (AHERA) and OSHA Standard 29 CFR 1926.1101 Inspection Protocol. Multiple samples of each unique material were submitted. Samples were analyzed using "Positive Stop" methodology. If one sample of a homogeneous material is reported to contain asbestos, the remaining samples of that material are not analyzed. EPA regulations stipulate that if one sample contains asbestos the entire quantity of that material contains asbestos, regardless of additional analysis.

4.0 RESULTS

The following is a summary of laboratory results, findings and observations.

4.1 Asbestos-Containing Materials

An Asbestos-Containing Material (ACM) is defined as any material containing more than one percent (>1%) asbestos as determined using the method specified in Appendix E, Subpart E, 40 CFR Part 763, Section 1, PLM. Materials are categorized by the U.S. EPA in the following categories:

- Friable ACMs are defined as any ACM that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure.
- Non-friable ACMs are defined as any ACM that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.
    - Category I non-friable ACM are listed as following: packings, gaskets, resilient floor coverings, and asphalt roofing products containing more than one percent (>1%) asbestos.
    - Category II non-friable ACM are listed as any material, excluding Category I non-friable ACM, containing more than one percent (>1%) asbestos.

Regulated Asbestos Containing Materials (RACM) are friable ACM or non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading or has crumbled, been pulverized, or reduced to powder in the course of renovation and/or demolition operations.

AHERA requires identified asbestos-containing building materials (ACBMs) to be categorized by a trained AHERA inspector into the following categories:

• (1) Damaged or significantly damaged thermal system insulation ACBM.
• (2) Damaged friable surfacing ACBM.
• (3) Significantly damaged friable surfacing ACBM.
• (4) Damaged or significantly damaged friable miscellaneous ACBM.
• (5) ACBM with potential for damage.
• (6) ACBM with potential for significant damage.

• (7) Any remaining friable ACBM or friable suspected ACBM.

Definitions for the above-referenced categories can be found in the Appendices.

Scientific Analytical Institute, Inc. (SAI) submitted a signed final laboratory report to ECS on March 30th, 2022. Three of the bulk samples submitted for analysis were reported to contain asbestos in detectable concentrations. These materials are summarized below. A complete list of the sampled materials submitted for analysis and sample locations are located in the Appendix of this report. Additional details regarding the overall locations of the materials identified as asbestos-containing are provided further in the report. Photographs of collected samples reported as asbestos-containing are also located in the Appendix of this report.

In total, 28 bulk samples from homogeneous areas were submitted to the laboratory of which 35 layers were analyzed.

Summary of Asbestos-Containing Materials Identified

Location	Material Description	Analytical Result	EPA Category	AHERA Category
Cafeteria Kitchen	12" x 12" Old/ damaged Off-White Floor Tile and associated Brown Mastic	2% Chrysotile	Category I Non-Friable	Not applicable
Kiln Closet Sink- Art Room	Black Sink Undercoat	2% Chrysotile	Category II Non-Friable	Not applicable
2nd Floor Trash Room (observed under carpet throughout Rooms 10-20)	Black Unknown Size Floor Tile (under carpet)	4% Chrysotile	Category I Non-Friable	Not applicable

Summary of Previously Identified Asbestos-Containing Materials

Location	Material Description	Analytical Results	EPA Category	AHERA Category	Abatement History
Art Room on 1st Floor (Assumed Under Existing	12" x 12" Brown Floor Tiles and Associated Mastic (Reported under Existing 12" x 12" Floor Tiles	Analysis Not Available	Category I Non-Friable	Not Applicable	Observed, intact (pictured)

Location	Material Description	Analytical Results	EPA Category	AHERA Category	Abatement History
Book Storage on 1st Floor (Assumed in Other Areas)	1' x 1' White Ceiling Tiles Large Pinhole Pattern	Analysis Not Available	RACM	(6) ACBM with potential for significant damage.	Observed, intact (pictured)
Book Storage on 1st Floor (Assumed under Existing Flooring Materials in other Areas)	9" x 9" Reddish Brown Floor Tiles and associated Mastic (Reported under Existing Flooring Materials)	Analysis Not Available	Category I Non-Friable	Not Applicable	Not Observed, assumed to have been abated or to still be concealed under new flooring applications*
Rooms 14, 17 and 18 on 2nd Floor and Teacher Lounge (Assumed under Existing Flooring Materials in other Areas)	Floor Tiles (Reported under Existing Flooring Materials)	Analysis Not Available	Category I Non-Friable	Not Applicable	Not Observed, assumed to have been abated or to still be concealed under new flooring applications*
Trash Closets on 1st and 2nd Floors and General Storage Closet	Wire Insulation (Assumed above Plaster Ceiling)	Analysis Not Available	RACM	(7) Any remaining friable ACBM or friable suspected ACBM.	Observed, Intact (pictured)
Hallway Rooms 16 and 20 on 2nd Floor (Assumed under Existing Flooring Materials in other Areas)	Black with Black Trim Floor Tiles (Reported under Existing Flooring Materials)	Analysis Not Available	Category I Non-Friable	Not Applicable	Not Observed, assumed to have been abated or to still be concealed under new flooring applications.*

Location	Material Description	Analytical Results	EPA Category	AHERA Category	Abatement History
Cafeteria on 1st Floor (Assumed under Existing Flooring Materials in other Areas)	Light Brown Floor Tiles (Reported under Existing Flooring Materials)	Analysis Not Available	Category I Non-Friable	Not Applicable	Not observed, possibly abated through ECS Job #01:10976-A, May still be concealed in other areas throughout the building.**
Cafeteria and Library on 1 st Floor (Assumed under Existing Flooring Materials in other Areas)	9" x 9" Maroon Floor Tiles and associated Mastic (Reported under Existing Flooring Materials)	Analysis Not Available	Category I Non-Friable	Not Applicable	Not observed, possibly abated through ECS Job #01:10976-A, May still be concealed in other areas throughout the building.**
Crawl Spaces in 1 st Floor Boiler Room and Ground Floor (Assumed in other Areas)	TSI-Mudded Elbows/Joints	Analysis Not Available	RACM	(1) Damaged or significantly damaged thermal system insulation ACBM	Observed, Moisture and Water Damage (Pictured)
Teacher Lounge and Rooms 11,15, 19 and 33 on 2nd Floor (Assumed under Carpet in other Areas)	9" x 9" Green Floor Tiles and associated Mastic (Observed under Carpet)	Analysis Not Available	Category I Non-Friable	Not Applicable	Not Observed, assumed to have been abated or to be concealed under new flooring application*
Media Room (Assumed in Library on 1 st Floor)	Red Galvanized Duct Mastic	Analysis Not Available	Category II Non-Friable	Not Applicable	Not Observed, assumed to be concealed *

Location	Material Description	Analytical Results	EPA Category	AHERA Category	Abatement History
Hallways (Assumed under Existing Flooring Materials in other Areas)	9" x 9" Gray Floor Tiles and associated Mastic (Reported under Existing Flooring Materials)	Analysis Not Available	Category I Non-Friable	Not Applicable	Not observed, assumed to have been abated in ECS PROJECT NO. 47:47:11652-N/ N1, or is concealed under new flooring application.**
Hallways (Observed in other Areas)	Fire Door Insulation	Analysis Not Available	RACM	(5) ACBM with potential for damage.	Observed, Intact
Kitchen Offices on 1 st Floor (Assumed under Existing Flooring Materials in other Areas)	9" x 9" Brown Floor Tiles (Reported under Existing Flooring Materials)	Analysis Not Available	Category I Non-Friable	Not Applicable	Not observed, assumed to have been abated in ECS Job #01:10976-A or is concealed under new flooring application.**
Food Storage in Kitchen on 1st Floor (Reported in other Areas)	1' x 1' Ceiling Tiles	Analysis Not Available	RACM	(6) ACBM with potential for significant damage.	Observed, Intact (pictured)
Library on 1st Floor (Assumed under Carpet in other Areas)	Light Brown Floor Tiles (Reported under Carpet)	Analysis Not Available	Category I Non-Friable	Not Applicable	Not observed, assumed to have been abated or to still be present under new flooring application.*

Location	Material Description	Analytical Results	EPA Category	AHERA Category	Abatement History
Room 20 on 2nd Floor (Assumed in other Areas)	Gray Galvanized Duct Mastic	Analysis Not Available	Category II Non-Friable	Not Applicable	Not observed, assumed to be concealed with paint*
Room 22 on Ground Floor (Assumed under Carpet in other Areas)	12" x 12" White Floor Tiles and associated Mastic (Reported under Carpet)	Analysis Not Available	Category I Non-Friable	Not Applicable	Not observed, assumed to have been abated or to still be present under new flooring application.*
Room 23 on Ground Floor (Assumed in other Areas)	Wallboard	Analysis Not Available	Category II Non-Friable	Not Applicable	Inaccessible during survey, assumed to still be present*
Classrooms 4, 6 and 8	Black Floor Tile (under Carpet)	Tile- 5% Chrysotile	Category I Non-Friable	Not Applicable	Observed, intact and concealed under carpet (Pictured and sampled)
Stage Stair Landing on 1 st Floor and Janitor Closet on Ground Floor	9" x 9" Gray with White Flecks and associated Black Mastic	Tile- 5% Chrysotile Mastic- 3% Chrysotile	Category I Non-Friable	Not Applicable	Observed, Intact (Pictured)
Janitor Closet on Ground Floor	Black with White Flecks Floor Tile and associated Mastic	Tile- 5% Chrysotile Mastic- 5% Chrysotile	Category I Non-Friable	Not Applicable	Not observed, assumed to have been abated or to still be present under new flooring application.*
Janitor Closet on Ground Floor	6" Pipe Fitting Insulation	5% Chrysotile	RACM	(5) ACBM with potential for damage.	Not observed, assumed to have been abated * (pictured)

Location	Material Description	Analytical Results	EPA Category	AHERA Category	Abatement History
Notes: ***No data available in historical documentation reviewed.** ****No additional description of the vinyl floor tiles abated was provided in historical documentation reviewed.** **Based on historical documentation reviewed, floor tile and mastic abatements have taken place in the Cafeteria area and serving area (ECS Project NO. #01:10976-A), the 1st and 2nd floor hallway (ECS Project NO. 47:47:11652-N/N1), and Classrooms within the K wing (Classrooms 1-9 and the associated storage room- ECS Project NO. #1519-E2).**					

Summary of Non Asbestos-Containing Materials Identified

Location	Material Description	Analytical Results
Materials Sampled in 2021 AHERA Survey		
Main Office	4" Blue Cove Base and associated Cream Mastic	NAD
Boiler Room	Concrete Masonry Unit (CMU) Wall Seam Sealant (Gray Painted White)	NAD
Boiler Room	Red Exhaust Pipe Sealant	NAD
1st Floor Trash Room	5" Black Cove Base and associated Cream Mastic	NAD
1st Floor Janitors Closet	Damaged Plaster Skim Coat on Ceiling	NAD
Elevator Closet in Room 25-30 Hallway	Gray Pipe to Wall Penetration Ceiling	NAD
Mechanical Penthouse	White Duct Insulation Seam Mastic	NAD
Mechanical Penthouse	White Mudded Thermal System Pipe Insulation and associated Fibrous Wrap	NAD

Location	Material Description	Analytical Results
Stairs to Mechanical Penthouse	White Stair Stringer Caulk	NAD
Library- Office behind Front Desk	Black Sink Undercoat	PACM (Not Analyzed due to Positive Stop Methodology)
2nd Floor Stripped Hallway	Beige Leveling Compound on Concrete Floor	NAD
Previously Sampled Materials		
Rooms 4, 6, and 8	Yellow Carpet Mastic associated with Black Floor Tile	NAD
Janitor Closet Ground Floor	6" Pipe Fitting Insulation	Wrap - NAD
Boiler Room	Grey Textured Plaster	NAD
Boiler Room	Grey Metal Duct Mastic	NAD
Kitchen Office	Brown Glue Dot associated with 1' x 1' Ceiling Tiles	NAD
Kitchen Office	Yellow Glue Dot associated with 1' x 1' Ceiling Tiles	NAD
Kitchen Office, Kitchen Rear Entrance, Cafeteria, Book Storage Room, Exit Door 10 under Stair Landing, Janitor Closet on Ground Floor, and Hallway to Gym	Plaster Ceiling/ Wall	NAD
Refrigerator Area in Kitchen, and Counseling Area on 2nd Floor	Drywall	NAD
Refrigerator Area in Kitchen, and Counseling Area on 2nd Floor	Joint Compound	NAD
Cafeteria	Brown Glue Dot on Plaster Ceiling	NAD

Location	Material Description	Analytical Results
Stairs on Cafeteria	Black and White Mastic and Leveling Compound	Both NAD
Stairs on Cafeteria	Grey Stair Tread	NAD
Room 8, 17, and Stairwell on 2nd Floor (above Exit Door 10)	Grey Interior Window Caulk	NAD
Grey (Painted Beige) 1' x1' Textured Wall Tile	Room 8	NAD
Exit Door 6, 10, and 14	Beige Interior Window Caulk	NAD
Hallway on 2nd Floor	2' x 4' White Textured Ceiling Tile	NAD
Girl's Bathroom on 2nd Floor	Black Partition Wall	NAD
Room 17	Grey Sink Undercoat	NAD
Hallway between Rooms 25-30 on 1st Floor	2' x 4' Fissured Ceiling Tile	NAD
Stage Stair Landing	Black Stair Tread	NAD
Art Room	White Sink Undercoat	NAD
Janitors Closet on 1st Floor	Black Pipe Wrap	NAD
Science Room 125	2' x 2' White Punch Ceiling Tile	NAD
Gymnasium	2' x 2' White Solid Ceiling Tile	NAD
Roof Access in Gymnasium	4" White and Red Pipe Bridging Mastic	NAD
Roof Access in Gymnasium	2" White Pipe Bridging Mastic	NAD
Notes: **NAD = No Asbestos Detected** **Locations reflect the area in which the material was sampled. These materials may be representative of and located in other homogenous areas throughout the school.**		

Flooring Materials

ECS observed asbestos-containing 12" x 12" Off-White Floor Tile and associated Brown Mastic ECS observed in the Cafeteria Kitchen in a small application.

Additionally, ECS observed asbestos-containing Black Unknown Size Floor Tile under the carpet in the 2nd Floor Trash Room and was also observed under carpet throughout Rooms 10-20.

These materials may be present in other areas of the building. Note: generally asbestos-containing floor tile and mastics can be found under furniture, partitions, other flooring materials, etc.

Miscellaneous Materials

ECS observed asbestos-containing Black Sink Undercoat on the sink in the Kiln Closet of the Art Classroom. This material may be present in similar applications in other areas of the building deemed inaccessible during the survey, and should be tested if uncovered.

4.2 Suspect or Assumed Asbestos-Containing Materials

Due to the inaccessibility or the destructive means that asbestos sampling requires, additional suspect ACMs may remain within the building hidden behind inaccessible areas that include, but are not limited to, sub-grade walls, structural members, topping slabs, sub-grade sealants, flooring located below underlayments, areas behind exterior walls, pipe trenches, and subsurface utilities, etc. These areas were deemed inaccessible and were not assessed.

If these materials are discovered during construction activities, they should be presumed to contain asbestos and be treated as ACMs or be sampled immediately upon discovery and prior to disturbance for asbestos content by a certified asbestos inspector in accordance with 29 CFR 1926.1101.

Based upon our past experience in the identification of ACMs in similarly constructed buildings, the following additional suspect ACMs may also be located in inaccessible areas of the structure:

- **Boilers Components** in boilers (gasket, fire brick, etc.).
- **Elevator Components** such as Switch Deflector Plates, Brakes, Cab and Doors.
- **Roofing Components** such as Asphalt- Based Roofing Material and Caulks and Sealants.
- **Vermiculite Filler** associated with Concrete Masonry Unit (Blocks/Walls) .
- **Duct Pin Mastic** associated with the HVAC Units.
- **Window Glazing** that were inaccessible during surveying.
- **HVAC Components** such as vibration dampeners.
- **Electrical Panels Asbestos Cement Components** in electrical systems.
- **Fire Door and associated Casing Insulation** in locations requiring a rated fire door and door casing.
- **Mastics or Cement Boards** associated with Baseboard Heaters/Radiator Components/Wall Mounted Fan Coil Units in and/or behind Radiators/Baseboards.
- **Mastics** behind/under mirrors, chalk/dry-erase boards, and flooring applications.
- **Water Fountain Components** in water fountains (mastics, pipe cloth, etc)
- **Waterproofing Membrane/Mastics/Vapor Barriers/Sub-grade Pipe Conduit** within exterior wall cavities, behind interior finishes, exterior veneer and/or subgrade walls.
- **Vibration Dampener Cloth** associated with HVAC Systems.
- **Roofing Materials** including caulk, flashing, membranes.
- **Felt Paper and Leveling Compound** associated with hardwood floors.
- **Asbestos-Cement Pipe Conduit** encased in duct banks and/or below sub-grade.

- **Laboratory Bench Tops**
- **Terrazzo Stairs, Floors, Sinks, and Window Sills**
- **Exterior Soffit Materials**
- **Spray-On Fireproofing** above ceilings and behind walls.
- **Gym floors**
- **Locker mastics**
- **Block filler paint**
- **Exterior materials (roof, caulkings, glazings)**

5.0 RECOMMENDATIONS AND REGULATORY REQUIREMENTS

Based on our understanding of the purpose of the AHERA Asbestos-Containing Materials Survey, the results of laboratory analysis, and our findings and observations, ECS presents the following recommendations.

5.1 Asbestos-Containing Materials

ECS recommends where a material type has been identified as asbestos-containing that other materials with similar color, texture, age and size throughout the building's interior and exterior be assumed to contain asbestos. Please refer to Section 4.1 for a complete list of building materials that were reported positive for asbestos and to Section 4.2 for materials that were assumed to contain asbestos.

Due to the damage observed on some of the pipe insulation, ECS recommends that the crawlspace be locked out for entry unless personnel are properly trained and have adequate ppe.

If the identified ACMs are scheduled to be disturbed in the future, it is recommended that this work be performed by a Commonwealth of Virginia licensed asbestos abatement contractor. The Commonwealth of Virginia requires 20 calendar-days notice prior to an asbestos project involving greater than or equal to 10 linear feet or 10 squared feet. The EPA requires 10 working days notice prior to removal of regulated ACM (RACM) in quantities greater than or equal to 160 square feet, 260 linear feet, or 35 cubic feet. Note that EPA Region III no longer requires notification of asbestos projects but rather request all notification go to the appropriate state agencies. Notification requirements in general will be dependent on the means/methods used by the contractor to abate the material found in the building.

If ACMs are to be removed, it is recommended that an industrial hygienist monitor the project. This involves collecting air samples from within and outside abatement work areas to monitor the asbestos abatement contractor's work practices over the course of the project. The industrial hygienist should evaluate if the asbestos abatement work is in accordance with project specifications, U.S. EPA regulation 40 CFR Part 61-National Emission Standards for Hazardous Air Pollutants Subpart M: National Emission Standard for Asbestos, and U.S. Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1926.1101 – Asbestos in Construction. The industrial hygienist should

assess each work area to monitor the removal of ACMs. Only after the industrial hygienist has determined the identified ACMs have been removed should final clearance air samples be collected (if necessary).

Suspect ACMs not observed due to inaccessibility or not sampled due to the destructive means that sampling would require may also be encountered during construction activities. At the time of the survey, only limited destructive means were used to locate or sample suspect ACMs; therefore, additional suspect ACMs may remain within inaccessible areas that include, but are not limited to, sub-grade walls, structural members, topping slabs, exterior areas, sub-grade sealants, flooring located below underlayments, vapor barriers, pipe trenches and other subsurface utilities, etc. If additional suspect ACMs are uncovered which were not accessible during this survey, it is recommended that these materials either be assumed to contain asbestos or be sampled prior to disturbance upon discovery for asbestos content by an asbestos inspector in accordance with 29 CFR 1926.1101.

The results of this survey should be added to the school's management plan.

6.0 LIMITATIONS

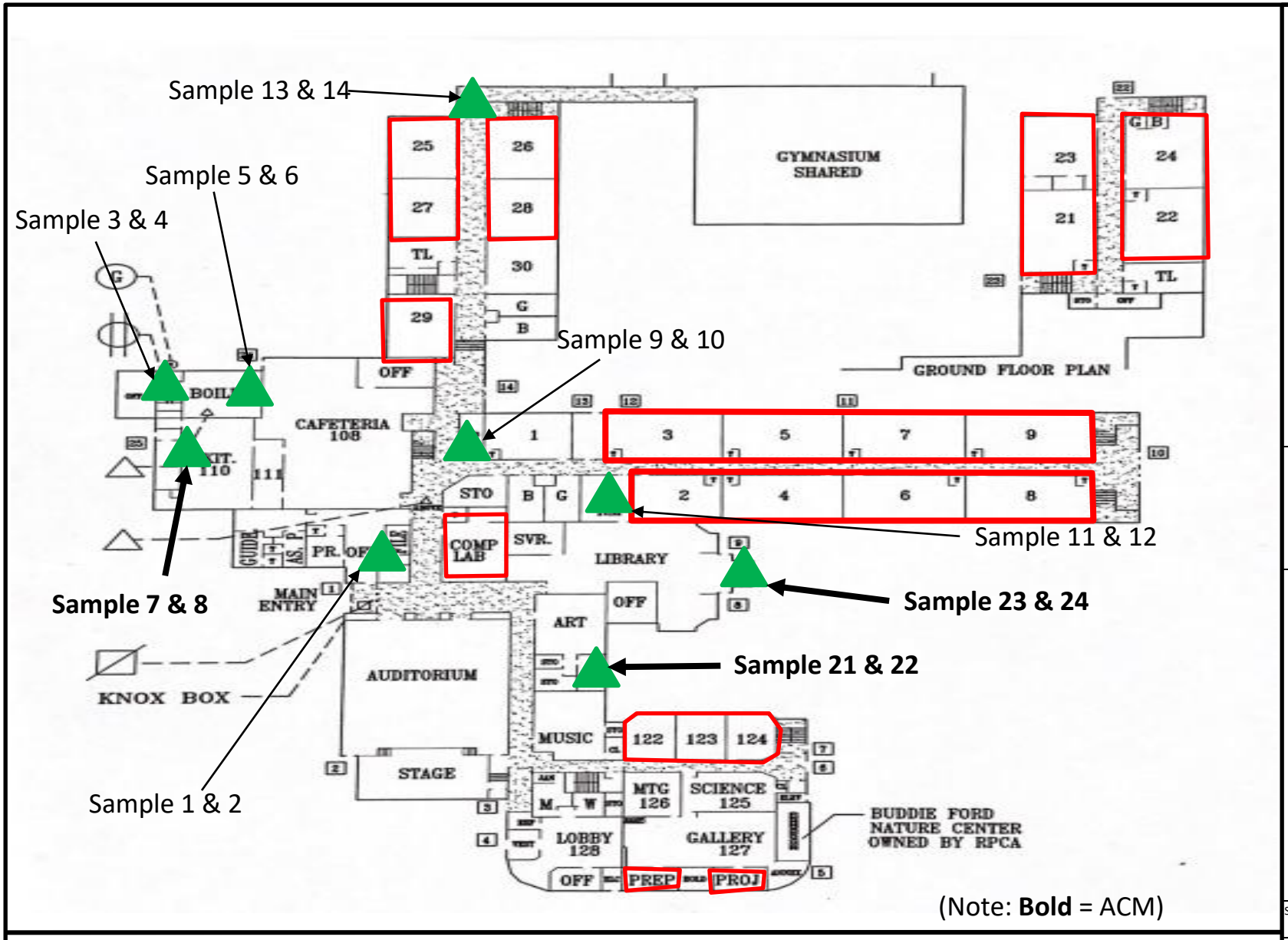
The conclusions and recommendations presented within this report are based upon a reasonable level of assessment within normal bounds and standards of professional practice for a site in this particular geographic setting. ECS is not responsible or liable for the discovery and elimination of hazards that may potentially cause damage, accidents, or injuries.

During this study, samples were submitted for analysis at an accredited laboratory via polarized light microscopy. As with any similar survey of this nature, actual conditions exist only at the precise locations from which samples were collected. Certain inferences are based on the results of this sampling and related testing to form a professional opinion of conditions in areas beyond those from which the samples were collected. No warranty, expressed or implied, is made.

The observations, conclusions, and recommendations pertaining to environmental conditions at the subject site are necessarily limited to conditions observed, and/or materials reviewed at the time this study was undertaken. No warranty, expressed or implied, is made with regard to the conclusions and recommendations presented within this report. This report is provided for the exclusive use of the client. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties without the written consent of ECS and the client.

Our recommendations are in part based on federal, state, and local regulations and guidelines. ECS does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state, or federal public agencies, any conditions at the site that may present a potential danger to public health, safety, or the environment. Under this scope of services, ECS assumes no responsibility regarding any response actions initiated as a result of these findings. General compliance with regulations and response actions are the sole responsibility of the Client and should be conducted in accordance with local, state, and/or federal requirements.

Appendix I: Figures



(Note: **Bold** = ACM)

Inaccessible Areas (during time of survey)

Sample Locations

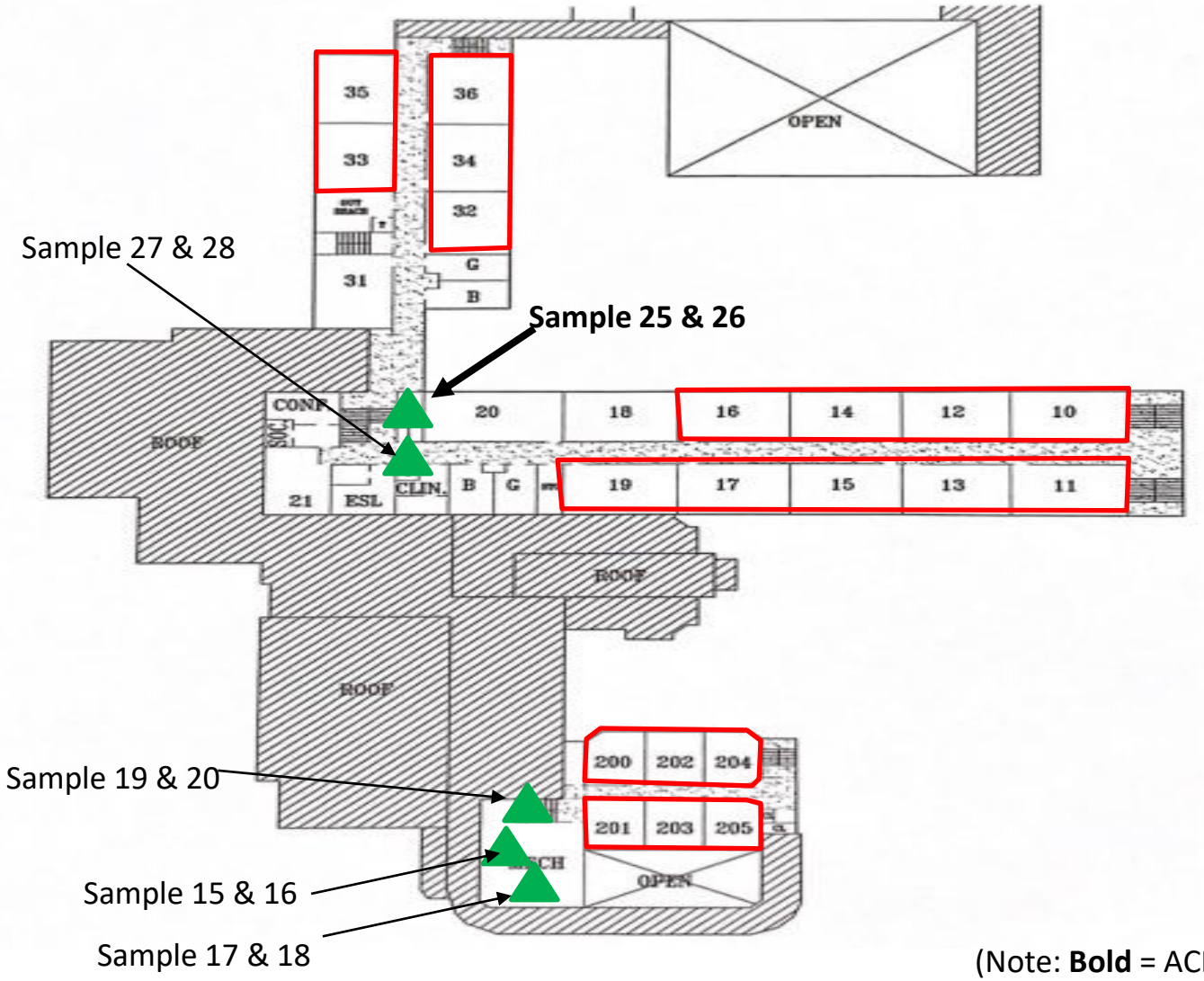
William Ramsey Elementary School
5700 Sanger Avenue,
Alexandria, Virginia

1st Floor and Ground Floor Survey Sample Map

SCALE NTS

Project No. 47:11652-E2

Date 3/28/22



Inaccessible Areas (during time of survey)

Sample Locations

William Ramsey Elementary School
5700 Sanger Avenue,
Alexandria, Virginia

2nd Floor Survey Sample Map

SCALE NTS

Project No. 47:11652-E2

Date 3/28/22

Appendix II: Site Photographs



1 - View of Black Floor Tile Under Carpet in 2nd Floor Trash Room (observed under carpet in Rooms 10-20) Sample No. 25 and 26 - 4% Chrysotile



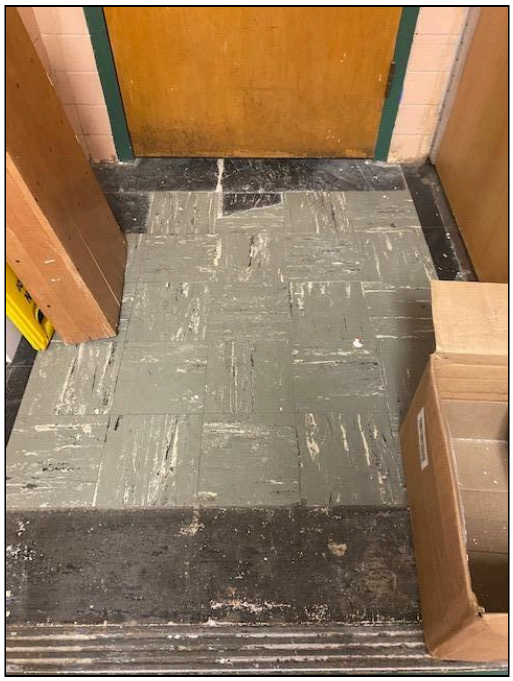
2 - View of Black Sink Undercoat in Kiln Closet Room (Sample No. 21 and 22 - 2% Chrysotile)



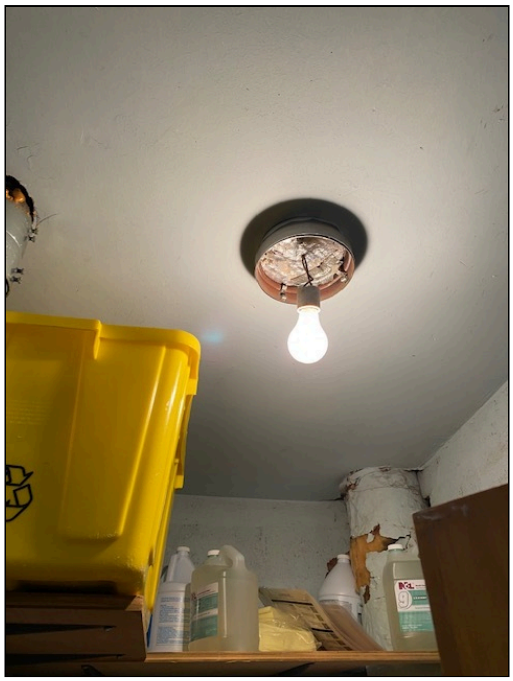
3 - View of 12" x 12" Old and damaged Off-white Floor Tile and associated Brown Mastic (Sample No. 7 & 8 - 2% Chrysotile)



4 - View of 1' x 1' Ceiling Tiles with Large Pinhole Pattern in Book Storage (1st Floor- Previously reported as ACM)



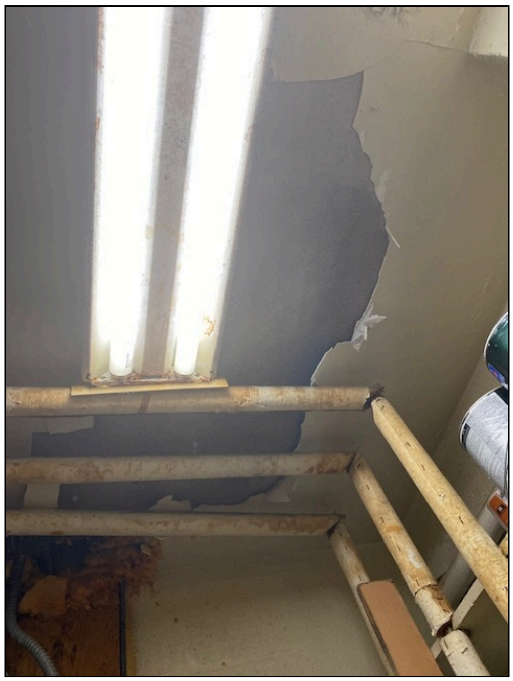
5 - View of 9" x 9" Floor Tile at Stage Stair Landing (Previously reported as ACM)



6 - View of 2nd Floor Trash Room Light Shield and Old Wiring (Previously reported as ACM)



7 - View of 1' x 1' Textured Wall Tile in Classroom 1 (inaccessible Mastic assumed as PACM)



8 - 3-28-22- View of 1st Floor Janitors Closer Plaster Skim Coat (NAD)



9 - View of 5 inch Black Cove Base and Self-Stick Floor Tile in 1st Floor Trash Room (NAD)



10 - View of Duct in Room 20 (Previously had components sampled as ACM)



11 - View of Kiln Closet 12" x 12" Brown Floor Tile (previously sampled as ACM)



12 - View of Science Classroom



13 - View of White Duct Insulation Seam Mastic (NAD)



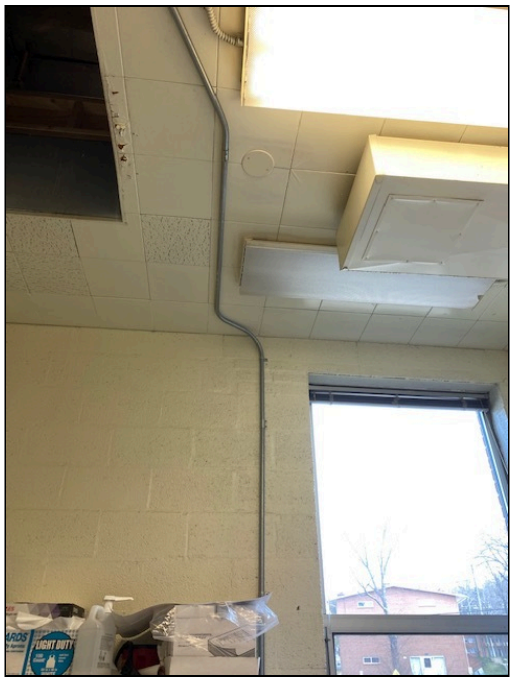
14 - View of White Mudded Pipe Insulation and Fibrous Wrap in Mechanical Penthouse (NAD)



15 - View of Window Film-Glazing in Library Office (inaccessible)



16 - View of Boiler Room Crawl Space- Damaged TSI



17 - View of 4" Blue Cove Base Sample Site (NAD)



18 - View of Cafeteria Kitchen Storage 1' x 1' Ceiling Tile (previously reported as ACM)

Appendix III: Asbestos Bulk Sample Results

SUSPECT ASBESTOS-CONTAINING MATERIALS BULK SAMPLING RESULTS

Sample #	Sampling Location	Material/Description	Analytical Results
1	Main Office	4" Blue Cove Base and associated Cream Mastic- Cove Base	NAD
2-A	Main Office	4" Blue Cove Base and associated Cream Mastic- Cove Base	NAD
2-B	Main Office	4" Blue Cove Base and associated Cream Mastic- Mastic	NAD
3	Boiler Room	crete Masonry Unit (CMU) Wall Seam Sealant (Gray Painted W	NAD
4	Boiler Room	crete Masonry Unit (CMU) Wall Seam Sealant (Gray Painted W	NAD
5	Boiler Room	Red Exhaust Pipe Sealant	NAD
6	Boiler Room	Red Exhaust Pipe Sealant	NAD
7-A	Cafeteria Kitchen	2" Old/damaged OffWhite Floor Tile and associated Brown Mas	NAD
7-B	**Cafeteria Kitchen**	**)ld/damaged OffWhite Floor Tile and associated Brown Mas**	**2% Chrysotile**
8-A	Cafeteria Kitchen	2" Old/damaged OffWhite Floor Tile and associated Brown Mas	NAD
8-B	**Cafeteria Kitchen**	**)ld/damaged OffWhite Floor Tile and associated Brown Mas**	**Not Analyzed**
9-A	1st Floor Trash Room	5" Black Cove Base and associated Cream Mastic- Cove Base	NAD
9-B	1st Floor Trash Room	5" Black Cove Base and associated Cream Mastic- Mastic	NAD
10-A	1st Floor Trash Room	5" Black Cove Base and associated Cream Mastic- Cove Base	NAD
10-B	1st Floor Trash Room	5" Black Cove Base and associated Cream Mastic- Mastic	NAD
11	1st Floor Janitors Closet	Damaged Plaster Skim Coat on Ceiling	NAD
12	1st Floor Janitors Closet	Damaged Plaster Skim Coat on Ceiling	NAD
13	tor Closet in Room 25-30 H	Gray Pipe to Wall Penetration Ceiling	NAD
14	tor Closet in Room 25-30 H	Gray Pipe to Wall Penetration Ceiling	NAD
15	Mechanical Penthouse	White Duct Insulation Seam Mastic	NAD
16	Mechanical Penthouse	White Duct Insulation Seam Mastic	NAD
17-A	Mechanical Penthouse	lded Thermal System Pipe Insulation and associated Fibrous W	NAD
17-B	Mechanical Penthouse	ded Thermal System Pipe Insulation and associated Fibrous W	NAD
18-A	Mechanical Penthouse	lded Thermal System Pipe Insulation and associated Fibrous W	NAD
18-B	Mechanical Penthouse	ded Thermal System Pipe Insulation and associated Fibrous W	NAD
19	airs to Mechanical Penthou	White Stair Stringer Caulk	NAD
20	airs to Mechanical Penthou	White Stair Stringer Caulk	NAD
21	**Kiln Closet Sink- Art Roon**	**Black Sink Undercoat**	**2% Chrysotile**

Table Notes:
Bold = Asbestos-Containing Materials
N/A = Not Analyzed
None Detected = No Asbestos Detected

SUSPECT ASBESTOS-CONTAINING MATERIALS BULK SAMPLING RESULTS

Sample #	Sampling Location	Material/Description	Analytical Results
22	**Kiln Closet Sink- Art Roon**	**Black Sink Undercoat**	**Not Analyzed**
23	**ary- Office behind Front D**	**Black Sink Undercoat**	**Not Analyzed**
24	**ary- Office behind Front D**	**Black Sink Undercoat**	**Not Analyzed**
25	**2nd Floor Trash Room**	**Black Unknown Size Floor Tile (under carpet)**	**4% Chrysotile**
26	**2nd Floor Trash Room**	**Black Unknown Size Floor Tile (under carpet)**	**Not Analyzed**
27	2nd Floor Stripped Hallway	Beige Leveling Compound on Concrete Floor	NAD
28	2nd Floor Stripped Hallway	Beige Leveling Compound on Concrete Floor	NAD

Table Notes:
Bold = Asbestos-Containing Materials
N/A = Not Analyzed
None Detected = No Asbestos Detected

Appendix IV: Laboratory Report(s)

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E, App.E

NVLAP TESTING NVLAP LAB CODE 200664-0

AIHA ACCREDITED LABS.ORG Lab ID # 173190

Customer: ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151

Attn: Zach Harrell

Project: ACPS William Rmsey/ 47:11652-B

Lab Order ID: 71988696
Analysis ID: 71988696_PLM
Date Received: 3/29/2022
Date Reported: 3/30/2022

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
1 *71988696PLM_1*	4" Blue Cove Base and associated Cream Mastic *cove base only*	**None Detected**		**100% Other**	Gray Non Fibrous Homogeneous Ashed
2 - A *71988696PLM_2*	4" Blue Cove Base and associated Cream Mastic *cove base*	**None Detected**		**100% Other**	Gray Non Fibrous Homogeneous Ashed
2 - B *71988696PLM_29*	4" Blue Cove Base and associated Cream Mastic *mastic*	**None Detected**		**100% Other**	Cream Non Fibrous Homogeneous Ashed
3 *71988696PLM_3*	Concrete Masonry Unit (CMU) Wall Seam Sealant (Gray Painted White)	**None Detected**		**100% Other**	Gray Non Fibrous Heterogeneous Crushed
4 *71988696PLM_4*	Concrete Masonry Unit (CMU) Wall Seam Sealant (Gray Painted White)	**None Detected**		**100% Other**	Gray Non Fibrous Heterogeneous Crushed
5 *71988696PLM_5*	Red Exhaust Pipe Sealant	**None Detected**	**5% Fiber Glass**	**95% Other**	Red Non Fibrous Homogeneous Ashed
6 *71988696PLM_6*	Red Exhaust Pipe Sealant	**None Detected**	**5% Fiber Glass**	**95% Other**	Red Non Fibrous Homogeneous Ashed
7 - A *71988696PLM_7*	12" x 12" Old/damaged Off-White Floor Tile and associated Brown Mastic *tile*	**None Detected**		**100% Other**	Cream Non Fibrous Homogeneous Dissolved

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

Yanelis Delgado (35)

Analyst

Approved Signatory

P-F-002 r15 1/16/2023

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E, App.E

NVLAP TESTING NVLAP LAB CODE 200664-0

INDUSTRIAL HYGIENE ISO/IEC 17025:2017 Accredited Laboratory AIHA LAP, LLC AIHAACCREDITEDLABS.ORG Lab ID # 173190

Customer: ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151

Attn: Zach Harrell

Project: ACPS William Rmsey/ 47:11652-B

Lab Order ID: 71988696
Analysis ID: 71988696_PLM
Date Received: 3/29/2022
Date Reported: 3/30/2022

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
7 - B *71988696PLM_30*	12" x 12" Old/damaged Off-White Floor Tile and associated Brown Mastic *mixed mastics*	**2% Chrysotile**		**98% Other**	Black, Yellow Non Fibrous Heterogeneous Dissolved
8 - A *71988696PLM_8*	12" x 12" Old/damaged Off-White Floor Tile and associated Brown Mastic *tile*	**None Detected**		**100% Other**	Cream Non Fibrous Homogeneous Dissolved
8 - B *71988696PLM_31*	12" x 12" Old/damaged Off-White Floor Tile and associated Brown Mastic *mixed mastics*	**Not Analyzed**			
9 - A *71988696PLM_9*	5" Black Cove Base and associated Cream Mastic *cove base*	**None Detected**		**100% Other**	Black Non Fibrous Homogeneous Ashed
9 - B *71988696PLM_32*	5" Black Cove Base and associated Cream Mastic *mastic*	**None Detected**		**100% Other**	Cream Non Fibrous Homogeneous Ashed
10 - A *71988696PLM_10*	5" Black Cove Base and associated Cream Mastic *cove base*	**None Detected**		**100% Other**	Black Non Fibrous Homogeneous Ashed
10 - B *71988696PLM_33*	5" Black Cove Base and associated Cream Mastic *mastic*	**None Detected**		**100% Other**	Cream Non Fibrous Homogeneous Ashed
11 *71988696PLM_11*	Damaged Plaster Skim Coat on Ceiling	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Crushed

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

Yanelis Delgado (35)

Analyst

Approved Signatory

P-F-002 r15 1/16/2023

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E, App.E

NVLAP TESTING NVLAP LAB CODE 200664-0

AIHA ACCREDITED LABS.ORG Lab ID # 173190

Customer: ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151

Attn: Zach Harrell

Project: ACPS William Rmsey/ 47:11652-B

Lab Order ID: 71988696
Analysis ID: 71988696_PLM
Date Received: 3/29/2022
Date Reported: 3/30/2022

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
12	Damaged Plaster Skim Coat on Ceiling	**None Detected**		**100% Other**	White Non Fibrous Homogeneous
71988696PLM_12					Crushed
13	Gray Pipe to Wall Penetration Ceiling	**None Detected**		**100% Other**	Gray Non Fibrous Homogeneous
71988696PLM_13					Ashed
14	Gray Pipe to Wall Penetration Ceiling	**None Detected**		**100% Other**	Gray Non Fibrous Homogeneous
71988696PLM_14					Ashed
15	White Duct Insulation Seam Mastic	**None Detected**	**5% Wollastonite**	**95% Other**	White Non Fibrous Homogeneous
71988696PLM_15					Ashed
16	White Duct Insulation Seam Mastic	**None Detected**	**5% Wollastonite**	**95% Other**	White Non Fibrous Homogeneous
71988696PLM_16					Ashed
17 - A	White Mudded Thermal System Pipe Insulation and associated Fibrous Wrap	**None Detected**	**80% Cellulose**	**20% Other**	White Fibrous Homogeneous
71988696PLM_17	*wrap*				Ashed
17 - B	White Mudded Thermal System Pipe Insulation and associated Fibrous Wrap	**None Detected**	**15% Wollastonite**	**85% Other**	White Non Fibrous Homogeneous
71988696PLM_34	*mastic*				Ashed
18 - A	White Mudded Thermal System Pipe Insulation and associated Fibrous Wrap	**None Detected**	**80% Cellulose**	**20% Other**	White Fibrous Homogeneous
71988696PLM_18	*wrap*				Ashed

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Yanelis Delgado (35)

Analyst

Approved Signatory

P-F-002 r15 1/16/2023

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E, App.E

NVLAP TESTING NVLAP LAB CODE 200664-0

Lab ID # 173190

Customer: ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151

Attn: Zach Harrell

Project: ACPS William Rmsey/ 47:11652-B

Lab Order ID: 71988696
Analysis ID: 71988696_PLM
Date Received: 3/29/2022
Date Reported: 3/30/2022

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
18 - B *71988696PLM_35*	White Mudded Thermal System Pipe Insulation and associated Fibrous Wrap *mastic*	**None Detected**	**15% Wollastonite**	**85% Other**	White Non Fibrous Homogeneous Ashed
19 *71988696PLM_19*	White Stair Stringer Caulk	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Ashed
20 *71988696PLM_20*	White Stair Stringer Caulk	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Ashed
21 *71988696PLM_21*	Black Sink Undercoat	**2% Chrysotile**		**98% Other**	Black Non Fibrous Homogeneous Dissolved
22 *71988696PLM_22*	Black Sink Undercoat	**Not Analyzed**			
23 *71988696PLM_23*	Black Sink Undercoat	**Not Analyzed**			
24 *71988696PLM_24*	Black Sink Undercoat	**Not Analyzed**			
25 *71988696PLM_25*	Black Unknown Size Floor Tile (under carpet)	**4% Chrysotile**		**96% Other**	Black Non Fibrous Heterogeneous Dissolved

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

Yanelis Delgado (35)

Analyst

Approved Signatory

P-F-002 r15 1/16/2023

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E, App.E

NVLAP TESTING NVLAP LAB CODE 200664-0

Lab ID # 173190

Customer: ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151

Attn: Zach Harrell

Project: ACPS William Rmsey/ 47:11652-B

Lab Order ID: 71988696
Analysis ID: 71988696_PLM
Date Received: 3/29/2022
Date Reported: 3/30/2022

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
26	Black Unknown Size Floor Tile (under carpet)	**Not Analyzed**			
71988696PLM_26					
27	Beige Leveling Compound on Concrete Floor	**None Detected**		**100% Other**	Gray Non Fibrous Heterogeneous
71988696PLM_27					Crushed
28	Beige Leveling Compound on Concrete Floor	**None Detected**		**100% Other**	Gray Non Fibrous Heterogeneous
71988696PLM_28					Crushed

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

Yanelis Delgado (35)

Analyst

Approved Signatory

Ramsey

7148869

Client:	ECS Mid-Atlantic, LLC	*"Instructions:*
Contact:	Zach Harrell	*Use Column "B" for your contact info*
Address:	14026 Thunderbolt Place, Suite	
Phone:	(703)-471-8400	*To See an Example Click the bottom Example Tab.*
Fax:		
Email:	zharrell@ecslimited.com	***Enter samples between "<<" and ">>"***
Project:	ACPS William Ramsey/ 47:11652-E	***Begin Samples with a "<< "above the first sample and end with a ">>" below the last sample.***
Client Notes:		*Only Enter your data on the first sheet "Sheet1"*
	Positive Stop	
P.O. #.		*Note: Data 1 and Data 2 are optional fields that do not show up on the official report, however they will be included in the electronic data returned to you to facilitate your reintegration of the report data.*
Date Submitted:	3/28/2022 0:00	
Analysis:	PLM EPA 600/R-93/116	
TurnAroundTime:	3 day TAT	

Scientific Analytical Institute

4604 Dundas Drive
Greensboro, NC 27407
Phone: 336.292.3888
Fax: 336.292.3313

Sample Number	Data 1	Sample Description	Data 2
<<			
1		4" Blue Cove Base and associated Cream Mastic	Main Office
2		4" Blue Cove Base and associated Cream Mastic	Main Office
3		Concrete Masonry Unit (CMU) Wall Seam Sealant (Gray Painted White)	Boiler Room
4		Concrete Masonry Unit (CMU) Wall Seam Sealant (Gray Painted White)	Boiler Room
5		Red Exhaust Pipe Sealant	Boiler Room
6		Red Exhaust Pipe Sealant	Boiler Room
7		12" x 12" Old/damaged Off-White Floor Tile and associated Brown Mastic	Cafeteria Kitchen
8		12" x 12" Old/damaged Off-White Floor Tile and associated Brown Mastic	Cafeteria Kitchen
9		5" Black Cove Base and associated Cream Mastic	1st Floor Trash Room
10		5" Black Cove Base and associated Cream Mastic	1st Floor Trash Room
11		Damaged Plaster Skim Coat on Ceiling	1st Floor Janitors Closet
12		Damaged Plaster Skim Coat on Ceiling	1st Floor Janitors Closet
13		Gray Pipe to Wall Penetration Ceiling	Elevator Closet in Room 25-30 Hallway
14		Gray Pipe to Wall Penetration Ceiling	Elevator Closet in Room 25-30 Hallway
15		White Duct Insulation Seam Mastic	Mechanical Penthouse
16		White Duct Insulation Seam Mastic	Mechanical Penthouse
17		White Mudded Thermal System Pipe Insulation and associated Fibrous Wrap	Mechanical Penthouse
18		White Mudded Thermal System Pipe Insulation and associated Fibrous Wrap	Mechanical Penthouse
19		White Stair Stringer Caulk	Stairs to Mechanical Penthouse
20		White Stair Stringer Caulk	Stairs to Mechanical Penthouse
21		Black Sink Undercoat	Kiln Closet Sink- Art Room
22		Black Sink Undercoat	Kiln Closet Sink- Art Room
23		Black Sink Undercoat	Library- Office behind Front Desk
24		Black Sink Undercoat	Library- Office behind Front Desk
25		Black Unknown Size Floor Tile (under carpet)	2nd Floor Trash Room (observed under carpet throughout Rooms 10-20)
26		Black Unknown Size Floor Tile (under carpet)	2nd Floor Trash Room (observed under carpet throughout Rooms 10-20)
27		Beige Leveling Compound on Concrete Floor	2nd Floor Stripped Hallway
28		Beige Leveling Compound on Concrete Floor	2nd Floor Stripped Hallway
>>			

Accepted ☑

Rejected ☐

3/2
10:30am

Relinquished By

Received By

Appendix V: Certifications/ Licenses

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation
9960 Mayland Drive, Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
12-31-2022

NUMBER
3303004832

BOARD FOR ASBESTOS, LEAD, AND HOME INSPECTORS
ASBESTOS INSPECTOR LICENSE

ZACHARY DAVID HARRELL
1927 N CAMERON ST
ARLINGTON, VA 22207

DPOR

Mary Broz-Vaughan, Director

Status can be verified at http://www.dpor.virginia.gov

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)

DPOR COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR ASBESTOS, LEAD, AND HOME INSPECTORS
ASBESTOS INSPECTOR LICENSE
NUMBER: 3303004832 EXPIRES: 12-31-2022

ZACHARY DAVID HARRELL
1927 N CAMERON ST
ARLINGTON, VA 22207

(FOLD)

Status can be verified at http://www.dpor.virginia.gov

DPOR-PC (02/2017)

Appendix VI: AHERA ACBM and Suspect ACBM Categories Document

AHERA ACBM and Suspect ACBM Categories

(1) Damaged or significantly damaged thermal system insulation ACM:

- (1) Means thermal system insulation ACM on pipes, boilers, tanks, ducts, and other thermal system insulation equipment where the insulation has lost its structural integrity, or its covering, in whole or in part, is crushed, water stained, gouged, punctured, missing, or not intact such that it is not able to contain fibers. Damage may be further illustrated by occasional punctures, gouges or other signs of physical injury to ACM; occasional water damage on the protective coverings/jackets; or exposed ACM ends or joints. Asbestos debris originating from the ACBM in question may also indicate damage.

(2) Damaged friable surfacing ACM:

- (2) Means friable surfacing ACM which has deteriorated or sustained physical injury such that the internal structure (cohesion) of the material is inadequate or which has delaminated such that its bond to the substrate (adhesion) is inadequate, or which, for any other reason, lacks fiber cohesion or adhesion qualities. Such damage or deterioration may be illustrated by the separation of ACM into layers; separation of ACM from the substrate; flaking, blistering, or crumbling of the ACM surface; water damage; significant or repeated water stains, scrapes, gouges, mars or other signs of physical injury on the ACM. Asbestos debris originating from the ACBM in question may also indicate damage.

(3) Significantly damaged friable surfacing ACM:

- (3) Means damaged friable surfacing ACM in a functional space where the damage is extensive and severe.

(4) Damaged or significantly damaged friable miscellaneous ACM:

- (4) Means friable miscellaneous ACM which has deteriorated or sustained physical injury such that the internal structure (cohesion) of the material is inadequate or, if applicable, which has delaminated such that its bond to the substrate (adhesion) is inadequate or which for any other reason lacks fiber cohesion or adhesion qualities. Such damage or deterioration may be illustrated by the separation of ACM into layers; separation of ACM from the substrate; flaking, blistering, or crumbling of the ACM surface; water damage; significant or repeated water stains, scrapes, gouges, mars or other signs of physical injury on the ACM. Asbestos debris originating from the ACBM in question may also indicate damage.

(5) ACBM with potential for damage:

- (5) Means circumstances in which:

    - (1) Friable ACBM is in an area regularly used by building occupants, including maintenance personnel, in the course of their normal activities.

- (2) There are indications that there is a reasonable likelihood that the material or its covering will become damaged, deteriorated, or delaminated due to factors such as changes in building use, changes in operations and maintenance practices, changes in occupancy, or recurrent damage.

(6) ACBM with potential for significant damage:

- (6) Means circumstances in which:

  - (1) Friable ACBM is in an area regularly used by building occupants, including maintenance personnel, in the course of their normal activities.

  - (2) There are indications that there is a reasonable likelihood that the material or its covering will become significantly damaged, deteriorated, or delaminated due to factors such as changes in building use, changes in operations and maintenance practices, changes in occupancy, or recurrent damage.

  - (3) The material is subject to major or continuing disturbance, due to factors including, but not limited to, accessibility or, under certain circumstances, vibration or air erosion.

(7) Any remaining friable ACBM or friable suspected ACBM:

- (1) Means any remaining friable ACBM or friable Suspected ACBM in a building.

Appendix VII: Previous Reports

April 11, 2017

Mr. Derrick Fulcher
Alexandria City Public Schools
1340 Braddock Place
Alexandria, Virginia 22314

ECS Project No. 47:1519-D

Reference: AHERA Management Plan, William Ramsey Elementary School, 5700 Sanger Avenue, Alexandria, Virginia

Dear Mr. Fulcher:

ECS Mid-Atlantic, LLC (ECS), is pleased to provide Alexandria City Public Schools (ACPS) with an AHERA Management Plan for the William Ramsey Elementary School. This work was performed in general conformance with ECS Proposal No. 47:1750-EP2, dated October 19, 2016 and ACPS Purchase Order Number 17003633. This Management Plan contains the asbestos survey results, procedures for managing the asbestos-containing materials in place, procedures for asbestos removal, and other documentation regarding asbestos-containing materials located within the school building. It is our understanding that asbestos removal and replacement procedures will be performed by asbestos abatement contractors rather than training in-house personnel to perform these tasks. The Management Plan has been modified to these conditions.

ECS appreciates this opportunity to provide these services. If we can be of further assistance to you, please do not hesitate to contact us.

Respectfully,

ECS MID-ATLANTIC, LLC

Beverly Sedon
Senior Environmental Project Manager

Diana Krass-Hofmann
Senior Industrial Hygiene Manger

I:_e-projects\1501-1600\1519-D ACPS 3 YR AHERA - O&M Plans\William Ramsey\MMP\William Ramsey Management Plan.doc

14026 Thunderbolt Place, Suite 100, Chantilly, VA 20151-3296 • T: 703-471-8400 • F: 703-834-5527 • www.ecslimited.com
ECS Capitol Services, PLLC • ECS Florida, LLC • ECS Mid-Atlantic, LLC • ECS Midwest, LLC • ECS Southeast, LLP • ECS Texas, LLP

APPENDIX A

PREVIOUS REPORTS

WILLIAM RAMSEY ELEMENTARY SCHOOL

Asbestos Sampling

A summary of materials found to contain asbestos or assumed to contain asbestos can be found in Table 1. A list of materials sampled and tested for asbestos content can be found in Table 3.

TABLE 1
ASBESTOS-CONTAINING MATERIALS SUMMARY

Location	Material	Friability
REPORTED ON PRIOR SURVEYS		
Art Room on 1st Floor (Assumed under Existing 12" x 12" Floor Tiles in other Areas)	12" x 12" Brown Floor Tiles and associated Mastic (Reported under Existing 12" x 12" Floor Tiles)	Category I Non-Friable
Book Storage on 1st Floor (Assumed in other Areas)	White Ceiling Tiles Large Pinhole Pattern *	Friable
Book Storage on 1st Floor (Assumed under Existing Flooring Materials in other Areas)	9" x 9" Reddish Brown Floor Tiles and associated Mastic (Reported under Existing Flooring Materials)	Category I Non-Friable
Rooms 14, 17 and 18 on 2nd Floor and Teacher Lounge (Assumed under Existing Flooring Materials in other Areas)	Floor Tiles (Reported under Existing Flooring Materials)	Category I Non-Friable
Trash Closets on 1st and 2nd Floors and General Storage Closet	Wire Insulation (Assumed above Plaster Ceiling)	Friable
Hallway Rooms 16 and 20 on 2nd Floor (Assumed under Existing Flooring Materials in other Areas)	Black with Black Trim Floor Tiles (Reported under Existing Flooring Materials)	Category I Non-Friable
Cafeteria on 1st Floor (Assumed under Existing Flooring Materials in other Areas)	Light Brown Floor Tiles (Reported under Existing Flooring Materials)	Category I Non-Friable

Location	Material	Friability
Cafeteria and Library on 1st Floor (Assumed under Existing Flooring Materials in other Areas)	9" x 9" Maroon Floor Tiles and associated Mastic (Reported under Existing Flooring Materials)	Category I Non-Friable
Crawl Spaces in 1st Floor Boiler Room and Ground Floor (Assumed in other Areas)	TSI-Mudded Elbows/Joints **	Friable
Teacher Lounge and Rooms 11, 15, 19 and 33 on 2nd Floor (Assumed under Carpet in other Areas)	9" x 9" Green Floor Tiles and associated Mastic (Observed under Carpet)	Category I Non-Friable
Media Room (Assumed in Library on 1st Floor)	Red Galvanized Duct Mastic	Category II Non-Friable
Hallways (Assumed under Existing Flooring Materials in other Areas)	9" x 9" Gray Floor Tiles and associated Mastic (Reported under Existing Flooring Materials)	Category I Non-Friable
Hallways (Observed in other Areas)	Fire Door Insulation	Friable
Kitchen Offices on 1st Floor (Assumed under Existing Flooring Materials in other Areas)	9" x 9" Brown Floor Tiles (Reported under Existing Flooring Materials)	Category I Non-Friable
Food Storage in Kitchen on 1st Floor (Reported in other Areas)	1' x 1' Ceiling Tiles	Friable
Library on 1st Floor (Assumed under Carpet in other Areas)	Light Brown Floor Tiles (Reported under Carpet)	Category I Non-Friable
Room 20 on 2nd Floor (Assumed in other Areas)	Gray Galvanized Duct Mastic	Category II Non-Friable

Location	Material	Friability
Room 22 on Ground Floor (Assumed under Carpet in other Areas)	12” x 12” White Floor Tiles and associated Mastic (Reported under Carpet)	Category I Non-Friable
Room 23 on Ground Floor (Assumed in other Areas)	Wallboard	Category II Non-Friable
SAMPLED BY ECS ON NOVEMBER 18, 2013		
Classrooms 4, 6 and 8	Black Floor Tile (under Carpet)	Category I Non-Friable
Stage Stair Landing on 1st Floor and Janitor Closet on Ground Floor	9" x 9" Gray with White Flecks and associated Black Mastic ***	Category I Non-Friable
Janitor Closet on Ground Floor	9" x 9" Black with White Flecks Floor Tile and associated Mastic ***	Category I Non-Friable
Janitor Closet on Ground Floor	6" Pipe Fitting Insulation	Friable
MATERIALS ASSUMED TO CONTAIN ASBESTOS ****		
Stage and Gymnasium on 1st Floor	Wood Floor Underlayment and associated Mastics	Category I Non-Friable
Classrooms and Hallways	Boards and associated Mastics	Category II Non-Friable
Throughout Building	Interior Pipe Wrap associated with Water Fountains and Radiators	Category II Non-Friable
Classrooms	Boards above Windows	Category II Non-Friable

Location	Material	Friability
Classrooms	Black Window Sill	Category II Non-Friable
Auditorium on 1st Floor	Wall Boards and associated Mastic	Category II Non-Friable
Library and Auditorium on 1st Floor	Ceiling Tiles and Materials above Drop Ceiling Tiles***	Friable
Gymnasium and Library on 1st Floor	Exterior and Interior Caulk associated with Glass Window Panels	Category II Non-Friable
Throughout Building	Gypsum Roof Boards	Category II Non-Friable
Elevator	Switch Deflector Plates, Brakes, Cab and Doors	Unknown
Pipes within chases behind walls and above ceiling throughout the building	Thermal System Insulation (TSI)	Friable
Throughout Building	Pipe Flange Gaskets	Unknown
Mechanical Rooms	Electric Panels: Transite Components	Category II Non-Friable
Bathrooms	Mirror Mastics	Category II Non-Friable
Behind Interior Finishes, Exterior Veneer and/or Subgrade Walls, and under Ceramic Flooring	Waterproofing Membranes/Mastics	Category II Non-Friable
Roof	Asphalt-Based Roofing Materials and Caulks/Sealants	Non-Friable

Notes: * This material was reported to be removed from the Art Storage and Storage Room next to Room 19.
** This material was observed to be damaged in the above listed locations.

*** These materials were reported to be enclosed in the janitor's closet on ground floor; however, during this re-inspection, ECS observed these materials exposed. Missing identified asbestos-containing 9" x 9" gray floor tile were observed in the stage stair landing.

**** These materials, if present, could not be reached at the time of the survey. These materials should be presumed to be asbestos-containing materials (ACMs).

Physical Assessment

A summary of the physical assessment category for each identified and presumed friable ACM can be found in Table 2.

TABLE 2
PHYSICAL ASSESSMENT OF FRIABLE
ASBESTOS CONTAINING MATERIALS

Location	Material	Physical Assessment Category
Book Storage on 1st Floor	White Ceiling Tiles Large Pinhole Pattern	5 – ACBM with Potential for Damage
Trash Closets on 1st and 2nd Floors and General Storage Closet	Wire Insulation	5 – ACBM with Potential for Damage
Crawl Space in 1st Floor Boiler Room and Ground Floor	TSI-Mudded Elbows/Joints	1 – Damaged or Significantly Damaged TSI ACBM
Hallways	Fire Door	7 – Any Remaining Friable ACBM
Food Storage in Kitchen on 1st Floor	1' x 1' Ceiling Tiles	5 – ACBM with Potential for Damage
Janitor Closet on Ground Floor	6" Pipe Fitting Insulation	5 – ACBM with Potential for Damage
Auditorium on 1st Floor	Ceiling Tiles and Materials above Drop Ceiling Tiles	7 – Friable Suspected ACBM

Recommendations

1) The identified friable TSI-mudded elbows/joints inside the crawl spaces in the boiler room on 1st floor and the janitor closet on ground floor were observed damaged and should be repaired or removed by a Commonwealth of Virginia licensed asbestos abatement contractor.

2) Missing asbestos-identified 9" x 9" gray/black with white flecks floor tiles were observed in the stage stair landing. Any missing or damaged 9" x 9" gray/black with white flecks floor tile should be replaced as soon as possible by personnel designated by the School and trained in Operations & Maintenance asbestos activities to avoid future damage to the asbestos containing floor mastic.

3) Water stained presumed asbestos-containing ceiling tiles were observed in the auditorium on 1st floor. This material is considered friable; therefore, it is recommended to sample and analyze for asbestos content as soon as possible by a Commonwealth of Virginia licensed asbestos inspector. Additional suspect asbestos-containing materials may be present above the drop ceiling tiles in this area. Sampling of this material and assessment of the ceiling cavity above the drop ceiling tiles require proper lifting equipment.

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

LETTER OF TRANSMITTAL

August 18, 2015

Alexandria City Public Schools
4701 Seminary Road
Alexandria, VA 22304

ATTN: Mr Derrick Fulcher

RE: **ACPS - William Ramsey Elementary School Abatement**

ECS Job # **01:10976-A**

Permits:

Location: **5700 Sanger Avenue**
Alexandria, VA

We are enclosing:

X	Materials Engineering Division Reports
X	For your use
X	As requested

CC: **Waco, Inc - Steve E. Williams**

ENCL:

Field Report # 1	08/17/2015	7 PCMs

Christopher M. Elliott
Senior Project Manager

Joanna Vivanco
Senior Environmental Project Manager

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ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**01:10976-A**
Report No.	**1**
Day & Date	**Monday 08/17/2015**
Weather	**94°/ Sunny**
On-Site Time	**8.50**
Lab Time	**0.25**
Travel Time*	**0.00**
Total	**8.75**
Re Obs.Time	**0.00**

Project **ACPS - William Ramsey Elementary School Abatement**
Location **Alexandria, VA**
Client **Alexandria City Public Schools - Derrick Fulcher**

Remarks **7 PCMs**

Trip Charges* Tolls/Parking* Mileage*

Chargeable Items

Time of Arrival Departure
06:00A 02:30P

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived onsite, as requested, to perform air monitoring and observe asbestos abatement. The material to be removed today was floor tiles from the cafeteria - serving area.

Photographs for today's regulated work area are attached to this report.

At 6:30 am, the undersigned met with Ms. Joanna Vivanco of ECS and the abatement contractor supervisor to discuss today's abatement activities.

A total of five (5) abatement contractor workers were preparing the regulated work area in the cafeteria - serving area.

Prior to starting the removal of the material, the abatement notification was reviewed and the abatement contractor employees were asked to present their State license for review. No workers were found to be without valid licenses.

WORK AREA MONITORING

At 10:50 am, the abatement contractor requested a pre-abatement survey of the regulated work area. The Pre-Abatement Checklist was completed and is attached to this report.

At 11:00 am, the abatement contractor workers were taking their lunch break.

Between 11:45 and 11:50 am, two (2) PCM air samples were started outside the work area at decontamination enclosure and critical barrier, and another PCM air sample was started inside the work area. The sampling pumps were calibrated using a rotameter to 5.0 liters per minute.

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No. **01:10976-A**
Report No. **1**
Project **ACPS - William Ramsey Elementary School Abatement**
Day & Date **Monday 08/17/2015**

The abatement contractor workers started removing floor tiles inside the regulated work area using scraper.

The regulated work area was surveyed to evaluate compliance with applicable regulations. The Daily Work Area survey checklist was completed and is attached to this report.

The abatement contractor was placing floor tiles in 6-mil polyethylene bags which were double-bagged and sealed in accordance with applicable regulations. Waste bags were labeled and placed in the abatement contractor's transport.

Between 1:50 and 1:55 pm, the sampling pumps were calibrated using a rotameter. The flow rate was 5.0 liters per minute. The air sampling pumps were stopped, and the cassettes were gathered for analysis.

The abatement contractor supervisor, Mr. Ever Martinez of Waco, Inc., informed the undersigned that floor mastic removal would be conducted on next business day.

PERSONAL EXPOSURE MONITORING

At 11:55 am, a PCM air sample was started on the abatement contractor worker, Ms. Glenda Guzman (xxx-xx-1111), to monitor personal exposure during floor tiles removal. The personal exposure sampling pump was calibrated using a rotameter to 2.0 liters per minute.

At 12:25 pm, the personal sampling pump on Ms. Guzman was calibrated using a rotameter. The flow rate was 2.0 liters per minute. The air sampling pump was stopped, the cassette was gathered for analysis, and a new PCM air sample was started on Ms. Guzman to continue monitoring personal exposure during floor tiles removal.

At 2:00 pm, the personal sampling pump on Ms. Guzman was calibrated using a rotameter. The flow rate was 2.0 liters per minute. The air sampling pump was stopped, and the cassette was gathered for analysis.

GENERAL

The undersigned prepared and analyzed the PCM air sample cassettes for total fiber concentration. Results were recorded on the PCM Chain of Custody and Field Data Sheet which is attached.

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No. **01:10976-A**
Report No. **1**
Project **ACPS - William Ramsey Elementary School Abatement**
Day & Date **Monday 08/17/2015**

The Occupational Safety and Health Administration (OSHA) 8-hour Time Weighted Average (TWA) is 0.1 fiber per cubic centimeter (f/cc) and the 30-minute Excursion Limit (EL) is 1.0 fiber per cubic centimeter (f/cc). The analytical results of the PCM air samples collected on the abatement contractor worker, Ms. Glenda Guzman (xxx-xx-1111), during floor tiles removal using scraper found the airborne fiber concentrations to be less than the TWA and EL set by OSHA.

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 10976-A **Date:** 08/17/2015

Project Address: 5700 Sanger Avenue
Alexandria, VA 22311

Work Area Location/Description: Cafeteria - Serving Area

Administrative	Training Certificates/Licenses	Satisfactory
	Permits	Satisfactory
	EPA/State/Local Notification	Satisfactory
Work Area	Public Access Restricted	Satisfactory
	Warning Signs/Tape Posted	Satisfactory
Negative Air Filtration	Number of Units	2
	Pre-Filters In-Use/Available	Satisfactory
	Exhausted from Work Area	Satisfactory
	Pressure Differential Monometer Operating	N/A
Equipment	HEPA Vacuum Available	Satisfactory
	Amended Water Sprayers	Satisfactory
Decontamination Enclosure	Clean Room	Satisfactory
	Shower Water Available	Satisfactory
	Waste Water Filtration In-Use	N/A
	Disposable Towels	Satisfactory
	Soap	N/A
	Equipment Room	Satisfactory
Personal Protective Equipment	Type of Respirator	Half-Face APR
	Type of Filters Used	P100
	Disposable Protective Clothing	Satisfactory
	Work Area Acceptable	Yes

Notes: Class II Work - No Shower Required. Bucket with water was provided by the contractor for washing station.

ECS Technician: Suhel Shafaat **Date:** 08/17/2015

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 10976-A **Date:** 08/17/2015

Project Address: 5700 Sanger Avenue
Alexandria, VA 22311

Work Area Location/Description: Cafeteria - Serving Area

Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	N/A
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	Satisfactory
	Wet Methods In-Use	Satisfactory
	Prompt Clean-Up	Satisfactory
	Adequate Lighting	Satisfactory
	Respiratory Protection	Satisfactory
	Disposable Clothing Worn Properly	Satisfactory
	No Respirators Stored in Work Area	Satisfactory
	Negative Air Filtration In-Use	Satisfactory
	Pre-Filters Clean	Satisfactory
	Exhaust Properly Vented	Satisfactory
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	Satisfactory
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	5 (3 Work Area and 2 Personal Exposure)
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes: Class II Work - No Shower Required. Bucket with water was provided by the contractor for washing station.

ECS Technician: Suhel Shafaat **Date:** 08/17/2015

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 10976-A

Project Address: 5700 Sanger Avenue
Alexandria, VA 22311

Date: 08/17/2015

Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (min)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
08171501SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08171502SS	OWA / Cafeteria - Serving Line at Decontamination Enclosure Entry	11:45 AM	1:45 PM	5.0	5.0	5.0	120	600.0	1.0	100	0.001
08171503SS	OWA / Cafeteria at Critical Barrier	11:47 AM	1:47 PM	5.0	5.0	5.0	120	600.0	1.0	100	0.001
08171504SS	IWA / Cafeteria - Serving Line	11:50 AM	1:50 PM	5.0	5.0	5.0	120	600.0	2.0	100	0.002

NFD = None Fibers Detected; OWA = Outside Work Area; IWA = Inside Work Area; FC = Final Clearance

Notes: The Commonwealth of Virginia re-occupancy limit is 0.01 fibers per cubic centimeter (f/cc) of air.

ECS Technician: Suhel Shafaat

Date: 08/17/2015

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
PERSONNEL EXPOSURE

Project Number: 10976-A

Project Address: 5700 Sanger Avenue
Alexandria, VA 22311

Date: 08/17/2015

Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (min)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
08171501P	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08171502P	* Ms. Glenda Guzman (xxx-xx-1111) / Removing Floor Tiles	11:55 AM	12:25 PM	2.0	2.0	2.0	30	60.0	1.0	100	0.008
08171503P	Ms. Glenda Guzman (xxx-xx-1111) / Removing Floor Tiles	12:25 PM	2:00 PM	2.0	2.0	2.0	95	190.0	1.0	100	0.003

NFD = None Fibers Detected; OWA = Outside Work Area; IWA = Inside Work Area; FC = Final Clearance

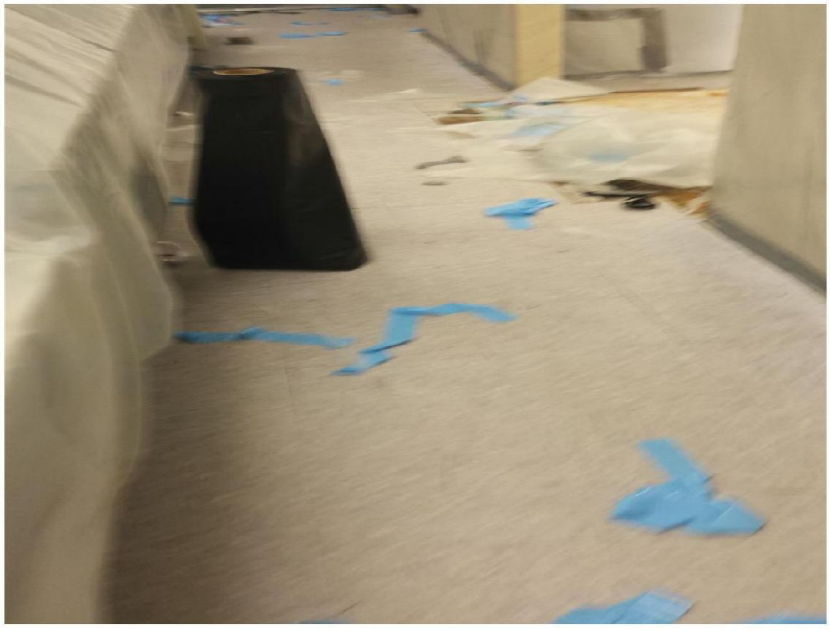
Notes:

* = Excursion Limit Sample
OSHA 8-hour TWA = 0.001 f/cc
The Occupational Safety and Health Administration (OSHA) 8-hour Time Weight Average (TWA) is 0.1 fiber per cubic centimeter (f/cc) and the 30-minute Excursion Limit (EL) is 1.0 fiber per cubic centimeter (f/cc).

ECS Technician: Suhel Shafaat

Date: 08/17/2015

ATTACHMENTS



Attachment No. 1
PHOTO-Inside Regulated Work Area from the Cafeteria - Serving Area



Attachment No. 2
PHOTO-Floor Tile and Black Mastic to be Removed inside Work Area from the Cafeteria - Serving Area



Attachment No. 3
PHOTO-Sealed Ceiling inside Regulated Work Area in Cafeteria - Serving Area

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

LETTER OF TRANSMITTAL

August 20, 2015

Alexandria City Public Schools
4701 Seminary Road
Alexandria, VA 22304

ATTN: Mr Derrick Fulcher

RE: **ACPS - William Ramsey Elementary School Abatement**

ECS Job # **01:10976-A**

Permits:

Location: **5700 Sanger Avenue**
Alexandria, VA

We are enclosing:

X Materials Engineering Division Reports
X For your use
X As requested

CC: **Waco, Inc - Steve E. Williams**

ENCL:

Field Report # 2	08/18/2015	7 PCMs and 5 TEMs

Stephen R. Geraci
Environmental Department Manager

Joanna Vivanco
Senior Environmental Project Manager

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14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
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(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**01:10976-A**
Report No.	**2**
Day & Date	**Tuesday 08/18/2015**
Weather	**88°/ Sunny**
On-Site Time	**8.50**
Lab Time	**0.25**
Travel Time*	**0.00**
Total	**8.75**
Re Obs.Time	**0.00**

Project	**ACPS - William Ramsey Elementary School Abatement**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools - Derrick Fulcher**

Remarks **7 PCMs and 5 TEMs**

Trip Charges* Tolls/Parking* Mileage*

Chargeable Items

Times of Arrival Departure
06:00A 11:00A
12:00P 03:30P

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived onsite, as requested, to perform air monitoring and observe asbestos abatement. The material to be removed today was floor mastic from the cafeteria - serving area.

Photographs for today's regulated work area are attached to this report.

WORK AREA MONITORING

Between 6:15 and 6:20 am, two (2) PCM air samples were started outside the work area at decontamination enclosure and critical barrier, and another PCM air sample was started inside the work area. The sampling pumps were calibrated using a rotameter to 2.0 liters per minute.

The abatement contractor workers started removing floor mastic, using chemical remover, inside the regulated work area.

The regulated work area was surveyed to evaluate compliance with applicable regulations. The Daily Work Area survey checklist was completed and is attached to this report.

The abatement contractor was placing material in 6-mil polyethylene bags which were double-bagged and sealed in accordance with applicable regulations. Waste bags were labeled and placed in the abatement contractor's transport.

At 11:00 am, the abatement contractor workers were taking their lunch break.

Between 10:25 and 10:30 am, the sampling pumps were calibrated using a rotameter. The flow

rate was 2.0 liters per minute. The air sampling pumps were stopped, and the cassettes were gathered for analysis.

The abatement contractor stated the materials had been removed from the regulated work area and requested a visual survey to confirm compliance. The Final Clearance Visual Survey checklist was completed and is attached to this report.

Following the successful completion of the final clearance visual survey, the abatement contractor applied an encapsulant to surfaces within the regulated work area. After waiting 120 minutes for the encapsulant to dry, five (5) TEM aggressive air samples were started within the regulated work area and five (5) TEM air samples were started outside the work area. The sampling pumps were calibrated using a rotameter to 8.0 liters per minute. One blank sample was opened within the work area for 60 seconds. One blank sample was opened outside the work area for 60 seconds.

Between 3:10 and 3:15 pm, the sampling pumps were calibrated using a rotameter after the air within and outside the regulated work area was sampled using TEM cassettes for 150 minutes at 8.0 liters per minute. The sampling cassettes were labeled with unique identification and transported to EMSL Analytical, Inc. in Beltsville, Maryland for analysis. A copy of the chain of custody has been attached to this report.

The Commonwealth of Virginia maximum allowable airborne asbestos concentration is 70 structures per millimeter squared (s/mm2). In order to be deemed acceptable, the average of all samples analyzed must have asbestos concentrations less than 70 s/mm2. EMSL Analytical, Inc. informed ECS that the analytical results of the TEM final clearance aggressive air samples collected from cafeteria serving area found the airborne asbestos fiber concentrations to be less than the maximum allowable limits set by applicable regulations which meets the project requirements. The client and abatement contractor supervisor, Mr. Ever Martinez, were informed of the results. A copy of the laboratory report is attached.

PERSONAL EXPOSURE MONITORING

At 6:30 am, a PCM air sample was started on the abatement contractor worker, Mr. Jaime Cabrera (xxx-xx-8588), to monitor personal exposure during floor mastic removal using chemical remover. The personal exposure sampling pump was calibrated using a rotameter to 2.0 liters per minute.

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No. **01:10976-A**
Report No. **2**
Project **ACPS - William Ramsey Elementary School Abatement** Day & Date **Tuesday 08/18/2015**

At 7:00 am, the personal sampling pump on Mr. Cabrera was calibrated using a rotameter. The flow rate was 2.0 liters per minute. The air sampling pump was stopped, the cassette was gathered for analysis, and a new PCM sample was started on Mr. Cabrera to continue monitoring personal exposure during floor mastic removal using chemical remover.

At 10:20 am, the personal sampling pump on Mr. Cabrera was calibrated using a rotameter. The flow rate was 2.0 liters per minute. The air sampling pump was stopped, and the cassette was gathered for analysis.

GENERAL

The undersigned prepared and analyzed the PCM air sample cassettes for total fiber concentration. Results were recorded on the PCM Chain of Custody and Field Data Sheet which is attached.

The Occupational Safety and Health Administration (OSHA) 8-hour Time Weighted Average (TWA) is 0.1 fiber per cubic centimeter (f/cc) and the 30-minute Excursion Limit (EL) is 1.0 fiber per cubic centimeter (f/cc). The analytical results of the PCM air samples collected on the abatement contractor worker, Mr. Jaime Cabrera (xxx-xx-8588), during floor mastic removal using chemical remover found the airborne fiber concentrations to be less than the TWA and EL set by OSHA.

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 10976-A **Date:** 08/18/2015

Project Address: 5700 Sanger Avenue
Alexandria, VA 22311

Work Area Location/Description: Cafeteria Serving Area

Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	N/A
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	Satisfactory
	Wet Methods In-Use	Satisfactory
	Prompt Clean-Up	Satisfactory
	Adequate Lighting	Satisfactory
	Respiratory Protection	Satisfactory
	Disposable Clothing Worn Properly	Satisfactory
	No Respirators Stored in Work Area	Satisfactory
	Negative Air Filtration In-Use	Satisfactory
	Pre-Filters Clean	Satisfactory
	Exhaust Properly Vented	Satisfactory
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	Satisfactory
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	5 (3 Work Area and 2 Personal Exposure)
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes: Class II Work: No Shower Required.
Bucket with water was provided by the contractor for washing station.

ECS Technician: Suhel Shafaat **Date:** 08/18/2015

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 10976-A **Date:** 08/18/2015

Project Address: 5700 Sanger Avenue
Alexandria, VA 22311

Work Area Location/Description: Cafeteria Serving Area

Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	N/A
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	Floors	Satisfactory
	Walls	Satisfactory
	Ceiling	Satisfactory
	Windows	Satisfactory
	Mechanical Equipment	N/A
	Ducts	N/A
	Pipes	N/A
	Lighting	Satisfactory
	Other Surfaces	Satisfactory
	Specified ACM Removed	Satisfactory
	Work Area Encapsulated	Satisfactory
	Negative Air Filtration Functioning	Satisfactory
	Waste Bags Removed	Satisfactory
	Final Clearance Air Sample Type	TEM
	Number of Samples Collected	13
	Sample Volume (liters)	1200
	Work Area Acceptable	Yes

Notes: Work area encapsulated at 10:40 am.

ECS Technician: Suhel Shafaat **Date:** 08/18/2015

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
PERSONNEL EXPOSURE

Project Number: 10976-A

Project Address: 5700 Sanger Avenue
Alexandria, VA 22311

Date: 08/18/2015

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (min)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
08181501P	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08181502P	* Mr. Jaime Cabrera (xxx-xx-8588) / Removing Floor Mastic using Chemical Remover	6:30 AM	7:00 AM	2.0	2.0	2.0	30	60.0	1.0	100	0.008
08181503P	Mr. Jaime Cabrera (xxx-xx-8588) / Removing Floor Mastic using Chemical Remover	7:00 AM	10:20 AM	2.0	2.0	2.0	200	400.0	1.0	100	0.001

NFD = None Fibers Detected; OWA = Outside Work Area; IWA = Inside Work Area; FC = Final Clearance

Notes:

* = Excursion Limit (EL) Sample
OSHA 8-hour TWA = 0.0009 f/cc.
The Occupational Safety and Health Administration (OSHA) 8-hour Time Weight Average (TWA) is 0.1 fiber per cubic centimeter (f/cc) and the 30-minute Excursion Limit (EL) is 1.0 fiber per cubic centimeter (f/cc).

ECS Technician: Suhel Shafaat

Date: 08/18/2015

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 10976-A

Project Address: 5700 Sanger Avenue
Alexandria, VA 22311

Date: 08/18/2015

Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (min)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
08181501SSPCM	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08181502SSPCM	OWA / Kitchen at Decontamination Enclosure Entry	6:15 AM	10:25 AM	2.0	2.0	2.0	250	500.0	1.0	100	0.001
08181503SSPCM	OWA / Cafeteria at Critical Barrier	6:17 AM	10:27 AM	2.0	2.0	2.0	250	500.0	1.0	100	0.001
08181504SSPCM	IWA / Cafeteria Serving Area	6:20 AM	10:30 AM	2.0	2.0	2.0	250	500.0	2.0	100	0.002

NFD = None Fibers Detected; OWA = Outside Work Area; IWA = Inside Work Area; FC = Final Clearance

Notes: The Commonwealth of Virginia re-occupancy limit is 0.01 fibers per cubic centimeter (f/cc) of air.

ECS Technician: Suhel Shafaat

Date: 08/18/2015

ATTACHMENTS



Attachment No. 1
PHOTO-Inside Regulated Work Area within Cafeteria Serving Area following Removal



Attachment No. 2
PHOTO-Concrete Slab following Floor Mastic Removal under Buffet Table within Cafeteria Serving Area



Attachment No. 3
PHOTO-Concrete Slab following Floor Mastic Removal from Serving Area inside Regulated Work Area

EMSL Analytical, Inc.
10768 Baltimore Avenue, Beltsville, MD 20705
Phone/Fax: (301) 937-5700 / (301) 937-5701
http://www.EMSL.com beltsvillelab@emsl.com

EMSL Order: 191510063
CustomerID: ECMA78
CustomerPO:
ProjectID:

Attn: **Joanna Vivanco**
ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151

Phone: (703) 471-8400
Fax:
Received: 08/18/15 4:00 PM
Analysis Date: 8/19/2015
Collected: 8/18/2015

Project: **WILLIAM RAMSEY ELEM. SCHOOL 10976**

Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Appendix A to Subpart E

Sample	Location	Volume (Liters)	Area Analyzed (mm^2)	Non Asb	Asbestos Type(s)	# Structures ≥ 0.5µ < 5µ	# Structures ≥5µ	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm^2)	Asbestos Concentration (S/cc)
081815-01SS *191510063-0001*	FC-IWA/CAFETERIA KTICHEN	1200.00	0.0650	0	None Detected			0.0049	**<15.00**	**<0.0049**
081815-02SS *191510063-0002*	FC-IWA/CAFETERIA KTICHEN	1200.00	0.0650	0	None Detected			0.0049	**<15.00**	**<0.0049**
081815-03SS *191510063-0003*	FC-IWA/CAFETERIA KTICHEN	1200.00	0.0650	0	None Detected			0.0049	**<15.00**	**<0.0049**
081815-04SS *191510063-0004*	FC-IWA/CAFETERIA KTICHEN	1200.00	0.0650	0	None Detected			0.0049	**<15.00**	**<0.0049**
081815-05SS *191510063-0005*	FC-IWA/CAFETERIA KTICHEN	1200.00	0.0650	0	None Detected			0.0049	**<15.00**	**<0.0049**

Analyst(s)

Joe Centifonti (5)

Joe Centifonti, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. Results reported in both structures/cm3 and structures/mm2 are dependent on the volume of air sampled and measured by non-laboratory personnel are not the responsibility of EMSL and are not covered by the laboratory's NVLAP accreditation. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request.

Samples analyzed by EMSL Analytical, Inc. Beltsville, MD NVLAP Lab Code 200293-0

Initial report from 08/19/2015 10:57:08

OrderID: 191510063

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number (*Lab Use Only*): 191510063

EMSL ANALYTICAL, INC.
10768 BALTIMORE AVE
BELTSVILLE, MD 20705
PHONE: (301) 937-5700
FAX: (301) 937-5701

Company: ECS MID-ATLANTIC, LLC	**EMSL-Bill to:** ☐ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 14026 THUNDERBOLT PL, STE 100	
City: Chantilly **State/Province:** VA	**Zip/Postal Code:** 20151 **Country:** USA
Report To (Name): Joanna Vivanco	**Telephone #:** (571) 437-5398
Email Address: jvivanco@ecslimited.com	**Fax #:** N/A **Purchase Order:** N/A
Project Name/Number: William Ramsey Elem School/10276	**Please Provide Results:** ☐ Fax ☒ Email
U.S. State Samples Taken: VA	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☒ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air ☐ Check if samples are from NY
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☐ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ **4-4.5hr TAT (AHERA only)**
- ☒ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM CARB 435 - A (0.25% sensitivity)
- ☐ PLM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - C (0.01% sensitivity)
- ☐ TEM Qual. via Filtration Technique
- ☐ TEM Qual. via Drop-Mount Technique

Other:
- ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group** | **Filter Pore Size (Air Samples):** ☐ 0.8µm ☐ 0.45µm

Samplers Name: Suhel Shafaat **Samplers Signature:**

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
081815-0155	FC-IWA/ Cafeteria Kitchen	1,200 L	8/18/15 / 12:40 - 3:00PM
0255	FC-IWA/		
0355	FC-IWA/		
0455	FC-IWA/		
0555	FC-IWA/		
0655	FC-OWA / Cafeteria Kitchen		12:45-3:15PM
0755	FC-OWA /		
0855	FC-OWA /		

Client Sample # (s): 081815 0155 - 081815 1355 **Total # of Samples:** 13

Relinquished (Client): [signature] **Date:** 8/18/15 **Time:** 4:PM

Received (Lab): [signature] Walton **Date:** 8/18/15 **Time:** 4pm

Comments/Special Instructions: Please, only analyze first five samples collected inside work area (IWA) (Aggressive Air Sampling)

OrderID: 191510063

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*:

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

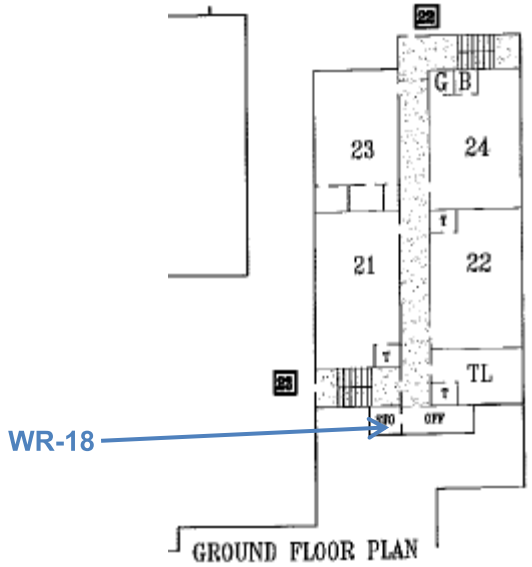
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
081815-0955	FC-OWA / Cafeteria kitchen	1,200L	8/18/15
1055	FC-OWA ↓	↓	↓
1155	Blank for IWA	N/A	
1255	Blank for OWA	↓	
1355	Sealed Blank	↓	↓

*Comments/Special Instructions:

APPENDIX B

FLOOR PLANS

Ground Floor



Legend
- Sample Number

Notes
1. Sample Locations are estimated

WILLIAM RAMSEY
5700 SANGER AVE.
ALEXANDRIA, VIRGINIA

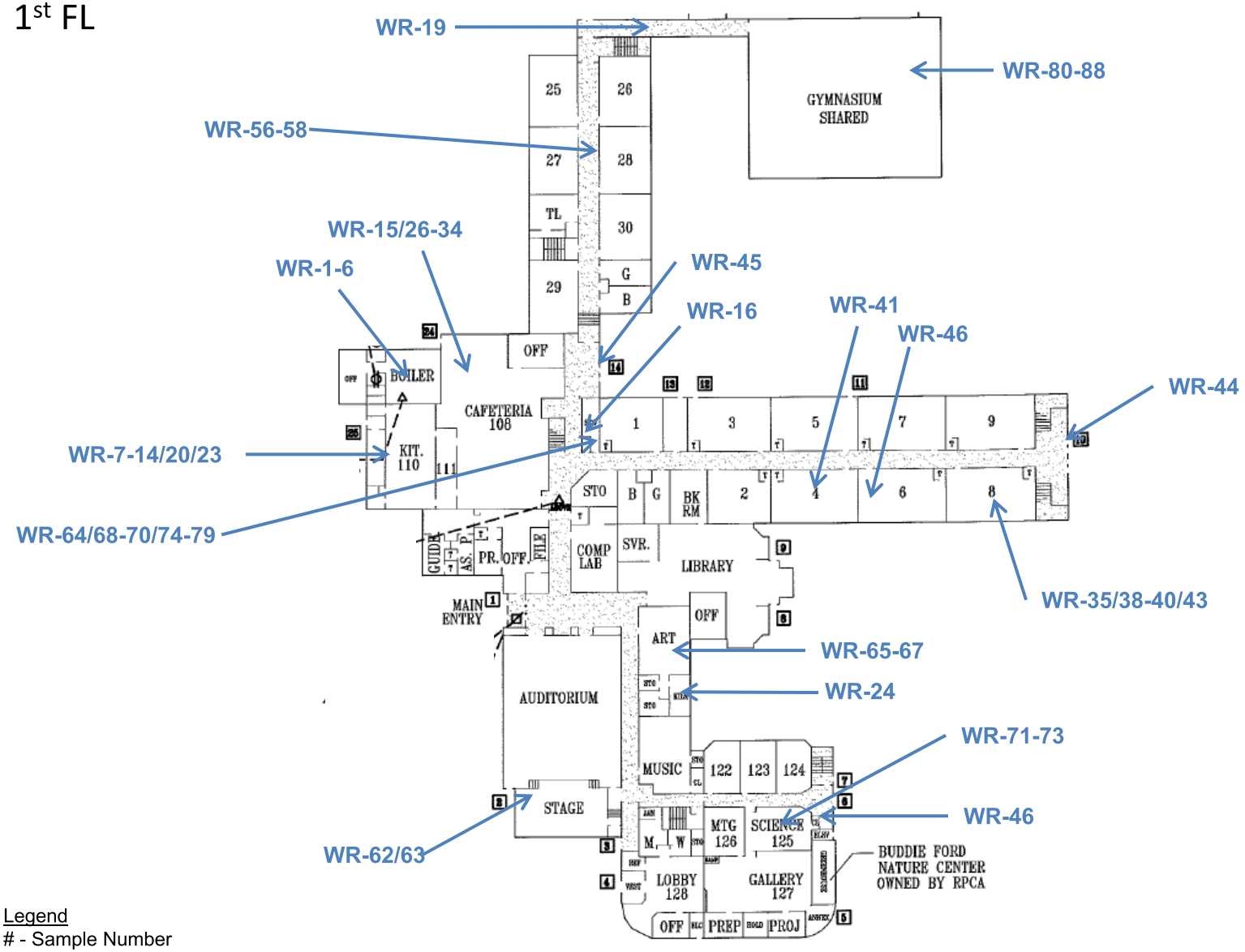
SAMPLING LOCATIONS
ACPS

SCALE NTS

Project No. 47:1519-D

Date 3/31/2017

1st FL



Legend
- Sample Number

Notes
1. Sample Locations are estimated

WILLIAM RAMSEY
5700 SANGER AVE.
ALEXANDRIA, VIRGINIA

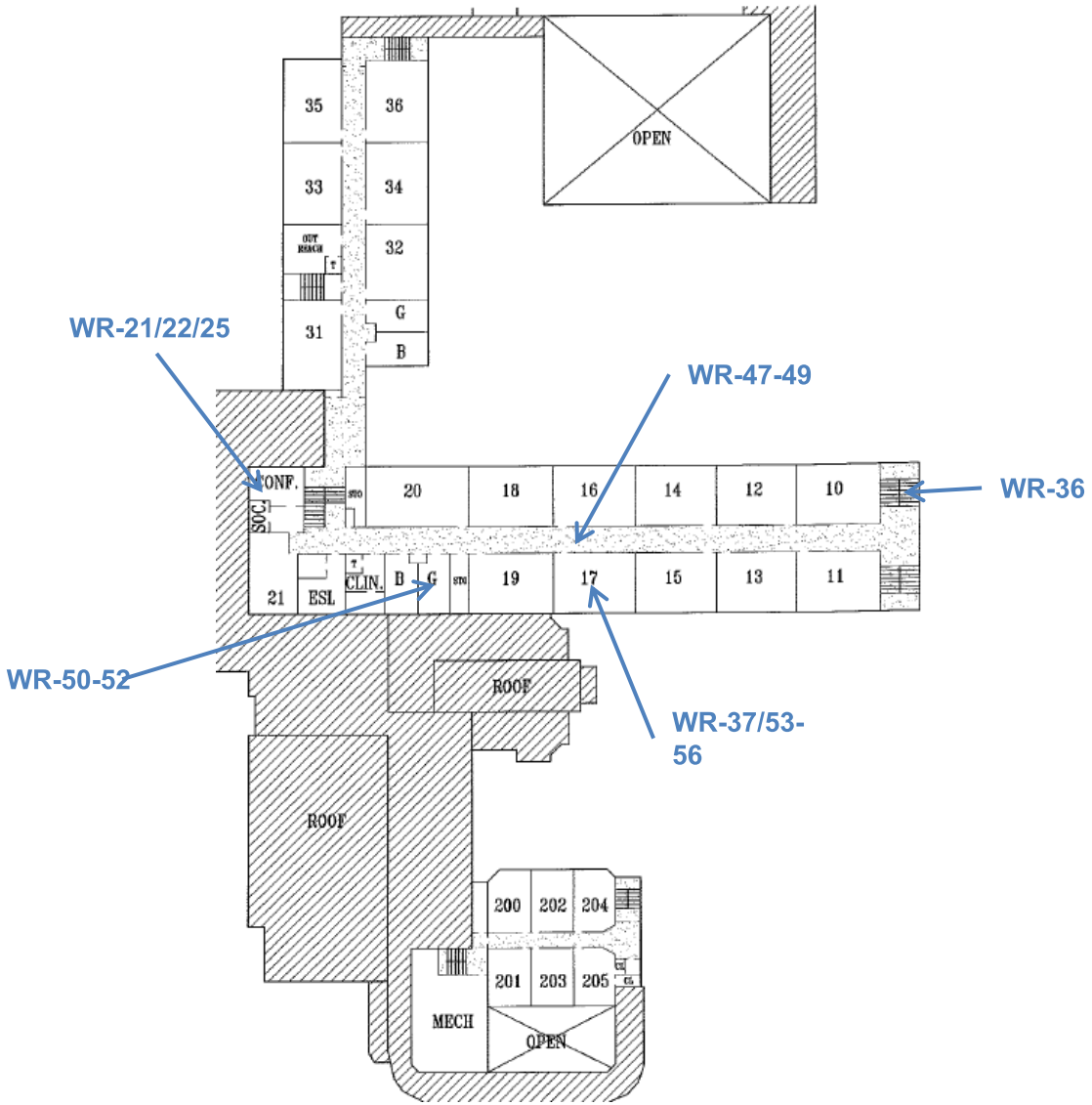
SAMPLING LOCATIONS
ACPS

SCALE NTS

Project No. 47:1519-D

Date 3/31/2017

2nd FL



Legend
- Sample Number

Notes
1. Sample Locations are estimated

WILLIAM RAMSEY
5700 SANGER AVE.
ALEXANDRIA, VIRGINIA

SAMPLING LOCATIONS
ACPS

SCALE NTS

Project No. 47:1519-D

Date 3/31/2017

APPENDIX C

ASBESTOS SUMMARY TABLES

WILLIAM RAMSEY ELEMENTARY SCHOOL
ACPS ASBESTOS CONTAINING MATERIALS SUMMARY

Updated as of December 30, 2016

MATERIAL	LOCATION	FRIABILITY	CONDITION	COMMENTS	LAST INSPECTION DATE	RECOMMENDATION	6-MONTH SURVEY DATE	REMARKS
MATERIALS REPORTED AS ASBESTOS-CONTAINING MATERIALS ON PRIOR SURVEYS								
12" x 12" Brown Floor Tiles and associated Mastic	1st Floor Art Room and Kiln Room Office	NF	Intact	Materials assumed to be under new 12" x 12" floor tiles	30-Dec-16	Maintain in O & M Plan		Reported as Enclosed. Verify Analytical Results
White Ceiling Tiles Large Pinhole Pattern	1st Floor Book Storage	NF	Intact	Assumed to be in other areas throughout the building.	30-Dec-16	Maintain in O & M Plan		Verify Analytical Results
9" x 9" Reddish Brown Floor Tiles and associated Black Mastic	1dt Floor Book Storage #1, Room 20, 1, 9, & 16 and Storage Room next to Room 19	NF	Intact	Materials may be under existing partition walls, fixtures, cabinets, etc. throughout the building	30-Dec-16	Maintain in O & M Plan		Reported as Enclosed. Verify Analytical Results
Floor Tiles	2nd Floor Rooms 14, 17, & 18 and Teachers Lounge	NF	Intact	Materials may be under existing partition walls, fixtures, cabinets, etc. throughout the building	30-Dec-16	Maintain in O & M Plan		Reported as Enclosed. Verify Analytical Results
Wire insulation	1st and 2nd Floor Trash Closet and General Storage Closet	F	Intact	Assumed to be above plaster ceiling	30-Dec-16	Maintain in O & M Plan		Verify Analytical Results
Black with Black Trim Floor Tiles	2nd Floor Hallway Rooms 16 and 20	NF	Intact	Materials was reported to be under 12" x 12" floor tile. Materials may be under existing materials throughout the building	30-Dec-16	Maintain in O & M Plan		Reported as Enclosed. Verify Analytical Results
Light Brown Floor Tiles	Cafeteria	NF	Intact	Assumed to be under 12" x 12" floor tile in the cafeteria and in other areas	30-Dec-16	Maintain in O & M Plan		Reported as Enclosed. Verify Analytical Results
9" x 9" Maroon Floor Tiles and associated Mastic	Cafeteria and Library	NF	Intact	Assumed to be under 12" x 12" floor tile in the cafeteria and in other areas	30-Dec-16	Maintain in O & M Plan		Reported as Enclosed. Verify Analytical Results
TSI-Mudded Elbows/Joints	Basement Crawl Space, Boiler Room Crawl Space	F	Damaged	Isolated damage on TSI in Basement Crawl	30-Dec-16	Repair or Remove ASAP		Need Encapsulation; Verify Analytical Results
9" x 9" Green Floor Tiles and associated Mastic	ESL/Lounge Room	NF	Intact	Materials may be under carpet, existing partition walls, fixtures, cabinets, etc. throughout the building	30-Dec-16	Maintain in O & M Plan		Reported as Enclosed. Verify Analytical Results
Red Galvanized Duct Mastic	Ground Floor Media Room	NF	Intact	Assumed to be in the Library on the first floor	30-Dec-16	Maintain in O & M Plan		Verify Analytical Results
9" x 9" Grey Floor Tiles and associated Mastic	Hallways	NF	Intact	Materials may be under carpet or tiles, existing partition walls, fixtures, cabinets, etc. throughout the building	30-Dec-16	Maintain in O & M Plan		Reported as Enclosed. Verify Analytical Results
Fire Doors	Hallways and Kitchen	F	Intact	Throughout Building	30-Dec-16	Maintain in O & M Plan		Verify Analytical Results
9" x 9" Brown Floor Tiles	Kitchen Offices	NF	Intact	Assumed to be under 12" x 12" floor tile in the kitchen and in other areas	30-Dec-16	Maintain in O & M Plan		Reported as Enclosed. Verify Analytical Results

WILLIAM RAMSEY ELEMENTARY SCHOOL
ACPS ASBESTOS CONTAINING MATERIALS SUMMARY

MATERIAL	LOCATION	FRIABILITY	CONDITION	COMMENTS	LAST INSPECTION DATE	RECOMMENDATION	6-MONTH SURVEY DATE	REMARKS
1' x 1' Ceiling Tiles	Kitchen Offices and food storage room	NF	Intact	None	30-Dec-16	Maintain in O & M Plan		Verify Analytical Results
Light Brown Floor Tiles	Library	NF	Intact	Materials may be under carpet, existing partition walls, fixtures, cabinets, etc. throughout the building	30-Dec-16	Maintain in O & M Plan		Reported as Enclosed. Verify Analytical Results
Gray Galvanized Duct Mastic	Room 20	NF	Intact	Throughout Building	30-Dec-16	Maintain in O & M Plan		Verify Analytical Results
12" x 12" White Floor Tiles and associated Mastic	Room 22	NF	Intact	Materials may be under carpet, existing partition walls, fixtures, cabinets, etc. throughout the building	30-Dec-16	Maintain in O & M Plan		Reported as Enclosed. Verify Analytical Results
Wallboard	Room 23	NF	Intact	Assumed to be in other areas throughout the building.	30-Dec-16	Maintain in O & M Plan		Verify Analytical Results
MATERIALS REPORTED AS ASBESTOS-CONTAINING MATERIALS ON PRIOR SURVEYS THAT WERE NOT IDENTIFIED/OBSERVED BY ECS IN NOVEMBER 18, 2013 SURVEY								
White Electric Conduit Penetrations, Foil Wrap Duct	Room 19	F	N/A	This material is reported as ACM; however it was not observed in this area.	30-Dec-16	Maintain in O & M Plan		Sample if proposed for disturbance
Floor tiles	Ground Floor Janitor's Closet	NF	N/A	This material is reported as ACM; however it was not observed in this area.	30-Dec-16	Maintain in O & M Plan		Reported as Enclosed. Sample if proposed for disturbance
1' x 1' Ceiling Tiles large Pinhole Pattern	Art Storage, Storage Room next to Room 19, and Book Storage Room on 1st Floor next to Room 1	NF	N/A	This material is reported as ACM; however it was not observed in these areas.	30-Dec-16	Maintain in O & M Plan		Sample if proposed for disturbance
Black Floor tiles	Kitchen Office	NF	N/A	This material is reported as ACM; however it was not observed in this area.	30-Dec-16	Maintain in O & M Plan		Not observed - Verify removal or Sample if proposed for disturbance
Wall Heater Insulation Board	2nd Floor Science Lab	F	N/A	This material is reported as ACM; however it was not observed in this area.	30-Dec-16	Maintain in O & M Plan		Sample if proposed for disturbance
9" x 9" Green Floor Tiles and associated Mastic	Rooms 11, 15, 19 & 33	NF	N/A	This material is reported as ACM; however it was not observed in these areas. Black floor tile observed under carpet.	30-Dec-16	Maintain in O & M Plan		Not observed - Verify removal or Sample if proposed for disturbance
9" x 9" Grey Floor Tiles and associated Mastic	Stage Stair Landing	NF	N/A	This material is reported as PACM; however it was not observed in these areas.	30-Dec-16	Maintain in O & M Plan		Sample if proposed for disturbance
Light Shield	2nd Floor Trash Room	F	N/A	This material is reported as PACM; however it was not observed in these areas.	30-Dec-16	Maintain in O & M Plan		Sample if proposed for disturbance

WILLIAM RAMSEY ELEMENTARY SCHOOL
ACPS ASBESTOS CONTAINING MATERIALS SUMMARY

MATERIAL	LOCATION	FRIABILITY	CONDITION	COMMENTS	LAST INSPECTION DATE	RECOMMENDATION	6-MONTH SURVEY DATE	REMARKS
ASBESTOS CONTAINING MATERIALS SAMPLED BY ECS IN NOVEMBER 18, 2013 SURVEY								
Black Floor Tile	Rooms 4, 6, and 8	NF	Intact	None	30-Dec-16	Add to O & M Plan		Asbestos: Floor Tile - 5% Chrysotile
9' x 9" Grey Floor Tile with White Flecks and associated Mastic	Stage Stair Landing and Janitor Closet on Ground Floor	NF	Intact	This material may be present in other areas	30-Dec-16	Add to O & M Plan		Asbestos: Floor Tile - 5% Chrysotile Mastic - 3% Chrysotile
9' x 9" Black Floor Tile with White Flecks and associated Mastic	Janitor Closet on Ground Floor	NF	Intact	This material may be present in other areas	30-Dec-16	Add to O & M Plan		Asbestos: Floor Tile - 5% Chrysotile Mastic - 5% Chrysotile
6" Pipe Fitting Insulation	Janitor Closet on Ground Floor	F	Intact	This material may be present in other areas	30-Dec-16	Add to O & M Plan		Asbestos: Insulation - 5% Chrysotile
ASBESTOS CONTAINING MATERIALS SAMPLED BY ECS IN December 30, 2016 SURVEY								
Tile 2 Beneath 12" x 12" Green Stick-On Floor Tile	1st Floor Hallway Closet	NF	Intact	This material may be present in other areas	30-Dec-16	Add to O & M Plan		Asbestos: 3% Chrysotile
MATERIALS ASSUMED TO CONTAIN ASBESTOS								
6" White TSI-Mudded Elbows	Ground Floor Janitor's Closet	F	Intact	Sampled positive by ECS	30-Dec-16	Maintain in O & M Plan		None
Hardwood Underlayment and associated Mastic	Stage and Gymnasium on 1st Floor	NF	Intact	PACM until tested	30-Dec-16	Maintain in O & M Plan		Sample if proposed for disturbance
Plaster Walls	Throughout Building	F	Intact	Sampled as NAD in Kitchen Office, Kitchen Rear Entrance, Cafeteria, Book Storage Room, Exit Door 10 under Stair Landing, Janitor Closet on Ground Floor, and Hallway to Gym. Material may be present in other areas.	30-Dec-16	Maintain in O & M Plan		Sample if proposed for disturbance
Boards and associated Mastic	Classrooms and Hallways	NF	Intact	PACM until tested	30-Dec-16	Maintain in O & M Plan		Sample if proposed for disturbance
Sink Underlayment	Art Room	NF	Intact	Sampled as NAD in the Art Room by ECS	30-Dec-16	Remove from O & M Plan		None
Fountain and Radiator Coil Wrap	Throughout Building	F	Intact	PACM until tested	30-Dec-16	Maintain in O & M Plan		Sample if proposed for disturbance
Drywall/Joint Compound	Throughout Building	NF	Intact	Sampled as NAD in Refrigerator Area in Kitchen and Counseling Area on 2nd Floor by ECS	30-Dec-16	Maintain in O & M Plan		Sample if proposed for disturbance

WILLIAM RAMSEY ELEMENTARY SCHOOL
ACPS ASBESTOS CONTAINING MATERIALS SUMMARY

MATERIAL	LOCATION	FRIABILITY	CONDITION	COMMENTS	LAST INSPECTION DATE	RECOMMENDATION	6-MONTH SURVEY DATE	REMARKS
Window and Door Caulking	Throughout Building	NF	Intact	Various types of caulk were sampled as NAD by ECS.	30-Dec-16	Maintain in O & M Plan		Sample if proposed for disturbance
Stair Vinyl Treads and Riser	Throughout Building	NF	Intact	Sampled as NAD in the Cafeteria and Stage Stairs by ECS.	30-Dec-16	Remove from O & M Plan		Sample if proposed for disturbance
Black Window Sill	Classrooms	NF	Intact	PACM until tested	30-Dec-16	Add to O & M Plan		Sample if proposed for disturbance
Boards above Windows	Classrooms	NF	Intact	PACM until tested	30-Dec-16	Add to O & M Plan		Sample if proposed for disturbance
Wall Boards and Mastic	Auditorium	NF	Intact	PACM until tested	30-Dec-16	Add to O & M Plan		Sample if proposed for disturbance
Ceiling Tiles and Materials above Drop Ceiling Tiles	Library and Auditorium on 1st Floor	NF	Intact	PACM until tested	30-Dec-16	Add to O & M Plan		Sample if proposed for disturbance
Exterior and Interior Caulk associated with Glass Window Panels	Library and Gymnasium on 1st Floor	NF	Intact	PACM until tested	30-Dec-16	Add to O & M Plan		Sample if proposed for disturbance
Pipe Flange Gaskets	Throughout the Building	Unknown	Intact	PACM until tested	30-Dec-16	Add to O & M Plan		Sample if proposed for disturbance
Electrical Panels: Transite Components	Mechanical Rooms	NF	Intact	PACM until tested	30-Dec-16	Add to O & M Plan		Sample if proposed for disturbance
Thermal System Insulation (TSI)	Pipes within Chases behind Walls and above Ceiling throughout Building	F	Not Observed	PACM Until Tested	30-Dec-16	Maintain in O & M Plan		Sample if proposed for disturbance
Mirror Mastic	Bathrooms	NF	Intact	PACM until tested	30-Dec-16	Add to O & M Plan		Sample if proposed for disturbance
Waterproofing Membranes/Mastics	Behind Interior Finishes, Exterior Veneer and/or Subgrade Walls, and Under Ceramic Flooring	NF	Intact	PACM until tested	30-Dec-16	Add to O & M Plan		Sample if proposed for disturbance
Asphalt-Based Roofing Material and Caulks/Sealants	Roof	NF	Intact	PACM until tested	30-Dec-16	Add to O & M Plan		Sample if proposed for disturbance
Switch Deflector Plate, Brakes, Cab and Doors	Elevator	Unknown	Intact	PACM until tested	30-Dec-16	Add to O & M Plan		Sample if proposed for disturbance
Gypsum Roof Boards	Throughout Building	NF	Intact	PACM until tested	30-Dec-16	Add to O & M Plan		Sample if proposed for disturbance

WILLIAM RAMSEY ELEMENTARY SCHOOL
ACPS ASBESTOS CONTAINING MATERIALS SUMMARY

MATERIAL	LOCATION	FRIABILITY	CONDITION	COMMENTS	LAST INSPECTION DATE	RECOMMENDATION	6-MONTH SURVEY DATE	REMARKS
NON-ASBESTOS CONTAINING MATERIALS SAMPLED BY ECS IN NOVEMBER 18, 2013 SURVEY								
Yellow Carpet Mastic associated with Black Floor Tile	Rooms 4, 6, and 8	NF	N/A	The floor tile associated wit this material is ACM, and is listed as such in the corresponding section of this table.	N/A	N/A	N/A	Carpet Mastic - NAD
6" Pipe Fitting Insulation	Janitor Closet on Ground Floor	F	N/A	The floor tile associated wit this material is ACM, and is listed as such in the corresponding section of this table.	N/A	N/A	N/A	Wrap - NAD
Grey Textured Plaster	Boiler Room	F	N/A	N/A	N/A	N/A	N/A	NAD
Grey Metal Duct Mastic	Boiler Room	NF	N/A	N/A	N/A	N/A	N/A	NAD
Brown Glue Dot associated with 1' x 1' Ceiling Tiles	Kitchen Office	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Yellow Glue Dot associated with 1' x 1' Ceiling Tiles	Kitchen Office	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Plaster Ceiling/Wall	Kitchen Office, Kitchen Rear Entrance, Cafeteria, Book Storage Room, Exit Door 10 under Stair Landing, Janitor Closet on Ground Floor, and Hallway to Gym	N/A	N/A	N/A	N/A	N/A	N/A	Texture - NAD Finish - NAD Base - NAD
Drywall	Refrigerator Area in Kitchen and Counseling Area on 2nd Floor.	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Joint Compound	Refrigerator Area in Kitchen and Counseling Area on 2nd Floor.	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Brown Glue Dot on Plaster Ceiling	Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Black and White Mastic and Leveling Compound	Stairs at Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Grey Stair Tread	Stairs at Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Grey Interior Window Caulk	Room 8 & 17 and Stairwell on 2nd Floor (above Exit Door 10)	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Grey (Painted Beige) 1' x 1' Textured Wall Tile	Room 8	N/A	N/A	Mastic associated with wall tile was not accessible and is PACM	N/A	N/A	N/A	NAD
Beige Interior Door Caulk	Exit Door 6, 10, and 14	N/A	N/A	N/A	N/A	N/A	N/A	NAD
2' x 4' White Textured Ceiling Tile	Hallway on 2nd Floor	N/A	N/A	N/A	N/A	N/A	N/A	NAD

WILLIAM RAMSEY ELEMENTARY SCHOOL
ACPS ASBESTOS CONTAINING MATERIALS SUMMARY

MATERIAL	LOCATION	FRIABILITY	CONDITION	COMMENTS	LAST INSPECTION DATE	RECOMMENDATION	6-MONTH SURVEY DATE	REMARKS
Black Partition Wall	Girl's Bathroom on 2nd Floor	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Grey Sink Undercoat	Room 17	N/A	N/A	N/A	N/A	N/A	N/A	NAD
2' x 4' White Fissured Ceiling Tile	Hallway between Rooms 25 - 30 on 1st Floor	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Black Stair Tread	Stage Stair Landing	N/A	N/A	N/A	N/A	N/A	N/A	NAD
White Sink Undercoat	Art Room	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Black Pipe Wrap	Janitor Closet on 1st Floor	N/A	N/A	N/A	N/A	N/A	N/A	NAD
2' x 2' White Punch Ceiling Tile	Science Room 125	N/A	N/A	N/A	N/A	N/A	N/A	NAD
2' x 2' White Solid Ceiling Tile	Gymnasium	N/A	N/A	N/A	N/A	N/A	N/A	NAD
4" White and Red Pipe Bridging Mastic	Roof Access Room in Gymnasium	N/A	N/A	N/A	N/A	N/A	N/A	NAD
2" White Pipe Bridging Mastic	Roof Access Room in Gymnasium	N/A	N/A	N/A	N/A	N/A	N/A	NAD

Notes: F = Friable; NF = Non-Friable; PACM = Presumed Asbestos Containing Material; O & M Plan = Operations and Maintenance Plan; NAD = No Asbestos Detected., N/A = Not Applicable.

William Ramsey Elementary School 3-Year AHERA Re-Inspection Survey
Asbestos-Containing Materials Summary

Date: December 30, 2016

Address: 5700 Sager Avenue, Alexandria, Virginia

Room	Material	Condition	Abated
1st Floor Art Room and Kiln Room Office	12" x 12" Brown Floor Tiles and associated Mastic	Intact	No
1st Floor Book Storage	White Ceiling Tiles Large Pinhole Pattern	Intact	No
1dt Floor Book Storage #1, Room 20, 1, 9, & 16 and Storage Room next to Room 19	9" x 9" Reddish Brown Floor Tiles and associated Black Mastic	Intact	No
2nd Floor Rooms 14, 17, & 18 and Teachers Lounge	Floor Tiles	Intact	No
1st and 2nd Floor Trash Closet and General Storage Closet	Wire insulation	Intact	No
2nd Floor Hallway Rooms 16 and 20	Black with Black Trim Floor Tiles	Intact	No
Cafeteria	Light Brown Floor Tiles	Intact	No
Cafeteria and Library	9" x 9" Maroon Floor Tiles and associated Mastic	Intact	No
Basement Crawl Space, Boiler Room Crawl Space	TSI-Mudded Elbows/Joints	Not Observed	No

Room	Material	Condition	Abated
ESL/Lounge Room	9" x 9" Green Floor Tiles and associated Mastic	Intact	No
Ground Floor Media Room	Red Galvanized Duct Mastic	Not Observed	No
Hallways	9" x 9" Grey Floor Tiles and associated Mastic	Intact	No
Hallways and Kitchen	Fire Doors	Intact	No
Kitchen Offices	9" x 9" Brown Floor Tiles	Intact	No
Kitchen Offices and food storage room	1' x 1' Ceiling Tiles	Not Observed	No
Library	Light Brown Floor Tiles	Intact	No
Room 20	Gray Galvanized Duct Mastic	Not Observed	No
Room 22	12" x 12" White Floor Tiles and associated Mastic	Intact	No
Room 23	Wallboard	Intact	No
Room 19	White Electric Conduit Penetrations, Foil Wrap Duct	Not Observed	No

Room	Material	Condition	Abated
Ground Floor Janitor's Closet	Floor tiles	Intact	No
Art Storage, Storage Room next to Room 19, and Book Storage Room on 1st Floor next to Room 1	1' x 1' Ceiling Tiles large Pinhole Pattern	Not Observed	No
Kitchen Office	Black Floor tiles	Intact	No
2nd Floor Science Lab	Wall Heater Insulation Board	Not Observed	No
Rooms 11, 15, 19 & 33	9" x 9" Green Floor Tiles and associated Mastic	Not Observed	No
Stage Stair Landing	9" x 9" Grey Floor Tiles and associated Mastic	Intact	No
2nd Floor Trash Room	Light Shield	Not Observed	No
Rooms 4, 6, and 8	Black Floor Tile	Not Observed	No
Stage Stair Landing and Janitor Closet on Ground Floor	9' x 9" Grey Floor Tile with White Flecks and associated Mastic	Intact	No
Janitor Closet on Ground Floor	9' x 9" Black Floor Tile with White Flecks and associated Mastic	Not Observed	No
Janitor Closet on Ground Floor	6" Pipe Fitting Insulation	Not Observed	No

Room	Material	Condition	Abated
1st Floor Hallway Closet	Tile 2 Beneath 12" x 12" Green Stick-On Floor Tile	Intact	No

Comments

1. Various floor tiles were observed beneath newer floor tiles and carpeting. Layering of several floorings materials was observed.

AHERA Inspector: Brian Wasserstein **License No:** 3303004080

Signature of Inspector: 

APPENDIX D

GLOSSARY

APPENDIX Q

HISTORICAL INFORMATION

MasiMax
Resources, Inc.

THREE-YEAR REINSPECTION OF ASBESTOS-CONTAINING MATERIALS
ALEXANDRIA CITY PUBLIC SCHOOL SYSTEMS (ACPS)
William Ramsey Elementary School
August 10, 2007

MasiMax Resources Inc. – Environmental Health & Safety Services (MasiMax) conducted the Three Year Re-Inspection of Asbestos-Containing Materials (ACM) at William Ramsey Elementary School on June 21, 2007. The purpose of the re-inspection was to assess the condition of all friable and non-friable Asbestos Containing Building Materials (ACBMs) listed as present from the previous triennial re-inspection.

The Scope of Work included a review of the Asbestos Operations & Management Plan (O&M), asbestos inspection and assessment of ACBM, and updated recommended response actions based on the condition of the ACBM.

All tasks were performed in accordance with re-inspection and assessment criteria established by the Environmental Protection Agency (EPA) Asbestos Hazard Emergency Response Act (AHERA), 40 CFR, Part 763.85 and Part 763.88. Each homogeneous area of ACM identified by the previous triennial re-inspection report was inspected. Additionally, the quantity, type, current conditions and recommendations are provided in the table presented in Attachment A.

MasiMax's performed an assessment of the school's asbestos O&M to review if the information required by AHERA is present and current. A checklist of the assessment findings is presented in Attachment B. Included in the checklist is the Local Education Agency's (LEA) designated person listed in the on-site O&M plan; however, ACPS should verify if this information is current.

The re-inspection was conducted by Virginia state licensed asbestos inspectors. All work was directed and supervised by a Certified Industrial Hygienist (CIH) who is also licensed by the State of Virginia as an Asbestos Management Planner. Copies of the Virginia asbestos inspector and management planner licenses are presented in Attachment C.

Under the AHERA requirements 763.93, a copy of the triennial re-inspection report shall be included in the ACPS's Management Plan. In addition, all six (6) month periodic inspection reports, response actions conducted at the school, and personnel training records shall be included in the Management Plan. It is the responsibility of the LEA designated person to ensure the Management Plan is updated regularly and made available to any interested party.

Mark Schneider, CIH, PG, LAC
VA Management Planner # 3304 001536
Exp. 06/30/2008

Bjarne Smith
VA Asbestos Inspector # 3303 002764
Exp. 08/31/2007

Amy Chang
VA Asbestos Inspector # 3303 002399
Exp. 05-31-2008

Corporate Headquarters
1375 Piccard Drive • Suite 175 • Rockville, MD 20850
Phone: 240-632-0610 • Fax: 240-632-0519 • www.masimax.com

Environmental Health and Safety Services
11417 Sunset Hills Road • Suite 225 • Reston, VA 20190
Phone: 571-203-7766 • Fax: 571-203-7911

CHECKLIST FOR ALEXANDRIA CITY PUBIC SCHOOLS AHERA MANAGEMENT PLANS

SCHOOL NAME: William Ramsay

Yes No

■ ☐ Name and address of school, including a statement of whether the facility has friable, non-friable ACBM, suspect friable ACBM, or suspect non-friable ACBM.

Comments: _____

Yes

■ LEA – Designated Person

Name: William Simms Phone #: 703-836-7565

Yes No

■ ☐ Initial Inspection Reports including:

- Date of inspection;
- Diagram or description of ACBM material locations;
- Bulk sample analysis report;
- Initial response action recommendations;
- Assessment of asbestos materials; and,
- Signature, state, and accreditation # of inspector(s).

Comments: _____

Yes No

☐ ■ Records of all response actions for the last three (3) years (or longer), including:

- Detailed description of response actions;
- Air sample results;
- Signature, state, and accreditation of air sampler;
- Signature, state and accreditation of designer; and,
- Signature, state, and accreditation of contractor.

Comments: Also did not have record of Boiler Room abatement.

Yes No

■ ☐ Recommendations for all response actions.

Comments: _____

Yes No

■ ☐ Signature, State, and accreditation of Management Planner, Inspector(s), Designer(s), and Contractor(s) for initial and all re-inspections.

Comments: Only 2004 re-inspection report was found.

Yes No

☐ ■ 6-Month O&M Inspections

Comments: _____

Inspector (s): Bjarne Smith & Amy Chang Date: 6/21/2007

Management Planner: _____ Date: 08/21/2007

City of Alexandria - AHERA Inspection

School William Ramsay **Date** 6/22/2007 **Inspector(s)** Bjarne Smith & Amy Chang8

Location	Material	Size	Color	Amount	Unit	Comment	Class	Friable	Damage	Damage Location	Damage Amount	Damage Description	Recommend-ation
1st floor Art Room	Floor Tile	12x12	Brown	All	SF	12x12 Brown Floor Tile	5	No	No	N/A	N/A	N/A	O & M
1st Floor Book Storage	Ceiling Tile (w/large pinhole pattern)	1x1	White			Present	0	No	No	N/A	N/A	N/A	O & M
1st Floor Book Storage	Floor Tile	9x9	Reddish brown			In good condition	5	No	No	N/A	N/A	N/A	O & M
1st floor Hallways, above ceiling	TSI-elbows	large	N/A	500	SF	Some still present on 1st floor	5	Yes	Yes	Throughout	13 EA	Impact	O & M
1st&2nd floor Ceilings	Adhesive divot	ALL	Brown	ALL	ALL	Removed in 2005	0	No	No	N/A	N/A	N/A	N/A

City of Alexandria - AHERA Inspection

School William Ramsay **Date** 6/22/2007 **Inspector(s)** Bjarne Smith & Amy Chang

Location	Material	Size	Color	Amount	Unit	Comment	Class	Friable	Damage	Damage Location	Damage Amount	Damage Description	Recommend-ation
2nd floor Boys Bathroom	Partition	ALL	Gray	ALL	ALL	Throughout	0	No	No	N/A	N/A	N/A	O & M
2nd floor room 14	Floor Tile					Under carpet	5	No	No	N/A	N/A	N/A	O & M
2nd floor Science Lab (Former Library) (room 42)	Wall heater insulation board	ALL	N/A	ALL	ALL	Throughout exterior rms-Material inside heater-Gray	0	No	No	N/A	N/A	N/A	O & M
2nd floorTrash Closet, Some in 1st floor trash room, General Storage Closet	Incandescent light fixture insulation - Wire insulation white	8 in	White	1	EA	Intact	5	No	No	N/A	N/A	N/A	O & M
2nd flr. stg. room, 2nd flr. room 17 & Teacher Lounge	Floor Tile					Under carpet	5	No	No	N/A	N/A	N/A	O & M

City of Alexandria - AHERA Inspection

School **William Ramsay** Date 6/22/2007 Inspector(s) Bjarne Smith & Amy Chang

Location	Material	Size	Color	Amount	Unit	Comment	Class	Friable	Damage	Damage Location	Damage Amount	Damage Description	Recommend-ation
2nd. fl. Hallway	Floor Tile	ALL	Black w/blk trim	175	SF	Under carpet	5	No	No	N/A	N/A	N/A	O & M
2nd. flr. room 18, Kitchen (offices)	Floor Tile					Under carpet	5	No	No	N/A	N/A	N/A	O & M
Art Storage	Ceiling Tile (w/large pinhole pattern)	1x1	White			Unable to locate	0	No	No	N/A	N/A	N/A	O & M
Auditorium, above stage	Vibration Damper	ALL	N/A	4	EA	Removed	5	No	No	N/A	N/A	N/A	N/A
Auditorium, above stage	TSI-elbows	ALL	N/A	22	EA	Removed	5	No	No	N/A	N/A	N/A	N/A

City of Alexandria - AHERA Inspection

School **William Ramsay** Date 6/22/2007 Inspector(s) Bjarne Smith & Amy Chang

Location	Material	Size	Color	Amount	Unit	Comment	Class	Friable	Damage	Damage Location	Damage Amount	Damage Description	Recommend-ation
Auditorium, above stage	TSI-duct insulation	ALL	N/A	400	SF	Removed	5	No	No	N/A	N/A	N/A	N/A
Auditorium, front, air hanlder room	TSI-elbows, joints	ALL	N/A	2	EA	Removed	5	No	No	N/A	N/A	N/A	N/A
Boiler Room	TSI-duct insulation	ALL	N/A	200	SF	Abated & removed	5	No	No	N/A	N/A	N/A	N/A
Boiler Room	TSI-boiler insulation	ALL	Gray	480	SF	Abated & removed	1	Yes	No	N/A	N/A	N/A	N/A
Boiler Room	TSI-elbows, joints	ALL	Gray	50	EA	Abated & removed	1	Yes	No	N/A	N/A	N/A	N/A

City of Alexandria - AHERA Inspection

School William Ramsay **Date** 6/22/2007 **Inspector(s)** Bjarne Smith & Amy Chang

Location	Material	Size	Color	Amount	Unit	Comment	Class	Friable	Damage	Damage Location	Damage Amount	Damage Description	Recommend-ation
Boiler Room	Incinerator Insulation	ALL	Brown	125	SF	Abated & removed	2	Yes	No	N/A	N/A	N/A	N/A
Cafeteria	Floor Tile	ALL	Light brown	780	SF	Under new tile, storage rms & office	5	No	No	N/A	N/A	N/A	O & M
Cafeteria	Floor Tile	9x9	Maroon	48	EA	Unable to locate	5	No	No	N/A	N/A	N/A	O & M
Crawlspace basement	TSI-elbows, joints	ALL	N/A			Minor damage on some elbows	5	Yes	Yes	Isolated	2 EA	Impact	O & M
Crawlspace in Boiler Room	TSI-elbows, joints	ALL	N/A	ALL	ALL	Good condition	5	Yes	No	N/A	N/A	N/A	O & M

City of Alexandria - AHERA Inspection

School **William Ramsay** Date 6/22/2007 Inspector(s) Bjarne Smith & Amy Chang

Location	Material	Size	Color	Amount	Unit	Comment	Class	Friable	Damage	Damage Location	Damage Amount	Damage Description	Recommend-ation
ESL/lounge room	Floor Tile	9x9	Green	All	ALL	Carpeted	5	No	No	N/A	N/A	N/A	O & M
Ground floor Janitors Closet	Floor Tile			35	EA	Under 12x12 tile or removed	5	No	No	N/A	N/A	N/A	O & M
Ground floor Janitors Closet	TSI-elbow	6 inch diameter	White	1	EA	PACM near crawlspace	5	No	No	N/A	N/A	N/A	O & M
Ground floor Media Center	Galvanized Duct mastic	ALL	Red	2	EA	Unable to locate here-but on A/C throughout	0	No	No	N/A	N/A	N/A	O & M
Hallways	Floor Tile	9x9	Gray	ALL	ALL	Tiled over or removed	5	No	No	N/A	N/A	N/A	O & M

City of Alexandria - AHERA Inspection

School **William Ramsay** Date 6/22/2007 Inspector(s) Bjarne Smith & Amy Chang

Location	Material	Size	Color	Amount	Unit	Comment	Class	Friable	Damage	Damage Location	Damage Amount	Damage Description	Recommend-ation
Hallways	Fire Doors	door	N/A	4	SF	Painted	5	No	No	N/A	N/A	N/A	O & M
Kitchen	TSI-elbows, joints	ALL	N/A	ALL 2nd floor	ALL	Removed, new electric heater	5	No	No	N/A	N/A	N/A	N/A
Kitchen Offices	Floor Tile	9x9	Brown	3840	SF	Not listed on prior survey, good condition		No	No	N/A	N/A	N/A	O & M
Kitchen Offices	Ceiling Tile	12x12	White	3644	SF	Painted white - good condition		Yes	No	N/A	N/A	N/A	O & M
Library	Floor Tile	ALL	Light brown	780	SF	Carpet in Library	5	No	No	N/A	N/A	N/A	O & M

City of Alexandria - AHERA Inspection

School **William Ramsay** Date 6/22/2007 Inspector(s) Bjarne Smith & Amy Chang

Location	Material	Size	Color	Amount	Unit	Comment	Class	Friable	Damage	Damage Location	Damage Amount	Damage Description	Recommend-ation
Library	Floor Tile	9x9	Maroon	300	SF	Possibly under Carpet in Library	5	No	No	N/A	N/A	N/A	O & M
Oven Room	Ceiling Tile (w/ large pinhole pattern)	1x1	White			Removed	0	No	No	N/A	N/A	N/A	N/A
Room 11	Floor Tile	9x9	Green			Under carpet	5	No	No	N/A	N/A	N/A	O & M
Room 16	Floor Tile	ALL	Black w/blk trim	22969	SF	Under carpet	5	No	No	N/A	N/A	N/A	O & M
Room 19	Electric conduit penetrations, foil wrap duct	ALL	White	15x8	SF	Unable to locate - appears to be painted	0	No	No	N/A	N/A	N/A	O & M

City of Alexandria - AHERA Inspection

School **William Ramsay** Date 6/22/2007 Inspector(s) Bjarne Smith & Amy Chang

Location	Material	Size	Color	Amount	Unit	Comment	Class	Friable	Damage	Damage Location	Damage Amount	Damage Description	Recommend-ation
Room 20	Galvanized duct mastic	ALL	Gray			Unable to locate	0	No	No	N/A	N/A	N/A	O & M
Room 20	Floor Tile	ALL	Black w/blk trim	1215	SF	Under carpet	5	No	No	N/A	N/A	N/A	O & M
Room 20	Floor Tile	9x9	Red			Under carpet	5	No	Yes	Rm 16, near door	8 SF	Loose tiles	O & M
Room 22	Floor Tile	12x12	White			Under carpet	5	No	No	N/A	N/A	N/A	O & M
Room 23	Wallboard	ALL	N/A			Good condition	5	No	No	N/A	N/A	N/A	O & M

City of Alexandria - AHERA Inspection

School **William Ramsay** Date 6/22/2007 Inspector(s) Bjarne Smith & Amy Chang

Location	Material	Size	Color	Amount	Unit	Comment	Class	Friable	Damage	Damage Location	Damage Amount	Damage Description	Recommend-ation
Room 9	Floor Tile	9x9	Red			Under carpet	5	No	Yes	Rm 16, near door	8 SF	Loose tiles	O & M
Room1	Floor Tile	9x9	Red			Under carpet	5	No	Yes	Rm 16, near door	8 SF	Loose tiles	O & M
Room15	Floor Tile	9x9	Green			Under carpet	5	No	No	N/A	N/A	N/A	O & M
Room16	Floor Tile	9x9	Red			Under carpet	5	No	Yes	Rm 16, near door	8 SF	Loose tiles	O & M
Room19	Floor Tile	9x9	Green			Under carpet	5	No	No	N/A	N/A	N/A	O & M

City of Alexandria - AHERA Inspection

School **William Ramsay** Date 6/22/2007 Inspector(s) Bjarne Smith & Amy Chang

Location	Material	Size	Color	Amount	Unit	Comment	Class	Friable	Damage	Damage Location	Damage Amount	Damage Description	Recommend-ation
Room21-36 & halls	Ceiling Tile	12x12	N/A			Removed	5	No	No	N/A	N/A	N/A	N/A
Room33	Floor Tile	9x9	Green			Under carpet	5	No	No	N/A	N/A	N/A	O & M
Storage room next to room 19	Floor Tile	9x9	Reddish brown with black trimming			Good condition	5	Yes	No	N/A	N/A	N/A	O & M
Storage room next to room 19	Ceiling Tile (w/large pinhole pattern)	1x1	White			1x1 white CT but no pinhole pattern	0	No	No	N/A	N/A	N/A	O & M

ASBESTOS ABATEMENT PROJECT MONITORING SUMMARY REPORT



ACPS WILLIAM RAMSAY ELEMENTARY SCHOOL

5700 SANGER AVE
ALEXANDRIA, VIRGINIA 22311

ECS PROJECT NO. 47:47:11652-N/N1

FOR: ALEXANDRIA CITY PUBLIC SCHOOL

FEBRUARY 14, 2022

February 14, 2022

Mr. Norman Wiebusch
Alexandria City Public School
1340 Braddock Place
Suite 620
Alexandria, Virginia 22301

ECS Project No. 47:47:11652-N/N1

Reference: Asbestos Abatement Project Monitoring Summary Report, ACPS William Ramsay Elementary School, 5700 Sanger Ave, Alexandria, Virginia

Dear Mr. Wiebusch:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Alexandria City Public School with this summary report of the asbestos abatement work performed during the above-referenced project. ECS performed visual assessments, evaluations, and air monitoring and sampling during the removal of asbestos-containing materials (ACMs). This report includes a project description, a summary of the asbestos abatement activities observed by ECS, and a summary of the work conducted by ECS including laboratory results.

ECS appreciates this opportunity to provide Alexandria City Public School with our services. If we can be of further assistance to you, please do not hesitate to contact us.

Sincerely,

ECS Mid-Atlantic, LLC

Marcus Sobetsky
Environmental Scientist
msobetsky@ecscapitolservices.com
703-471-8400

Michael Hamill, CIH, CSP
Environmental Senior Project Manager
MHamill@ecslimited.com
703-471-8400

TABLE OF CONTENTS

PAGE

1.0 PROJECT DESCRIPTION 1

2.0 ECS SCOPE OF WORK 1

3.0 ASBESTOS ABATEMENT ACTIVITIES 1

3.1 Asbestos Removal 1

3.2 Daily Air Sampling 1

3.3 ECS Observations 1

4.0 FINAL CLEARANCE AIR SAMPLING 2

5.0 CLOSING 2

6.0 LIMITATIONS 2

TABLE OF APPENDICES

Appendix I: Daily Field Reports with PCM Air Sample Results

Appendix II: Drawings

Appendix III: Certifications/Licenses

1.0 PROJECT DESCRIPTION

The asbestos abatement work was performed by Waco, Inc, in general from December 20 through December 28 and included the removal of the following asbestos-containing materials (ACMs):

- Floor tiles and associated mastic from the 1st and 2nd floor hallway work areas

No other materials or areas of the school building were included in this asbestos abatement. Please note that the above-referenced asbestos-containing materials (ACMs), other identified ACMs, and/or assumed ACMs are most likely present in other areas of the school building.

2.0 ECS SCOPE OF WORK

ECS was tasked with performing visual assessments and evaluations, monitoring and air sampling during and after the removal of the above-identified asbestos-containing materials (ACMs) within the above-referenced subject building.

3.0 ASBESTOS ABATEMENT ACTIVITIES

3.1 Asbestos Removal

Asbestos abatement was performed by Waco, Inc within regulated work areas. The regulated work areas within the subject building consisted of enclosures placed under negative pressure constructed of 6-mil polyethylene sheeting.

3.2 Daily Air Sampling

During the asbestos abatement project, ECS collected and analyzed air samples using Phase Contrast Microscopy (PCM) in general accordance with applicable federal and Virginia regulations. Samples were collected during the project outside the work areas to monitor airborne fiber concentrations. In general, the air sampling found the engineering controls (i.e., polyethylene sheeting, negative air pressure, High Efficiency Particulate Air (HEPA) filtration adequate to keep fiber concentrations on air samples collected outside the regulated work areas below the Virginia PCM re-occupancy limit of <0.01 fibers per cubic centimeter (f/cc). Air sample results are included within the technicians' daily field notes.

3.3 ECS Observations

ECS reviewed the asbestos credentials of the abatement workers. The credential documentation reviewed was noted to be current at the time presented to ECS.

ECS observed abatement workers utilizing personal protective equipment deemed necessary for asbestos abatement work by applicable OSHA and Virginia regulations (respirators, disposable protective clothing, eye protection, hard hats, gloves, etc.).

ECS observed the abatement contractor seal the asbestos waste in 6-mil waste bags prior to removal from the work area for disposal. ECS observed that the waste was collected by the abatement contractor in sealed shipping containers for transport to an EPA accredited landfill authorized to accept asbestos waste. ECS recommends that the property owner obtain a copy of the waste transport and disposal manifests from the abatement contractor, if not already provided.

4.0 FINAL CLEARANCE AIR SAMPLING

After Waco, Inc had removed the specified asbestos-containing materials (ACMs) and related waste from the work areas, ECS performed final clearance visual assessments to survey each work area and evaluate if the ACMs had been removed and if dust and/or debris remained in the work areas. Following the completion of the final clearance visual assessments, ECS reported the results to Waco, Inc .

Final clearance air samples were collected from work areas in accordance with aggressive sampling protocol described in Unit III.B.7.d of 40 CFR 763 Subpart E Appendix A and analyzed via Transmission Electron Microscopy (TEM) in accordance with federal and Virginia regulations. The results of the TEM final clearance air samples collected from each work area were found to be below the Virginia re-occupancy limit of 70 structures per square millimeter (70 s/mm^2).

5.0 CLOSING

Copies of ECS's daily monitoring field reports are enclosed along with copies of laboratory reports. If we can be of further assistance to you, please do not hesitate to contact us at (703) 471-8400.

Note that this summary letter is limited to the areas referenced above which were included in the scope of work. Additional quantities or other ACMs may be located in other areas of the building which were not included in the scope of work.

The results of the above referenced abatement activities should be included in the buildings operations and maintenance programs.

6.0 LIMITATIONS

The conclusions and recommendations presented within this report are based upon a reasonable level of assessment within normal bounds and standards of professional practice for a site in this particular geographic setting. ECS is not responsible or liable for the discovery and elimination of hazards that may potentially cause damage, accidents, or injuries.

The observations, conclusions, and recommendations pertaining to environmental conditions at the subject site are necessarily limited to conditions observed, and/or materials reviewed at the time this study was undertaken. No warranty, expressed or implied, is made with regard to the conclusions and recommendations presented within this report. This report is provided for the exclusive use of the client. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties without the written consent of ECS and the client.

Our recommendations are in part based on federal, state, and local regulations and guidelines. ECS does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state, or federal public agencies, any conditions at the site that may present a potential danger to public health, safety, or the environment. Under this scope of services, ECS assumes no responsibility regarding any response actions initiated as a result of these findings. General compliance with regulations and response actions are the sole responsibility of the Client and should be conducted in accordance with local, state, and/or federal requirements.

The client agrees to notify the appropriate local, state, or federal public agencies as required by law, or otherwise to disclose, in a timely manner, information that may be necessary to prevent any danger to public health, safety, or the environment.

Appendix I: Daily Field Reports with PCM Air Sample Results

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
7034718400
7038345527

LETTER OF TRANSMITTAL

December 22, 2021

Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: Mr. Norman Wiebusch

RE: **ACPS William Ramsay ES - 1st Fl Hall Abatement**
ECS Job # **47:11652-N**

Permits:
Location: **5700 Sanger Avenue**
Alexandria, VA 22311

X	Field Reports	**X**	For your use	**X**	As requested

CC: Alexandria City Public Schools - John Contreras
Alexandria City Public Schools - John Finnigan
Waco, Inc - Chris Lanham

ENCL: Field Report # 1 12/20/2021

Michael P. Hamill, CIH, CSP
Environmental Senior Project Manager

Lauren E. Kesslak, CIH, CSP
Environmental Project Manager

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3. *Where appropriate, this report includes statements as to compliance with applicable project drawings, and specifications for the activities, performed on this report date.*
4. *Incomplete or non-conforming work will be reported for future resolution.*
5. *The results of samples and/or specimens obtained or prepared for subsequent laboratory testing will be presented in separate reports/documents.*

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**47:11652-N**
Report No.	**1**
Day & Date	**Monday 12/20/2021**
Weather	**42 °/ Sunny**
On-Site Time	**4.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**4.50**
Re Obs Time	**0.00**

Project	**ACPS William Ramsay ES - 1st Fl Hall Abatement**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Times of	Arrival	Departure
Chargeable Items				**7:15A**	**11:00A**
				1:45P	**2:30P**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on-site, as requested, to perform air monitoring and observe asbestos abatement. The materials to be removed today are asbestos-containing asbestos-containing floor tile and mastic in the 1st floor corridor work area.

Prior to starting the removal of the specified material, the abatement permit was reviewed. The abatement contractor was notified the permit was on-site and the removal of the specified materials could begin.

Prior to starting the removal of the specified material, the abatement contractor employees were asked to provide their asbestos abatement licenses for review. No workers were found to be without valid asbestos abatement licenses.

1ST FLOOR CORRIDOR WORK AREA MONITORING

The abatement contractor requested a pre-abatement survey of the regulated work area. The Pre-Abatement Checklist was completed and is attached to this report. Please refer to the attached drawing for Work Area and Phase Contrast Microscopy (PCM) air sample locations.

Between 7:20 am and 7:21 am, PCM air samples were started outside the work area at decontamination unit entry and in the main office hallway. The sampling pumps were calibrated using a rotameter to 1.5 liters per minute.

ECS observed the abatement workers removing floor tiles and black mastic using motorized floor scraper and hand tools. The abatement contractor workers were placing the removed floor tiles inside waste drums.

Between 2:00 and 2:01 pm, the sampling pump was checked using a rotameter. The flow rate was 1.5

liters per minute. The PCM air samples were stopped and gathered for analysis.

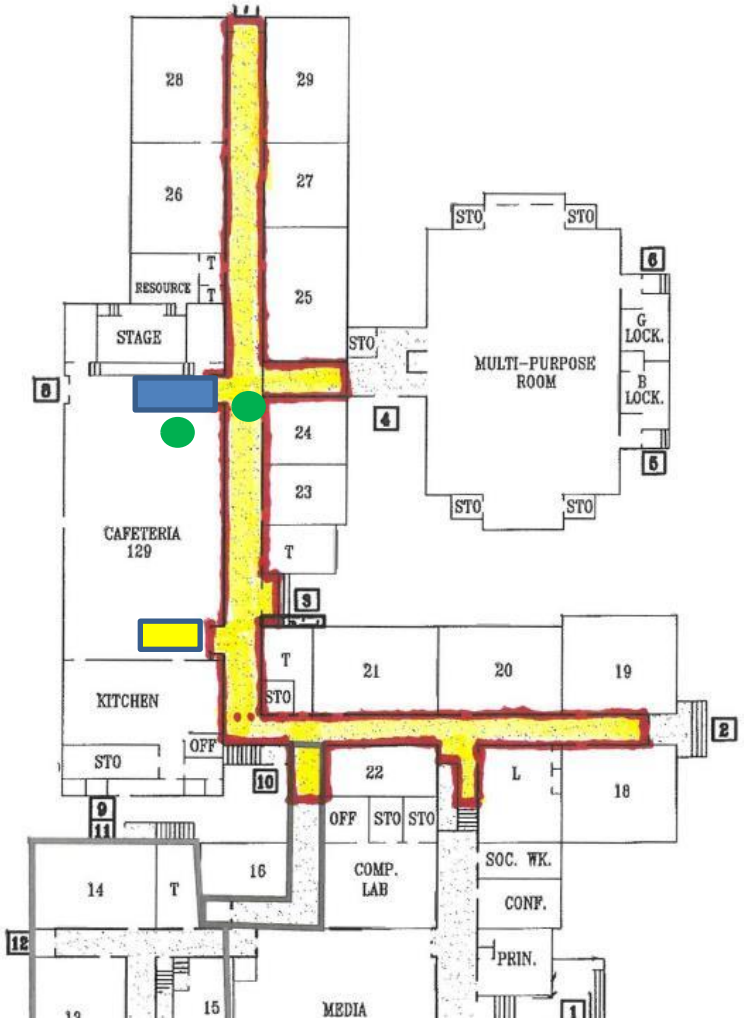
The re-occupancy criteria for the EPA and Commonwealth of Virginia is less than or equal to 0.01 fibers/cc. The samples collected outside the work area were less than the re-occupancy limit.

GENERAL

The regulated work areas were surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

ECS observed the abatement contractor placing the specified asbestos-containing materials in waste drums which were sealed in general accordance with applicable regulations. Waste drums were placed inside the work area.

The undersigned prepared and analyzed the PCM air sample cassettes for total fiber concentration in general accordance with NIOSH Method 7400. Results were recorded on the PCM Chain of Custody which is attached.



Work Area

Decontamination Unit

Sample Location

Waste Decontamination Unit

Naomi Brooks
600 Russel Rd Alexandria VA 22301

WORK AREA SKETCH

Scale: NTS

Project No.
47:11652- F1

12/20/21

Attachments



View of abatement activities within the 1st floor corridor work area

Figure 1



View of the 1st floor corridor work area during pre abatement walk through

Figure 2

Attachments



View of the 1st floor corridor work area during pre abatement walk through

Figure 3



View of the 1st floor corridor work area during pre abatement walk through

Figure 4

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 47:11652-N **Date:** 12/20/2021

Project Address: 5700 Sanger Avenue
Alexandria, VA-22311

Work Area Location/Description: 1st floor corridor

	Work Area Location/Description	1st floor corridor
Administrative	Training Certificates/Licenses	Satisfactory
	Permits	Satisfactory
	EPA/State/Local Notification	Satisfactory
Work Area	Public Access Restricted	Satisfactory
	Warning Signs/Tape Posted	Satisfactory
Negative Air Filtration	Number of Units	6
	Pre-Filters In-Use/Available	Satisfactory
	Exhausted from Work Area	Satisfactory
	Pressure Differential Monometer Operating	Satisfactory
Equipment	HEPA Vacuum Available	Satisfactory
	Amended Water Sprayers	Satisfactory
Decontamination Enclosure	Clean Room	Satisfactory
	Shower Water Available	Satisfactory
	Waste Water Filtration In-Use	Satisfactory
	Disposable Towels	Satisfactory
	Soap	Satisfactory
	Equipment Room	Satisfactory
Personal Protective Equipment	Type of Respirator	Half face
	Type of Filters Used	P100
	Disposable Protective Clothing	Satisfactory
	Work Area Acceptable	Yes

Notes:

ECS Technician: Lauren E. Kesslak **Date:** 12/20/2021

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 47:11652-N
Project Address: 5700 Sanger Avenue
Alexandria, VA-22311

Date: 12/20/2021
Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (lpm)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
12202101GN	OWA,1st floor corridor work area at decontamination unit entry	7:20 AM	2:00 PM	1.5	1.5	1.5	400	600.0	2.0	100	0.002
12202102GN	OWA,1st floor corridor work area at main office hallway	7:21 AM	2:01 PM	1.5	1.5	1.5	400	600.0	2.0	100	0.002
122021FB01GN	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
122021FB02GN	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD

Notes: NFD = None Fibers Detected OWA = Outside Work Area IWA = Inside Work Area

Notes: The re-occupancy criteria for the EPA and Commonwealth of Virginia is less than or equal to 0.01 fibers/cc. The samples collected outside the work area were less than the re-occupancy limit.

ECS Technician: JP Nuique **Date:** 12/20/2021

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 47:11652-N **Date:** 12/20/2021

Project Address: 5700 Sanger Avenue
Alexandria, VA-22311

Work Area Location/Description: 1st floor corridor

	Work Area Location/Description	1st floor corridor
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	Satisfactory
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	Satisfactory
	Wet Methods In-Use	Satisfactory
	Prompt Clean-Up	Satisfactory
	Adequate Lighting	Satisfactory
	Respiratory Protection	Satisfactory
	Disposable Clothing Worn Properly	Satisfactory
	No Respirators Stored in Work Area	Satisfactory
	Negative Air Filtration In-Use	Satisfactory
	Pre-Filters Clean	Satisfactory
	Exhaust Properly Vented	Satisfactory
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	Satisfactory
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	2
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Lauren E. Kesslak **Date:** 12/20/2021

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
7034718400
7038345527

LETTER OF TRANSMITTAL

December 23, 2021

Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: Mr. Norman Wiebusch

RE: **ACPS William Ramsay ES - 1st Fl Hall Abatement**
ECS Job # **47:11652-N**

Permits:
Location: **5700 Sanger Avenue**
Alexandria, VA 22311

X Field Reports **X** For your use **X** As requested

CC: Alexandria City Public Schools - John Contreras
Alexandria City Public Schools - John Finnigan
Waco, Inc - Chris Lanham

ENCL: Field Report # 2 12/21/2021

Michael P. Hamill, CIH, CSP
Environmental Senior Project Manager

Lauren E. Kesslak, CIH, CSP
Environmental Project Manager

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14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**47:11652-N**
Report No.	**2**
Day & Date	**Tuesday 12/21/2021**
Weather	**44 °/ Cloudy**
On-Site Time	**2.00**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**2.00**
Re Obs Time	**0.00**

Project	**ACPS William Ramsay ES - 1st Fl Hall Abatement**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Times of	Arrival	Departure
Chargeable Items				**7:15A**	**9:00A**
				2:00P	**2:15P**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on-site, as requested, to perform air monitoring and observe asbestos abatement. The materials to be removed today are asbestos-containing floor mastic in the 1st floor corridor work area.

1ST FLOOR CORRIDOR WORK AREA MONITORING

Please refer to the attached drawing for Work Area and Phase Contrast Microscopy (PCM) air sample locations.

Between 7:15 am-7:16 am, PCM air samples were started outside the work area at decontamination unit entry and in the main office lobby. The sampling pumps were calibrated using a rotameter to 1.5 liters per minute.

ECS observed the abatement workers removing black mastic using buffer and hand tools.

Between 2:14-2:15 pm, the sampling pump was checked using a rotameter. The flow rate was 1.5 liters per minute. The PCM air samples were stopped and gathered for analysis.

The EPA and Virginia re-occupancy limit is less than or equal to 0.01 fibers/cc. Samples collected outside the work area were found to be less than the re-occupancy limit.

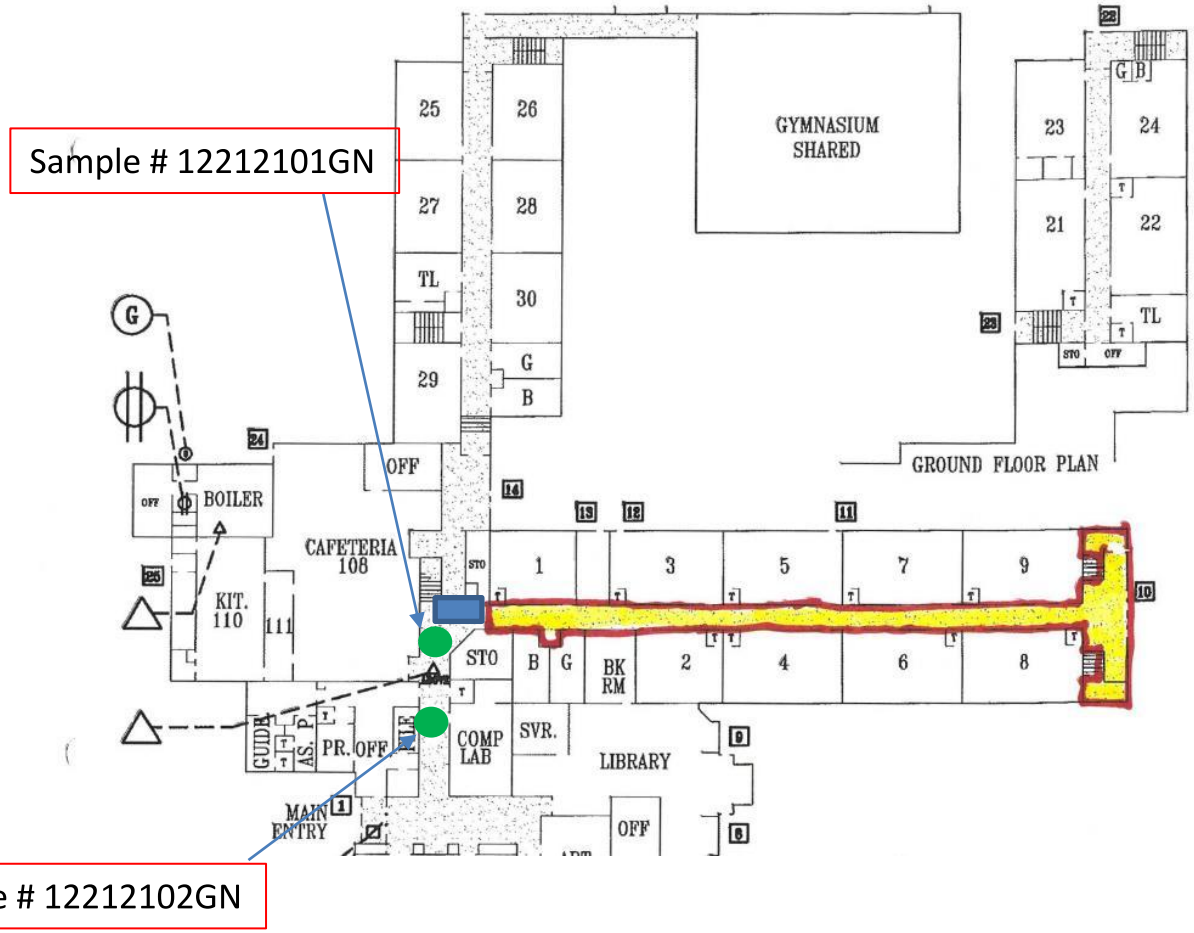
GENERAL

The regulated work areas were surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

By JP Nuique 1625

ECS observed the abatement contractor placing the specified asbestos-containing materials in waste drums which were sealed in general accordance with applicable regulations. Waste drums were placed temporarily outside of the work area.

The undersigned prepared and analyzed the PCM air sample cassettes for total fiber concentration in general accordance with NIOSH Method 7400. Results were recorded on the PCM Chain of Custody which is attached.



Work Area
Decontamination Unit
Sample Location
Waste Decontamination Unit

William Ramsay
5700 Sanger Ave Alexandria VA 22311

WORK AREA SKETCH

Scale: NTS

Project No.

12/21/21

Attachments



View of abatment activities within the 1st floor hallway work area

Figure 1

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 47:11652-N **Date:** 12/22/2021

Project Address: 5700 Sanger Avenue
Alexandria, VA-22311

Work Area Location/Description: 1st floor hallway

	Work Area Location/Description	1st floor hallway
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	Satisfactory
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	Satisfactory
	Wet Methods In-Use	Satisfactory
	Prompt Clean-Up	Satisfactory
	Adequate Lighting	Satisfactory
	Respiratory Protection	Satisfactory
	Disposable Clothing Worn Properly	Satisfactory
	No Respirators Stored in Work Area	Satisfactory
	Negative Air Filtration In-Use	Satisfactory
	Pre-Filters Clean	Satisfactory
	Exhaust Properly Vented	Satisfactory
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	Satisfactory
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	2
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Lauren E. Kesslak **Date:** 12/22/2021

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 47:11652-N
Project Address: 5700 Sanger Avenue
Alexandria, VA-22311

Date: 12/21/2021
Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (lpm)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
12212101GN	OWA,1st floor hallway work area at decontamination unit entry	7:15 AM	2:14 PM	1.5	1.5	1.5	419	628.5	1.0	100	0.001
12212102GN	OWA,1st floor hallway work area at the main office lobby	7:16 AM	2:15 PM	1.5	1.5	1.5	419	628.5	0.0	100	0.000
122121FB01GN	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
122121FB02GN	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD

Notes: NFD = None Fibers Detected OWA = Outside Work Area IWA = Inside Work Area

Notes: The EPA and Virginia re-occupancy limit is less than or equal to 0.01 fibers/cc.

ECS Technician: JP Nuique

Date: 12/21/2021

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
7034718400
7038345527

LETTER OF TRANSMITTAL

December 26, 2021

Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: Mr. Norman Wiebusch

RE: **ACPS William Ramsay ES - 1st Fl Hall Abatement**
ECS Job # **47:11652-N**

Permits:
Location: **5700 Sanger Avenue**
Alexandria, VA 22311

X Field Reports **X** For your use **X** As requested

CC: Alexandria City Public Schools - John Contreras
Alexandria City Public Schools - John Finnigan
Waco, Inc - Chris Lanham

ENCL: Field Report # 3 12/22/2021

Michael P. Hamill, CIH, CSP
Environmental Senior Project Manager

Lauren E. Kesslak, CIH, CSP
Environmental Project Manager

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ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**47:11652-N**
Report No.	**3**
Day & Date	**Wednesday 12/22/2021**
Weather	**44 °/ Sunny**
On-Site Time	**5.00**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**5.00**
Re Obs Time	**0.00**

Project	**ACPS William Ramsay ES - 1st Fl Hall Abatement**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Times of	Arrival	Departure
Chargeable Items				**6:45A**	**8:00A**
				10:00A	**1:45P**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on-site, as requested, to perform final clearance TEM air samples in the 1st floor corridor work area.

1ST FLOOR CORRIDOR WORK AREA FINAL CLEARANCE TEM AIR SAMPLES

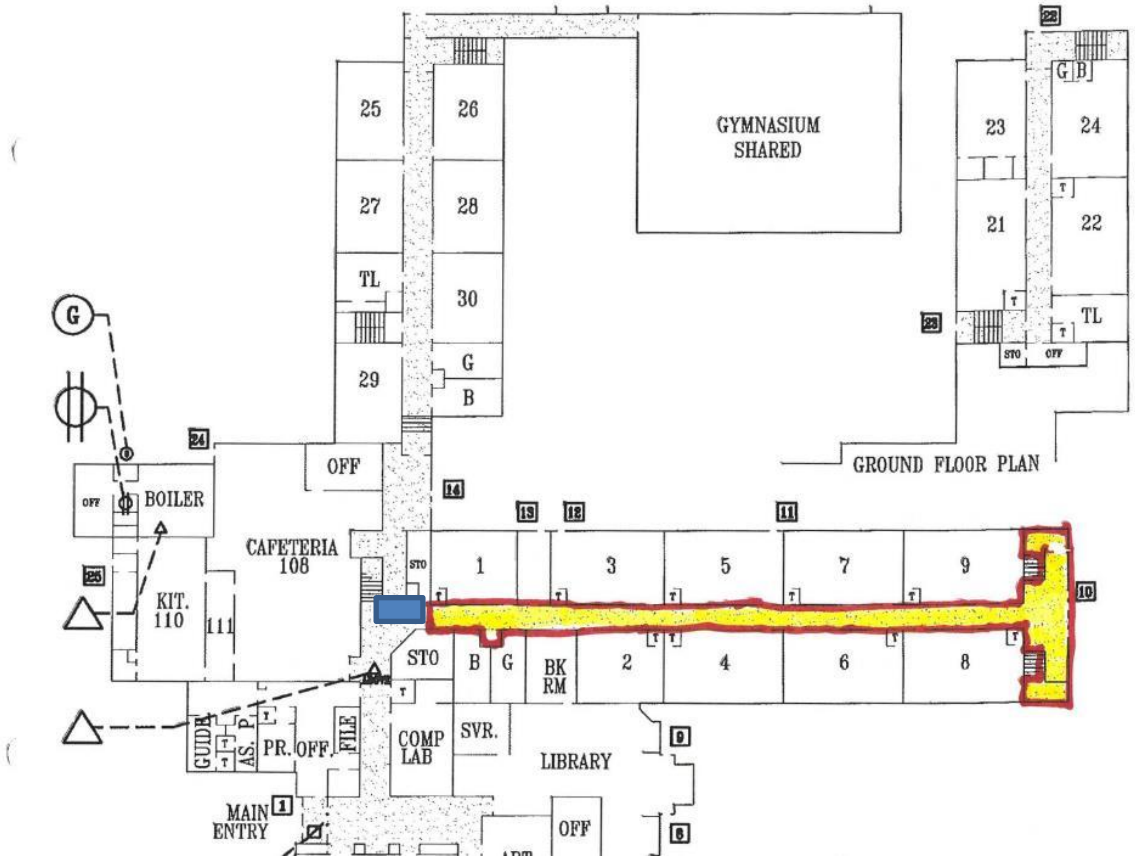
The abatement contractor stated the specified materials have been removed from the regulated work area and requested a visual survey to confirm compliance. The Final Clearance Visual Survey Checklist was completed and is attached to this report.

Following the successful completion of the final clearance visual survey, the abatement contractor applied an encapsulant to surfaces within the regulated work area. After waiting for the encapsulant to dry, aggressive air sampling was performed. Five (5) TEM air samples were started within the regulated work area and Five (5) TEM air samples were started outside the work area. The sampling pumps were calibrated using a rotameter to 8.0 liters per minute. One field blank sample was opened within the work area for 30 seconds. One field blank sample was opened outside the work area for 30 seconds.

At 1:30 pm, the sampling pumps were checked using a rotameter after the air within and outside the regulated work area was sampled using TEM cassettes for 150 minutes at 8.0 liters per minute. The sampling cassettes, including the two field blanks and one sealed blank were labeled with unique identification and transported to EMSL, Beltsville MD for analysis. A copy of the chain of custody has been attached.

The EPA and VA maximum allowable airborne asbestos concentration from within the work area is 70 structures per millimeter squared (s/mm2). In order to be deemed acceptable, the average of the interior samples analyzed must have asbestos concentrations of 70 s/mm2 or less. EMSL, Inc. of Beltsville, MD, informed ECS that the analytical results of the TEM final clearance air samples collected from 1st floor

hallway work area found the airborne asbestos fiber concentrations to be less than the maximum allowable concentration. The client and abatement contractor supervisor were informed of the results. A copy of the laboratory report is attached.



Final Clearance TEM air samples collected within the work area.

Work Area

Decontamination Unit

Sample Location

Waste Decontamination Unit

William Ramsay
5700 Sanger Ave Alexandria VA 22311

WORK AREA SKETCH

Scale: NTS

Project No.

12/22/21

Attachments



View of the 1st floor hallway work area following abatement acitivities

Figure 1



View of the 1st floor hallway work area following abatement acitivities

Figure 2

Attachments



View of the 1st floor hallway work area following abatement acitivities

Figure 3



View of the 1st floor hallway work area following abatement acitivities

Figure 4

EMSL Analytical, Inc.

10768 Baltimore Avenue Beltsville, MD 20705

Tel/Fax: (301) 937-5700 / (301) 937-5701

http://www.EMSL.com / beltsvillelab@emsl.com

EMSL Order: 192112018
Customer ID: ECMA78
Customer PO:
Project ID:

Attention: Michael Hamill
ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151
Project: William Ramsay/47:11652-N

Phone: (703) 471-8400
Fax: (703) 471-8400
Received Date: 12/22/2021 16:22 PM
Analysis Date: 12/23/2021
Collected Date: 12/22/2021

Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Appendix A to Subpart E

Sample	Location	Volume (Liters)	Area Analyzed (mm²)	Non Asb	Asbestos Type(s)	#Structures ≥0.5µ < 5µ	#Structures ≥5µ	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm²)	Asbestos Concentration (S/cc)
122221-01 GN *192112018-0001*	FC, IWA, 1st Floor Hallway	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
122221-02 GN *192112018-0002*	FC, IWA, 1st Floor Hallway	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
122221-03 GN *192112018-0003*	FC, IWA, 1st Floor Hallway	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
122221-04 GN *192112018-0004*	FC, IWA, 1st Floor Hallway	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
122221-05 GN *192112018-0005*	FC, IWA, 1st Floor Hallway	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049

Analyst(s)

Emily Baker (5)

Joe Centifonti, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. Results reported in structures/cm3 are not covered by the laboratory's NVLAP accreditation. Measurement of uncertainty available upon request.

Samples analyzed by EMSL Analytical, Inc. Beltsville, MD NVLAP Lab Code 200293-0

Initial report from: 12/23/2021 11:44 AM

OrderID: 192112018

Asbestos Chain of Custody

EMSL Order Number *(lab use only)*:

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

PHONE:
FAX:

Company Name : ECS MidAtlantic LLC		**EMSL Customer ID:**	
Street:		**City:**	**State or Province:**
Zip/Postal Code:	**Country:**	**Telephone #:**	**Fax #:**
Report To (Name): Michael Hamill		**Please Provide Results via:** ☐ Fax ☑ Email	
email Address: MHamill@ecslimited.com		**Purchase Order Number:**	
Client Project ID: William Ramsay / 47.11652-N		**EMSL Project ID** *(internal use only)*:	
State or Province Collected: VA		**CT only** ☐ **Commercial/Taxable** ☐ **Residential/Tax Exempt**	

EMSL-Bill to: ☑ Same ☐ Different - *If bill to is different note instructions in comment. Third party billing requires written authorization from third party*

Turnaround Time (TAT) Options Please Check

☐ 3 Hr[1]	☐ 4-4.5Hr[1] AHERA Only	☐ 6 Hr[1]	☑ 24 Hr	☐ 32 Hr[2]	☐ 48 Hr	☐ 72 Hr	☐ 96 Hr	☐ 1 Week	☐ 2 Week

[1]*Premium Service Charge applies for 3 Hour TEM AHERA or EPA Level II TAT – you will be asked to sign an authorization form. TEM Air 3-6 Hour, please call ahead to schedule*
[2]*32 Hour TAT available for select tests only; samples must be submitted by 11:30 am.*

PCM - Air	TEM – Air[1]	TEM- Settled Dust
☐ NIOSH 7400	☑ AHERA 40 CFR, Part 763	☐ Microvac - ASTM D 5755
☐ w/ OSHA 8hr. TWA	☐ NIOSH 7402	☑ Wipe - ASTM D6480
PLM - Bulk (reporting limit)	☐ EPA Level II	☐ Carpet Sonication (EPA 600/J-93/167)
☐ PLM EPA 600/R-93/116 (<1%)	☐ ISO 10312	**Soil – Rock – Vermiculite (reporting limit)**
☐ PLM EPA NOB (<1%)	**TEM - Bulk**	☐ PLM EPA 600/R-93/116 with milling prep (≤0.25%)
Point Count	☐ TEM EPA NOB	☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)*
☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ NYS NOB 198.4 (non-friable-NY)	☐ TEM Qualitative via Filtration Prep
Point Count w/Gravimetric	☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)*	☐ TEM Qualitative via Drop Mount Prep
☐ 400 (<0.25%) ☐ 1000 (<0.1%)	**TEM – Water:** EPA 100.2	☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM
☐ NYS 198.1 (friable - NY)	Fibers >10µm ☐ Waste ☐ Drinking	*Lower reporting limits avaialble on request*
☐ NYS 198.6 NOB (non-friable-NY)	All Fiber Sizes ☐ Waste ☐ Drinking	**Other test (please specify):**
☐ NYS 198.8 SOF-V		
☐ NIOSH 9002 (<1%)		

☐ **Stop At First Positive** *(clearly identify homogenous areas below)* | **Filter Pore Size (Air Samples):** ☐ 0.8µm ☑ 0.45µm

Sampler's Name: Gallardo Nuigue | **Sampler's Signature:**

Sample #	Sample Description/Location	Volume, Area or Homogenous Area	Date/Time Sampled
122221 01 GN	FC, IWA, 1st Floor Hallway	200 L	12/22/21
02			
03			
04			
05			

Client Sample # (s): 01GN - 13GN **Total # of Samples:** 13

Relinquished by (Client): Gallardo Nuigue **Date:** 12/22/21 **Time:**

Received by (Lab): L. Fenwick Drop Box **Date:** **Time:** '21 DEC 22 PM 4:22

Comments/Special Instructions:

Aggressive

Analyze IWA only

EMSL Analytical, Inc.'s (DBA: LA Testing) Laboratory Terms and Conditions are incorporated into this chain of custody by reference in their entirety. Submission of samples to EMSL Analytical Inc. constitutes acceptance and acknowledgment of all terms and conditions.

OrderID: 192112018

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*:

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
122221 06 GW	FC, DWA, 1st floor Hallway	1200 L	12/22/21
07			
08			
09			
10			
11	Field Blank open 30 sec. by Entrance	N/A	
12	Field Blank open 30 sec. in Ambient	N/A	
13	Sealed Blank (not opened)	N/A	

***Comments/Special Instructions:**

Sample Instructions

Controlled Document – COC-05 Asbestos – R12.1 – 11/01/2019

Transmittal Page 9/10

EMSL Analytical, Inc.'s (DBA: LA Testing) Laboratory Terms and Conditions are incorporated into this chain of custody by reference in their entirety. Submission of samples to EMSL Analytical Inc. constitutes acceptance and acknowledgment of all terms and conditions.

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 47:11652-N **Date:** 12/23/2021

Project Address: 5700 Sanger Avenue
Alexandria, VA-22311

Work Area Location/Description: 1st floor

	Work Area Location/Description	1st floor
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	Satisfactory
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	Floors	Satisfactory
	Walls	Satisfactory
	Ceiling	Satisfactory
	Windows	N/A
	Mechanical Equipment	N/A
	Ducts	N/A
	Pipes	N/A
	Lighting	Satisfactory
	Other Surfaces	N/A
	Specified ACM Removed	Satisfactory
	Work Area Encapsulated	Satisfactory
	Negative Air Filtration Functioning	Satisfactory
	Waste Bags Removed	Satisfactory
	Final Clearance Air Sample Type	TEM
	Number of Samples Collected	5 IWA, 5 OWA, 3 Blanks
	Sample Volume (liters)	1200
	Work Area Acceptable	Yes

Notes:

ECS Technician: Lauren E. Kesslak **Date:** 12/23/2021

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
7034718400
7038345527

LETTER OF TRANSMITTAL

December 26, 2021

Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: Mr. Norman Wiebusch

RE: **ACPS William Ramsay ES - 2nd Fl Hall Abatement**
ECS Job # **47:11652-N1**

Permits:
Location: **5700 Sanger Avenue**
Alexandria, VA 22311

X Field Reports **X** For your use **X** As requested

CC: Alexandria City Public Schools - John Contreras
Alexandria City Public Schools - John Finnigan
Waco, Inc - Chris Lanham

ENCL: Field Report # 1 12/22/2021

Michael P. Hamill, CIH, CSP
Environmental Senior Project Manager

Lauren E. Kesslak, CIH, CSP
Environmental Project Manager

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4. *Incomplete or non-conforming work will be reported for future resolution.*
5. *The results of samples and/or specimens obtained or prepared for subsequent laboratory testing will be presented in separate reports/documents.*

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project	**ACPS William Ramsay ES - 2nd Fl Hall Abatement**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Project No.	**47:11652-N1**
Report No.	**1**
Day & Date	**Wednesday 12/22/2021**
Weather	**44 °/ Sunny**
On-Site Time	**0.25**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**0.25**
Re Obs Time	**0.00**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**3:30P**	**3:45P**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on-site, as requested, to perform air monitoring and observe asbestos abatement. The materials to be removed today are asbestos-containing asbestos-containing floor tile and mastic in the 2nd floor corridor work area.

Prior to starting the removal of the specified material, the abatement permit was reviewed. The abatement contractor was notified the permit was on-site and the removal of the specified materials could begin.

Prior to starting the removal of the specified material, the abatement contractor employees were asked to provide their asbestos abatement licenses for review. No workers were found to be without valid asbestos abatement licenses.

2ND FLOOR CORRIDOR WORK AREA MONITORING

The abatement contractor requested a pre-abatement survey of the regulated work area. The Pre-Abatement Checklist was completed and is attached to this report. Please refer to the attached drawing for Work Area and Phase Contrast Microscopy (PCM) air sample locations.

At 10:30 am, PCM air sample was started outside the work area at decontamination unit entry. The sampling pump was calibrated using a rotameter to 3.0 liters per minute.

ECS observed the abatement workers removing floor tiles and black mastic using motorized floor scraper and hand tools. The abatement contractor workers were placing the removed floor tiles inside waste drums.

At 1:45 pm, the sampling pump was checked using a rotameter. The flow rate was 3.0 liters per minute. The PCM air sample was stopped and gathered for analysis.

By JP Nuique 1625

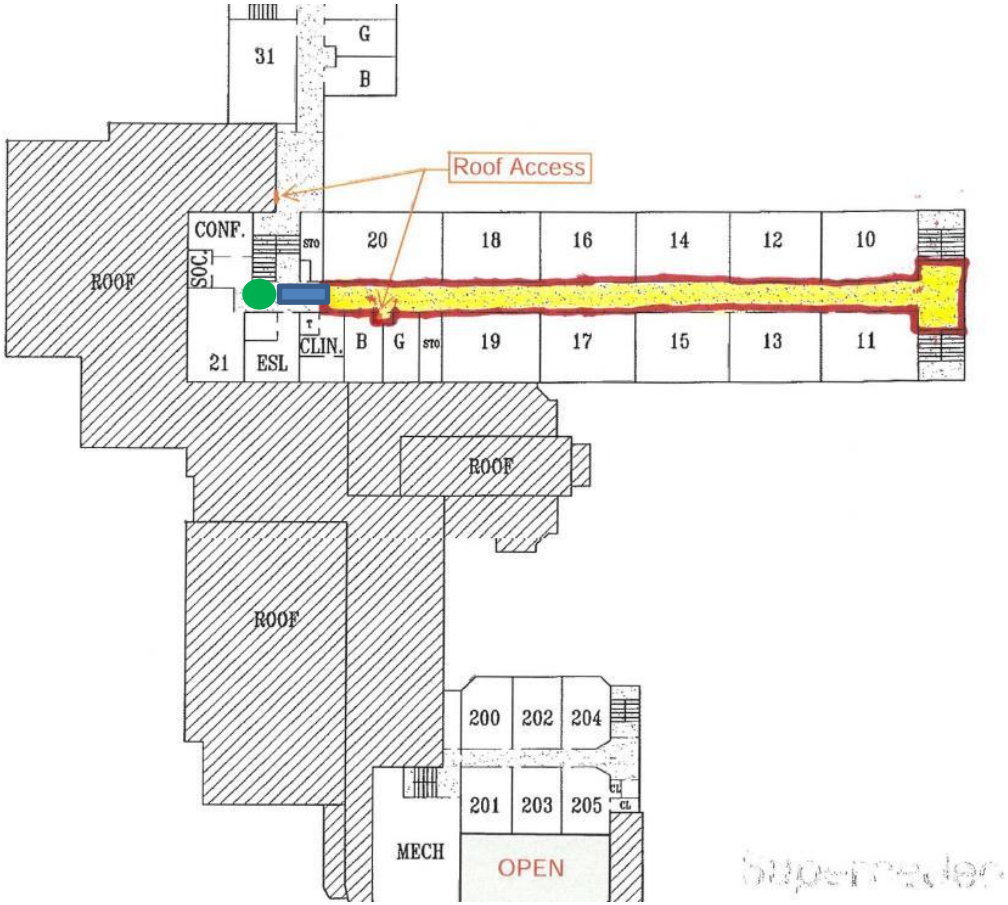
The EPA and Commonwealth of Virginia re-occupancy criteria is less than or equal to 0.01 fibers/cc. The outside work area sample was less than the re-occupancy criteria.

GENERAL

The regulated work areas were surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

ECS observed the abatement contractor placing the specified asbestos-containing materials in waste drums which were sealed in general accordance with applicable regulations. Waste drums were placed inside the work area.

The undersigned prepared and analyzed the PCM air sample cassettes for total fiber concentration in general accordance with NIOSH Method 7400. Results were recorded on the PCM Chain of Custody which is attached.



Work Area
Decontamination Unit
Sample Location
Waste Decontamination Unit

William Ramsay
5700 Sanger Ave Alexandria VA 22311

WORK AREA SKETCH

Scale: NTS

Project No.

12/22/21

Attachments



View of the 2nd floor hallway work area at Ramsay during pre abatement walk through

Figure 1



View of the 2nd floor hallway work area at Ramsay during pre abatement walk through

Figure 2

Attachments



View of the 2nd floor hallway work area at Ramsay during pre abatement walk through

Figure 3



View of the 2nd floor hallway work area at Ramsay during pre abatement walk through

Figure 4

Attachments



View of the 2nd floor hallway work area at Ramsay during pre abatement walk through

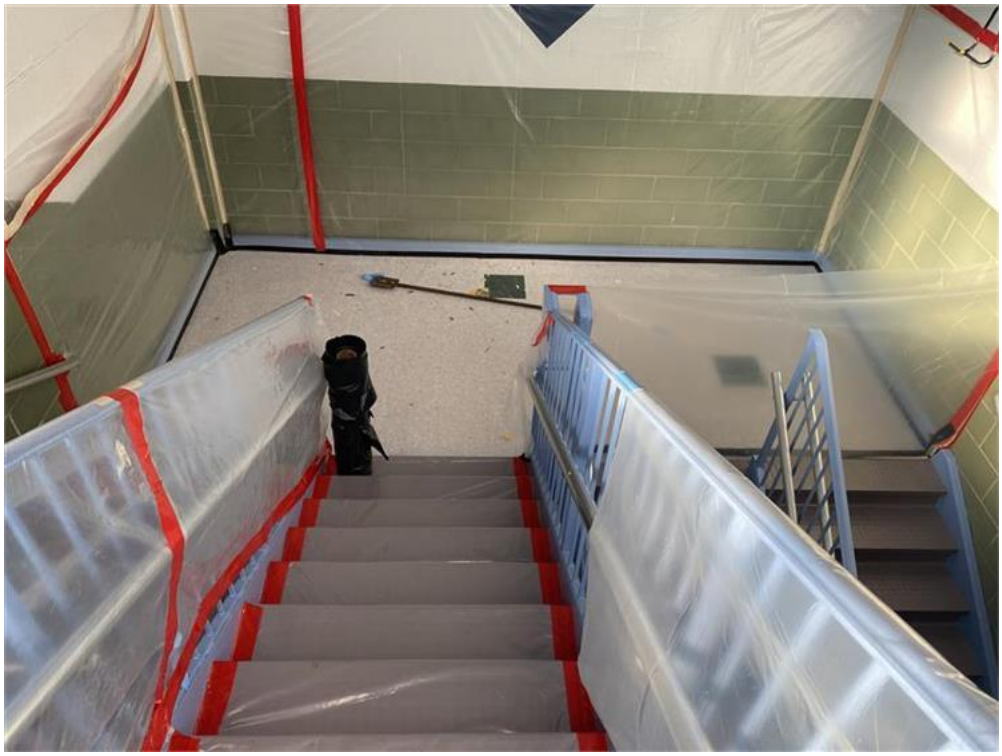
Figure 5



View of the 2nd floor hallway work area at Ramsay during pre abatement walk through

Figure 6

Attachments



View of the 2nd floor hallway work area at Ramsay during pre abatement walk through

Figure 7

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 47:11652-N1 **Date:** 12/23/2021

Project Address: 5700 Sanger Avenue
Alexandria, VA-22311

Work Area Location/Description: 2nd floor

	Work Area Location/Description	2nd floor
Administrative	Training Certificates/Licenses	Satisfactory
	Permits	Satisfactory
	EPA/State/Local Notification	Satisfactory
Work Area	Public Access Restricted	Satisfactory
	Warning Signs/Tape Posted	Satisfactory
Negative Air Filtration	Number of Units	6
	Pre-Filters In-Use/Available	Satisfactory
	Exhausted from Work Area	Satisfactory
	Pressure Differential Monometer Operating	Satisfactory
Equipment	HEPA Vacuum Available	Satisfactory
	Amended Water Sprayers	Satisfactory
Decontamination Enclosure	Clean Room	Satisfactory
	Shower Water Available	Satisfactory
	Waste Water Filtration In-Use	Satisfactory
	Disposable Towels	Satisfactory
	Soap	Satisfactory
	Equipment Room	Satisfactory
Personal Protective Equipment	Type of Respirator	Half face
	Type of Filters Used	P100
	Disposable Protective Clothing	Satisfactory
	Work Area Acceptable	Yes

Notes:

ECS Technician: Lauren E. Kesslak **Date:** 12/23/2021

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 47:11652-N1 **Date:** 12/23/2021

Project Address: 5700 Sanger Avenue
Alexandria, VA-22311

Work Area Location/Description: 2nd floor

	Work Area Location/Description	2nd floor
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	Satisfactory
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	Satisfactory
	Wet Methods In-Use	Satisfactory
	Prompt Clean-Up	Satisfactory
	Adequate Lighting	Satisfactory
	Respiratory Protection	Satisfactory
	Disposable Clothing Worn Properly	Satisfactory
	No Respirators Stored in Work Area	Satisfactory
	Negative Air Filtration In-Use	Satisfactory
	Pre-Filters Clean	Satisfactory
	Exhaust Properly Vented	Satisfactory
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	Satisfactory
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	1
	Number of PCM Blank Samples	1
	Work Area Acceptable	Yes

Notes:

ECS Technician: Lauren E. Kesslak **Date:** 12/23/2021

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 47:11652-N1
Project Address: 5700 Sanger Avenue
Alexandria, VA-22311

Date: 12/22/2021
Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (lpm)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
12222101GN	OWA, 2nd floor work area at the decontamination unit entry	10:30 AM	1:45 PM	3.0	3.0	3.0	195	585.0	0.0	100	0.000
122221FB01GN	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD

Notes: NFD = None Fibers Detected OWA = Outside Work Area IWA = Inside Work Area

Notes: The EPA and Commonwealth of Virginia re-occupancy criteria is <0.01 fibers/cc. The outside work area sample was less than the re-occupancy criteria.

ECS Technician: JP Nuique

Date: 12/22/2021

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
7034718400
7038345527

LETTER OF TRANSMITTAL

January 4, 2022

Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: Mr. Norman Wiebusch

RE: **ACPS William Ramsay ES - 2nd Fl Hall Abatement**
ECS Job # **47:11652-N1**

Permits:
Location: **5700 Sanger Avenue**
Alexandria, VA 22311

X Field Reports **X** For your use **X** As requested

CC: Alexandria City Public Schools - John Contreras
Alexandria City Public Schools - John Finnigan
Waco, Inc - Chris Lanham

ENCL: Field Report # 2 12/23/2021

Michael P. Hamill, CIH, CSP
Environmental Senior Project Manager

Lauren E. Kesslak, CIH, CSP
Environmental Project Manager

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ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**47:11652-N1**
Report No.	**2**
Day & Date	**Thursday 12/23/2021**
Weather	**44 °/ Sunny**
On-Site Time	**0.75**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**0.75**
Re Obs Time	**0.00**

Project	**ACPS William Ramsay ES - 2nd Fl Hall Abatement**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Times of	Arrival	Departure
Chargeable Items				**7:00A**	**7:30A**
				12:45P	**1:00P**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on-site, as requested, to perform air monitoring and observe asbestos abatement. The materials to be removed today are asbestos-containing asbestos-containing floor tile and mastic in the 2nd floor corridor work area.

2ND FLOOR CORRIDOR WORK AREA MONITORING

Please refer to the attached drawing for Work Area and Phase Contrast Microscopy (PCM) air sample locations.

Between 7:14-7:15 am, PCM air samples were started outside the work area at decontamination unit entry and 1st floor main office lobby. The sampling pump was calibrated using a rotameter to 1.5 liters per minute.

ECS observed the abatement workers removing floor tiles and black mastic using motorized floor scraper and hand tools. The abatement contractor workers were placing the removed floor tiles inside waste drums.

Between 12:50-12:51 pm, the sampling pump was checked using a rotameter. The flow rate was 1.5 liters per minute. The PCM air sample was stopped and gathered for analysis.

GENERAL

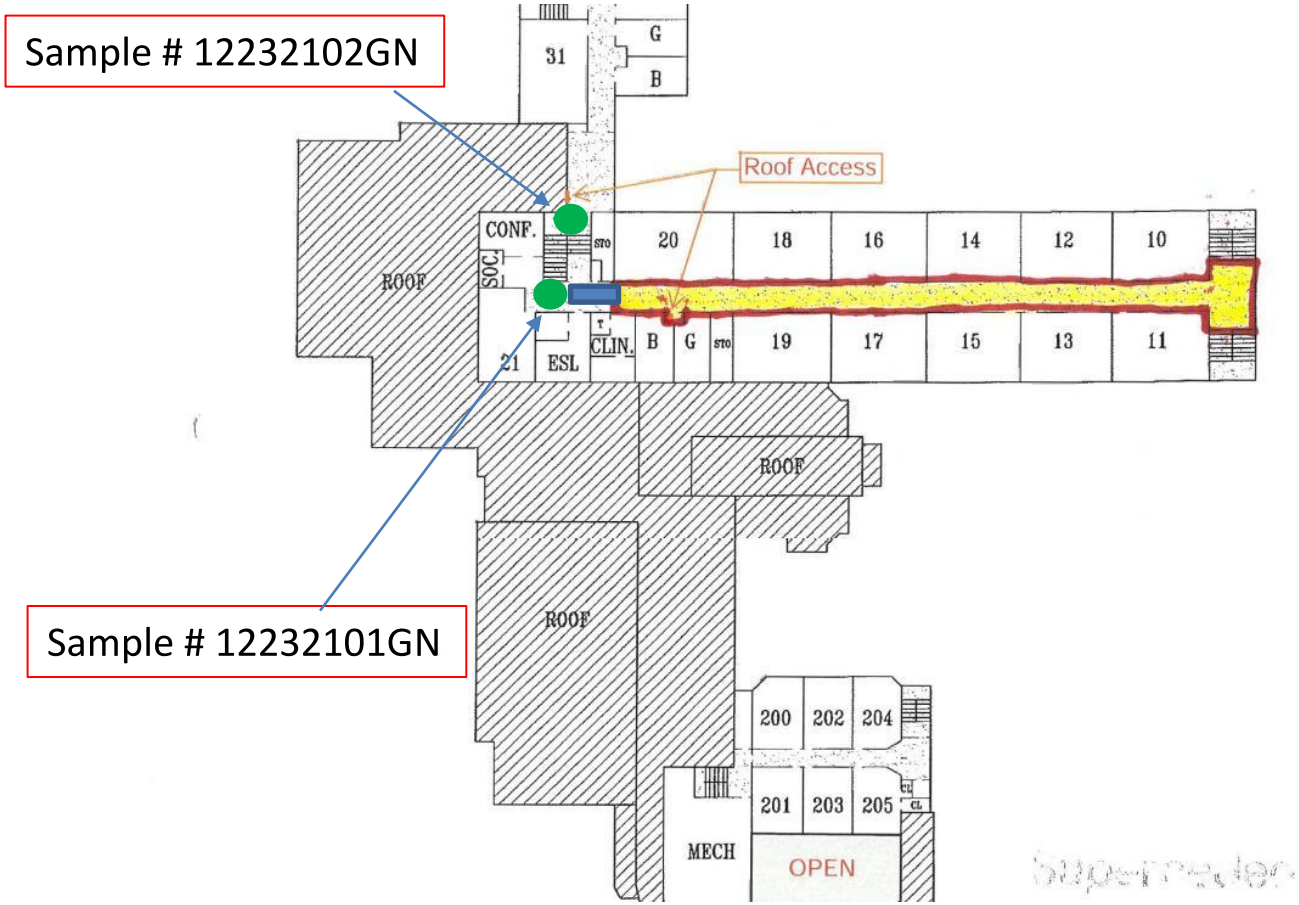
The regulated work areas were surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

ECS observed the abatement contractor placing the specified asbestos-containing materials in waste

drums which were sealed in general accordance with applicable regulations. Waste drums were temporarily placed outside the work area.

The undersigned prepared and analyzed the PCM air sample cassettes for total fiber concentration in general accordance with NIOSH Method 7400. Results were recorded on the PCM Chain of Custody which is attached.

The re-occupancy criteria for the EPA and Commonwealth of Virginia is less than or equal to 0.01 fibers/cc. The samples collected outside the work area meet this criteria.



Work Area
Decontamination Unit
Sample Location
Waste Decontamination Unit

William Ramsay
5700 Sanger Ave Alexandria VA 22311

WORK AREA SKETCH

Scale: NTS

Project No.

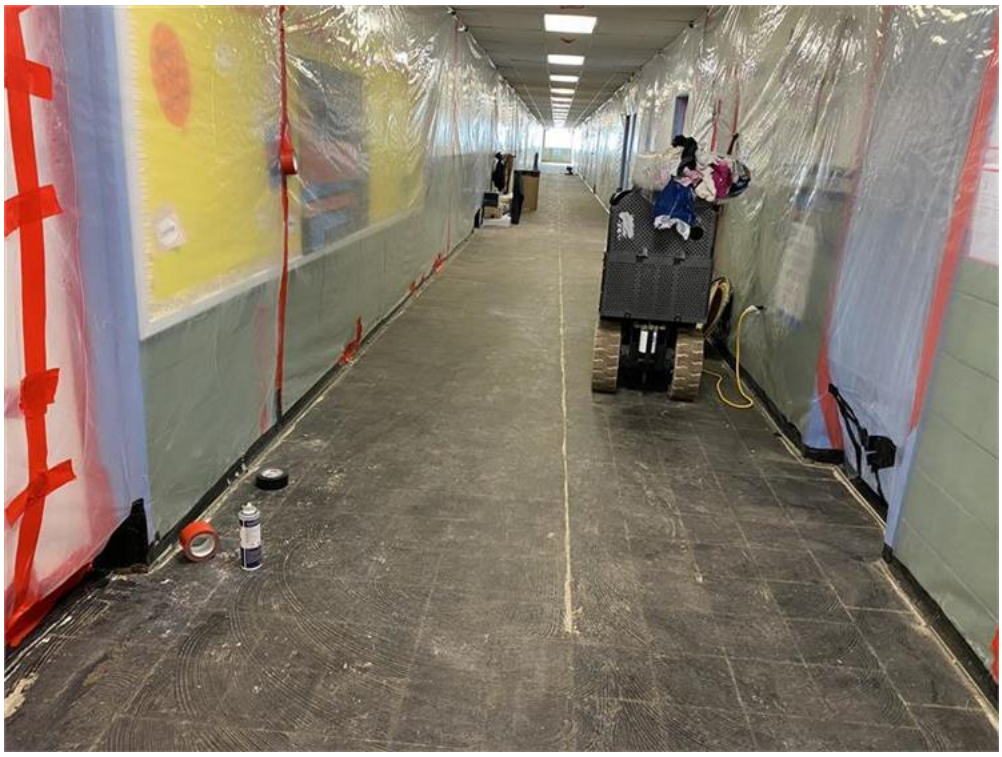
12/23/21

Attachments



View of abatement activities within the 2nd floor hallway work area

Figure 1



View of abatement activities within the 2nd floor hallway work area

Figure 2

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 47:11652-N1
Project Address: 5700 Sanger Avenue
Alexandria, VA-22311

Date: 12/23/2021
Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (lpm)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
12232101GN	OWA,2nd floor hallway work area at the decontamination unit entry	7:14 AM	12:50 PM	1.5	1.5	1.5	336	504.0	1.0	100	0.001
12232102GN	OWA,2nd floor hallway work area at the main office lobby on the 1st floor	7:15 AM	12:51 PM	1.5	1.5	1.5	336	504.0	1.0	100	0.001
122321FB01GN	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
122321FB02GN	Field Blank	N/A	N/A	N/A	N/A	N/A			0.0	100	NFD

Notes: NFD = None Fibers Detected OWA = Outside Work Area IWA = Inside Work Area

Notes: The re-occupancy criteria for the EPA and Commonwealth of Virginia is is less than or equal to 0.01 fibers/cc. The samples collected outside the work area meet this criteria.

ECS Technician: JP Nuique **Date:** 12/23/2021

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 47:11652-N1 **Date:** 12/24/2021

Project Address: 5700 Sanger Avenue
Alexandria, VA-22311

Work Area Location/Description: 2nd floor hallway

	Work Area Location/Description	2nd floor hallway
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	Satisfactory
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	Satisfactory
	Wet Methods In-Use	Satisfactory
	Prompt Clean-Up	Satisfactory
	Adequate Lighting	Satisfactory
	Respiratory Protection	Satisfactory
	Disposable Clothing Worn Properly	Satisfactory
	No Respirators Stored in Work Area	Satisfactory
	Negative Air Filtration In-Use	Satisfactory
	Pre-Filters Clean	Satisfactory
	Exhaust Properly Vented	Satisfactory
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	Satisfactory
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	2
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Lauren E. Kesslak **Date:** 12/24/2021

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
7034718400
7038345527

LETTER OF TRANSMITTAL

January 4, 2022

Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: Mr. Norman Wiebusch

RE: **ACPS William Ramsay ES - 2nd Fl Hall Abatement**
ECS Job # **47:11652-N1**

Permits:
Location: **5700 Sanger Avenue**
Alexandria, VA 22311

X Field Reports **X** For your use **X** As requested

CC: Alexandria City Public Schools - John Contreras
Alexandria City Public Schools - John Finnigan
Waco, Inc - Chris Lanham

ENCL: Field Report # 3 12/26/2021

Michael P. Hamill, CIH, CSP
Environmental Senior Project Manager

Lauren E. Kesslak, CIH, CSP
Environmental Project Manager

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ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**47:11652-N1**
Report No.	**3**
Day & Date	**Sunday 12/26/2021**
Weather	**55 °/ Sunny**
On-Site Time	**2.75**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**2.75**
Re Obs Time	**0.00**

Project	**ACPS William Ramsay ES - 2nd Fl Hall Abatement**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Times of	Arrival	Departure
Chargeable Items				**6:00A**	**6:30A**
				12:15P	**2:30P**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on-site, as requested, to perform air monitoring and observe asbestos abatement. The materials to be removed today are asbestos-containing asbestos-containing floor mastic in the 2nd floor corridor work area.

2ND FLOOR CORRIDOR WORK AREA MONITORING

Please refer to the attached drawing for Work Area and Phase Contrast Microscopy (PCM) air sample locations.

Between 6:29-6:30 am, PCM air samples were started outside the work area at decontamination unit entry and 1st floor main office lobby. The sampling pump was calibrated using a rotameter to 1.5 liters per minute.

ECS observed the abatement workers were removing floor black mastic using buffer and hand tools.

Between 1:30-1:31 pm, the sampling pump was checked using a rotameter. The flow rate was 1.5 liters per minute. The PCM air samples were stopped and gathered for analysis.

GENERAL

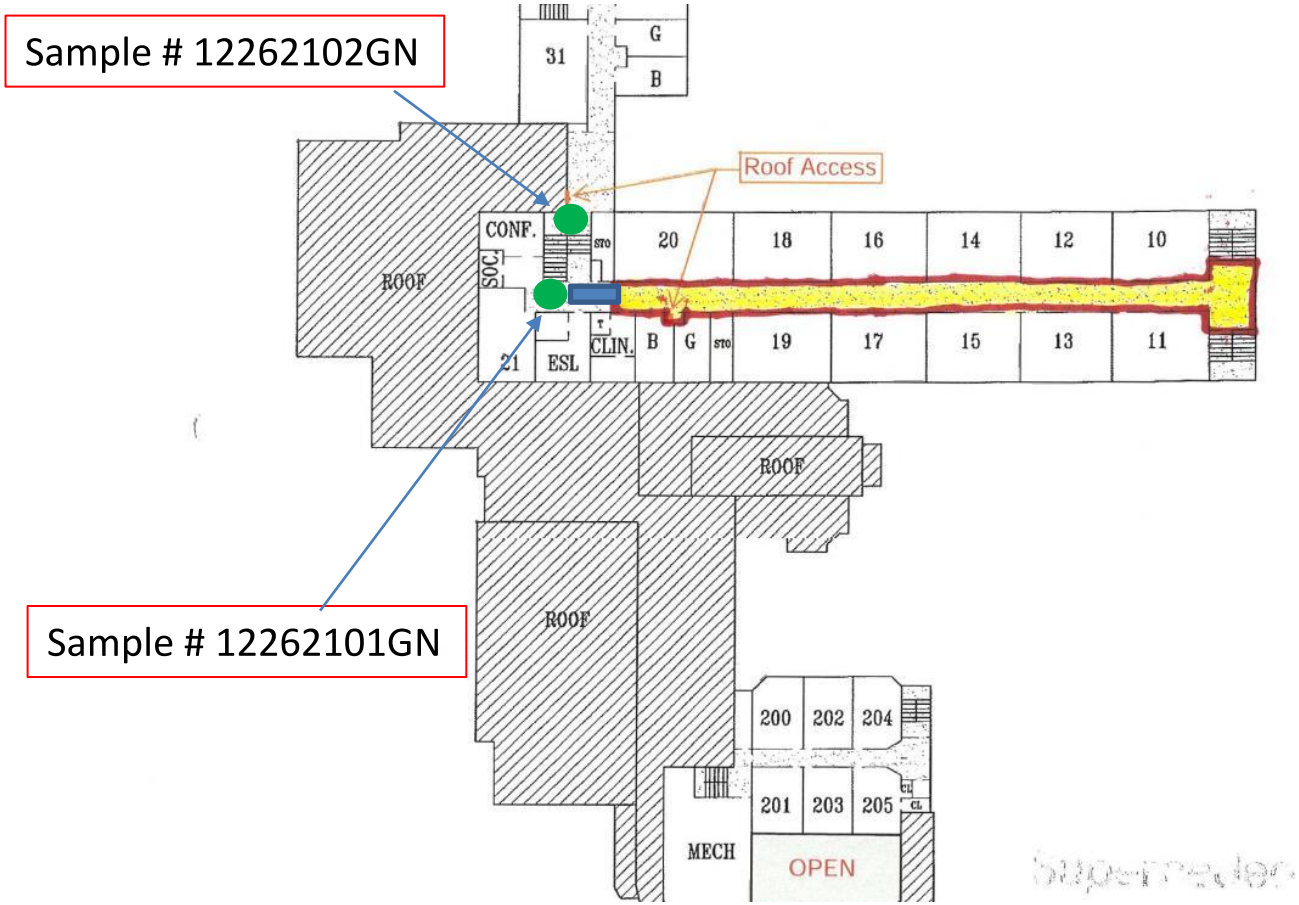
The regulated work areas were surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

ECS observed the abatement contractor placing the specified asbestos-containing materials in waste drums which were sealed in general accordance with applicable regulations. Waste drums were place in waste hauling container.

By JP Nuique 1625

The undersigned prepared and analyzed the PCM air sample cassettes for total fiber concentration in general accordance with NIOSH Method 7400. Results were recorded on the PCM Chain of Custody which is attached.

The re-occupancy criteria for the EPA and Commonwealth of Virginia is less than or equal to 0.01 fibers/cc. The samples collected outside the work area meet this criteria.



Work Area
Decontamination Unit
Sample Location
Waste Decontamination Unit

William Ramsay
5700 Sanger Ave Alexandria VA 22311

WORK AREA SKETCH

Scale: NTS

Project No.

12/26/21

Attachments



View of abatement activities within the 2nd floor corridor work area

Figure 1

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 47:11652-N1 **Date:** 12/27/2021

Project Address: 5700 Sanger Avenue
Alexandria, VA-22311

Work Area Location/Description: 2nd floor corridor

	Work Area Location/Description	2nd floor corridor
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	Satisfactory
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	Satisfactory
	Wet Methods In-Use	Satisfactory
	Prompt Clean-Up	Satisfactory
	Adequate Lighting	Satisfactory
	Respiratory Protection	Satisfactory
	Disposable Clothing Worn Properly	Satisfactory
	No Respirators Stored in Work Area	Satisfactory
	Negative Air Filtration In-Use	Satisfactory
	Pre-Filters Clean	Satisfactory
	Exhaust Properly Vented	Satisfactory
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	Satisfactory
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	2
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Lauren E. Kesslak **Date:** 12/27/2021

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 47:11652-N1
Project Address: 5700 Sanger Avenue
Alexandria, VA-22311

Date: 12/26/2021
Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (lpm)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
12262101GN	OWA,2nd floor corridor work area at decontamination unit entry	6:29 AM	1:30 PM	1.5	1.5	1.5	421	631.5	3.0	100	0.002
12262102GN	OWA,2nd floor corridor work area at 1st floor main office lobby	6:30 AM	1:31 PM	1.5	1.5	1.5	421	631.5	1.0	100	0.001
122621FB01GN	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
122621FB02GN	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD

Notes: NFD = None Fibers Detected OWA = Outside Work Area IWA = Inside Work Area

Notes: The re-occupancy criteria for the EPA and Commonwealth of Virginia is less than or equal to 0.01 fibers/cc. The samples collected outside the work area meet this criteria.

ECS Technician: JP Nuique

Date: 12/26/2021

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
7034718400
7038345527

LETTER OF TRANSMITTAL

January 4, 2022

Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: Mr. Norman Wiebusch

RE: **ACPS William Ramsay ES - 2nd Fl Hall Abatement**
ECS Job # **47:11652-N1**

Permits:
Location: **5700 Sanger Avenue**
Alexandria, VA 22311

X Field Reports **X** For your use **X** As requested

CC: Alexandria City Public Schools - John Contreras
Alexandria City Public Schools - John Finnigan
Waco, Inc - Chris Lanham

ENCL: Field Report # 4 12/27/2021

Michael P. Hamill, CIH, CSP
Environmental Senior Project Manager

Lauren E. Kesslak, CIH, CSP
Environmental Project Manager

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4. *Incomplete or non-conforming work will be reported for future resolution.*
5. *The results of samples and/or specimens obtained or prepared for subsequent laboratory testing will be presented in separate reports/documents.*

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**47:11652-N1**
Report No.	**4**
Day & Date	**Monday 12/27/2021**
Weather	**42 °/ Cloudy**
On-Site Time	**2.25**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**2.25**
Re Obs Time	**0.00**

Project	**ACPS William Ramsay ES - 2nd Fl Hall Abatement**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Times of	Arrival	Departure
Chargeable Items				**6:00A**	**6:45A**
				12:00P	**1:30P**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on-site, as requested, to perform air monitoring and observe asbestos abatement. The materials to be removed today are asbestos-containing asbestos-containing floor mastic in the 2nd floor corridor work area.

2ND FLOOR CORRIDOR WORK AREA MONITORING

Please refer to the attached drawing for Work Area and Phase Contrast Microscopy (PCM) air sample locations.

Between 6:35-6:36 am, PCM air samples were started outside the work area at decontamination unit entry and 1st floor main office lobby. The sampling pump was calibrated using a rotameter to 1.5 liters per minute.

ECS observed the abatement workers were removing floor black mastic using buffer and hand tools.

Between 1:10-1:11 pm, the sampling pump was checked using a rotameter. The flow rate was 1.5 liters per minute. The PCM air samples were stopped and gathered for analysis.

The abatement contractor stated the specified materials have been removed from the regulated work area and requested a visual survey to confirm compliance. The Final Clearance Visual Survey Checklist was completed and is attached to this report.

Following the successful completion of the final clearance visual survey, the abatement contractor applied an encapsulant to surfaces within the regulated work area.

ECS will collect the final clearance TEM air samples on the next working shift.

By JP Nuique 1625

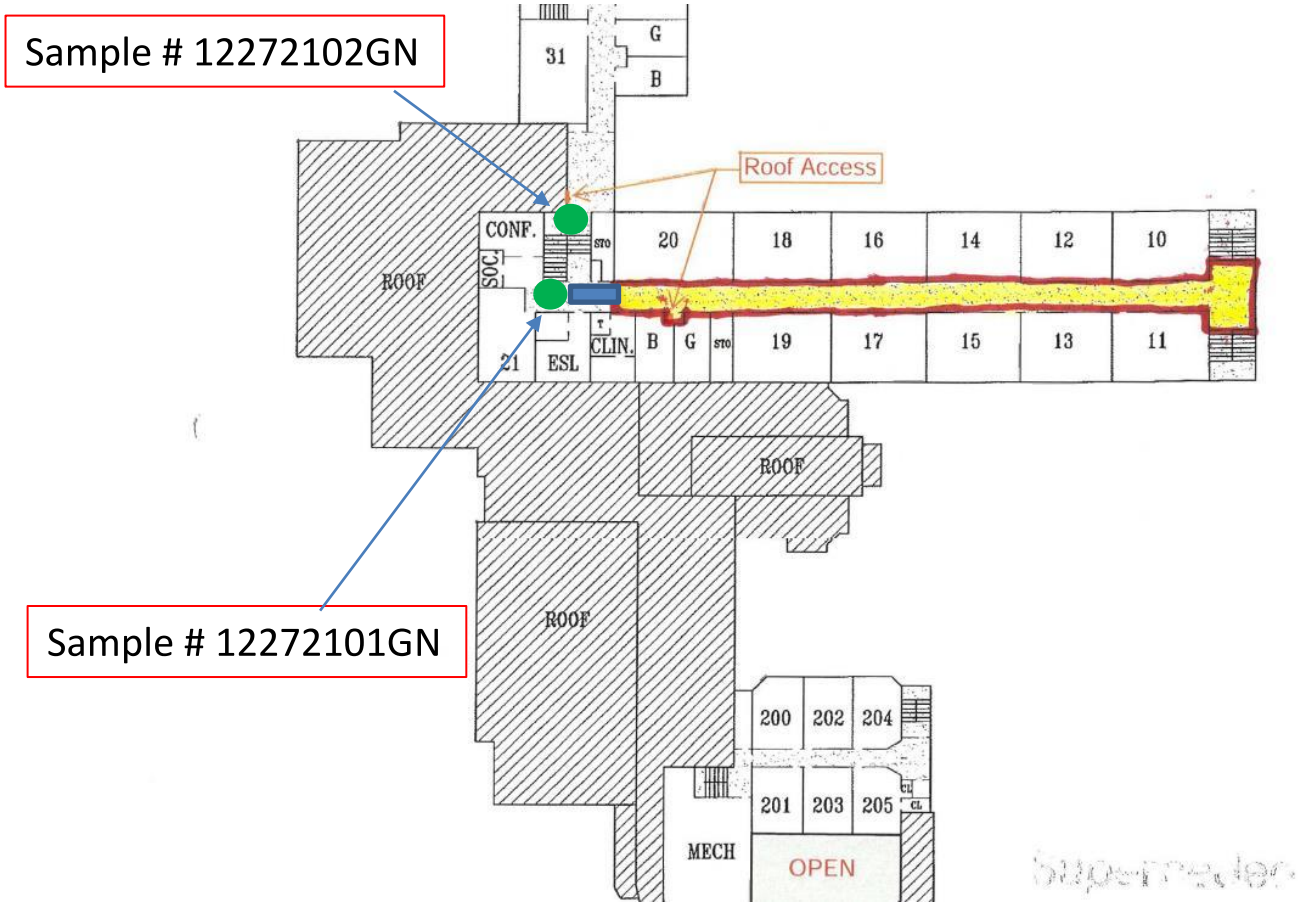
GENERAL

The regulated work areas were surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

ECS observed the abatement contractor placing the specified asbestos-containing materials in waste drums which were sealed in general accordance with applicable regulations. Waste drums were place in waste hauling container.

The undersigned prepared and analyzed the PCM air sample cassettes for total fiber concentration in general accordance with NIOSH Method 7400. Results were recorded on the PCM Chain of Custody which is attached.

The re-occupancy criteria for the EPA and Commonwealth of Virginia is less than or equal to 0.01 fibers/cc. The samples collected outside the work area meet this criteria.



Work Area
Decontamination Unit
Sample Location
Waste Decontamination Unit

William Ramsay
5700 Sanger Ave Alexandria VA 22311

WORK AREA SKETCH

Scale: NTS

Project No.

12/27/21

Attachments



View of the 2nd floor hallway following abatement work activities

Figure 1



View of the 2nd floor hallway following abatement work activities

Figure 2

Attachments



View of the 2nd floor hallway following abatement work activities

Figure 3



View of the 2nd floor hallway following abatement work activities

Figure 4

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 47:11652-N1 **Date:** 12/28/2021

Project Address: 5700 Sanger Avenue
Alexandria, VA-22311

Work Area Location/Description: 2nd Floor Hallway

	Work Area Location/Description	2nd Floor Hallway
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	Satisfactory
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	Floors	Satisfactory
	Walls	Satisfactory
	Ceiling	Satisfactory
	Windows	N/A
	Mechanical Equipment	N/A
	Ducts	N/A
	Pipes	N/A
	Lighting	Satisfactory
	Other Surfaces	N/A
	Specified ACM Removed	Satisfactory
	Work Area Encapsulated	Satisfactory
	Negative Air Filtration Functioning	Satisfactory
	Waste Bags Removed	Satisfactory
	Final Clearance Air Sample Type	N/A
	Number of Samples Collected	0
	Sample Volume (liters)	0
	Work Area Acceptable	Yes

Notes: ECS will collect the final clearance TEM air samples on the next working shift.

ECS Technician: Lauren E. Kesslak **Date:** 12/28/2021

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 47:11652-N1 **Date:** 12/28/2021

Project Address: 5700 Sanger Avenue
Alexandria, VA-22311

Work Area Location/Description: 2nd floor

	Work Area Location/Description	2nd floor
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	Satisfactory
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	Satisfactory
	Wet Methods In-Use	Satisfactory
	Prompt Clean-Up	Satisfactory
	Adequate Lighting	Satisfactory
	Respiratory Protection	Satisfactory
	Disposable Clothing Worn Properly	Satisfactory
	No Respirators Stored in Work Area	Satisfactory
	Negative Air Filtration In-Use	Satisfactory
	Pre-Filters Clean	Satisfactory
	Exhaust Properly Vented	Satisfactory
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	Satisfactory
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	2
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Lauren E. Kesslak **Date:** 12/28/2021

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 47:11652-N1
Project Address: 5700 Sanger Avenue
Alexandria, VA-22311

Date: 12/27/2021
Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (lpm)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
12272101GN	OWA,2nd floor work area at the decontamination unit entry	6:35 AM	1:10 PM	1.5	1.5	1.5	395	592.5	4.0	100	0.003
12272102GN	OWA,2nd floor work area at the main lobby office on 1st floor	6:36 AM	1:11 PM	1.5	1.5	1.5	395	592.5	1.0	100	0.001
122721FB01GN	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
122721FB02GN	Field Blank	N/A	N/A	N/A	N/A	N/A			0.0	100	NFD

Notes: NFD = None Fibers Detected OWA = Outside Work Area IWA = Inside Work Area

Notes: The re-occupancy criteria for the EPA and Commonwealth of Virginia is less than or equal to 0.01 fibers/cc. The samples collected outside the work area meet this criteria.

ECS Technician: JP Nuique **Date:** 12/27/2021

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
7034718400
7038345527

LETTER OF TRANSMITTAL

January 4, 2022

Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: Mr. Norman Wiebusch

RE: **ACPS William Ramsay ES - 2nd Fl Hall Abatement**
ECS Job # **47:11652-N1**

Permits:
Location: **5700 Sanger Avenue**
Alexandria, VA 22311

X Field Reports **X** For your use **X** As requested

CC: Alexandria City Public Schools - John Contreras
Alexandria City Public Schools - John Finnigan
Waco, Inc - Chris Lanham

ENCL: Field Report # 5 12/28/2021

Michael P. Hamill, CIH, CSP
Environmental Senior Project Manager

Lauren E. Kesslak, CIH, CSP
Environmental Project Manager

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ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**47:11652-N1**
Report No.	**5**
Day & Date	**Tuesday 12/28/2021**
Weather	**51 °/ Cloudy**
On-Site Time	**3.25**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**3.25**
Re Obs Time	**0.00**

Project	**ACPS William Ramsay ES - 2nd Fl Hall Abatement**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Times of	Arrival	Departure
Chargeable Items				**6:00A**	**7:00A**
				8:45A	**11:00A**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on-site, as requested, to collect final clearance TEM air samples from the 2nd floor corridor work area.

2ND FLOOR CORRIDOR WORK AREA FINAL CLEARANCE TEM AIR SAMPLES

Following the successful completion of the final clearance visual survey, the abatement contractor applied an encapsulant to surfaces within the regulated work area the previous shift. Aggressive air sampling was performed. Five (5) TEM air samples were started within the regulated work area and five (5) TEM air samples were started outside the work area. The sampling pumps were calibrated using a rotameter to 8.0 liters per minute. One field blank sample was opened within the work area for 30 seconds. One field blank sample was opened outside the work area for 30 seconds.

At 9:00 am, the sampling pumps were checked using a rotameter after the air within and outside the regulated work area was sampled using TEM cassettes for 150 minutes at 8.0 liters per minute. The sampling cassettes, including the two field blanks and one sealed blank were labeled with unique identification and transported to EMSL, Beltsville MD for analysis. A copy of the chain of custody has been attached.

The EPA and Commonwealth of Virginia maximum allowable airborne asbestos concentration from within the work area is 70 structures per millimeter squared (s/mm2). In order to be deemed acceptable, the average of the interior samples analyzed must have asbestos concentrations of 70 s/mm2 or less. EMSL Analytical Inc., Beltsville MD, informed ECS that the analytical results of the TEM final clearance air samples collected from 2nd floor hallway work area found the airborne asbestos fiber concentrations to be less than the maximum allowable concentration. The client and abatement contractor supervisor were informed of the results. A copy of the laboratory report is attached.

By JP Nuique 1625

EMSL Analytical, Inc.

10768 Baltimore Avenue Beltsville, MD 20705

Tel/Fax: (301) 937-5700 / (301) 937-5701

http://www.EMSL.com / beltsvillelab@emsl.com

EMSL Order: 192112114
Customer ID: ECMA78
Customer PO:
Project ID:

Attention: Michael Hamill
ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151
Project: WILLIAM RAMSAY / 47:11652-N1

Phone: (703) 471-8400
Fax: (703) 471-8400
Received Date: 12/28/2021 12:21 PM
Analysis Date: 12/28/2021
Collected Date: 12/28/2021

Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Appendix A to Subpart E

Sample	Location	Volume (Liters)	Area Analyzed (mm²)	Non Asb	Asbestos Type(s)	#Structures ≥0.5µ < 5µ	#Structures ≥5µ	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm²)	Asbestos Concentration (S/cc)
122821-01	FC, IWA, 2ND FL HALLWAY	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
192112114-0001										
122821-02	FC, IWA, 2ND FL HALLWAY	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
192112114-0002										
122821-03	FC, IWA, 2ND FL HALLWAY	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
192112114-0003										
122821-04	FC, IWA, 2ND FL HALLWAY	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
192112114-0004										
122821-05	FC, IWA, 2ND FL HALLWAY	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
192112114-0005										

Analyst(s)

Joe Centifonti (5)

Joe Centifonti, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. Results reported in structures/cm3 are not covered by the laboratory's NVLAP accreditation. Measurement of uncertainty available upon request.

Samples analyzed by EMSL Analytical, Inc. Beltsville, MD NVLAP Lab Code 200293-0

Initial report from: 12/28/2021 16:07 PM

OrderID: 192112114

Asbestos Chain of Custody

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

EMSL Order Number *(lab use only)*: 192112114

PHONE:
FAX:

Company Name : ECS Mid Atlantic		**EMSL Customer ID:**	
Street:		**City:**	**State or Province:**
Zip/Postal Code:	**Country:**	**Telephone #:**	**Fax #:**
Report To (Name): Michael Hamill		**Please Provide Results via:** ☐ Fax ☑ Email	
email Address: MHamill@ecslimited.com		**Purchase Order Number:**	
Client Project ID: William Ramsay / 47:11652-N1		**EMSL Project ID** *(internal use only)*:	
State or Province Collected: VA		**CT only** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☑ Same ☐ Different - *If bill to is different note instructions in comment. Third party billing requires written authorization from third party*

Turnaround Time (TAT) Options Please Check

☐ 3 Hr[1] ☐ 4-4.5Hr[1] AHERA Only ~~☐ 6Hr[1]~~ ☑ 24 Hr ☐ 32 Hr[2] ☐ 48 Hr ☐ 72 Hr ☐ 96 Hr ☐ 1 Week ☐ 2 Week

[1]*Premium Service Charge applies for 3 Hour TEM AHERA or EPA Level II TAT – you will be asked to sign an authorization form. TEM Air 3-6 Hour, please call ahead to schedule*
[2]*32 Hour TAT available for select tests only; samples must be submitted by 11:30 am.*

PCM - Air
☐ NIOSH 7400
☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
☐ PLM EPA 600/R-93/116 (<1%)
☐ PLM EPA NOB (<1%)

Point Count
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
☐ NYS 198.1 (friable - NY)
☐ NYS 198.6 NOB (non-friable-NY)
☐ NYS 198.8 SOF-V
☐ NIOSH 9002 (<1%)

TEM – Air[1]
☑ AHERA 40 CFR, Part 763
☐ NIOSH 7402'
☐ EPA Level II
☐ ISO 10312

TEM - Bulk
☐ TEM EPA NOB
☐ NYS NOB 198.4 (non-friable-NY)
☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)*

TEM – Water: EPA 100.2
Fibers >10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Settled Dust
☐ Microvac - ASTM D 5755
☐ Wipe - ASTM D6480
☐ Carpet Sonication (EPA 600/J-93/167)

Soil – Rock – Vermiculite (reporting limit)
☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)*
☐ TEM Qualitative via Filtration Prep
☐ TEM Qualitative via Drop Mount Prep
☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM

*Lower reporting limits available on request

Other test (please specify):

☐ **Stop At First Positive** *(clearly identify homogenous areas below)*

Filter Pore Size (Air Samples): ☐ 0.8µm ☑ 0.45µm

Sampler's Name: Gallardo Nuñez **Sampler's Signature:**

Sample #	Sample Description/Location	Volume, Area or Homogenous Area	Date/Time Sampled
122821 01 GW	FC, IWA, 2nd Fl. Hallway	1200 L	12/28/21
02			
03			
04			
05			

Client Sample # (s): 01GW - 13GW **Total # of Samples:** 13

Relinquished by (Client): Gallardo Nuñez **Date:** 12/28/21 **Time:**

Received by (Lab): Marcy Nyfeler DB **Date:** **Time:**

Comments/Special Instructions: Analyze IWA only

Aggressive

'21 DEC 28 PM12:21

EMSL Analytical, Inc.'s (DBA: LA Testing) Laboratory Terms and Conditions are incorporated into this chain of custody by reference in their entirety. Submission of samples to EMSL Analytical Inc. constitutes acceptance and acknowledgment of all terms and conditions.

OrderID: 192112114

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*:

192112114

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
122821 06 GW	FC, OWA, 2nd Fl. Hallway	1200 L	12/28/21
07			
08			
09			
10			
11	Field Blank opened 30 secs. by Entrance	N/A	
12	Field Blank opened 30 secs. in Ambient	N/A	
13	Sealed Blank (not opened)	N/A	

***Comments/Special Instructions:**

Sample Instructions

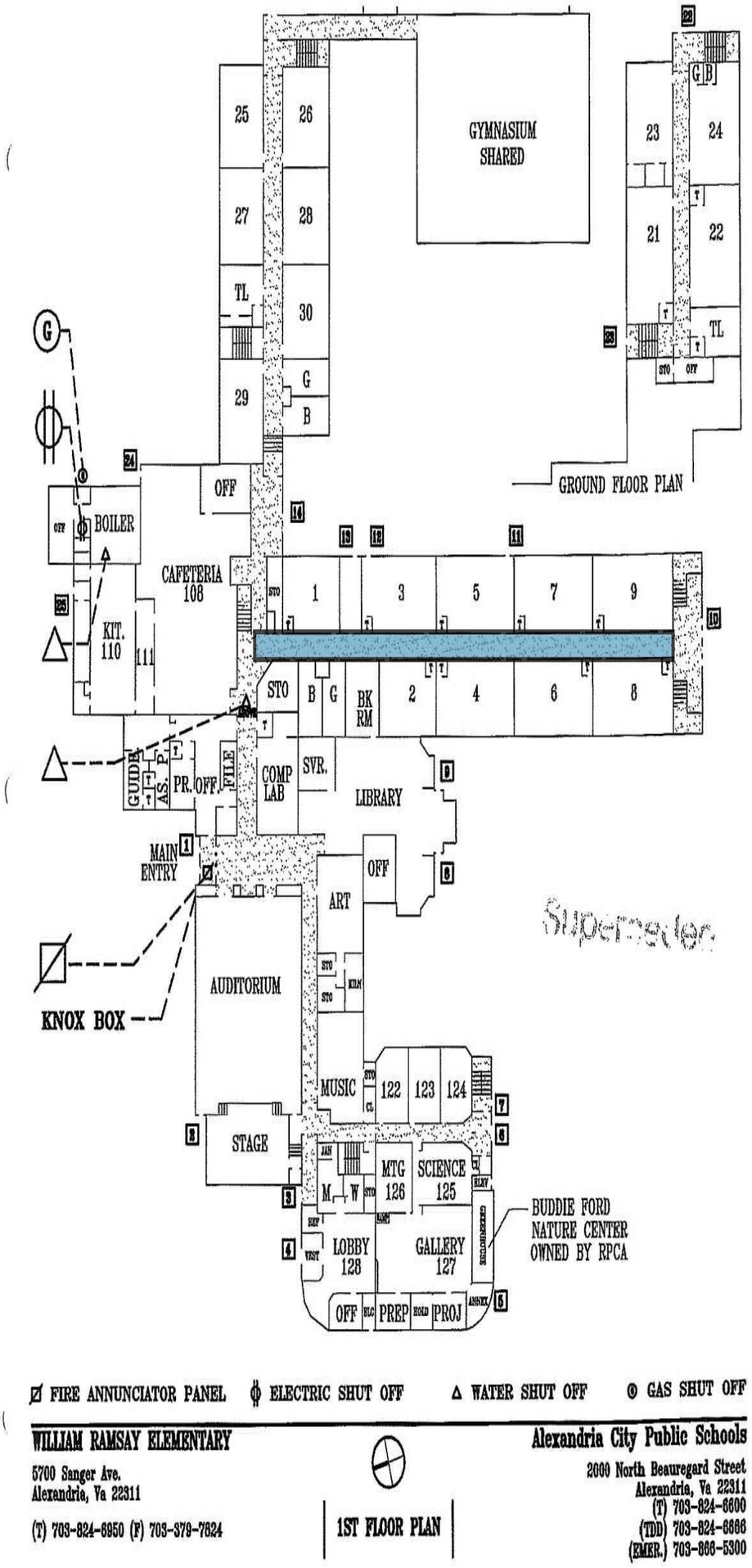
Controlled Document – COC-05 Asbestos – R12.1 – 11/01/2019

EMSL Analytical, Inc.'s (DBA: LA Testing) Laboratory Terms and Conditions are incorporated into this chain of custody by reference in their entirety. Submission of samples to EMSL Analytical Inc. constitutes acceptance and acknowledgment of all terms and conditions.

Appendix II: Drawings

Legend

Work Area



FIRE ANNUNCIATOR PANEL ELECTRIC SHUT OFF WATER SHUT OFF GAS SHUT OFF

WILLIAM RAMSAY ELEMENTARY
5700 Sanger Ave.
Alexandria, Va 22311
(T) 703-824-6950 (F) 703-379-7824

1ST FLOOR PLAN

Alexandria City Public Schools
2000 North Beauregard Street
Alexandria, Va 22311
(T) 703-824-6600
(TDD) 703-824-6666
(EMER.) 703-866-5300

By Marcus Sobetsky	Project No. 47:11652-N/N1	Scale: NTS	**Work Area Site Sketch**	ECS	William Ramsey Elementary School 5700 Sanger Ave Alexandria, VA 22311

Legend

Work Area

William Ramsey Elementary School
5700 Sanger Ave
Alexandria, VA 22311

Work Area Site Sketch

Scale: NTS

Project No.
47:11652-N/N1

By: Marcus Sobetsky

Appendix III: Certifications/ Licenses

DPOR License Lookup License Number 3309001288

License Details

Name	NUIQUE, GALLARDO SEDILLO
License Number	3309001288
License Description	Asbestos Project Monitor License
Rank	Asbestos Project Monitor
Address	ROCKVILLE, MD 20851
Initial Certification Date	2004-07-13
Expiration Date	2022-07-31

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DPOR License Lookup build 1,444 (built 2021-08-04 03:00:51).

ECS Mid Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

LETTER OF TRANSMITTAL

July 7, 2020

Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: John Finnigan

RE: **ACPS William Ramsay ES First Floor - ACM Monitoring**
ECS Job # **1519-E2**

Permits:
Location: **5700 Sanger Ave**
Alexandria, VA 22311

CC: Alexandria City Public Schools - Carol Cheney

ENCL: Field Report # 1A 6/30/2020

Diana D. Krass
Environmental Senior Project Manager

Robert Lawrence Rhett
Environmental Project Manager

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5. *The results of samples and/or specimens obtained or prepared for supersequent laboratory testing will be presented in separate reports/documents.*

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**1519-E2**
Report No.	**1A**
Day & Date	**Tuesday 6/30/2020**
Weather	**92 °/ Sunny**
On-Site Time	**6.00**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**6.00**
Re Obs Time	**0.00**

Project	**ACPS William Ramsay ES First Floor - ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	**11**	Time of	Arrival	Departure
Chargeable Items					**7:00A**	**1:00P**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on-site, as requested, to perform air monitoring and observe asbestos abatement. The materials specified to be removed today are asbestos-containing floor tile and mastic from the Classrooms within the K Wing. Classrooms 1, 2, 3, 4, 6, 7, 8, 9, and the storage room are reportedly scheduled for asbestos abatement. A floor plan is attached to this report.

The abatement contractor (Waco) is on-site preparing the containment in the K Wing. Classrooms 6, 7, 8, and 9 are currently confined to a single containment connected by the hallway.

Prior to starting the removal of the specified materials, the abatement permit was reviewed. The abatement contractor employees were asked to provide their asbestos abatement license for review. No workers were found to be without valid asbestos abatement licenses.

At 9:00 am, background PCM air samples were started inside the work area outside Classroom 4 and within Classroom 9. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

At 12:00 pm, the sampling pumps were calibrated using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 180 minutes at 2.5 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

Workers stopped for lunch at 12:00 pm. Mr. John O'Neil arrived on-site and the undersigned left the site at 1:00 pm.

By Lauren E. Kesslak 1310



PCM Air Sample Location

Work Area Perimeter

William Ramsay
5700 Sanger Avenue
Alexandria, VA 22311

WORK AREA SKETCH
K Wing

Scale: NTS

Project No.
47:1519-E2

6/30/20

ECS Mid Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

LETTER OF TRANSMITTAL

July 7, 2020

Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: John Finnigan

RE: **ACPS William Ramsay ES First Floor - ACM Monitoring**
ECS Job # **1519-E2**

Permits:
Location: **5700 Sanger Ave**
Alexandria, VA 22311

CC: Alexandria City Public Schools - Carol Cheney

ENCL: Field Report # 1B 6/30/2020 6 PCM

Diana D. Krass
Environmental Senior Project Manager

Robert Lawrence Rhett
Environmental Project Manager

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5. *The results of samples and/or specimens obtained or prepared for supersequent laboratory testing will be presented in separate reports/documents.*

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**1519-E2**
Report No.	**1B**
Day & Date	**Tuesday 6/30/2020**
Weather	**90 °/ Sunny**
On-Site Time	**5.25**
Lab Time	**0.00**
Travel Time*	**0.75**
Total	**6.00**
Re Obs Time	**0.00**

Project	**ACPS William Ramsay ES First Floor - ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks **6 PCM**

Trip Charges* Tolls/Parking* Mileage* **15**

Chargeable Items

Times of	Arrival	Departure
	7:45A	**8:15A**
	11:45A	**1:30P**
	2:45P	**5:45P**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on-site, as requested, to perform air monitoring and observe asbestos abatement. The material to be removed today is asbestos-containing floor tile and associated mastic from the first floor F wing (Rooms 6, 7, 8, and 9).

Prior to starting the removal of the specified materials, the abatement contractor employees were asked to provide their asbestos abatement license for review. No workers were found to be without valid asbestos abatement licenses.

Prior to starting the removal of the specified material, the abatement permit was reviewed. The permit was on-site and the removal of the specified material could begin.

FIRST FLOOR F WING WORK AREA

The abatement contractor requested a pre-abatement survey of the regulated work area. The Pre-Abatement Checklist was completed and is attached to this report.

At 1:00 pm, PCM air samples were started inside and outside the work area. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

At 5:15 pm, the sampling pumps were checked using a rotameter. The flow rate was 2.5 liters per minute. The PCM air samples were stopped and gathered from inside and outside the work area.

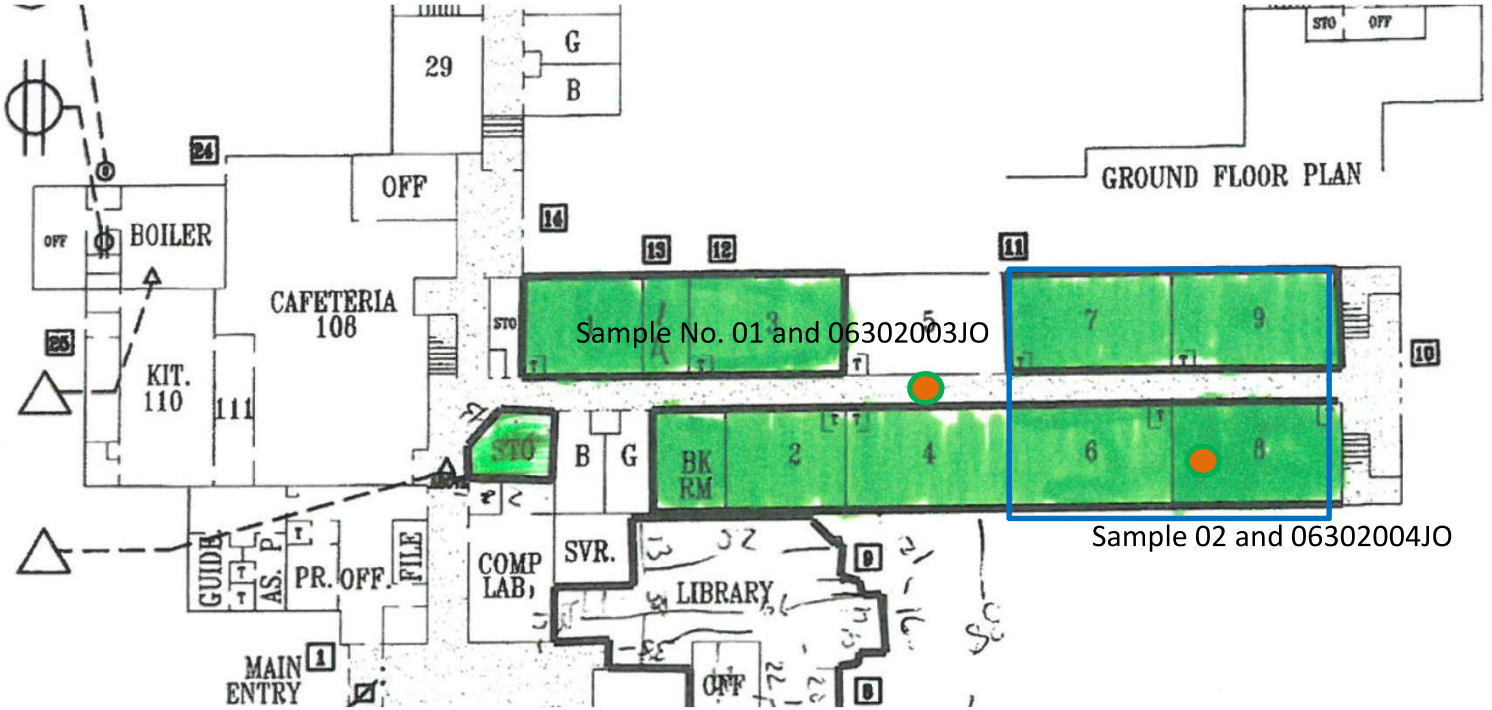
GENERAL

The regulated work area was surveyed to evaluate general compliance with applicable regulations. The

Daily Work Area Survey Checklist was completed and is attached to this report.

ECS observed the abatement contractor placing the specified asbestos-containing materials in 6-mil polyethylene bags which were double-bagged and sealed in general accordance with the applicable regulations. Waste bags were labeled and stored temporarily within the work area.

The undersigned prepared and analyzed the PCM air sample cassettes for total fiber concentration in general accordance with NIOSH Method 7400. Results were recorded on the PCM Chain of Custody which is attached. Sample 06302004JO was overloaded with particulates and/or dust, and therefore this air sample could not be analyzed.ECS informed the abatement contractor to use additional water and engineering controls.



PCM Air Sample Location

Work Area Perimeter

William Ramsay
5700 Sanger Avenue
Alexandria, VA 22311

WORK AREA SKETCH
K Wing

Scale: NTS

Project No.
47:1519-E2

6/30/20

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-E2
Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Date: 7/5/2020
Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (lpm)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
06302004 JO	First Floor K Wing Work Area - IWA	1:00 PM	5:15 PM	2.5	2.5	2.5	255	637.5	N/A	N/A	
06302002 JO	First Floor K Wing Work Area - IWA	8:15 AM	11:45 AM	2.5	2.5	2.5	210	525.0	1.0	100	0.001
06302003 JO	First Floor K Wing Work Area - OWA	1:00 PM	5:15 PM	2.5	2.5	2.5	255	637.5	3.0	100	0.002
06302006 JO	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
06302005 JO	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
06302001 JO	First Floor F Wing Work Area - OWA	8:15 AM	11:45 AM	2.5	2.5	2.5	210	525.0	2.5	100	0.002

Notes: NFD = None Fibers Detected OWA = Outside Work Area IWA = Inside Work Area

Notes: Sample 06302004JO was overloaded with particulates and/or dusts and therefore this air sample could not be analyzed.
N/A = Not Available.

ECS Technician: John A O'Neil **Date:** 7/5/2020

Attachments



View of First Floor Hallway Inside the Work Area

Figure 1



View of First Floor Classroom Inside the Work Area

Figure 2

Attachments



View of First Floor Classroom Inside the Work Area

Figure 3



View of First Floor Classroom Inside the Work Area

Figure 4

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 1519-E2 **Date:** 7/5/2020

Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Work Area Location/Description: First Floor Rooms 6, 7, 8, and 9

	Work Area Location/Description	First Floor Rooms 6, 7, 8, and 9
Administrative	Training Certificates/Licenses	Satisfactory
	Permits	Satisfactory
	EPA/State/Local Notification	Satisfactory
Work Area	Public Access Restricted	Satisfactory
	Warning Signs/Tape Posted	Satisfactory
Negative Air Filtration	Number of Units	6
	Pre-Filters In-Use/Available	Satisfactory
	Exhausted from Work Area	Satisfactory
	Pressure Differential Monometer Operating	Satisfactory
Equipment	HEPA Vacuum Available	Satisfactory
	Amended Water Sprayers	Satisfactory
Decontamination Enclosure	Clean Room	Satisfactory
	Shower Water Available	Satisfactory
	Waste Water Filtration In-Use	Satisfactory
	Disposable Towels	Satisfactory
	Soap	Satisfactory
	Equipment Room	Satisfactory
Personal Protective Equipment	Type of Respirator	Half Face
	Type of Filters Used	P100
	Disposable Protective Clothing	Satisfactory
	Work Area Acceptable	Yes

Notes:

ECS Technician: Bobby Rhett **Date:** 7/5/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-E2 **Date:** 7/5/2020

Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Work Area Location/Description: First Floor K Wing (Rooms 6,7,8,9)

	Work Area Location/Description	First Floor K Wing (Rooms 6,7,8,9)
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	Satisfactory
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	Satisfactory
	Wet Methods In-Use	Satisfactory
	Prompt Clean-Up	Satisfactory
	Adequate Lighting	Satisfactory
	Respiratory Protection	Satisfactory
	Disposable Clothing Worn Properly	Satisfactory
	No Respirators Stored in Work Area	Satisfactory
	Negative Air Filtration In-Use	Satisfactory
	Pre-Filters Clean	Satisfactory
	Exhaust Properly Vented	Satisfactory
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	Satisfactory
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	4
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Bobby Rhett **Date:** 7/5/2020

ECS Mid Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

LETTER OF TRANSMITTAL

July 7, 2020

Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: John Finnigan

RE: **ACPS William Ramsay ES First Floor - ACM Monitoring**
ECS Job # **1519-E2**

Permits:
Location: **5700 Sanger Ave**
Alexandria, VA 22311

CC: Alexandria City Public Schools - Carol Cheney

ENCL: Field Report # 2 7/1/2020

Diana D. Krass
Environmental Senior Project Manager

Robert Lawrence Rhett
Environmental Project Manager

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14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**1519-E2**
Report No.	**2**
Day & Date	**Wednesday 7/1/2020**
Weather	**84 °/ Sunny**
On-Site Time	**9.25**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**9.25**
Re Obs Time	**0.00**

Project	**ACPS William Ramsay ES First Floor - ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	**11**	Time of	Arrival	Departure
Chargeable Items					**6:15A**	**3:30P**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived onsite, as requested, to perform air monitoring and observe asbestos abatement. The materials specified to be removed today are asbestos-containing floor tile and associated mastic from Classrooms 6, 7, 8, and 9. Photographs of today's observed areas and a floor plan are attached to this report.

The regulated work area was surveyed to evaluate general compliance with US EPA and Commonwealth of Virginia regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

At 7:00 am, PCM air samples were started inside and outside the work area at the entrance of the containment and within Classroom 6. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute. Workers continued to manually remove carpet and floor tile from the work areas. The mastic is being removed by shot blasting methods. ECS observed wet methods in use.

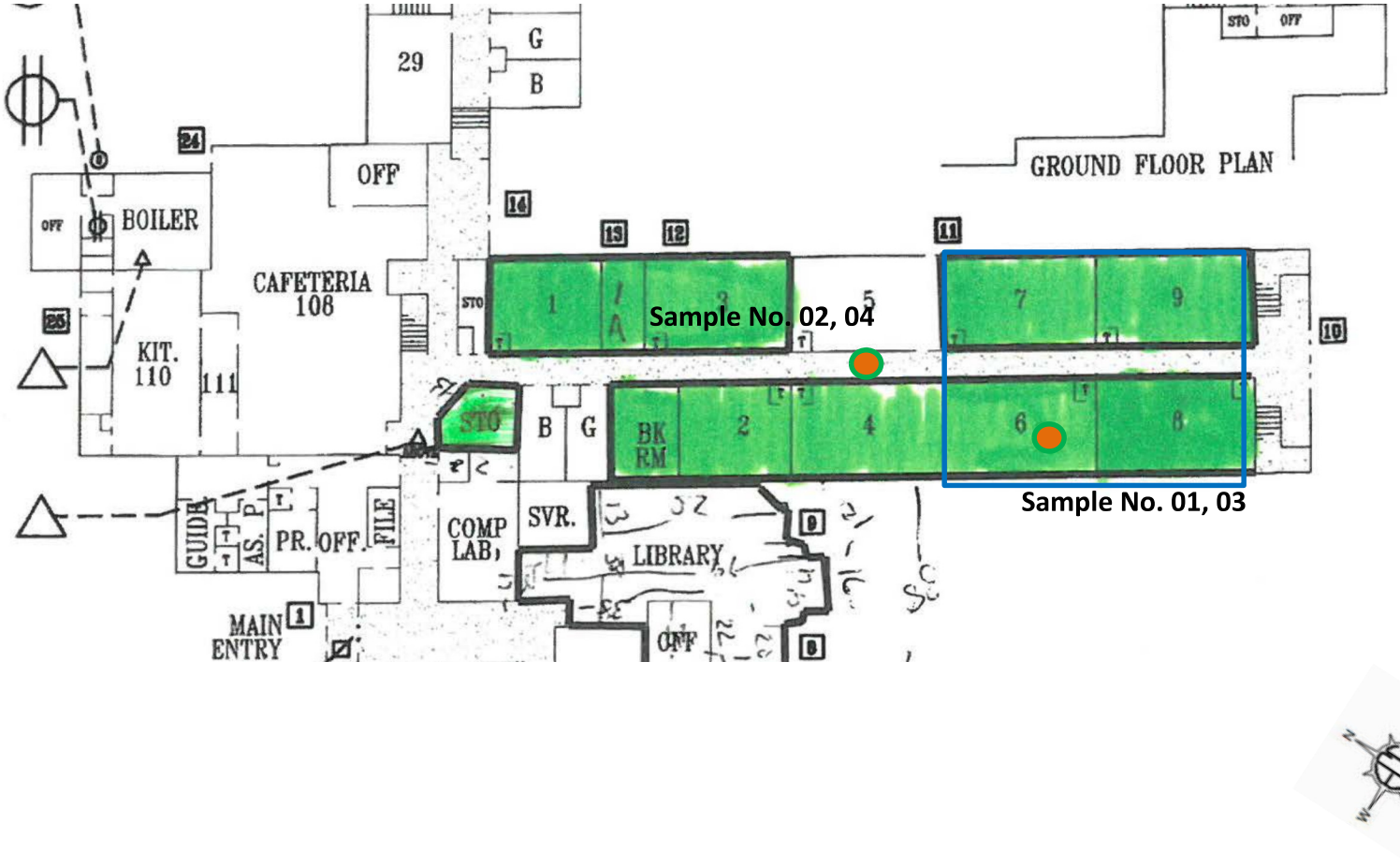
At 11:30 am, the sampling pumps were checked using a rotameter. The flow rate was 2.5 liters per minute. The PCM air samples were stopped and gathered from Classroom 6 and outside the containment entrance. A second set of PCM samples were started at similar locations.

ECS observed the abatement contractor placing the specified asbestos-containing materials in 6-mil polyethylene bags which were double-bagged and sealed in general accordance with EPA and Commonwealth of Virginia regulations. Waste bags were labeled and placed in drums and stored temporarily on-site.

At 3:15 pm, the sampling pumps were checked using a rotameter. The flow rate was 2.5 liters per minute. The PCM air sample were stopped and gathered from Classroom 6 and outside the containment entrance. Waco has finished abatement for the day and will continue to set up the next containment.

By Lauren E. Kesslak 1310

Mr. John O'Neil of ECS arrived on site to continue monitoring the work shift. The undersigned left the site at 3:30 pm.



PCM Air Sample Location

Work Area Perimeter

William Ramsay
5700 Sanger Avenue
Alexandria, VA 22311

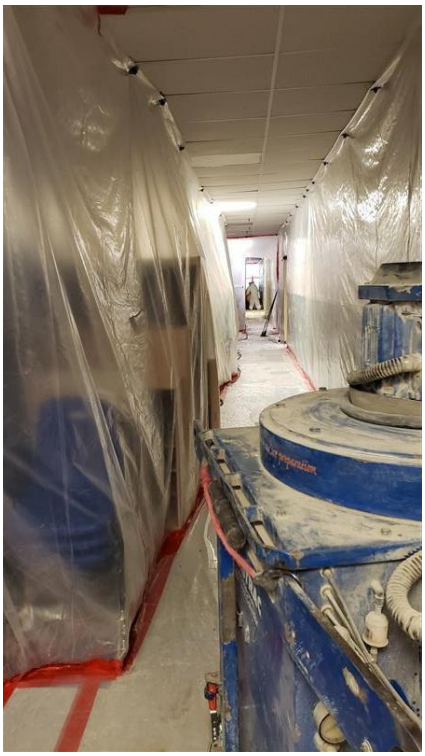
WORK AREA SKETCH
K Wing

Scale: NTS

Project No.
47:1519-E2

07/01/20

Attachments



View of the work area interior and the shot blasting machine

Figure 1



View of the concrete floor following removal of mastic by shot blasting

Figure 2

Attachments



View of the regulated work area

Figure 3

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-E2 **Date:** 7/1/2020

Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Work Area Location/Description: Classrooms 6, 7, 8, and 9

	Work Area Location/Description	Classrooms 6, 7, 8, and 9
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	N/A
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	Satisfactory
	Wet Methods In-Use	Satisfactory
	Prompt Clean-Up	Satisfactory
	Adequate Lighting	Satisfactory
	Respiratory Protection	Satisfactory
	Disposable Clothing Worn Properly	Satisfactory
	No Respirators Stored in Work Area	Satisfactory
	Negative Air Filtration In-Use	Satisfactory
	Pre-Filters Clean	Satisfactory
	Exhaust Properly Vented	Satisfactory
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	Satisfactory
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	4
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes: Class 2 abatement of non-friable materials, shower not required.

ECS Technician: Bobby Rhett **Date:** 7/1/2020

ECS Mid Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

LETTER OF TRANSMITTAL

July 7, 2020

Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: John Finnigan

RE: **ACPS William Ramsay ES First Floor - ACM Monitoring**
ECS Job # **1519-E2**

Permits:
Location: **5700 Sanger Ave**
Alexandria, VA 22311

CC: Alexandria City Public Schools - Carol Cheney

ENCL: Field Report # 2B 7/1/2020 8 PCM

Diana D. Krass
Environmental Senior Project Manager

Robert Lawrence Rhett
Environmental Project Manager

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14026 Thunderbolt Place
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Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**1519-E2**
Report No.	**2B**
Day & Date	**Wednesday 7/1/2020**
Weather	**90 °/ Sunny**
On-Site Time	**2.50**
Lab Time	**0.00**
Travel Time*	**0.25**
Total	**2.75**
Re Obs Time	**0.00**

Project	**ACPS William Ramsay ES First Floor - ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks **8 PCM**

Trip Charges*	Tolls/Parking*	Mileage*	**5**	Time of	Arrival	Departure
Chargeable Items					**3:00P**	**5:30P**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on-site, as requested, to perform air monitoring and observe asbestos abatement. The material to be removed today is floor tile and associated mastic from the first floor F wing (rooms 4, 5, 6, 7, 8, and 9). The shift was started by Ms. Lauren Kesslak of ECS. The undersigned completed monitoring of the shift after 3:00 pm.

FIRST FLOOR F WING WORK AREA

At 7:00 am, Ms. Lauren Kesslak started PCM air samples inside and outside the work area. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

At 11:00 am, the sampling pumps were checked using a rotameter. The flow rate was 2.5 liters per minute. The PCM air samples were stopped and gathered from inside and outside the work area. A second set of samples were started in similar locations.

At 3:15 pm, the undersigned checked the sampling pumps using a rotameter. The flow rate was 2.5 liters per minute. The PCM air samples were stopped and gathered from inside and outside the work area. Another set of PCM air samples were started inside and outside the work area. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

At 5:15 pm, the sampling pumps were checked using a rotameter. The flow rate was 2.5 liters per minute. The PCM air samples were stopped and gathered from inside and outside the work area.

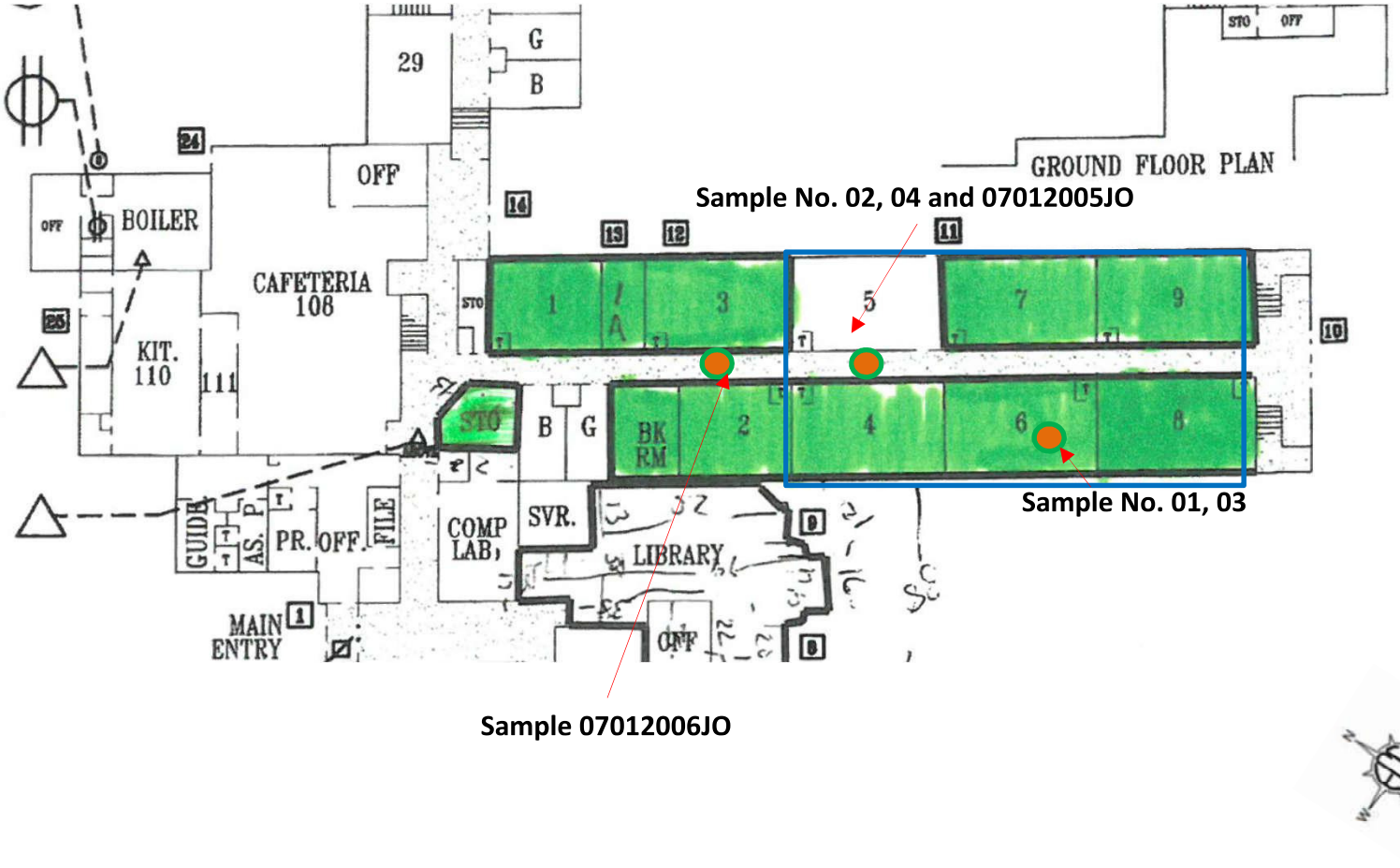
GENERAL

The regulated work area was surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

By John A O'Neil 1510

ECS observed the abatement contractor placing the specified asbestos-containing materials in 6-mil polyethylene bags which were double-bagged and sealed in general accordance with the applicable regulations. Waste bags were labeled and stored temporarily within the work area.

The undersigned prepared and analyzed the PCM air sample cassettes for total fiber concentration in general accordance with NIOSH Method 7400. Results were recorded on the PCM Chain of Custody which is attached. Samples 1 and 3 were overloaded with particulates and/or dust and therefore these air samples could not be analyzed. ECS informed the abatement contractor to use additional water and engineering controls.



PCM Air Sample Location

Work Area Perimeter

William Ramsay
5700 Sanger Avenue
Alexandria, VA 22311

WORK AREA SKETCH
K Wing

Scale: NTS

Project No.
47:1519-E2

07/01/20

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-E2
Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Date: 7/5/2020
Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (lpm)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
07012003 LK	K Wing Work Area - IWA	11:00 AM	3:15 PM	2.5	2.5	2.5	255	637.5	N/A	N/A	
07012001 LK	K Wing Work Area - IWA	7:00 AM	11:00 AM	2.5	2.5	2.5	240	600.0	N/A	N/A	
07012004 LK	K Wing Work Area - OWA	11:00 AM	3:15 PM	2.5	2.5	2.5	255	637.5	2.0	100	0.002
07012002 LK	K Wing Work Area - OWA	7:00 AM	11:00 AM	2.5	2.5	2.5	240	600.0	4.5	100	0.004
07012008 JO	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07012006 JO	K Wing Work Area - OWA	3:15 PM	5:15 PM	2.5	2.5	2.5	120	300.0	2.0	100	0.003
07012007 JO	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07012005 JO	K Wing Work Area - IWA	3:15 PM	5:15 PM	2.5	2.5	2.5	120	300.0	0.5	100	0.001

Notes: NFD = None Fibers Detected OWA = Outside Work Area IWA = Inside Work Area

Notes: Air samples 1 and 3 were overloaded with particulates and/or dust, and therefore these air samples could not be analyzed. N/A = Not Available.

ECS Technician: John A O'Neil **Date:** 7/5/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-E2 **Date:** 7/5/2020

Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Work Area Location/Description: K Wing Work Area

	Work Area Location/Description	K Wing Work Area
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	Satisfactory
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	Satisfactory
	Wet Methods In-Use	Satisfactory
	Prompt Clean-Up	Satisfactory
	Adequate Lighting	Satisfactory
	Respiratory Protection	Satisfactory
	Disposable Clothing Worn Properly	Satisfactory
	No Respirators Stored in Work Area	Satisfactory
	Negative Air Filtration In-Use	Satisfactory
	Pre-Filters Clean	Satisfactory
	Exhaust Properly Vented	Satisfactory
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	Satisfactory
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	6
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Bobby Rhett **Date:** 7/5/2020

ECS Mid Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

LETTER OF TRANSMITTAL

July 7, 2020

Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: John Finnigan

RE: **ACPS William Ramsay ES First Floor - ACM Monitoring**
ECS Job # **1519-E2**

Permits:
Location: **5700 Sanger Ave**
Alexandria, VA 22311

CC: Alexandria City Public Schools - Carol Cheney

ENCL:

Field Report # 3	7/2/2020	6 PCM

Diana D. Krass
Environmental Senior Project Manager

Robert Lawrence Rhett
Environmental Project Manager

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Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**1519-E2**
Report No.	**3**
Day & Date	**Thursday 7/2/2020**
Weather	**90 °/ Sunny**
On-Site Time	**4.00**
Lab Time	**0.00**
Travel Time*	**0.50**
Total	**4.50**
Re Obs Time	**0.00**

Project	**ACPS William Ramsay ES First Floor - ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks **6 PCM**

Trip Charges* Tolls/Parking* Mileage* **10**

Chargeable Items	Times of	Arrival	Departure
		8:00A	**9:00A**
		1:00P	**1:30P**
		2:45P	**5:15P**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on-site, as requested, to perform air monitoring and observe asbestos abatement. The material to be removed today is asbestos-containing floor tile and associated mastic from the first floor F wing (Classrooms 2, 3, 4, 5, 6, 7, 8, and 9).

FIRST FLOOR F WING WORK AREA

The abatement contractor requested a pre-abatement survey of the regulated work area for Classrooms 2 and 3. The Pre-Abatement Checklist was completed and is attached to this report.

At 8:15 am, PCM air samples were started inside and outside the work area. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

At 1:15 pm, the sampling pumps were checked using a rotameter. The flow rate was 2.5 liters per minute. The PCM air samples were stopped and gathered from inside and outside the work area.

At 1:15 pm, PCM air samples were started inside and outside the work area. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

At 5:00 pm, the sampling pumps were checked using a rotameter. The flow rate was 2.5 liters per minute. The PCM air samples were stopped and gathered from inside and outside the work area.

GENERAL

The regulated work area was surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

ECS observed the abatement contractor placing the specified asbestos-containing materials in 6-mil polyethylene bags which were double-bagged and sealed in general accordance with the applicable regulations. Waste bags were labeled and stored temporarily within the work area.

The undersigned prepared and analyzed the PCM air sample cassettes for total fiber concentration in general accordance with NIOSH Method 7400. Results were recorded on the PCM Chain of Custody which is attached. Sample 07022002JO was overloaded with particulates and/or dust and therefore this air samples could not be analyzed. ECS informed the abatement contractor to use additional water and engineering controls.



PCM Air Sample Location

Work Area Perimeter

William Ramsay
5700 Sanger Avenue
Alexandria, VA 22311

WORK AREA SKETCH
K Wing

Scale: NTS

Project No.
47:1519-E2

07/02/20

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-E2
Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Date: 7/5/2020
Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (lpm)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
07022002 JO	K Wing Work Area	8:15 AM	1:15 PM	2.5	2.5	2.5	300	750.0	N/A	N/A	
07022006 JO	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07022004 JO	K Wing Work Area - IWA	1:15 PM	5:00 PM	2.5	2.5	2.5	225	562.5	6.5	100	0.006
07022005 JO	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07022003 JO	K Wing Work Area - OWA	1:15 PM	5:00 PM	2.5	2.5	2.5	225	562.5	1.5	100	0.001
07022001 JO	K Wing Work Area - OWA	8:15 AM	1:15 PM	2.5	2.5	2.5	300	750.0	3.0	100	0.002

Notes: NFD = None Fibers Detected OWA = Outside Work Area IWA = Inside Work Area

Notes: Sample 07022002JO was overloaded with particulates and/or dust and therefore this air sample could not be analyzed.
N/A = Not Available.

ECS Technician: John A O'Neil **Date:** 7/5/2020

Attachments



View of K Wing Work Area

Figure 1



View of K Wing Work Area

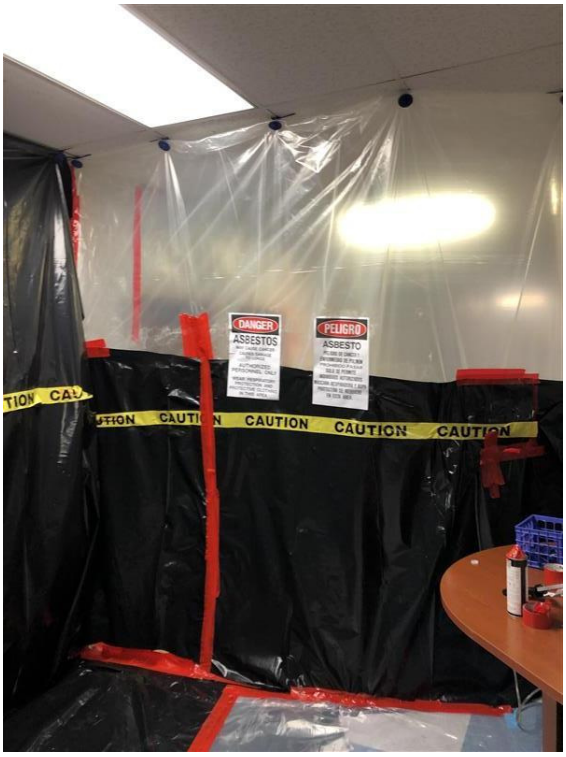
Figure 2

Attachments



View of K Wing Work Area

Figure 3



View of Exterior of K Wing Work Area

Figure 4

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 1519-E2 **Date:** 7/5/2020

Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Work Area Location/Description: K Wing Rooms 2 and 3

	Work Area Location/Description	K Wing Rooms 2 and 3
Administrative	Training Certificates/Licenses	Satisfactory
	Permits	Satisfactory
	EPA/State/Local Notification	Satisfactory
Work Area	Public Access Restricted	Satisfactory
	Warning Signs/Tape Posted	Satisfactory
Negative Air Filtration	Number of Units	2
	Pre-Filters In-Use/Available	Satisfactory
	Exhausted from Work Area	Satisfactory
	Pressure Differential Monometer Operating	Satisfactory
Equipment	HEPA Vacuum Available	Satisfactory
	Amended Water Sprayers	Satisfactory
Decontamination Enclosure	Clean Room	Satisfactory
	Shower Water Available	Satisfactory
	Waste Water Filtration In-Use	Satisfactory
	Disposable Towels	Satisfactory
	Soap	Satisfactory
	Equipment Room	Satisfactory
Personal Protective Equipment	Type of Respirator	Half-Face
	Type of Filters Used	P100
	Disposable Protective Clothing	Satisfactory
	Work Area Acceptable	Yes

Notes:

ECS Technician: Bobby Rhett **Date:** 7/5/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-E2 **Date:** 7/5/2020

Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Work Area Location/Description: K Wing Work Area

	Work Area Location/Description	K Wing Work Area
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	Satisfactory
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	Satisfactory
	Wet Methods In-Use	Satisfactory
	Prompt Clean-Up	Satisfactory
	Adequate Lighting	Satisfactory
	Respiratory Protection	Satisfactory
	Disposable Clothing Worn Properly	Satisfactory
	No Respirators Stored in Work Area	Satisfactory
	Negative Air Filtration In-Use	Satisfactory
	Pre-Filters Clean	Satisfactory
	Exhaust Properly Vented	Satisfactory
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	Satisfactory
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	4
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Bobby Rhett **Date:** 7/5/2020

ECS Mid Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

LETTER OF TRANSMITTAL

July 10, 2020

Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: John Finnigan

RE: **ACPS William Ramsay ES First Floor - ACM Monitoring**
ECS Job # **1519-E2**

Permits:
Location: **5700 Sanger Ave**
Alexandria, VA 22311

CC: Alexandria City Public Schools - Azjargal Bartlett Alexandria City Public Schools - Carol Cheney

ENCL:			
	Field Report # 4	7/6/2020	6 PCM

Diana D. Krass
Environmental Senior Project Manager

Robert Lawrence Rhett
Environmental Project Manager

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5. *The results of samples and/or specimens obtained or prepared for supersequent laboratory testing will be presented in separate reports/documents.*

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**1519-E2**
Report No.	**4**
Day & Date	**Monday 7/6/2020**
Weather	**90 °/ Sunny**
On-Site Time	**6.00**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**6.00**
Re Obs Time	**0.00**

Project	**ACPS William Ramsay ES First Floor - ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks **6 PCM**

Trip Charges*	Tolls/Parking*	Mileage*	Times of	Arrival	Departure
Chargeable Items				**7:00A**	**8:15A**
				9:30A	**10:30A**
				12:15P	**2:00P**
				3:00P	**5:00P**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on-site, as requested, to perform air monitoring and observe asbestos abatement. The material to be removed today is asbestos-containing floor tile and associated mastic from the first floor F wing (Rooms 1, 1A, 2, 3, 4, 6, 7, 8, 9, break room and storage room).

FIRST FLOOR F WING WORK AREA MONITORING

At 7:22 am, PCM air samples were started inside and outside the work area. The sampling pumps were calibrated using a rotameter to 2.0 liters per minute.

At 12:24 pm, the sampling pumps were checked using a rotameter. The flow rate was 2.0 liters per minute. The PCM air samples were stopped and gathered from inside and outside the work area. New PCM air samples were started inside and outside the work area.

At 4:00 pm, the sampling pumps were checked using a rotameter. The flow rate was 2.0 liters per minute. The PCM air samples were stopped and gathered from inside and outside the work area.

GENERAL

The regulated work area was surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

ECS observed the abatement contractor placing the specified asbestos-containing materials in 6-mil polyethylene bags which were double-bagged and sealed in general accordance with the applicable regulations. Waste bags were labeled and stored temporarily within the work area.

By Catey Bourne 1302

The undersigned prepared and analyzed the PCM air sample cassettes for total fiber concentration in general accordance with NIOSH Method 7400. Results were recorded on the PCM Chain of Custody which is attached.

The US EPA and Commonwealth of Virginia re-occupancy limit is 0.01 fibers per cubic centimeter of air (f/cc). The analytical results of the PCM final clearance air samples collected from inside and outside the work area were less than this maximum allowable limit, which meets the project requirements.



PCM Air Sample Location

Work Area Perimeter

William Ramsay Elementary School
5700 Sanger Avenue
Alexandria, VA 22311

WORK AREA SKETCH
K Wing

Scale: NTS

Project No.
47:1519-E2

07/06/20

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-E2
Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Date: 7/7/2020
Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (lpm)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
07062001CB	IWA- First Floor Work Area	7:22 AM	12:24 PM	2.0	2.0	2.0	302	604.0	1.0	100	0.001
07062002CB	OWA- First Floor Work Area	7:22 AM	12:24 PM	2.0	2.0	2.0	302	604.0	3.0	100	0.002
07062003CB	IWA- First Floor Work Area	12:24 PM	4:00 PM	2.0	2.0	2.0	216	432.0	6.0	100	0.007
07062004CB	OWA- First Floor Work Area	12:24 PM	4:00 PM	2.0	2.0	2.0	216	432.0	0.0	100	0.000
07062005CB	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07062006CB	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD

Notes: NFD = None Fibers Detected OWA = Outside Work Area IWA = Inside Work Area

Notes:

ECS Technician: Catey Bourne **Date:** 7/7/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-E2 **Date:** 7/7/2020

Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Work Area Location/Description: First Floor Work Area

	Work Area Location/Description	First Floor Work Area
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	Satisfactory
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	Satisfactory
	Wet Methods In-Use	Satisfactory
	Prompt Clean-Up	Satisfactory
	Adequate Lighting	Satisfactory
	Respiratory Protection	Satisfactory
	Disposable Clothing Worn Properly	Satisfactory
	No Respirators Stored in Work Area	Satisfactory
	Negative Air Filtration In-Use	Satisfactory
	Pre-Filters Clean	Satisfactory
	Exhaust Properly Vented	Satisfactory
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	Satisfactory
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	4
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Bobby Rhett **Date:** 7/7/2020

Attachments



View of the Work Area following Removal of Mastic from the Center of the Room

Figure 1



View of a Worker Removing Mastic from the Edges of a Room in the Work Area

Figure 2

ECS Mid Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

LETTER OF TRANSMITTAL

July 10, 2020

Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: John Finnigan

RE: **ACPS William Ramsay ES First Floor - ACM Monitoring**
ECS Job # **1519-E2**

Permits:
Location: **5700 Sanger Ave**
Alexandria, VA 22311

CC: Alexandria City Public Schools - Azjargal Bartlett Alexandria City Public Schools - Carol Cheney

ENCL: Field Report # 5 7/7/2020 6 PCM

Diana D. Krass
Environmental Senior Project Manager

Robert Lawrence Rhett
Environmental Project Manager

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ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**1519-E2**
Report No.	**5**
Day & Date	**Tuesday 7/7/2020**
Weather	**90 °/ Sunny**
On-Site Time	**10.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**10.50**
Re Obs Time	**0.00**

Project	**ACPS William Ramsay ES First Floor - ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks **6 PCM**

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:30A**	**5:00P**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on-site, as requested, to perform air monitoring and observe asbestos abatement. The material to be removed today is asbestos-containing floor tile and associated mastic from the first floor K wing (Rooms 1, 1A, 2, 3, 4, 5, 6, 7, 8, 9, break room and storage room).

FIRST FLOOR K WING WORK AREA MONITORING

At 6:50 am, PCM air samples were started inside and outside the work area. The sampling pumps were calibrated using a rotameter to 2.0 liters per minute.

At 11:30 am, the sampling pumps were checked using a rotameter. The flow rate was 2.0 liters per minute. The PCM air samples were stopped and gathered from inside and outside the work area. New PCM air samples were started inside and outside the work area.

At 4:12 pm, the sampling pumps were checked using a rotameter. The flow rate was 2.0 liters per minute. The PCM air samples were stopped and gathered from inside and outside the work area.

GENERAL

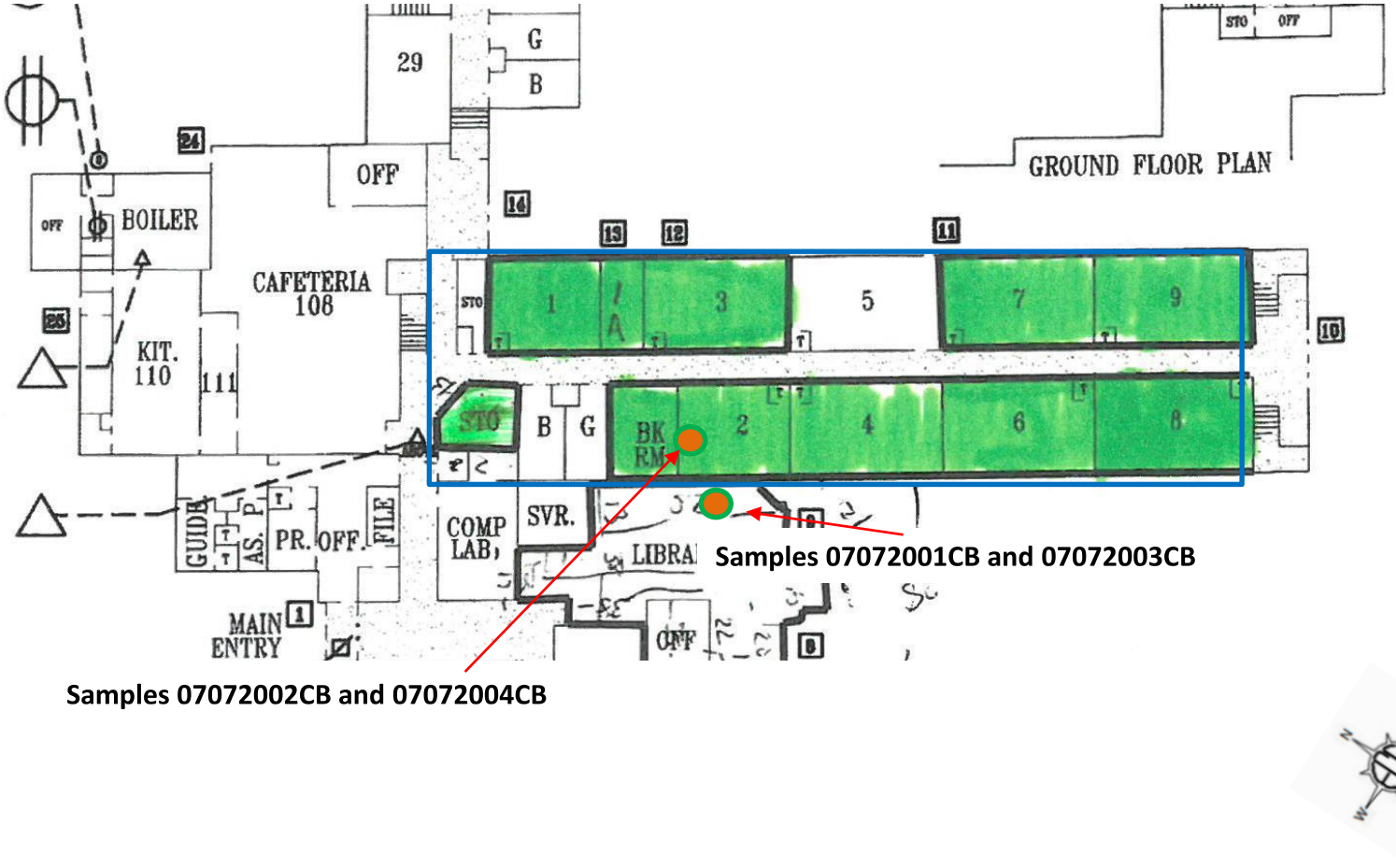
The regulated work area was surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

ECS observed the abatement contractor placing the specified asbestos-containing materials in 6-mil polyethylene bags which were double-bagged and sealed in general accordance with the applicable regulations. Waste bags were labeled and stored temporarily within the work area.

The undersigned prepared and analyzed the PCM air sample cassettes for total fiber concentration in general accordance with NIOSH Method 7400. Results were recorded on the PCM Chain of Custody

which is attached.

The US EPA and Commonwealth of Virginia re-occupancy limit is 0.01 fibers per cubic centimeter of air (f/cc). The analytical results of the PCM air samples collected from outside the work area were reported to be less than this maximum allowable limit, which meets the project requirements. The samples from inside the work area were overloaded with particulates and/pr dust, and therefore could not be analyzed. ECS informed the abatement contractor to use additional water and/or engineering controls.



PCM Air Sample Location

Work Area Perimeter

William Ramsay Elementary School
5700 Sanger Avenue
Alexandria, VA 22311

WORK AREA SKETCH
K Wing

Scale: NTS

Project No.
47:1519-E2

07/07/20

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-E2
Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Date: 7/7/2020
Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (lpm)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
07072001CB	IWA- First Floor Work Area	6:50 AM	11:30 AM	2.0	2.0	2.0	280	560.0	N/A	N/A	
07072002CB	OWA - First Floor Work Area	6:50 AM	11:30 AM	2.0	2.0	2.0	280	560.0	10.0	100	0.009
07072003CB	IWA- First Floor Work Area	11:30 AM	4:12 PM	2.0	2.0	2.0	282	564.0	N/A	N/A	
07072004CB	OWA- First Floor Work Area	11:30 AM	4:12 PM	2.0	2.0	2.0	282	564.0	7.0	100	0.006
07072005CB	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07072006CB	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD

Notes: NFD = None Fibers Detected OWA = Outside Work Area IWA = Inside Work Area

Notes: The samples inside the work area were overloaded with particulates and/or dust, and therefore could not be analyzed. N/A = Not Available.

ECS Technician: Catey Bourne **Date:** 7/7/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-E2 **Date:** 7/7/2020

Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Work Area Location/Description: First Floor Work Area

	Work Area Location/Description	First Floor Work Area
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	Satisfactory
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	Satisfactory
	Wet Methods In-Use	Satisfactory
	Prompt Clean-Up	Satisfactory
	Adequate Lighting	Satisfactory
	Respiratory Protection	Satisfactory
	Disposable Clothing Worn Properly	Satisfactory
	No Respirators Stored in Work Area	Satisfactory
	Negative Air Filtration In-Use	Satisfactory
	Pre-Filters Clean	Satisfactory
	Exhaust Properly Vented	Satisfactory
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	Satisfactory
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	4
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Bobby Rhett **Date:** 7/7/2020

ECS Mid Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

LETTER OF TRANSMITTAL

July 13, 2020

Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: John Finnigan

RE: **ACPS William Ramsay ES First Floor - ACM Monitoring**
ECS Job # **1519-E2**

Permits:
Location: **5700 Sanger Ave**
Alexandria, VA 22311

CC: Alexandria City Public Schools - Azjargal Bartlett Alexandria City Public Schools - Carol Cheney

ENCL: Field Report # 6 7/8/2020 6 PCM

Diana D. Krass
Environmental Senior Project Manager

Robert Lawrence Rhett
Environmental Project Manager

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ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**1519-E2**
Report No.	**6**
Day & Date	**Wednesday 7/8/2020**
Weather	**94 °/ Sunny**
On-Site Time	**4.00**
Lab Time	**0.00**
Travel Time*	**0.75**
Total	**4.75**
Re Obs Time	**0.00**

Project	**ACPS William Ramsay ES First Floor - ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks **6 PCM**

Trip Charges* Tolls/Parking* Mileage* **15**

Chargeable Items	Times of	Arrival	Departure
		7:15A	**9:45A**
		12:15P	**12:30P**
		3:45P	**5:00P**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on-site, as requested, to perform air monitoring and observe asbestos abatement. The material to be removed today is asbestos-containing floor tile and associated mastic from the first floor kindergarten wing.

FIRST FLOOR K WING WORK AREA MONITORING

Between 7:20 am and 7:25 am, PCM air samples were started inside and outside the work area. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

Between 12:20 pm and 12:25 pm, the sampling pumps were checked using a rotameter. The flow rate was 2.5 liters per minute. The PCM air samples were stopped and gathered from inside and outside the work area. A second set of samples were started in similar locations. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

Between 4:45 pm and 4:50 pm, the sampling pumps were checked using a rotameter. The flow rate was 2.5 liters per minute. The PCM air samples were stopped and gathered from inside and outside the work area.

GENERAL

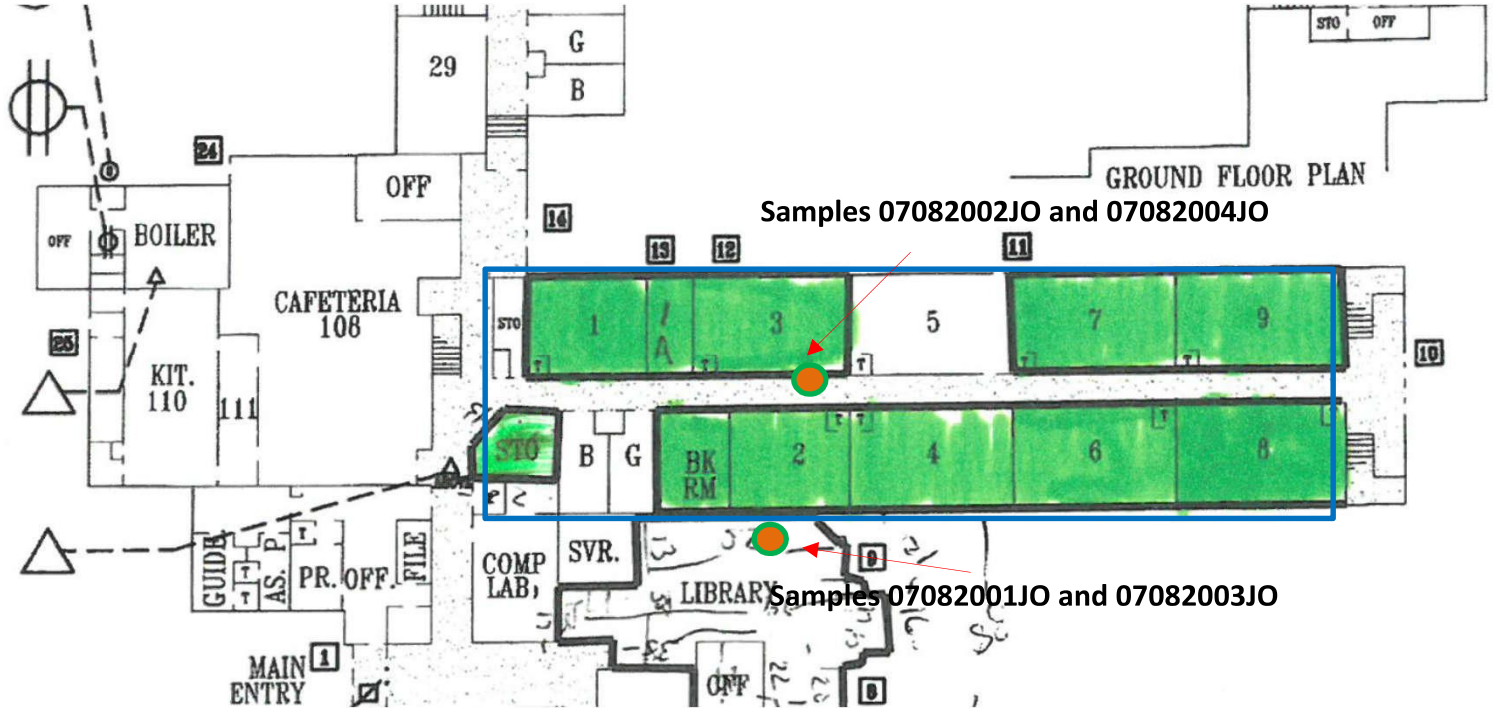
The regulated work area was surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

ECS observed the abatement contractor placing the specified asbestos-containing materials in 6-mil polyethylene bags which were double-bagged and sealed in general accordance with the applicable

regulations. Waste bags were labeled and stored temporarily within the work area.

The undersigned prepared and analyzed the PCM air sample cassettes for total fiber concentration in general accordance with NIOSH Method 7400. Results were recorded on the PCM Chain of Custody which is attached.

The US EPA and Commonwealth of Virginia re-occupancy limit is 0.01 fibers per cubic centimeter of air (f/cc). The analytical results of the PCM air samples collected from inside and outside the work area were reported to be less than this maximum limit, which meets the project requirements.



PCM Air Sample Location

Work Area Perimeter

William Ramsay
5700 Sanger Avenue
Alexandria, VA 22311

WORK AREA SKETCH
K Wing

Scale: NTS

Project No.
47:1519-E2

07/08/20

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-E2
Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Date: 7/12/2020
Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (lpm)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
07082001JO	First Floor K Wing - IWA	7:20 AM	12:20 PM	2.5	2.5	2.5	300	750.0	8.5	100	0.006
07082002JO	First Floor K Wing - OWA	7:25 AM	12:25 PM	2.5	2.5	2.5	300	750.0	0.5	100	0.000
07082003JO	First Floor K Wing - IWA	12:20 PM	4:45 PM	2.5	2.5	2.5	265	662.5	7.0	100	0.005
07082004JO	First Floor K Wing - OWA	12:25 PM	4:50 PM	2.5	2.5	2.5	265	662.5	1.5	100	0.001
07082005JO	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07082006JO	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD

Notes: NFD = None Fibers Detected OWA = Outside Work Area IWA = Inside Work Area

Notes:

ECS Technician: John A O'Neil **Date:** 7/12/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-E2 **Date:** 7/12/2020

Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Work Area Location/Description: First Floor K Wing Work Area

	Work Area Location/Description	First Floor K Wing Work Area
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	Satisfactory
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	Satisfactory
	Wet Methods In-Use	Satisfactory
	Prompt Clean-Up	Satisfactory
	Adequate Lighting	Satisfactory
	Respiratory Protection	Satisfactory
	Disposable Clothing Worn Properly	Satisfactory
	No Respirators Stored in Work Area	Satisfactory
	Negative Air Filtration In-Use	Satisfactory
	Pre-Filters Clean	Satisfactory
	Exhaust Properly Vented	Satisfactory
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	Satisfactory
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	4
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Bobby Rhett **Date:** 7/12/2020

Attachments



View of K Wing Work Area

Figure 1

ECS Mid Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

LETTER OF TRANSMITTAL

July 13, 2020

Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: John Finnigan

RE: **ACPS William Ramsay ES First Floor - ACM Monitoring**
ECS Job # **1519-E2**

Permits:
Location: **5700 Sanger Ave**
Alexandria, VA 22311

CC: Alexandria City Public Schools - Azjargal Bartlett Alexandria City Public Schools - Carol Cheney

ENCL:

Field Report # 7	7/9/2020	6 PCM

Diana D. Krass
Environmental Senior Project Manager

Robert Lawrence Rhett
Environmental Project Manager

Disclaimer

1. *This report (and any attachments) shall not be reproduced except in full without prior written approval of ECS.*
2. *The information in this report relates only to the activities performed on the report date.*
3. *Where appropriate, this report includes statements as to compliance with applicable project drawings, and specifications for the activities, performed on this report date.*
4. *Incomplete or non-conforming work will be reported for future resolution.*
5. *The results of samples and/or specimens obtained or prepared for supersequent laboratory testing will be presented in separate reports/documents.*

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**1519-E2**
Report No.	**7**
Day & Date	**Thursday 7/9/2020**
Weather	**90 °/ Sunny**
On-Site Time	**10.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**10.50**
Re Obs Time	**0.00**

Project	**ACPS William Ramsay ES First Floor - ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks **6 PCM**

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:30A**	**5:00P**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on-site, as requested, to perform air monitoring and observe asbestos abatement. The material to be removed today is asbestos-containing floor tile and associated mastic from the first floor kindergarten wing, Rooms 1, 1A, 2, 3, 4, 5, 6, 7, 8, 9, Break Room, and Storage Room.

FIRST FLOOR K WING WORK AREA MONITORING

Between 7:04 am and 7:07 am, PCM air samples were started inside and outside the work area. The sampling pumps were calibrated using a rotameter to 2.0 liters per minute.

The abatement contractor was observed beginning to do a fine clean of the work area and removing waste bags, waste drums, and equipment from the work area, in preparation for final air samples to be collected.

Between 11:18 am and 11:20 am, the sampling pumps were checked using a rotameter. The flow rate was 2.0 liters per minute. The PCM air samples were stopped and gathered from inside and outside the work area. New PCM air samples were started inside and outside the work area.

Between 4:14 pm and 4:15 pm, the sampling pumps were checked using a rotameter. The flow rate was 2.0 liters per minute. The PCM air samples were stopped and gathered from inside and outside the work area.

GENERAL

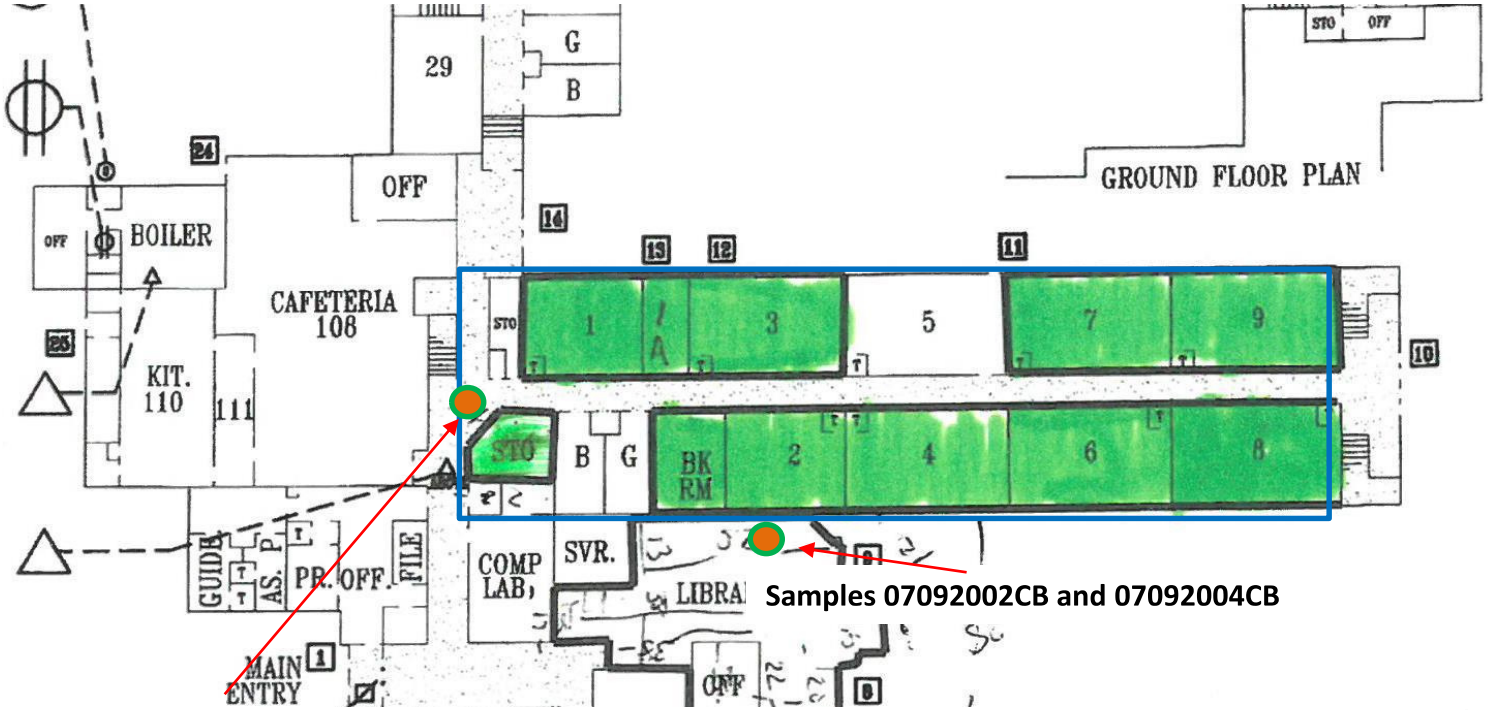
The regulated work area was surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

ECS observed the abatement contractor placing the specified asbestos-containing materials in 6-mil

polyethylene bags and waste drums which were double-bagged and sealed in general accordance with the applicable regulations. Waste bags and drums were labeled and placed in a temporary storage area.

The undersigned prepared and analyzed the PCM air sample cassettes for total fiber concentration in general accordance with NIOSH Method 7400. Results were recorded on the PCM Chain of Custody which is attached.

The US EPA and Commonwealth of Virginia re-occupancy limit is 0.01 fibers per cubic centimeter of air (f/cc). The analytical results of the PCM air samples collected from inside and outside the work area were reported to be less than this maximum limits, which meets the project requirements.



PCM Air Sample Location

Work Area Perimeter

William Ramsay Elementary School
5700 Sanger Avenue
Alexandria, VA 22311

WORK AREA SKETCH
K Wing

Scale: NTS

Project No.
47:1519-E2

07/09/20

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-E2
Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Date: 7/9/2020
Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (lpm)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
07092001CB	IWA- First Floor Hallway	7:04 AM	11:20 AM	2.0	2.0	2.0	256	512.0	6.0	100	0.006
07092002CB	OWA- First floor hallway	7:07 AM	11:18 AM	2.0	2.0	2.0	251	502.0	2.5	100	0.002
07092003CB	IWA- First floor hallway	11:20 AM	4:14 PM	2.0	2.0	2.0	294	588.0	3.0	100	0.003
07092004CB	OWA- First floor hallway	11:18 AM	4:15 PM	2.0	2.0	2.0	297	594.0	0.0	100	0.000
07092005CB	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07092006CB	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD

Notes: NFD = None Fibers Detected OWA = Outside Work Area IWA = Inside Work Area

Notes:

ECS Technician: Catey Bourne **Date:** 7/9/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-E2 **Date:** 7/9/2020

Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Work Area Location/Description: First Floor Kindergarten Hallway

	Work Area Location/Description	First Floor Kindergarten Hallway
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	Satisfactory
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	Satisfactory
	Wet Methods In-Use	Satisfactory
	Prompt Clean-Up	Satisfactory
	Adequate Lighting	Satisfactory
	Respiratory Protection	Satisfactory
	Disposable Clothing Worn Properly	Satisfactory
	No Respirators Stored in Work Area	Satisfactory
	Negative Air Filtration In-Use	Satisfactory
	Pre-Filters Clean	Satisfactory
	Exhaust Properly Vented	Satisfactory
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	Satisfactory
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	4
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Bobby Rhett **Date:** 7/9/2020

Attachments



View of work area

Figure 1

ECS Mid Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

LETTER OF TRANSMITTAL

July 13, 2020

Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: John Finnigan

RE: **ACPS William Ramsay ES First Floor - ACM Monitoring**
ECS Job # **1519-E2**

Permits:
Location: **5700 Sanger Ave**
Alexandria, VA 22311

CC: Alexandria City Public Schools - Azjargal Bartlett Alexandria City Public Schools - Carol Cheney

ENCL:			
	Field Report # 8	7/10/2020	5 PCM 5 TEM

Diana D. Krass
Environmental Senior Project Manager

Robert Lawrence Rhett
Environmental Project Manager

Disclaimer

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2. *The information in this report relates only to the activities performed on the report date.*
3. *Where appropriate, this report includes statements as to compliance with applicable project drawings, and specifications for the activities, performed on this report date.*
4. *Incomplete or non-conforming work will be reported for future resolution.*
5. *The results of samples and/or specimens obtained or prepared for supersequent laboratory testing will be presented in separate reports/documents.*

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**1519-E2**
Report No.	**8**
Day & Date	**Friday 7/10/2020**
Weather	**92 °/ Sunny**
On-Site Time	**6.25**
Lab Time	**0.00**
Travel Time*	**1.75**
Total	**8.00**
Re Obs Time	**0.00**

Project	**ACPS William Ramsay ES First Floor - ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks **5 PCM 5 TEM**

Trip Charges* Tolls/Parking* Mileage* **60**

Chargeable Items

Times of	Arrival	Departure
	7:30A	**10:30A**
	11:30A	**2:30P**
	3:45P	**4:00P**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived on-site, as requested, to perform air monitoring and observe asbestos abatement. The material removed from the work area was asbestos-containing floor tile and associated mastic from the first floor kindergarten wing. The work scheduled for today was fine cleaning the work area and performing final clearance.

FIRST FLOOR K WING WORK AREA MONITORING

Between 7:40 am and 7:45 am, PCM air samples were started inside and outside the work area. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

Between 10:30 am and 10:35 am, the sampling pumps were checked using a rotameter. The flow rate was 2.5 liters per minute. The PCM air samples were stopped and gathered from inside and outside the work area.

The abatement contractor stated the specified materials had been removed from the regulated work area and requested a visual survey to confirm compliance. The Final Clearance Visual Survey Checklist was completed and is attached to this report.

Following the successful completion of the final clearance visual survey, the abatement contractor applied an encapsulant to surfaces within the regulated work area. After waiting 60 minutes for the encapsulant to dry, aggressive air sampling was performed. Five (5) TEM air samples were started within the regulated work area and Five (5) TEM air samples were started outside the work area. The sampling pumps were calibrated using a rotameter to 9.5 liters per minute. One field blank sample was opened within the work area for 30 seconds. One field blank sample was opened outside the work area for 30 seconds.

At 2:10 pm, the sampling pumps were checked using a rotameter after the air within the regulated work area was sampled using TEM cassettes for 130 minutes at 9.5 liters per minute. The sampling cassettes, including the two field blanks and one sealed blank were labeled with unique identification and transported to EMSL Analytical Laboratory, Inc. (EMSL) in Beltsville, Maryland for analysis. A copy of the chain of custody has been attached.

The US EPA and Commonwealth of Virginia maximum allowable airborne asbestos concentration from within the work area is 70 structures per millimeter squared (s/mm2). In order to be deemed acceptable, the average of the interior samples analyzed must have asbestos concentrations of 70 s/mm2 or less. EMSL informed ECS that the analytical results of the TEM final clearance air samples collected from the K Wing work area were less than this maximum allowable concentration. The client and abatement contractor were informed of the results. A copy of the laboratory report is attached.

GENERAL

The regulated work area was surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

ECS observed the abatement contractor placing the specified asbestos-containing materials in 6-mil polyethylene bags which were double-bagged and sealed in general accordance with the applicable regulations. Waste bags were labeled and placed in the contractor's box truck for removal.

The undersigned prepared and analyzed the PCM air sample cassettes for total fiber concentration in general accordance with NIOSH Method 7400. Results were recorded on the PCM Chain of Custody which is attached.



PCM Air Sample Location

TEM Finals Sample Location

Work Area Perimeter

William Ramsay
5700 Sanger Avenue
Alexandria, VA 22311

WORK AREA SKETCH
K Wing

Scale: NTS

Project No.
47:1519-E2

07/10/20

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-E2
Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Date: 7/12/2020
Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (lpm)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
07102014JO	First Floor K Wing - IWA	7:40 AM	10:30 AM	2.5	2.5	2.5	170	425.0	0.0	100	0.000
07102015JO	First Floor K Wing - OWA	7:40 AM	10:30 AM	2.5	2.5	2.5	170	425.0	0.0	100	0.000
07102016JO	First Floor K Wing - OWA	7:25 AM	10:35 AM	2.5	2.5	2.5	190	475.0	0.0	100	0.000
07102017JO	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07102018JO	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD

Notes: NFD = None Fibers Detected OWA = Outside Work Area IWA = Inside Work Area

Notes:

ECS Technician: John A O'Neil **Date:** 7/12/2020

EMSL Analytical, Inc.

10768 Baltimore Avenue Beltsville, MD 20705

Tel/Fax: (301) 937-5700 / (301) 937-5701

http://www.EMSL.com / beltsvillelab@emsl.com

EMSL Order: 192006651
Customer ID: ECMA78
Customer PO:
Project ID:

Attention: Bobby Rhett
ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151
Project: 1519 E2 WILLIAM RAMSEY

Phone: (703) 471-8400
Fax: (703) 471-8400
Received Date: 07/10/2020 15:38 PM
Analysis Date: 07/10/2020
Collected Date: 07/10/2020

Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Appendix A to Subpart E

Sample	Location	Volume (Liters)	Area Analyzed (mm²)	Non Asb	Asbestos Type(s)	#Structures ≥0.5µ < 5µ	#Structures ≥5µ	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm²)	Asbestos Concentration (S/cc)
07102001OJ *192006651-0001*	IWA FINAL CLEARENCE K WING WORK AREA	1235.00	0.0650	0	None Detected	0	0	0.0048	<15.00	<0.0048
07102002OJ *192006651-0002*	IWA FINAL CLEARENCE K WING WORK AREA	1235.00	0.0650	0	None Detected	0	0	0.0048	<15.00	<0.0048
07102003OJ *192006651-0003*	IWA FINAL CLEARENCE K WING WORK AREA	1235.00	0.0650	0	None Detected	0	0	0.0048	<15.00	<0.0048
07102004OJ *192006651-0004*	IWA FINAL CLEARENCE K WING WORK AREA	1235.00	0.0650	0	None Detected	0	0	0.0048	<15.00	<0.0048
07102005OJ *192006651-0005*	IWA FINAL CLEARENCE K WING WORK AREA	1235.00	0.0650	0	None Detected	0	0	0.0048	<15.00	<0.0048

Analyst(s)

George Malone (5)

Joe Centifonti, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. Results reported in both structures/cm3 and structures/mm2 are dependent on the volume of air sampled and measured by non-laboratory personnel are not the responsibility of EMSL and are not covered by the laboratory's NVLAP accreditation. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request.

Samples analyzed by EMSL Analytical, Inc. Beltsville, MD NVLAP Lab Code 200293-0

Initial report from: 07/10/2020 23:55 PM

OrderID: 192006651

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(lab use only)*: 192006651

PHONE:
FAX:

Company Name : ECS Mid-Atlantic		**EMSL Customer ID:**	
Street: Thunderbolt Place Suite 100		**City:** Chantilly	**State or Province:** VA
Zip/Postal Code: 20151	**Country:** USA	**Telephone #:**	**Fax #:**
Report To (Name): Bobby Rhett		**Please Provide Results via:** ☐ Fax ☒ Email	
email Address: BRhett@ecslimited.com		**Purchase Order Number:**	
Client Project ID: 1519-E2 William Ramsay		**EMSL Project ID** *(internal use only)*:	
State or Province Collected: VA		**CT only** ☐ **Commercial/Taxable** ☐ **Residential/Tax Exempt**	

EMSL-Bill to: ☐ Same ☐ Different - *If bill to is different note instructions in comment. Third party billing requires written authorization from third party*

Turnaround Time (TAT) Options Please Check

☐ 3 Hr[1]	☐ 4-4.5Hr[1] AHERA Only	☐ 6 Hr[1]	☒ 24 Hr	☐ 32 Hr[2]	☐ 48 Hr	☐ 72 Hr	☐ 96 Hr	☐ 1 Week	☐ 2 Week

[1]*Premium Service Charge applies for 3 Hour TEM AHERA or EPA Level II TAT – you will be asked to sign an authorization form. TEM Air 3-6 Hour, please call ahead to schedule*
[2] *32 Hour TAT available for select tests only; samples must be submitted by 11:30 am.*

PCM - Air
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☐ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable - NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NYS 198.8 SOF-V
- ☐ NIOSH 9002 (<1%)

TEM – Air[1]
- ☒ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)*

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Settled Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil – Rock – Vermiculite (reporting limit)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)*
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep
- ☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM

**Lower reporting limits avaialble on request*

Other test (please specify):

☐ **Stop At First Positive** *(clearly identify homogenous areas below)*

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Sampler's Name: John O'Neil **Sampler's Signature:**

Sample #	Sample Description/Location	Volume, Area or Homogenous Area	Date/Time Sampled
07102001JO	IWA/Final Clearance - K Wing Work Area	1235L	7/10/20
07102002JO	IWA/Final Clearance - K Wing Work Area	1235L	7/10/20
07102003JO	IWA/Final Clearance - K Wing Work Area	1235L	7/10/20
07102004JO	IWA/Final Clearance - K Wing Work Area	1235L	7/10/20
07102005JO	IWA/Final Clearance - K Wing Work Area	1235L	7/10/20

Client Sample # (s): **Total # of Samples:** 13

Relinquished by (Client): **Date:** 7/10/20 **Time:** 3:45

Received by (Lab): Naumic **Date:** 7/10/2020 **Time:** 3:58

Comments/Special Instructions: Assessor Air sampling was performed

Analyse IWA Samples only

Controlled Document – COC-05 Asbestos – R12.1 – 11/01/2019

EMSL Analytical, Inc.'s (DBA: LA Testing) Laboratory Terms and Conditions are incorporated into this chain of custody by reference in their entirety. Submission of samples to EMSL Analytical Inc. constitutes acceptance and acknowledgment of all terms and conditions.

OrderID: 192006651

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*:

PHONE:
FAX:

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
07102006JO	OWA/Final Clearance - K Wing Work Area	1235L	7/10/20
07102007JO	OWA/Final Clearance - K Wing Work Area	1235L	7/10/20
07102008JO	OWA/Final Clearance - K Wing Work Area	1235L	7/10/20
07102009JO	OWA/Final Clearance - K Wing Work Area	1235L	7/10/20
07102010JO	OWA/Final Clearance - K Wing Work Area	1235L	7/10/20
07102011JO	Field Blank (Opened 30 sec Before Entrance)	N/A	7/10/20
07102012JO	Field Blank (Opened 30 sec inside containment)	N/A	7/10/20
07102013JO	Field Blank (Not Opened)	N/A	7/10/20

***Comments/Special Instructions:**

Sample Instructions

Controlled Document – COC-05 Asbestos – R12.1 – 11/01/2019

EMSL Analytical, Inc.'s (DBA: LA Testing) Laboratory Terms and Conditions are incorporated into this chain of custody by reference in their entirety. Submission of samples to EMSL Analytical Inc. constitutes acceptance and acknowledgment of all terms and conditions.

Attachments



View of K Wing Work Area during Final Visual Survey

Figure 1



View of K Wing Work Area during Final Visual Survey

Figure 2

Attachments



View of K Wing Work Area during Final Visual Survey

Figure 3

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-E2 **Date:** 7/12/2020

Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Work Area Location/Description: First Floor K Wing

	Work Area Location/Description	First Floor K Wing
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	Satisfactory
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	Satisfactory
	Wet Methods In-Use	Satisfactory
	Prompt Clean-Up	Satisfactory
	Adequate Lighting	Satisfactory
	Respiratory Protection	Satisfactory
	Disposable Clothing Worn Properly	Satisfactory
	No Respirators Stored in Work Area	Satisfactory
	Negative Air Filtration In-Use	Satisfactory
	Pre-Filters Clean	Satisfactory
	Exhaust Properly Vented	Satisfactory
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	Satisfactory
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	3
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Bobby Rhett **Date:** 7/12/2020

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 1519-E2 **Date:** 7/12/2020

Project Address: 5700 Sanger Ave
Alexandria, VA-22311

Work Area Location/Description: First Floor K Wing

	Work Area Location/Description	First Floor K Wing
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	Satisfactory
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	Floors	Satisfactory
	Walls	Satisfactory
	Ceiling	Satisfactory
	Windows	Satisfactory
	Mechanical Equipment	Satisfactory
	Ducts	Satisfactory
	Pipes	Satisfactory
	Lighting	Satisfactory
	Other Surfaces	Satisfactory
	Specified ACM Removed	Satisfactory
	Work Area Encapsulated	Satisfactory
	Negative Air Filtration Functioning	Satisfactory
	Waste Bags Removed	Satisfactory
	Final Clearance Air Sample Type	TEM
	Number of Samples Collected	13
	Sample Volume (liters)	1235
	Work Area Acceptable	Yes

Notes:

ECS Technician: Bobby Rhett **Date:** 7/12/2020

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

LETTER OF TRANSMITTAL

August 20, 2015

Alexandria City Public Schools
4701 Seminary Road
Alexandria, VA 22304

ATTN: Mr Derrick Fulcher

RE: **ACPS - William Ramsey Elementary School Abatement**

ECS Job # **01:10976-A**

Permits:

Location: **5700 Sanger Avenue**
Alexandria, VA

We are enclosing:

X	Materials Engineering Division Reports
X	For your use
X	As requested

CC: **Waco, Inc - Steve E. Williams**

ENCL:

Field Report # 2	08/18/2015	7 PCMs and 5 TEMs

Stephen R. Geraci
Environmental Department Manager

Joanna Vivanco
Senior Environmental Project Manager

This report (and any included attachments) shall not be reproduced, except in full, without the prior written approval of ECS.

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**01:10976-A**
Report No.	**2**
Day & Date	**Tuesday 08/18/2015**
Weather	**88°/ Sunny**
On-Site Time	**8.50**
Lab Time	**0.25**
Travel Time*	**0.00**
Total	**8.75**
Re Obs.Time	**0.00**

Project	**ACPS - William Ramsey Elementary School Abatement**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools - Derrick Fulcher**

Remarks **7 PCMs and 5 TEMs**

Trip Charges* Tolls/Parking* Mileage*

Chargeable Items

Times of	Arrival	Departure
	06:00A	**11:00A**
	12:00P	**03:30P**

* Travel time and mileage will be billed in accordance with the contract.

Summary of Services Performed (field test data, locations, elevations & depths are estimates) & Individuals Contacted.

The undersigned arrived onsite, as requested, to perform air monitoring and observe asbestos abatement. The material to be removed today was floor mastic from the cafeteria - serving area.

Photographs for today's regulated work area are attached to this report.

WORK AREA MONITORING

Between 6:15 and 6:20 am, two (2) PCM air samples were started outside the work area at decontamination enclosure and critical barrier, and another PCM air sample was started inside the work area. The sampling pumps were calibrated using a rotameter to 2.0 liters per minute.

The abatement contractor workers started removing floor mastic, using chemical remover, inside the regulated work area.

The regulated work area was surveyed to evaluate compliance with applicable regulations. The Daily Work Area survey checklist was completed and is attached to this report.

The abatement contractor was placing material in 6-mil polyethylene bags which were double-bagged and sealed in accordance with applicable regulations. Waste bags were labeled and placed in the abatement contractor's transport.

At 11:00 am, the abatement contractor workers were taking their lunch break.

Between 10:25 and 10:30 am, the sampling pumps were calibrated using a rotameter. The flow

rate was 2.0 liters per minute. The air sampling pumps were stopped, and the cassettes were gathered for analysis.

The abatement contractor stated the materials had been removed from the regulated work area and requested a visual survey to confirm compliance. The Final Clearance Visual Survey checklist was completed and is attached to this report.

Following the successful completion of the final clearance visual survey, the abatement contractor applied an encapsulant to surfaces within the regulated work area. After waiting 120 minutes for the encapsulant to dry, five (5) TEM aggressive air samples were started within the regulated work area and five (5) TEM air samples were started outside the work area. The sampling pumps were calibrated using a rotameter to 8.0 liters per minute. One blank sample was opened within the work area for 60 seconds. One blank sample was opened outside the work area for 60 seconds.

Between 3:10 and 3:15 pm, the sampling pumps were calibrated using a rotameter after the air within and outside the regulated work area was sampled using TEM cassettes for 150 minutes at 8.0 liters per minute. The sampling cassettes were labeled with unique identification and transported to EMSL Analytical, Inc. in Beltsville, Maryland for analysis. A copy of the chain of custody has been attached to this report.

The Commonwealth of Virginia maximum allowable airborne asbestos concentration is 70 structures per millimeter squared (s/mm2). In order to be deemed acceptable, the average of all samples analyzed must have asbestos concentrations less than 70 s/mm2. EMSL Analytical, Inc. informed ECS that the analytical results of the TEM final clearance aggressive air samples collected from cafeteria serving area found the airborne asbestos fiber concentrations to be less than the maximum allowable limits set by applicable regulations which meets the project requirements. The client and abatement contractor supervisor, Mr. Ever Martinez, were informed of the results. A copy of the laboratory report is attached.

PERSONAL EXPOSURE MONITORING

At 6:30 am, a PCM air sample was started on the abatement contractor worker, Mr. Jaime Cabrera (xxx-xx-8588), to monitor personal exposure during floor mastic removal using chemical remover. The personal exposure sampling pump was calibrated using a rotameter to 2.0 liters per minute.

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No. **01:10976-A**
Report No. **2**
Project **ACPS - William Ramsey Elementary School Abatement**
Day & Date **Tuesday 08/18/2015**

At 7:00 am, the personal sampling pump on Mr. Cabrera was calibrated using a rotameter. The flow rate was 2.0 liters per minute. The air sampling pump was stopped, the cassette was gathered for analysis, and a new PCM sample was started on Mr. Cabrera to continue monitoring personal exposure during floor mastic removal using chemical remover.

At 10:20 am, the personal sampling pump on Mr. Cabrera was calibrated using a rotameter. The flow rate was 2.0 liters per minute. The air sampling pump was stopped, and the cassette was gathered for analysis.

GENERAL

The undersigned prepared and analyzed the PCM air sample cassettes for total fiber concentration. Results were recorded on the PCM Chain of Custody and Field Data Sheet which is attached.

The Occupational Safety and Health Administration (OSHA) 8-hour Time Weighted Average (TWA) is 0.1 fiber per cubic centimeter (f/cc) and the 30-minute Excursion Limit (EL) is 1.0 fiber per cubic centimeter (f/cc). The analytical results of the PCM air samples collected on the abatement contractor worker, Mr. Jaime Cabrera (xxx-xx-8588), during floor mastic removal using chemical remover found the airborne fiber concentrations to be less than the TWA and EL set by OSHA.

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 10976-A **Date:** 08/18/2015

Project Address: 5700 Sanger Avenue
Alexandria, VA 22311

Work Area Location/Description: Cafeteria Serving Area

Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	N/A
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	Satisfactory
	Wet Methods In-Use	Satisfactory
	Prompt Clean-Up	Satisfactory
	Adequate Lighting	Satisfactory
	Respiratory Protection	Satisfactory
	Disposable Clothing Worn Properly	Satisfactory
	No Respirators Stored in Work Area	Satisfactory
	Negative Air Filtration In-Use	Satisfactory
	Pre-Filters Clean	Satisfactory
	Exhaust Properly Vented	Satisfactory
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	Satisfactory
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	5 (3 Work Area and 2 Personal Exposure)
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:
Class II Work: No Shower Required.
Bucket with water was provided by the contractor for washing station.

ECS Technician: Suhel Shafaat **Date:** 08/18/2015

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 10976-A **Date:** 08/18/2015

Project Address: 5700 Sanger Avenue
Alexandria, VA 22311

Work Area Location/Description: Cafeteria Serving Area

Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	N/A
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	Floors	Satisfactory
	Walls	Satisfactory
	Ceiling	Satisfactory
	Windows	Satisfactory
	Mechanical Equipment	N/A
	Ducts	N/A
	Pipes	N/A
	Lighting	Satisfactory
	Other Surfaces	Satisfactory
	Specified ACM Removed	Satisfactory
	Work Area Encapsulated	Satisfactory
	Negative Air Filtration Functioning	Satisfactory
	Waste Bags Removed	Satisfactory
	Final Clearance Air Sample Type	TEM
	Number of Samples Collected	13
	Sample Volume (liters)	1200
	Work Area Acceptable	Yes

Notes: Work area encapsulated at 10:40 am.

ECS Technician: Suhel Shafaat **Date:** 08/18/2015

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
PERSONNEL EXPOSURE

Project Number: 10976-A

Project Address: 5700 Sanger Avenue
Alexandria, VA 22311

Date: 08/18/2015

Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (min)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
08181501P	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08181502P	* Mr. Jaime Cabrera (xxx-xx-8588) / Removing Floor Mastic using Chemical Remover	6:30 AM	7:00 AM	2.0	2.0	2.0	30	60.0	1.0	100	0.008
08181503P	Mr. Jaime Cabrera (xxx-xx-8588) / Removing Floor Mastic using Chemical Remover	7:00 AM	10:20 AM	2.0	2.0	2.0	200	400.0	1.0	100	0.001

NFD = None Fibers Detected; OWA = Outside Work Area; IWA = Inside Work Area; FC = Final Clearance

Notes:

* = Excursion Limit (EL) Sample
OSHA 8-hour TWA = 0.0009 f/cc.
The Occupational Safety and Health Administration (OSHA) 8-hour Time Weight Average (TWA) is 0.1 fiber per cubic centimeter (f/cc) and the 30-minute Excursion Limit (EL) is 1.0 fiber per cubic centimeter (f/cc).

ECS Technician: Suhel Shafaat

Date: 08/18/2015

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 10976-A

Project Address: 5700 Sanger Avenue
Alexandria, VA 22311

Date: 08/18/2015

Page: 1 of 1

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (min)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
08181501SSPCM	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08181502SSPCM	OWA / Kitchen at Decontamination Enclosure Entry	6:15 AM	10:25 AM	2.0	2.0	2.0	250	500.0	1.0	100	0.001
08181503SSPCM	OWA / Cafeteria at Critical Barrier	6:17 AM	10:27 AM	2.0	2.0	2.0	250	500.0	1.0	100	0.001
08181504SSPCM	IWA / Cafeteria Serving Area	6:20 AM	10:30 AM	2.0	2.0	2.0	250	500.0	2.0	100	0.002

NFD = None Fibers Detected; OWA = Outside Work Area; IWA = Inside Work Area; FC = Final Clearance

Notes: The Commonwealth of Virginia re-occupancy limit is 0.01 fibers per cubic centimeter (f/cc) of air.

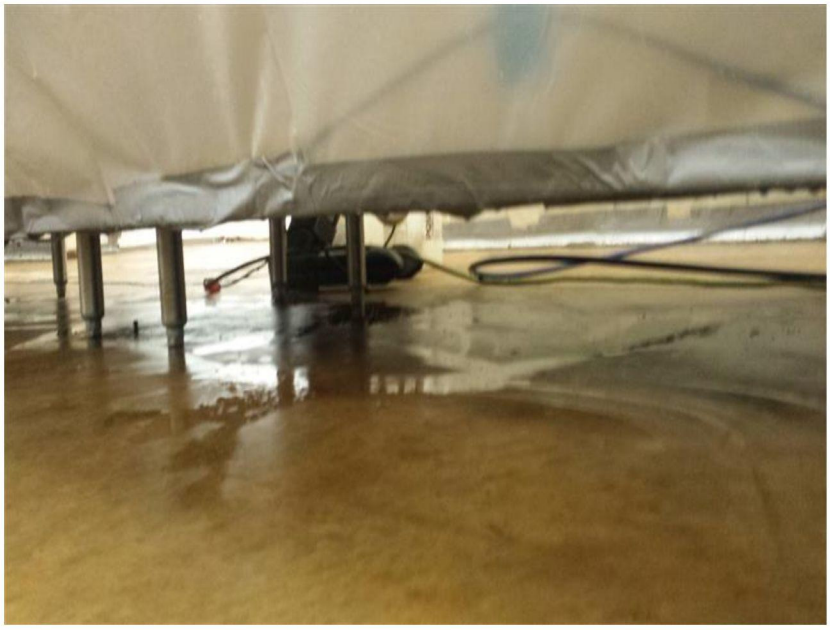
ECS Technician: Suhel Shafaat

Date: 08/18/2015

ATTACHMENTS



Attachment No. 1
PHOTO-Inside Regulated Work Area within Cafeteria Serving Area following Removal



Attachment No. 2
PHOTO-Concrete Slab following Floor Mastic Removal under Buffet Table within Cafeteria Serving Area



Attachment No. 3
PHOTO-Concrete Slab following Floor Mastic Removal from Serving Area inside Regulated Work Area

EMSL Analytical, Inc.
10768 Baltimore Avenue, Beltsville, MD 20705
Phone/Fax: (301) 937-5700 / (301) 937-5701
http://www.EMSL.com beltsvillelab@emsl.com

EMSL Order: 191510063
CustomerID: ECMA78
CustomerPO:
ProjectID:

Attn: **Joanna Vivanco**
ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151

Phone: (703) 471-8400
Fax:
Received: 08/18/15 4:00 PM
Analysis Date: 8/19/2015
Collected: 8/18/2015

Project: **WILLIAM RAMSEY ELEM. SCHOOL 10976**

Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Appendix A to Subpart E

Sample	Location	Volume (Liters)	Area Analyzed (mm^2)	Non Asb	Asbestos Type(s)	# Structures ≥ 0.5µ < 5µ	# Structures ≥5µ	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm^2)	Asbestos Concentration (S/cc)
081815-01SS *191510063-0001*	FC-IWA/CAFETERIA KTICHEN	1200.00	0.0650	0	None Detected			0.0049	**<15.00**	**<0.0049**
081815-02SS *191510063-0002*	FC-IWA/CAFETERIA KTICHEN	1200.00	0.0650	0	None Detected			0.0049	**<15.00**	**<0.0049**
081815-03SS *191510063-0003*	FC-IWA/CAFETERIA KTICHEN	1200.00	0.0650	0	None Detected			0.0049	**<15.00**	**<0.0049**
081815-04SS *191510063-0004*	FC-IWA/CAFETERIA KTICHEN	1200.00	0.0650	0	None Detected			0.0049	**<15.00**	**<0.0049**
081815-05SS *191510063-0005*	FC-IWA/CAFETERIA KTICHEN	1200.00	0.0650	0	None Detected			0.0049	**<15.00**	**<0.0049**

Analyst(s)

Joe Centifonti (5)

Joe Centifonti, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. Results reported in both structures/cm3 and structures/mm2 are dependent on the volume of air sampled and measured by non-laboratory personnel are not the responsibility of EMSL and are not covered by the laboratory's NVLAP accreditation. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request.

Samples analyzed by EMSL Analytical, Inc. Beltsville, MD NVLAP Lab Code 200293-0

Initial report from 08/19/2015 10:57:08

OrderID: 191510063

Asbestos Chain of Custody

EMSL Order Number (*Lab Use Only*): 191510063

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

EMSL ANALYTICAL, INC.
10768 BALTIMORE AVE
BELTSVILLE, MD 20705
PHONE: (301) 937-5700
FAX: (301) 937-5701

Company: ECS MID-ATLANTIC, LLC	**EMSL-Bill to:** ☐ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 14026 THUNDERBOLT PL, STE 100	
City: Chantilly **State/Province:** VA	**Zip/Postal Code:** 20151 **Country:** USA
Report To (Name): Joanna Vivanco	**Telephone #:** (571) 437-5398
Email Address: jvivanco@ecslimited.com	**Fax #:** N/A **Purchase Order:** N/A
Project Name/Number: William Ramsey Elem School/10276	**Please Provide Results:** ☐ Fax ☒ Email
U.S. State Samples Taken: VA	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☒ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air ☐ Check if samples are from NY
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☐ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ **4-4.5hr TAT (AHERA only)**
- ☒ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM CARB 435 - A (0.25% sensitivity)
- ☐ PLM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - C (0.01% sensitivity)
- ☐ TEM Qual. via Filtration Technique
- ☐ TEM Qual. via Drop-Mount Technique

Other:
- ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group** | **Filter Pore Size (Air Samples):** ☐ 0.8µm ☐ 0.45µm

Samplers Name: Suhel Shafaat **Samplers Signature:**

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
081815-0155	FC-IWA/ Cafeteria kitchen	1,200 L	8/18/15 / 12:40 - 3:00pm
0255	FC-IWA/		
0355	FC-IWA/		
0455	FC-IWA/		
0555	FC-IWA/		
0655	FC-OWA / Cafeteria kitchen		12:45-3:15PM
0755	FC-OWA /		
0855	FC-OWA /		

Client Sample # (s): 081815 0155 - 081815 1355 **Total # of Samples:** 13

Relinquished (Client): **Date:** 8/18/15 **Time:** 4:PM

Received (Lab): Walton **Date:** 8/18/15 **Time:** 4pm

Comments/Special Instructions: Please, only analyze first five samples collected inside work area (IWA) (Aggressive Air Sampling)

OrderID: 191510063

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*:

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
081815-0955	FC-OWA / Cafeteria kitchen	1/200L	8/18/15
1055	FC-OWA ↓	↓	↓
1155	Blank for IWA	N/A	
1255	Blank for OWA	↓	
1355	Sealed Blank	↓	↓

*Comments/Special Instructions: