AHERA - THREE YEAR REINSPECTION



GEORGE WASHINGTON MS

1005 MOUNT VERNON AVENUE
ALEXANDRIA, VIRGINIA 22301

ECS PROJECT NO. 47:11652-E4-10

FOR: ALEXANDRIA CITY PUBLIC SCHOOLS

AUGUST 21, 2025

August 21, 2025

Mr. Lee Conroy
Alexandria City Public Schools
1710 North Beauregard Street
Alexandria, Virginia 22311

ECS Project No. 47:11652-E4-10

Reference: AHERA - Three Year Reinspection, George Washington MS, 1005 Mount Vernon 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 George Washington MS located at 1005 Mount Vernon 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:

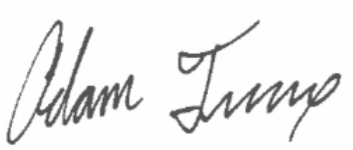
- **Plaster Walls located in Custodial Closets and at the entry to the Auditorium were observed as damaged.**
- **Mudded Pipe Insulation located in the Storage Room in the South Boiler Room was observed as damaged in the opening of the wall.**
- **Interior Tan Door Caulk located in the Cafeteria Janitor's Office at the Cafe Entry was observed as damaged and was painted over.**

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



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1.0 SITE DESCRIPTION

The subject property consists of George Washington MS, a three-story school building located at 1005 Mount Vernon Avenue in Alexandria, Virginia. The school was originally constructed in 1950 and encompasses approximately 286,000 square feet. 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 a review of historical documentation, the following materials were previously identified as asbestos-containing and have since been abated.

- Brown Dot Mastic associated with 1' x 1' Ceiling Tiles within the Cafeteria (limited area) and Black Wall Mastic within the Staff Locker Room Area and Hallway Adjacent to the Lockers (limited area) (ECS PROJECT NO. 47:1519-C3), and Mastic associated with HVAC Ductwork Insulation in the Cafeteria/Kitchen area in 2018 (ECS PROJECT NO. 47:1519-C4).

- Asbestos-containing Floor Tiles and Mastic within Rooms A130, A132, A134, A136, A138, the stairwell near entrance 34/35, C116, C118, C120, and C122 (ECS PROJECT NO.47:1519-C7), and asbestos-containing pipe insulation from Rooms D115, C116, C119, C121, C122, C123, C125, C126, C131, C132, C133, C135, C136, C138, the copy room, the hallway between classroom C116 and C122, the hallway between classroom C126 and C132, and the hallway between C119 and the copy room on the first floor in 2021 (ECS PROJECT NO. 47:1519-CC).

- Asbestos-containing Floor Tiles and Mastic from the first, second, and third floor A-wing hallways, the third floor stairwell near Room A301, and Rooms A100, A101A, A101B, A 129, and A131 in 2021(ECS PROJECT NO. 47:1519-CB).

- Asbestos-containing residual black Mastic in the C Corridor (ECS PROJECT NO. 47:16652-Q), Asbestos-containing Floor Tiles from Rooms A112, A118, A119, A120, A121, A122, A124, A128, A129, A131, A160, A161, A162, and A165, as well as black Mastic from Rooms, A100A/B/C, A101A/B, A108, A109, A110, A111, A112, A113, A114, A116, A118, A119, A120, A121, A122, A124, A128, A129, A130, A131, A132, A134, A136, A138, A160, A161, A162, and A165 (ECS PROJECT NO. 47:11652-Q2), Asbestos-containing Floor Tiles and associated Mastic in Room A236 (ECS PROJECT NO. 47:11652-Q4) and residual Black Mastic in Rooms A301, A302, AA303, A306, A308, A310, A312, A314, A316, A340, A342, A344, A346, and A348 in 2022 (ECS PROJECT NO, 47:11652-Q5)

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 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.

- **Plaster Walls located in custodial closets and at the entry to the Auditorium were observed as damaged.**
- **Mudded Pipe Insulation located in the Storage Room in the South Boiler Room was observed as damaged in the opening of the wall.**
- **Interior Tan Door Caulk located in the Cafeteria Janitor's Office at the Cafe Entry was observed as damaged and were painted over.**

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 **Plaster Walls located in custodial closets and at the entry to the Auditorium, Mudded Pipe Insulation located in the Storage Room in the South Boiler Room, and the Interior Tan Door Caulk located in the Cafeteria Janitor's Office at the Cafe Entry 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.

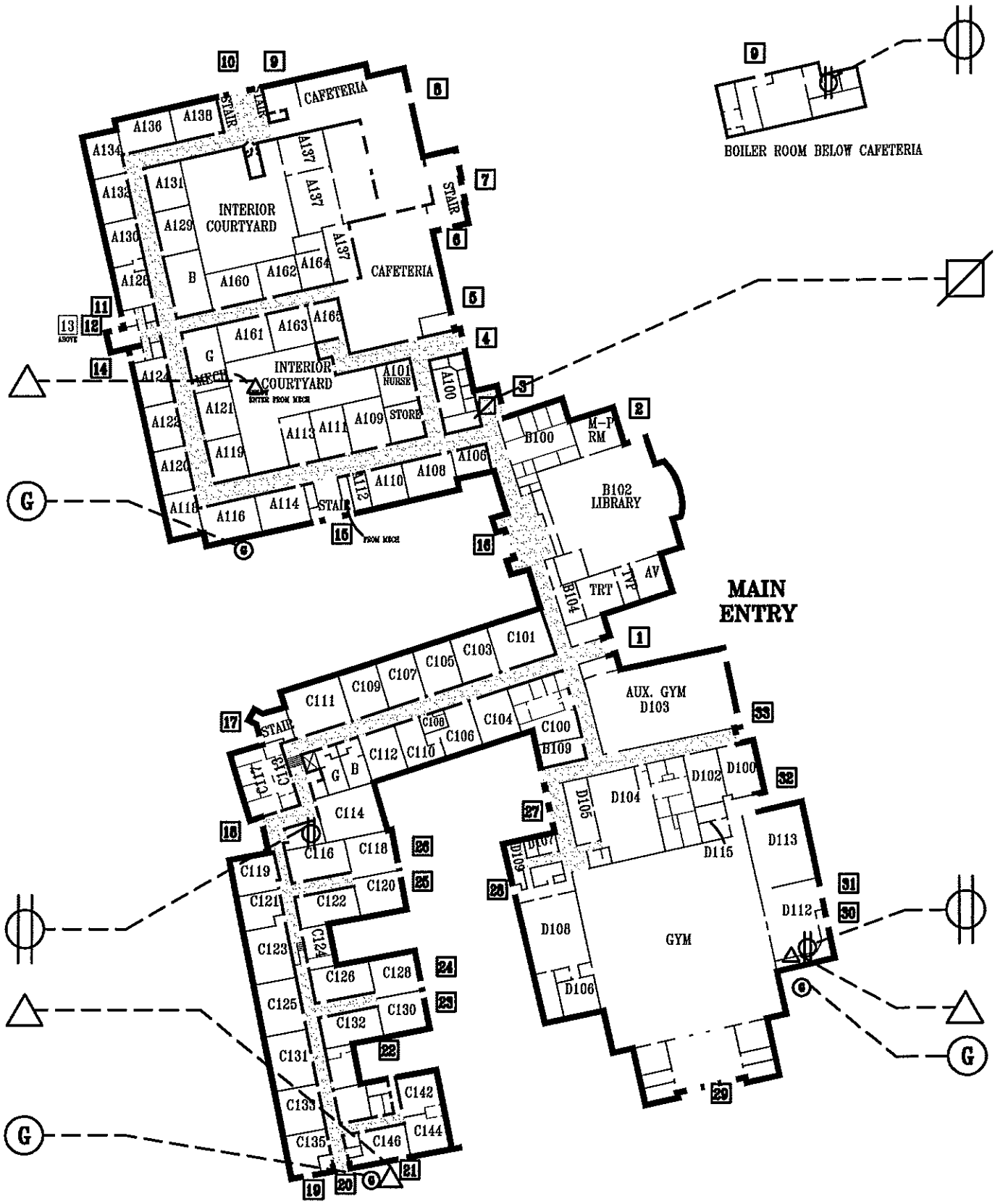
Our recommendations are in part based on federal, state, and local regulations and guidelines. ECS does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state, or federal public agencies, any conditions at the site 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								
9" x 9" Green Floor Tile	Basement - Small Storage Room	NF	Intact	None	2-Jul-25	Maintain in O & M Plan		3% Chrysotile
Brown Mastic of 1' x 1' Fissure Ceiling Tile	Cafeteria	NF	Intact	Observed residual mastic where Ceiling tiles are present. Abated in ECS Project 47:1519-C3	2-Jul-25	Maintain in O & M Plan		3% Chrysotile
Drywall Wallboard Joint Compound	Kitchen Hallway to Lockers and Kitchen	NF	Intact	None	2-Jul-25	Maintain in O & M Plan		2% Chrysotile
Dark Brown Ceiling Tile Mastic	Weight Room (assumed to be present in other areas)	NF	Intact	Observed in Cafeteria	2-Jul-25	Maintain in O & M Plan		<1% Anthophyllite 2% Chrysotile
Plaster Wall	Storage Room in Lobby at Exit 29	RACM	Intact	This material is assumed to be in other areas.	2-Jul-25	Maintain in O & M Plan		Finish: 2% Chrysotile
Mudded Pipe Insulation	Storage Room in South Boiler Room (Through Wall)	RACM	Damaged	Damaged at opening in wall.	2-Jul-25	Repair or Remove ASAP; Maintain in O & M Plan		5% Chrysotile
Interior Tan Door Caulk	Cafeteria Janitor's Office at Café Entry	NF	Damaged	This material is assumed to be in other areas.	2-Jul-25	Repair or Remove ASAP; Maintain in O & M Plan		2% Chrysotile
Brown Ceiling Mastic beneath Swirl Ceiling Texture	Cafeteria Janitor's Office at Café Entry	NF	Intact	Residual observed where no swirl texture is present	2-Jul-25	Maintain in O & M Plan		3% Chrysotile
MATERIALS REPORTED AS ASBESTOS-CONTAINING MATERIALS ON PRIOR SURVEYS THAT WERE NOT IDENTIFIED/OBSERVED BY ECS IN JULY 2, 2025 SURVEY								
9" x 9" Green Floor Tile	Basement - Small Storage Room	NF	N/A	This material is reported as ACM; however it was not observed in this area	2-Jul-25	Maintain in O & M Plan		3% Chyrsotile
Unknown Size Brown Floor Tile	First Floor Teachers Lounge (Under 19/20)	NF	N/A	Abated in ECS Project No. 47:1519-C8.	2-Jul-25	Remove from O & M Plan pending verification of removal		Verify Removal
Unknown Size Green Floor Tile	First Floor Teachers Lounge (Under 21/22)	NF	N/A	Abated in ECS Project No. 47:1519-C8.	2-Jul-25	Remove from O & M Plan pending verification of removal		Verify Removal
White Pipe Insulation Wrap	Room C124	RACM	N/A	This material is reported as ACM; however it was not observed in this area	2-Jul-25	Maintain in O & M Plan		3% Chrysotile
Black Mastic on Duct Wrap	Kitchen	NF	N/A	Abated in ECS Project No. 47:1519-C4.	2-Jul-25	Remove from O & M Plan pending verification of removal		Verify Removal
Black Residual Walla Mastic	Kitchen Hallways to Lockers	NF	N/A	Abated in ECS Project No. 47:1519-C3.	2-Jul-25	Remove from O & M Plan pending verification of removal		Verify Removal
9" x 9" Tan Flecked Floor Tile	Storage Room in Lobby at Exit 29	NF	N/A	Abated in ECS Project No. 47:1519-CB.	2-Jul-25	Remove from O & M Plan pending verification of removal		Verify Removal
Pipe Insulation	C124	NF	N/A	Abated areas in ECS Project No. 47:1519-CC.	2-Jul-25	Maintain in O & M Plan		Verify Removal
Tan Floor Tile and associated Mastic	A and C Wings (under Carpet or Flooring)	NF	N/A	Abated areas in ECS Project No. 47:1519-CB.	2-Jul-25	Remove from O & M Plan pending verification of removal		Verify Removal
Dark Brown Ceiling Tile Mastic	Dance Room Ceiling Cavity	NF	N/A	This material is reported as ACM; however it was not observed in this area	2-Jul-25	Maintain in O & M Plan		2%Chrysotile <1% Anthophyllite
Black Mastic on HVAC Insulation Wrap	Cafeteria Ceiling Cavity	NF	N/A	Abated in ECS Project No. 47:1519-C4.	2-Jul-25	Remove from O & M Plan pending verification of removal		Verify Removal

1/2" Black Flashing Caulk	Roof G	NF	N/A	This area was inaccessable at the time of survery. Assumed to be present.	2-Jul-25	Maintain in O & M Plan		3% Chrysotile
Black Waterproofing Mastic Under TPO Flashing	Roof G	NF	N/A	This area was inaccessable at the time of survery. Assumed to be present.	2-Jul-25	Maintain in O & M Plan		3% Chrysotile
Black Tar/Caulk on Concrete Parapet	Roof C	NF	N/A	This area was inaccessable at the time of survery. Assumed to be present.	2-Jul-25	Repair or Remove ASAP		5% Chrysotile
Black Tar on Exhaust Vents	Roof C	NF	N/A	This area was inaccessable at the time of survery. Assumed to be present.	2-Jul-25	Maintain in O & M Plan		5% Chrysotile
Paper with Silver Paint on Exhaust Vents	Roof I	NF	N/A	This area was inaccessable at the time of survery. Assumed to be present.	2-Jul-25	Add to O & M Plan		40% Chrysotile

Appendix II: Floor Plan



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

GEORGE WASHINGTON MIDDLE SCHOOL

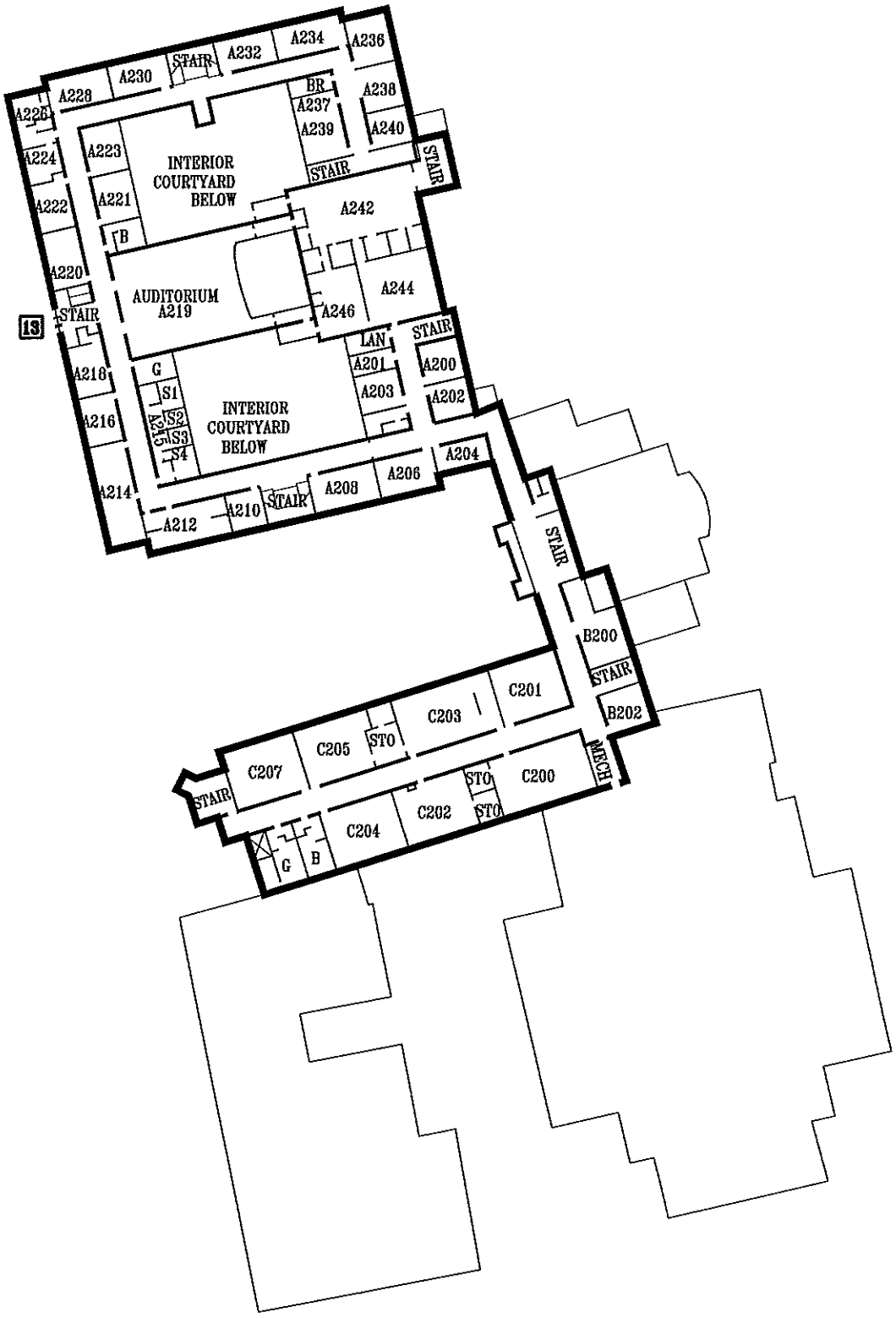
1005 Mount Vernon Ave.
Alexandria, Va 22301

(T) 703-706-4500 (F) 703-706-4507

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



GEORGE WASHINGTON MIDDLE SCHOOL

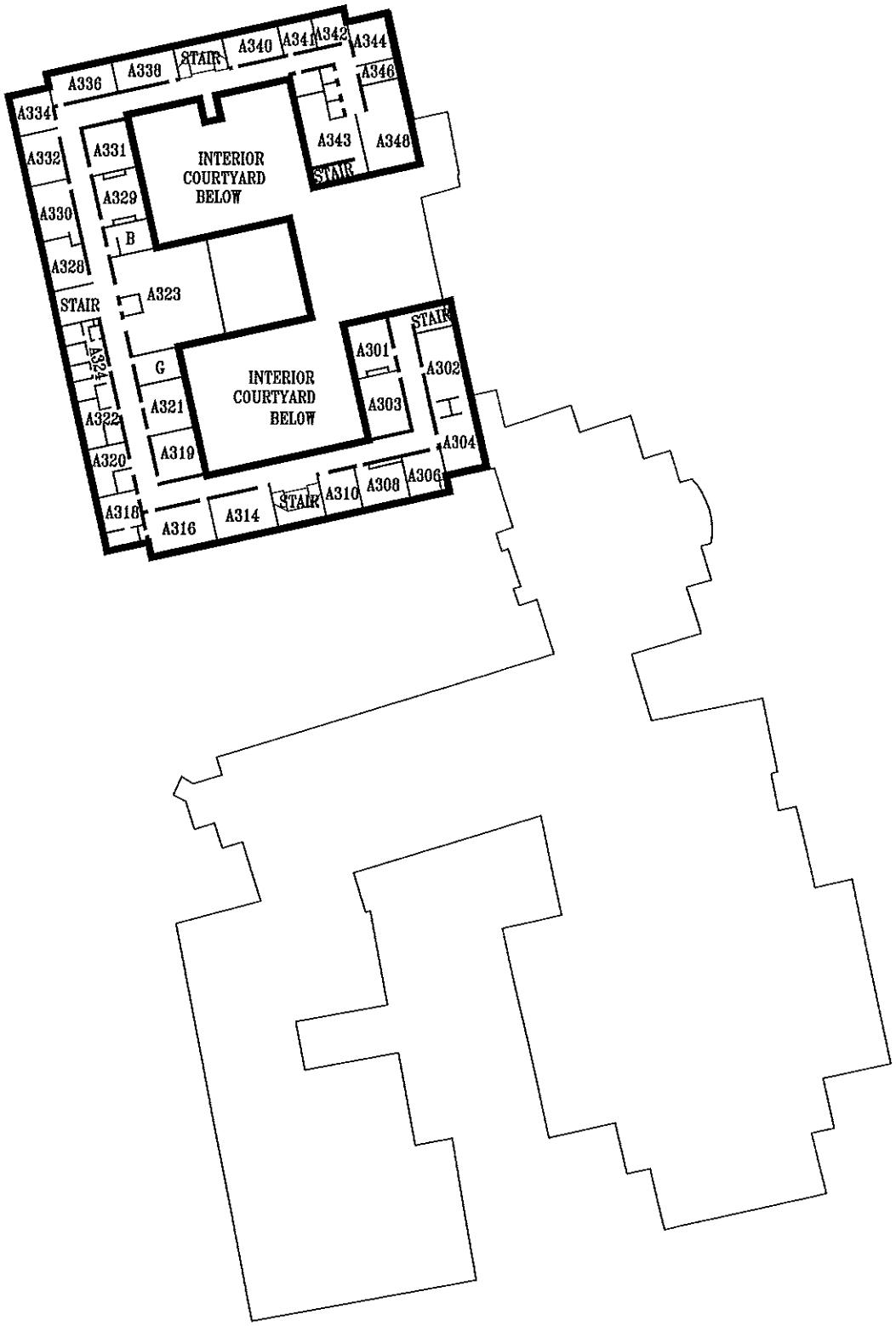
1005 Mount Vernon Ave.
Alexandria, Va 22301

(T) 703-706-4500 (F) 703-706-4507

2ND 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



GEORGE WASHINGTON MIDDLE SCHOOL

1005 Mount Vernon Ave.
Alexandria, Va 22301

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3RD FLOOR PLAN

Alexandria City Public Schools

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(TDD) 703-824-6666
(EMER.) 703-866-5300

Appendix III: 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 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 IV: Previous Reports

AHERA ASBESTOS-CONTAINING MATERIALS SURVEY



GEORGE WASHINGTON MIDDLE SCHOOL

1005 MT VERNON AVENUE
ALEXANDRIA, VIRGINIA 22301

ECS PROJECT NO. 47:11652-E2

FOR: ALEXANDRIA CITY PUBLIC SCHOOLS

MAY 4, 2022

May 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, George Washington Middle School, 1005 Mt Vernon 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 George Washington Middle School located at 1005 Mt Vernon 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

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571-334-3350

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

EXECUTIVE SUMMARY

The subject property is George Washington Middle School, a facility that reportedly encompasses approximately 286,000 square feet and was built in 1950. The facility is located at 1005 Mount Vernon Avenue, Alexandria, VA, 22301. 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) are 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 an Asbestos Hazard Emergency Response Act (AHERA) management plan.

Based on the laboratory analysis of the bulk samples collected during the survey, none of the sampled materials during this most recent survey were reported to contain asbestos.

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.

- Tan interior door caulks assumed present throughout building which may still be concealed under newer applications.
- Dot mastics associated with ceiling tile systems abated in certain areas but assumed to still be present in select areas throughout the building.
- Drywall Wallboard Joint Compound present in the Kitchen Hallway to Locker Rooms and Kitchen (assumed to be in other areas throughout the building).
- Mudded pipe insulation present in the boiler room as well as concealed or inaccessible areas throughout the building.
- Roofing components present throughout the roof system.

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

- Vinyl Floor Tiles and associated Mastic- Rooms A130, A132, A134, A136, A138, the stairwell near entrance 34/35, C116, C118, C120, and C122 in 2019 (reference ECS PROJECT NO.47:1519-C7). Additionally,
  the first, second, and third floor A-wing hallways, the third floor stairwell near room A301, and rooms A100, A101A, A101B, A129, and A131(reference ECS PROJECT NO.47:1519-CB).
- Mastic - associated with HVAC Ductwork Insulation in the Cafeteria/Kitchen area. (reference ECS PROJECT NO. 47:1519-C4)
- Pipe Insulation - Rooms D115, C116, C119, C121, C122, C123, C125, C126, C131, C132, C133, C135, C136, C138, the copy room, the hallway between classroom C116 and C122,the hallway between classroom C126 and C132, and the hallway between C119 and the copy room on the first floor (reference ECS PROJECT NO.47:1519-CC).
- Brown Dot Mastic associated with 1’ x 1’ Ceiling Tiles within the Cafeteria (ECS PROJECT NO. 47:1519-C3).

- Black Wall Mastic within the Staff Locker Room Area and Hallway Adjacent to the Lockers (reference ECS PROJECT NO. 47:1519-C3).

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.

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1.0 SITE DESCRIPTION

The subject property is George Washington Middle School, a facility that reportedly encompasses approximately 286,000 square feet and was built in 1950. The facility is located at 1005 Mount Vernon Avenue, Alexandria, VA, 22301. 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 (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 (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. Gym, Library, Select Maintenance, Electric, and Custodial Closets were inaccessible during the survey. Unidentified suspect ACMs may be located in these and/or other inaccessible areas. Additionally, 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.

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 (SAI) submitted a signed final laboratory report to ECS on November 8, 2021. None of the bulk samples submitted for analysis were reported to contain asbestos in detectable concentrations. 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, 8 bulk samples from homogeneous areas were submitted to the laboratory of which 12 layers were analyzed.

No asbestos was detected in the samples collected for this most recent re-inspection event.

Summary of Previously Identified Asbestos-Containing Materials

Location	Material Description	Analytical Results	EPA Category	AHERA Category	Abatement History
Basement - Small Storage Room	9" x 9" Green Floor Tile	Chrysotile 3%	Category I Non-Friable	Not applicable	Inaccessible, assumed to be present.
First Floor Teachers Lounge - Under 19/ 20	Unknown Size Brown Floor Tile	Chrysotile 3%	Category I Non-Friable	Not applicable	Abated (ECS PROJECT NO. 47:1519-CB)
First Floor Teachers Lounge - Under 21/ 22	Unknown Size Green Floor Tile	Chrysotile 4%	Category I Non-Friable	Not applicable	Abated (ECS PROJECT NO. 47:1519-CB)
Room C124	White Insulation Wrap	Chrysotile 3%	RACM	Not applicable	Inaccessible, assumed to be present.

Location	Material Description	Analytical Results	EPA Category	AHERA Category	Abatement History
Cafeteria	Brown Mastic of 1' x 1' Fissure Ceiling Tile	3% Chrysotile	Category II Non-Friable	Not applicable	Abated (ECS PROJECT NO. 47:1519-C3)
Kitchen	Black Mastic on Duct Wrap	8% Chrysotile	Category II Non-Friable	Not applicable	Abated (ECS PROJECT NO. 47:1519-C4)
Kitchen Hallway to Lockers	Black Residual Wall Mastic	5% Chrysotile	Category II Non-Friable	Not applicable	Abated (ECS PROJECT NO. 47:1519-C3)
Weight Room	Dark Brown Ceiling Tile Mastic	<1%Anthophyllite 2%Chrysotile	Category II Non-Friable	Not applicable	Inaccessible, assumed to be present.
Kitchen Hallway to Locker Rooms & Kitchen	Drywall Wallboard Joint Compound	2% Chrysotile	Category II Non-Friable	Not applicable	Observed
Storage Room in Lobby at Exit 29	9" x 9" Tan Flecked Floor Tile	5% Chrysotile	Category I Non-Friable	Not applicable	Abated (ECS PROJECT NO. 47:1519-CB)
Storage Room in Lobby at Exit 29	Plaster Wall	Finish – 2% Chrysotile Base – N/A	RACM	Not applicable	Observed
Storage Room in South Boiler Room (through Wall)	Mudded Pipe Insulation	5% Chrysotile	RACM	(5) ACBM with potential for damage	Observed

Location	Material Description	Analytical Results	EPA Category	AHERA Category	Abatement History
A and C Wings (under Carpet or Flooring)	Tan Floor Tile and associated Black Mastic	Tile- 3% Chrysotile Mastic – 5-8% Chrysotile	Category I Non-Friable	Not applicable	Abated from A210, A214, A130, A132, A134, A136, A138, C116, C118, C120, C122, and Stairwell by Entrance 34/35 (ECS PROJECT NO. 47:1519-CB)
Room C124	Pipe Insulation	50% Chrysotile	RACM	(5) ACBM with potential for damage	Abated from C112, C126, C132, C136, C138, and C Wing Hallways (ECS Project # 1519-CC) May be present in other areas
Dance Room Ceiling Cavity	Dark Brown Ceiling Tile Mastic	2% Chrysotile <1% Anthophyllite	Category II Non-Friable	Not applicable	Inaccessible, assumed to be present
Cafeteria Ceiling Cavity	Black Mastic on HVAC Insulation Wrap	8% Chrysotile	Category II Non-Friable	Not applicable	Abated (ECS Project # 1519-C4)
Cafeteria Janitor's Office at Cafe Entry	Interior Tan Door Caulk	2% Chrysotile	Category II Non-Friable	Not applicable	Observed, assumed to be present throughout and may be concealed by a new application.

Location	Material Description	Analytical Results	EPA Category	AHERA Category	Abatement History
Cafeteria Janitor's Office at Cafe Entry	Brown Ceiling Mastic beneath Swirl Ceiling Texture	2% Chrysotile	Category II Non-Friable	Not applicable	Inaccessible, assumed to be present.
Roof G	1/2" Black Flashing Caulk	3% Chrysotile	Category I non-friable	Not applicable	Inaccessible, assumed to be present.
Roof G	Black Waterproofing Mastic Under TPO Flashing	3% Chrysotile	Category I non-friable	Not applicable	Inaccessible, assumed to be present.
Roof C	Black Tar/ Caulk on Concrete Parapet	5% Chrysotile	Category I non-friable	Not applicable	Inaccessible, assumed to be present.
Roof C	Black Tar on Exhaust Vents	5% Chrysotile	Category I non-friable	Not applicable	Inaccessible, assumed to be present.
Roof I	Paper with Silver Paint on Exhaust Vents	40% Chrysotile	Category II Non-Friable	Not applicable	Inaccessible, assumed to be present.

Location	Material Description	Analytical Results	EPA Category	AHERA Category	Abatement History

Notes:
1. Historical documentation reviewed showed asbestos-containing Floor Tile and Mastic abatements took places within rooms A130, A132, A134, A136, A138, the stairwell near entrance 34/35, C116, C118, C120, and C122 in 2019 (reference ECS PROJECT NO.47:1519-C7).
2. Historical documentation reviewed showed Brown Dot Mastic associated with 1' x 1' Ceiling Tiles was abated within the Cafeteria (limited area) and Black Wall Mastic was abated within the Staff Locker Room Area and Hallway Adjacent to the Lockers (limited area) in 2018 (reference ECS PROJECT NO. 47:1519-C3).
3. Historical documentation reviewed showed Mastic associated with HVAC Ductwork Insulation was abated in the Cafeteria/Kitchen area in 2018 (reference ECS PROJECT NO. 47:1519-C4).
4. Historical documentation reviewed showed asbestos-containing pipe insulation was abated from from rooms D115, C116, C119, C121, C122, C123, C125, C126, C131, C132, C133, C135, C136, C138, the copy room, the hallway between classroom C116 and C122, the hallway between classroom C126 and C132, and the hallway between C119 and the copy room on the first floor in 2021 (reference ECS PROJECT NO. 47:1519-CC).
5. Historical documentation reviewed showed asbestos-containing floor tile and mastic from the first, second, and third floor A-wing hallways, the third floor stairwell near room A301, and Rooms A100, A101A, A101B, A 129, and A131 in 2021(reference ECS PROJECT NO. 47:1519-CB).

Summary of Non Asbestos-Containing Materials Identified

Location	Material Description	Analytical Results
Materials Sampled in 2021 AHERA Survey		
Room #A118	24" X 24" Grey with Black and White Steak Floor Tile with associated Clear Mastic	NAD
Ramp near door 1	Blue with Beige and light Blue Speck Sheet Vinyl Floor Tile and associated Tan Mastic	NAD
Room #C135	Tan Sink Undercoat	NAD
Room #A218	Grey Blue and Red with Dark and Light Specks Vinyl Sheet Floor Tile	NAD
Previously Sampled Materials		
Basement - Bathroom Area Under 1/2	Unknown Size White Floor Tile with Brown Mastic	NAD

Location	Material Description	Analytical Results
Basement - Large Storage Room	12" x 12" White Floor Tile with Brown and Gray Flecks with Brown Mastic	NAD
Basement Office	12" x 12" Tan Floor Tile with White Flecks with Brown Mastic	NAD
Basement - Hallway/HVAC Room	12" x 12" Blue Floor Tile with White Flecks with Brown Mastic	NAD
Basement - Hallway/HVAC Room - Under 9/10	12" x 12" Gray Floor Tile with Brown Mastic	NAD
Basement - Small Hallway	12" x 12" White Floor Tile with Black Flecks with Yellow Mastic	NAD
Basement - Small Hallway - Under 13/14	White Leveling Compound and Mastic	NAD
Basement - Small Storage Room	Black Mastic associated with 9" x 9" Green Floor Tile	NAD
First Floor Teachers Lounge	12" x 12" White Floor Tile with Blue Flecks with Green Mastic	NAD
First Floor Teachers Lounge - Under 19/20	Black Mastic associated with unknown Size Brown Floor Tile	NAD
First Floor Teachers Lounge - Under 21/22	Black Mastic associated with unknown Size Green Floor Tile	NAD
First Floor Teachers Lounge	12" x 12" Purple Floor Tile with White Flecks with Green Mastic	NAD
Café Areas 1 & 2	Ceiling Plaster- Base and Finish	NAD
Cafeteria	1' x 1' Fissure Ceiling Tile	NAD
Cafeteria	White Pipe Wrap (TSI) with White Mastic on Fiberglass	NAD
Kitchen	2' x 4' Gypsum Ceiling Tile	NAD
Kitchen	4" Ceramic Wall Compound	NAD
Kitchen Storage	4" Black Cove Base and associated Dark Yellow Mastic	NAD
Kitchen Storage	12" x 12" White Floor Tile with Black Flecks and associated Mastic	NAD
Kitchen Storage	12" x 12" Light Green Floor Tile and associated Yellow Mastic	NAD

Location	Material Description	Analytical Results
Kitchen Office Hallway	12" x 12" Green Heavy Mottled Floor Tile and associated Black Mastic	NAD
Cafeteria	12" x 12" Green Floor Tile with Dark Green Specs and associated Green Mastic	NAD
Cafeteria	12" x 12" White Floor Tile with associated Brown Mastic	NAD
Cafeteria	12" x 12" Red Floor Tile and associated Yellow/Brown Mastic	NAD
Cafeteria	12" x 12" Tan Floor Tile with Brown Specks with associated Yellow Mastic	NAD
Cafeteria	Gray Floor Level Compound	NAD
Cafeteria	Yellow/Dark Brown Mastic on Gray Floor Level Compound	NAD
Cafeteria	Interior White Window Caulk	NAD
Café Janitor's Office	Swirl Ceiling Texture	NAD
Café Janitor's Office	Swirl Ceiling Texture - Plaster Base	NAD
Weight Room	Yellow Floor Padding Mastic	NAD
Dance Room	1' x 1' Decorative Pinhole Ceiling Tile	NAD
Dance Room	Black Pipe Wrap (TSI) on Fiberglass	NAD
Dance Room	Black and Tan Pipe Wrap (TSI) on Fiberglass	NAD
Dance Room	Interior White Door Caulk	NAD
Dance Room	Wood Pattern Sheet Floor and associated Clear Mastic	NAD
Dance Room	Padding of Wood Pattern Sheet Floor	NAD
Cafeteria, Weight Room Ceiling, & Dance Ceiling	Drywall Wallboard	NAD
Cafeteria at Kitchen, Weight Room Ceiling, & Weight Room Wall	Drywall Joint Compound	NAD
Storage Room in Lobby at Exit 29	Black Mastic associated with 9" x 9" Tan Flecked Floor Tile	NAD

Location	Material Description	Analytical Results
Storage Room in Lobby at Exit 29	4" Brown Cove Base and associated Brown Mastic	NAD
Exit Door 29	Black Interior Door Caulk	NAD
Custodial Office in Cafeteria, Exit Door 10 by Cafeteria, & Ramp to Stair Stage	Plaster Ceiling	Finish – NAD Base – NAD
Cafeteria (behind Drywall), Classroom A114 (beneath Window), & Teacher Lounge Room A224	Plaster Wall	Finish – NAD Base – NAD
South Boiler Room	Gray Interior Window Glazing	NAD
South Boiler Room (Incinerator)	White Block Wall	NAD
South Boiler Room	Black Waterproofing	NAD
South Boiler Room	Beige Pipe Bridging Mastic	NAD
Storage Room in South Boiler Room	Yellow Board Mastic	NAD
Hallway in Annex Building at Exit 22	12" x 12" Light Gray with White/Gray Flecks Floor Tile and Leveling Compound and associated Mastic	All NAD
Custodial Office in Cafeteria	Swirl Plaster Ceiling	NAD
Custodial Office in Cafeteria	Gray Mastic on Metal Duct	NAD
Cafeteria	2' x 4' White Pinhole Punch Ceiling Tile	NAD
Cafeteria	4" Gray Cove Base and associated Beige Mastic	NAD
Cafeteria	1' x 1' White Fissured Ceiling Tile	NAD
Cafeteria	2' x 4' White Pinhole Fissured Ceiling Tile	NAD
Boy Restroom on 1st Floor by Exit 11-12	12" x 12" White with Color Flecks Floor Tile	NAD
Boy Restroom on 1st Floor by Exit 11-12	12" x 12" Blue Flecked Floor Tile	NAD
Boy Restroom on 1st Floor by Exit 11-12	12" x 12" Red Flecked Floor Tile	NAD
Boy Restroom on 1st Floor by Exit 11-12	Off-White Floor Tile and associated Brown Mastic under 12" x 12" Floor Tile	Both NAD

Location	Material Description	Analytical Results
Food Storage A137	12" x 12" Green Mottled Floor Tile and associated Black Mastic	Both NAD
Stairwell at Exit 15	Black Stair Tread and associated Black Mastic	Both NAD
Stairwell at Exit 4	Black Solid Stair Tread	NAD
Exit Door 4	1' x 1' White Small Pinhole Ceiling Tile	NAD
Exit Door 4	Brown Glue Dot associated with 1' x 1' White Small Pinhole Ceiling Tile	Both NAD
Stairwell behind Cafeteria	Black with White Flecks Stair Tread and associated Yellow Mastic	Both NAD
Teacher Lounge Room A224	Gray Sink Undercoat	NAD
Stage	Dark Blue Fire Rate Stage Curtain	NAD
Stage	Blue Fire Rate Stage Curtain	NAD
Teacher Lounge Room A224 & Classroom A214	White Interior Window Caulk	NAD
Classroom A214	12" x 12" Gray with White/Gray Flecks Floor Tile and associated Mastic (Top Layer)	Both NAD
Roof G	1/2" White Flashing Caulk	NAD
Roofs G, C, & I	Asphalt Hot Roof Membrane (3rd layer)	NAD
Roofs G, C, & I	Gypsum Board (4th layer)	NAD
Roof G	1” White Caulk Around Metal Support Pipes	NAD
Roof G	1/2" Gray Flashing Caulk	NAD
Roof I	Black Seam Caulk on TPO	NAD
Roof I	Black Tar on Old Roof Hatch	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.

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:

- **Terrazzo floors** in the main foyer or window sills
- **Parquet floors** in auditorium
- **Boilers Components** in boilers (gasket, fire brick, etc.)
- **Vermiculite Filler** associated with Concrete Masonry Unit (Blocks/Walls)
- **Duct Pin Mastic** associated with the HVAC Units
- **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** behind/under mirrors and dry-erase/chalk boards or furniture/lockers
- **"Transite" Panels** in roofing components and possibly other 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
- **Thermal System Insulation (TSI)** on pipes within chases behind solid walls, within the inaccessible regions of crawl spaces, above the visible ductwork, or below subgrade.
- **Pipe Flange Gaskets** in heating and plumbing systems.
- **Air Handler Components** in the air handlers (interior components).
- **Freezer Components** and insulation.
- **Vibration Dampener Cloth** associated with HVAC Systems.
- **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**
- **Exterior Soffit Materials**
- **Spray-On Fireproofing** above ceilings and behind walls.
- **CMU Block Coating**
- **Exterior materials** (roofing components, caulking, glazing, etc.)

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.

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

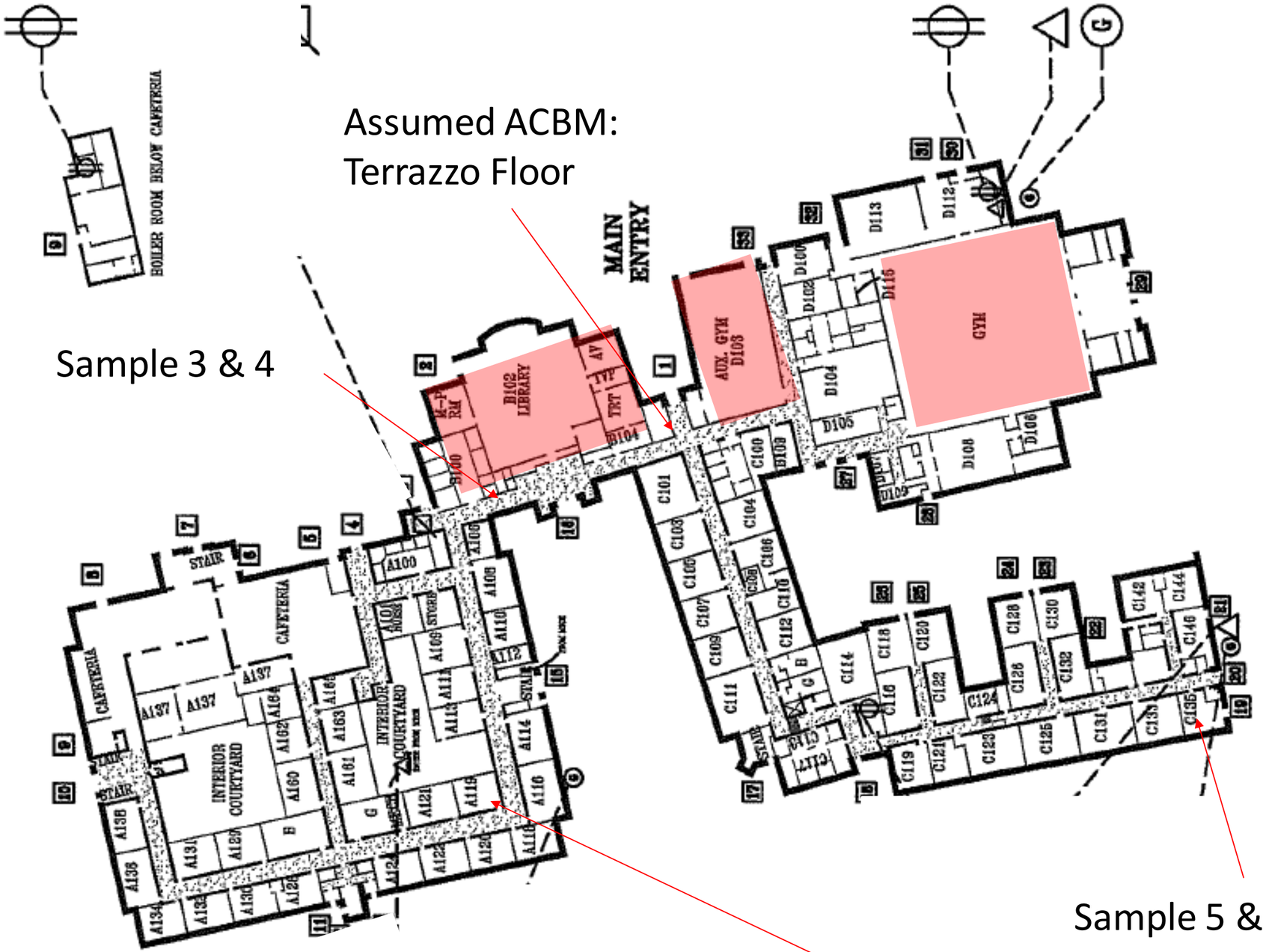
The conclusions and recommendations presented within this report are based upon a reasonable level of assessment within normal bounds and standards of professional practice for a site in this particular geographic setting. ECS is not responsible or liable for the discovery and elimination of hazards 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: Drawings



Inaccessible Area

George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA 22301

ECSI

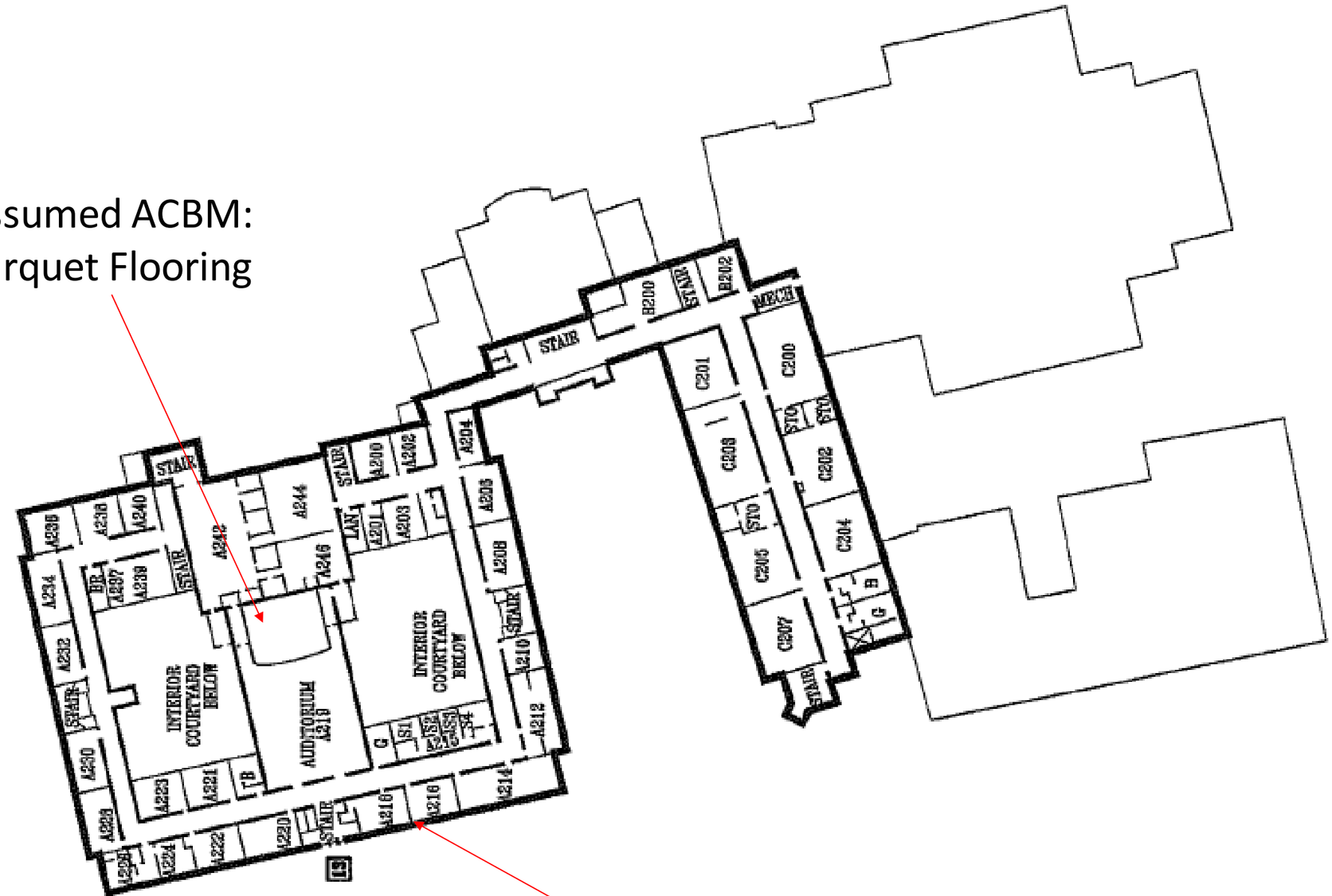
Sample Location Sketch First Floor

Scale: NTS

Project No.
47:11652-E2

Site Visits:
11/2/21

Assumed ACBM:
Parquet Flooring



Sample 7 & 8

Inaccessible Area

George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA 22301

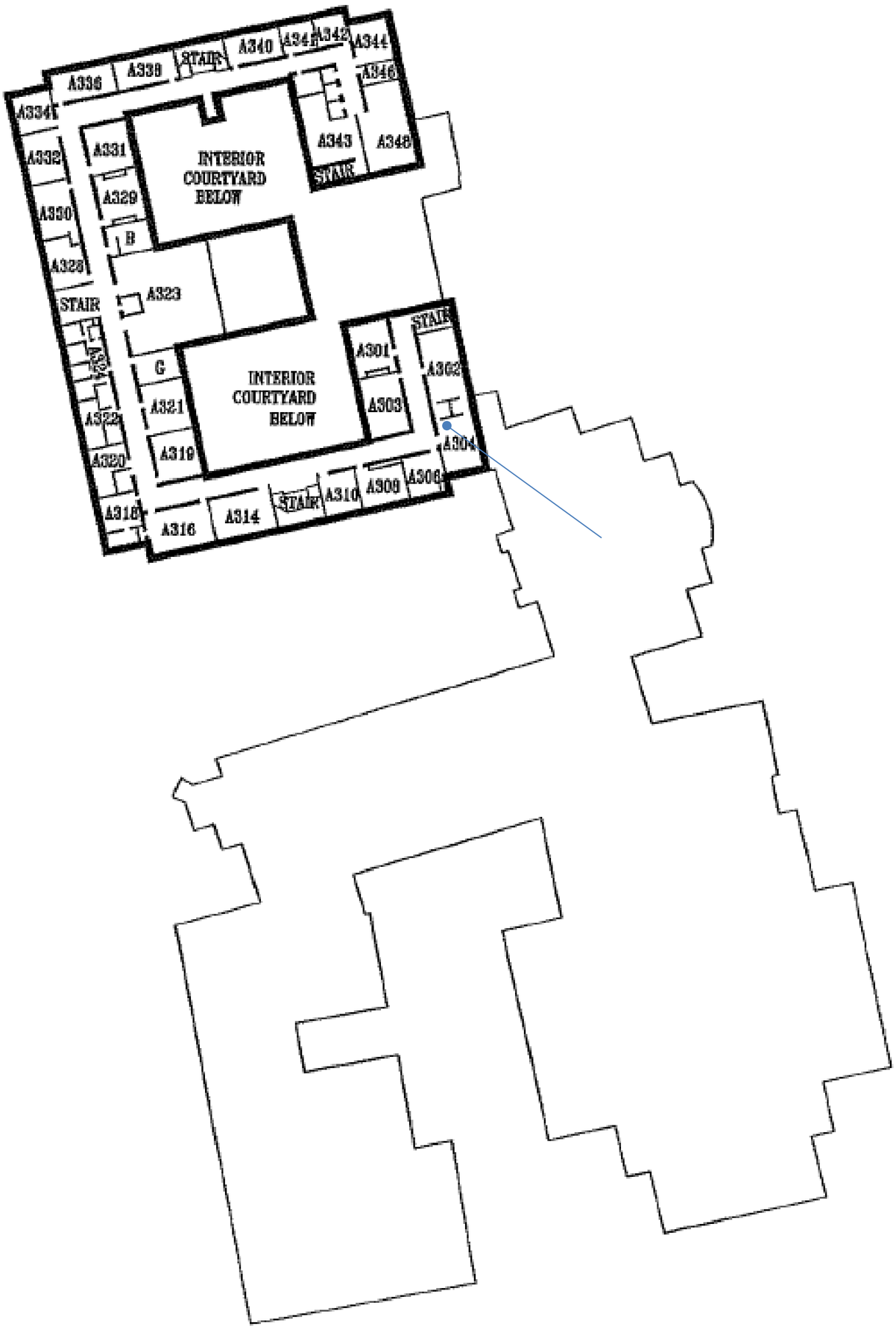
Sample Location Sketch Second Floor

Scale: NTS

Project No.
47:11652-E2

Site Visits:
11/2/21

Inaccessible Area



Site Visits: 11/2/21	Project No. 47:11652-E2	Scale: NTS	**Sample Location Sketch Third Floor**	ECS	George Washington Middle School 1005 Mount Vernon Avenue Alexandria, VA 22301

Appendix II: Site Photographs



1 - View of Terrazzo Floor in Main Foyer

Appendix III: Asbestos Bulk Sample Results

SUSPECT ASBESTOS-CONTAINING MATERIALS BULK SAMPLING RESULTS

Sample #	Sampling Location	Material/Description	Analytical Results
1 - A	Room#A118	24" X 24" Grey with Black and White Steak Floor Tile with associated Clear Mastic- Tile	NAD
1 - B	Room#A118	24" X 24" Grey with Black and White Steak Floor Tile with associated Clear Mastic- Mastic	NAD
2 - A	Room#A118	24" X 24" Grey with Black and White Steak Floor Tile with associated Clear Mastic- Tile	NAD
2 - B	Room#A118	24" X 24" Grey with Black and White Steak Floor Tile with associated Clear Mastic- Mastic	NAD
3 - A	Ramp Near Door 1	Blue with Beige and Light Blue Speck Sheet Vinyl Floor Tile and associated Tan Mastic- Tile	NAD
3 - B	Ramp Near Door 1	Blue with Beige and Light Blue Speck Sheet Vinyl Floor Tile and associated Tan Mastic- Mastic	NAD
4 - A	Ramp Near Door 1	Blue with Beige and Light Blue Speck Sheet Vinyl Floor Tile and associated Tan Mastic- Tile	NAD
4 - B	Ramp Near Door 1	Blue with Beige and Light Blue Speck Sheet Vinyl Floor Tile and associated Tan Mastic- Mastic	NAD
5	Room #C135	Tan Sink Undercoat	NAD
6	Room #C135	Tan Sink Undercoat	NAD
7	Room #A218	Blue and Red with Dark and Light Speck Vinyl Sheet Floor Tile	NAD
8	Room #A218	Blue and Red with Dark and Light Speck Vinyl Sheet Floor Tile	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

Lab ID # 173190

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

Attn: Michael Hamill

Project: 11652-E2/ ACPS George Washington Middle School AHERA Survey

Lab Order ID: 71978745
Analysis ID: 71978745_PLM
Date Received: 11/5/2021
Date Reported: 11/8/2021

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
1 - A *71978745PLM_1*	24" X 24" Grey with black and white steak floor tile with associated clear mastic *tile*	None Detected		100% Other	Gray Non Fibrous Homogeneous Crushed
1 - B *71978745PLM_9*	24" X 24" Grey with black and white steak floor tile with associated clear mastic *mastic (very small sample)*	None Detected		100% Other	Transparent Non Fibrous Homogeneous Crushed
2 - A *71978745PLM_2*	24" X 24" Grey with black and white steak floor tile with associated clear mastic *tile*	None Detected		100% Other	Gray Non Fibrous Homogeneous Crushed
2 - B *71978745PLM_10*	24" X 24" Grey with black and white steak floor tile with associated clear mastic *mastic (very small sample)*	None Detected		100% Other	Transparent Non Fibrous Homogeneous Crushed
3 - A *71978745PLM_3*	Blue with beige and light blue speck sheet vinyl floor tile and associated tan mastic *tile*	None Detected		100% Other	Blue, Aqua Non Fibrous Homogeneous Ashed
3 - B *71978745PLM_11*	Blue with beige and light blue speck sheet vinyl floor tile and associated tan mastic *mastic*	None Detected		100% Other	Transparent, Brown Non Fibrous Homogeneous Crushed
4 - A *71978745PLM_4*	Blue with beige and light blue speck sheet vinyl floor tile and associated tan mastic *tile*	None Detected		100% Other	Aqua, Blue Non Fibrous Homogeneous Ashed
4 - B *71978745PLM_12*	Blue with beige and light blue speck sheet vinyl floor tile and associated tan mastic *mastic*	None Detected		100% Other	Transparent, Brown 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%.

Lachlan Krenz (12)

Analyst

Approved Signatory

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: Michael Hamill

Project: 11652-E2/ ACPS George Washington Middle School AHERA Survey

Lab Order ID: 71978745
Analysis ID: 71978745_PLM
Date Received: 11/5/2021
Date Reported: 11/8/2021

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
5 *71978745PLM_5*	Tan sink undercoat	**None Detected**	**5% Cellulose**	**95% Other**	Beige Non Fibrous Homogeneous Crushed
6 *71978745PLM_6*	Tan sink undercoat	**Not Submitted**			
7 *71978745PLM_7*	Grey blue and red with dark and light specs vinyl sheet floor tile *tile only*	**None Detected**		**100% Other**	Gray Non Fibrous Homogeneous Crushed, Ashed
8 *71978745PLM_8*	Grey blue and red with dark and light specs vinyl sheet floor tile *tile only*	**None Detected**		**100% Other**	Gray Non Fibrous Homogeneous Ashed, 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%.

Lachlan Krenz (12)

Analyst

Approved Signatory

11978745

Client:	ECS Mid-Atlantic, LLC	***Instructions:***
Contact:	Michael Hamill	*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:	mhamill@ecslimited.com	***Enter samples between "<<" and ">>"***
Project:	11652-E2/ ACPS George Washingt	***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"*
P.O. #.	11652-E2/ George Washington Mid	*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:	11/2/2021 0:00	
Analysis:	PLM EPA 600/R-93/116	
TurnAroundTime:	3-Day	

Scientific Analytical Institute

4604 Dundas Drive
Greensboro, NC 27407
Phone: 336.292.3888
Fax: 336.292.3313
Email: lab@sailab.com

Sample Number	Data 1	Sample Description	Data 2
<<			
1		24" X 24" Grey with black and white steak floor tile with associated clear mastic	Room #A118
2		24" X 24" Grey with black and white steak floor tile with associated clear mastic	Room #A118
3		Blue with beige and light blue speck sheet vinyl floor tile and associated tan mastic	Ramp near door 1
4		Blue with beige and light blue speck sheet vinyl floor tile and associated tan mastic	Ramp near door 1
5		Tan sink undercoat	Room #C135
6		Tan sink undercoat	Room #C135
7		Grey blue and red with dark and light specs vinyl sheet floor tile	Room #A218
8		Grey blue and red with dark and light specs vinyl sheet floor tile	Room #A218
>>			

BK Hulley
11/5 10:30A

Accepted ☒

Rejected ☐

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
3309002099

BOARD FOR ASBESTOS, LEAD, AND HOME INSPECTORS
ASBESTOS PROJECT MONITOR LICENSE

ZACHARY DAVID HARRELL
1927 N CAMERON ST
ARLINGTON, VA 22207

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 PROJECT MONITOR LICENSE
NUMBER: 3309002099 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)

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

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DPOR COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR ASBESTOS, LEAD, AND HOME INSPECTORS
ASBESTOS INSPECTOR LICENSE
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ARLINGTON, VA 22207

(FOLD)

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DPOR-PC (02/2017)

DPOR License Lookup License Number 3303004273

License Details

Name	KESSLAK, LAUREN ELIZABETH
License Number	3303004273
License Description	Asbestos Inspector License
Rank	Asbestos Inspector
Address	ANNAPOLIS, MD 21401
Initial Certification Date	2017-05-25
Expiration Date	2022-05-31

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

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

APPENDIX A

PREVIOUS REPORTS

ASBESTOS CONTAINING MATERIALS SURVEY



GEORGE WASHINGTON MIDDLE SCHOOL

1005 MT. VERNON AVENUE
ALEXANDRIA, VIRGINIA

ECS PROJECT NO. 47:1519-C

FOR

ALEXANDRIA CITY PUBLIC SCHOOLS

DECEMBER 19, 2016

December 19, 2016

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

ECS Project No. 47:1519-C

Reference: Asbestos Containing Materials Survey, George Washington Middle School, 1005 Mt. Vernon Avenue, Alexandria, Virginia

Dear Mr. Finnigan:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Alexandria City Public Schools with the results of the above referenced Asbestos Containing Materials Survey performed at George Washington Middle School located at 1005 Mt. Vernon 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 47:47:2808-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

Beverly Sedon
Senior Project Manager
bsedon@ecslimited.com
703-471-8400

Christopher J. Chapman, CIH
Director of Industrial Hygiene
cchapman@ecslimited.com
703-471-8400

EXECUTIVE SUMMARY

The subject property is improved with the George Washington Middle School. The facility reportedly encompasses approximately 286,000 square feet and was built in 1950. The facility has had various renovations performed in the past. Select renovations are planned for the cafeteria, kitchen, weight room, and dance room. Upgrades to the ceiling and flooring materials are proposed for these areas. Therefore, the survey was limited to these areas within the building. No other areas of the structure were included in this assessment.

The purpose of the survey was to determine if asbestos-containing materials (ACMs) are present within the above referenced areas. ECS has previously performed asbestos testing services for the building in the past (ECS Project Nos. 01:22003, report dated June 6, 2014 and 01:24834). Analytical results of samples obtained from the subject areas during these surveys were also utilized for this current assessment.

During this assessment of the subject areas, a total of sixty-five (65) samples were collected from the subject areas in which a total of ninety-nine (99) layers were analyzed by the laboratory. Based on the laboratory analysis of the bulk samples collected during the survey, the following materials were reported to contain asbestos:

- Brown Ceiling Tile Mastic (Glue Dots)
- Dark Brown Ceiling Tile Mastic (Glue Dots)
- Black Mastic on HVAC Wrap
- Black Residual Wall Mastic
- Drywall Joint Compound
- Interior Tan Door Caulk
- Brown Mastic associated with Swirl Ceiling Texture

Additional asbestos containing materials are reported for other areas of the building in assessments previously performed. These materials are further referenced in Section 4. Recommendations regarding the identified ACMs and materials assumed to contain asbestos are further referenced in this report.

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Appendix II: Asbestos Bulk Sample Results

Appendix III: Laboratory Report(s)

1.0 SITE DESCRIPTION

The subject property is improved with George Washington Middle School. The facility reportedly encompasses approximately 286,000 square feet and was built in 1950. The facility has had various renovations performed in the past. Select renovations are planned for the cafeteria, kitchen, weight room, and dance room. Upgrades to the ceiling and flooring materials are proposed for these areas. Therefore, the survey was limited to these areas within the building. No other areas of the structure were included in this assessment. The building was occupied at the time of our assessment.

Accessibility was limited in some areas and ECS was unable to survey areas above solid ceilings or behind solid walls. The weight room was also observed to have a drywall ceiling.

2.0 PURPOSE

The purpose of the Asbestos Containing Materials Survey was to identify asbestos-containing materials (ACMs) which may require special handling and/or disposal if removed during construction activities.

ECS has previously performed asbestos testing services for the building in the past (reference ECS Project No. 01:22003, report dated June 6, 2014 and 01:24834). Analytical results of samples obtained from the subject areas during these surveys were also utilized for this assessment.

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 a licensed Commonwealth of Virginia asbestos inspector who has received EPA accredited training 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.

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. 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. 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. Unidentified suspect ACMs may be located in these and/or other inaccessible areas.

ECS observed built-up walls in the cafeteria. Additional building materials may be present within these cavities that were not readily accessible during the survey. In addition, boxed-in counters were present within the cafeteria beneath the windows. Fan coil units were positioned along these counters. Additional materials may be present in these areas. Built-up flooring systems were observed throughout the surveyed areas. Additional flooring materials may be present and also present beneath walls, furniture, cabinets, etc.

In total, sixty-five (65) bulk samples were submitted to the laboratory of which ninety-nine (99) layers were analyzed.

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 A, Subpart F, 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 complete list of the sampled materials submitted for analysis is located in the Appendix.

Of the 65 bulk samples submitted to Scientific Analytical Institute, Inc., the following materials were reported to contain asbestos in detectable concentrations. A complete list of the sampled materials submitted for analysis and sample locations are located in Table 2 attached to 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.

Summary of Asbestos-Containing Materials Identified

Location	Material Description	Analytical Result	Category
Cafeteria Ceiling Cavity	Brown Ceiling Tile Mastic	3% Chrysotile	Category II Non-Friable
Kitchen Ceiling Cavity	Black Mastic on HVAC Insulation Wrap	8% Chrysotile	Category II Non-Friable
Kitchen Hallway to Locker Rooms	Black Residual Wall Mastic	5% Chrysotile	Category II Non-Friable
Kitchen Hallway to Locker Rooms & Kitchen	Drywall Joint Compound	2% Chrysotile	Category II Non-Friable
Cafeteria Janitor's Office at Cafe Entry	Interior Tan Door Caulk	2% Chrysotile	Category II Non-Friable
Cafeteria Janitor's Office at Cafe Entry	Brown Ceiling Mastic beneath Swirl Ceiling Texture	2% Chrysotile	Friable
Dance Room Ceiling Cavity	Dark Brown Ceiling Tile Mastic	2% Chrysotile <1% Anthophyllite	Category II Non-Friable
Note: The location provided specifies where the material was sampled. Materials identified as asbestos containing should be assumed to be located in other areas of the building if not otherwise identified.			

The asbestos containing brown and dark brown ceiling tile mastics (glue dots) were observed within the ceiling cavities of the cafeteria, kitchen, and dance room associated with 1' x 1' ceiling tiles. Some of the mastic was observed to be residual on the concrete decking where the ceiling tiles were missing. Asbestos containing black mastic on the HVAC duct wrap insulation was observed within the ceiling cavity of the kitchen. Residual black wall mastic that is asbestos containing was observed in the kitchen hallway near the office/locker rooms. This mastic is likely present in other areas of the building used as an adhesive for mirrors, signs, or boards, etc. The drywall joint compound within the kitchen hallway and kitchen was also reported as asbestos containing.

The ceiling in the Janitor's Office/storage room (located near the entrance of the cafeteria) was observed to have a swirled ceiling texture. The samples collected of the brown mastic associated with the textured ceiling plaster were identified as asbestos containing. Based upon our observations during sampling, the brown mastic and textured plaster are classified as one ceiling system thus ECS defined the material as friable (RACM). The interior tan door caulk of this room was also reported as asbestos containing and may be associated with other door caulks in other areas of the building.

The following asbestos containing materials were also previously reported by ECS or others to be present within the building:

- Black Paper under Plaster Wrap at North Boiler Room;
- Roofing Felt at North Boiler Room;
- Black Tar Paper Under Carpet of Room 317;
- Plaster Ceiling of Old Gym Weight Room;
- White Fire Block in the old clinic and 2nd Floor A Wing;
- TSI 6" Mudded Elbows/Joints in Room 119;
- 9" x 9" Maroon Floor Tile in Rooms 302, 301, 344;
- Gray Mastic on TSI and Ducts in Room A111;
- 9" x 9" Brown Floor Tiles in Old Clinic 2nd Floor Wing A; 2nd Floor Custodial Closet by Auditorium;
- Wiring on Stage;
- Glue Dots in Room 120;
- Plaster Walls (Presummed Until Tested);
- 9" x 9" Tan Floor Tile with Flecks of Storage Room in Lobby at Exit 29;
- Plaster Wall/Ceiling of Storage Room in Lobby at Exit 29;
- Mudded Pipe Insulation of Storage Room in South Boiler Room behind Walls;
- Tan Floor Tile and associated Black Mastic of Classroom A210 & A214;
- Black Floor Mastics of Rooms A206, A200, A208;
- Gray Floor Tile (Unknown Size) of Room A216

The above referenced materials may be present in other areas of the building including the areas sampled during this present survey. Materials similar to these materials should be assumed as asbestos containing or further sampled by a licensed asbestos inspector.

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:

- Thermal System Insulation (TSI) on pipes within chases behind walls and above ceilings;
- Pipe Flange Gaskets in heating and plumbing systems;

- Fire Door and associated Casing Insulation in locations requiring a rated fire door and door casing;
- Air Handler Components in the air handlers (interior components);
- HVAC Duct Pin Mastics associated with the insulation
- Concrete Masonry Unit (Blocks/Walls) with Vermiculite filler;
- Electrical Panels Asbestos Cement Components in electrical systems;
- Water Fountain Components in water fountains (pipe cloth);
- Waterproofing Membrane/Mastics/vapor barriers within exterior wall cavities, behind interior finishes, exterior veneer and/or subgrade walls;
- Boilers Components in boilers (gasket, fire brick, etc.);
- Light shield Insulation in light shields;
- Mirror Mastics behind/under mirrors;
- Wood Paneling Mastic/Felt Paper behind panels and/or paneling;
- Wood flooring felts
- Mastics or cement boards associated with Baseboard Heaters/Radiators Components/Wall Mounted Fan Coil Units in and/or behind radiators/baseboards;
- Elevator Components in elevators (Panels, Brake Shoes, Roping, etc.);
- Soffit and materials within exterior soffit cavity at exterior sidewalk/entry locations;
- Chalkboards and Chalkboard/Bulletin Board mastics
- Wall Compounds and Mastics associated with ceramic wall/floor tiles
- Roof Structures – roof systems;

Additionally, flooring underlayments or additional mastics/compounds may be present in other areas of the building beneath shelving, cabinetry, fixed furniture, etc.

5.0 RECOMMENDATIONS AND REGULATORY REQUIREMENTS

Based on our understanding of the purpose of the Asbestos Containing Materials Survey including future plans for renovation, the laboratory analysis, our findings and observations, ECS presents the following recommendations.

5.1 Asbestos-Containing Materials

By definition, materials which contain greater than one percent (> 1%) asbestos are considered asbestos-containing materials (ACMs). Friable materials (i.e., able to be crumbled, pulverized, and/or reduced to powder by hand pressure when dry) will easily produce airborne asbestos fibers if disturbed. Non-friable materials may also produce airborne asbestos fibers if disturbed.

The following materials were reported as asbestos containing from the subject surveyed areas: brown ceiling tile mastic; black residual wall mastic; black mastic on HVAC duct insulation; interior tan door caulk; brown ceiling mastic associated with swirled texture ceiling; and drywall joint compound.

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.

Suspect ACMs not observed due to inaccessibility or not sampled due to the destructive means that sampling would require may 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, behind solid walls/above solid ceilings, 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.

Federal and local regulations require asbestos-containing materials be removed prior to disturbance by renovation/demolition. ECS recommends the identified asbestos-containing materials reported to be present within the building during renovation activities be removed and disposed of by Commonwealth of Virginia certified asbestos abatement contractor if they are to be impacted.

Prior to abatement, a 20-day notification to Virginia Department of Labor and Industry and 10 Day notification to US EPA may be required. These notifications are normally filed by the abatement contractor.

If asbestos-containing materials are to be removed, it may be required that a Virginia licensed project monitor inspect the project daily dependent upon the type and amount of ACMs to be removed. ECS can provide this service if requested.

ECS recommends that a project specification be prepared to delineate and quantify known and suspect hazardous and regulated materials in the buildings and to outline proper procedures for the abatement. This will help protect the owner's liability in better defining the scope of work and contractors' roles and responsibilities in the abatement process and holding the contractor accountable for the performance of the project. The specification typically define the Contractor's scope of work and outline requirements and procedures that must be followed for this project. The intent of the specification is to give performance requirements for the Contractor so that the project can be completed safely and in compliance with applicable federal and state regulations. Typically, the specification document serves as part of the site owner's contract with the contractor.

The Asbestos management plan for the building should be updated to reflect the findings of this study. Appropriate training/information should also be relayed to maintenance staff and others including outside contractors who may incidentally impact/disturb these materials.

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.

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 other warranty, expressed or implied, is made

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: Site Photographs



1 - View of the cafeteria area



2 - View of cafeteria flooring materials



3 - View of the ceiling plaster, Samples 1-3



4 - View of the brown ceiling tile mastic (ACM), Samples 4-5



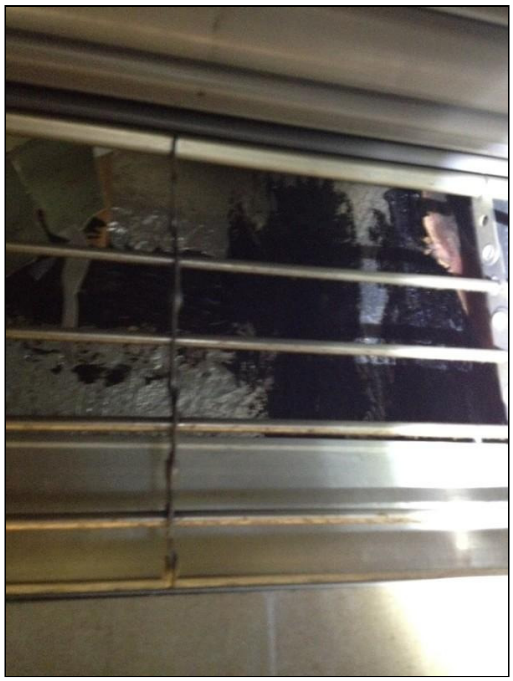
5 - View of TSI pipe wrap and mastic, Samples 6-8



6 - View of the kitchen area



7 - View of the drywall ceiling tile, Samples 9-10



8 - View of black mastic (ACM) on duct wrap, Samples 11-12



9 - View of ceramic wall compound, Samples 13-14



10 - View of black cove base, 12" x 12" white floor tile with black flecks (top layer) and 12" x 12" green floor tile (bottom layer), Samples 15-20



11 - View of 12" x 12" green floor tile with heavy mottles, Samples 21-22



12 - View of 12" x 12" light green floor tile with dark green specs (top layer) with 12" x 12" white floor tile (bottom layer), Samples 23-26



13 - View of 12" x 12" tan floor tile with brown specs and gray leveling compound, Samples 29-32



14 - View of the drywall wallboard in the cafeteria, Sample 58



15 - View of white interior window caulk, Samples 33-34



16 - View of black residual wall mastic (ACM) and drywall joint compound (ACM), Samples 35-36



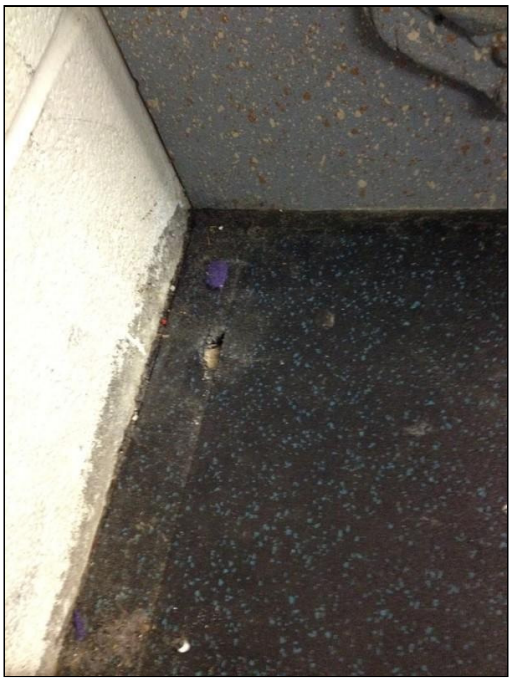
17 - View of tan interior door caulk (ACM), Samples 37-38



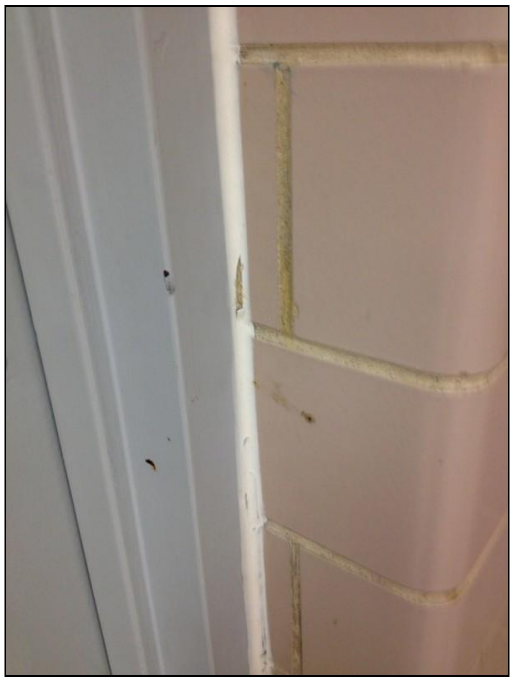
18 - View of the brown ceiling mastic (ACM) beneath ceiling texture, Samples 39-41



19 - View of the weight room



20 - View of yellow mastic of floor padding, Samples 42-43



21 - View of interior white door caulk, Samples 54-55



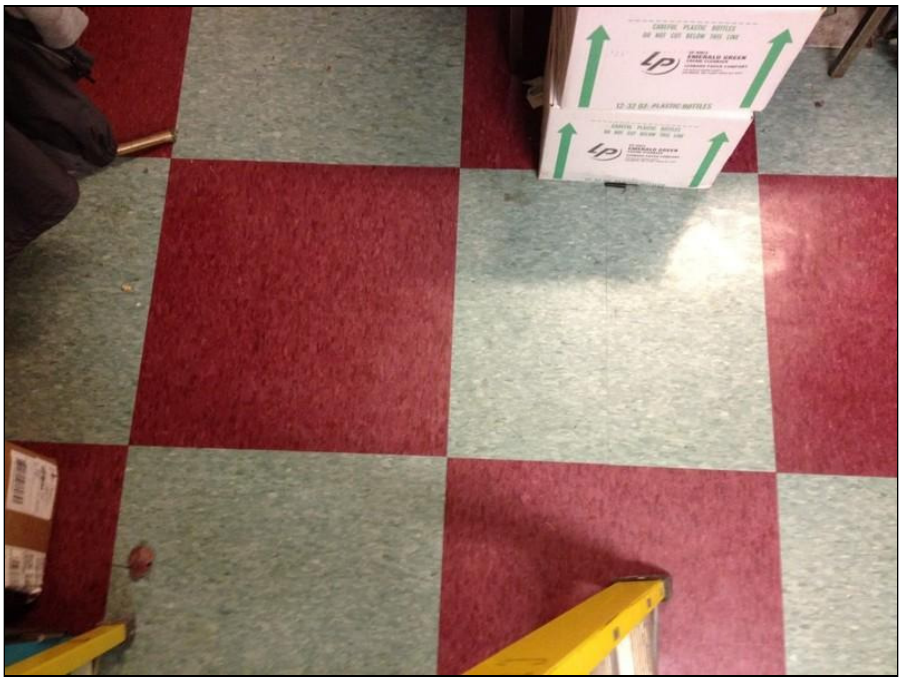
22 - View of wood-like sheet flooring, Samples 56-57



23 - View of the recessed ceilings in the cafeteria area



24 - View of the counters below windows, fan coil units, and water fountains



25 - View of similar floorings of Samples 21-22 in the Cafeteria Janitor's Office



26 - View of built-up wallboard systems

Appendix II: Asbestos Bulk Sample Results

TABLE 2
BULK SAMPLING OF SUSPECT ASBESTOS-CONTAINING MATERIALS

Sample #	Sampling Location	Material/Description	Analytical Results
1	Café Area 1	Ceiling Plaster - Finish	NAD
2 - A	Café Area 1	Ceiling Plaster - Finish	NAD
2 - B	Café Area 1	Ceiling Plaster - Base	NAD
3 - A	Café Area 2	Ceiling Plaster - Finish	NAD
3 - B	Café Area 2	Ceiling Plaster - Base	NAD
4 - A	Cafeteria	1' x 1' Fissure Ceiling Tile	NAD
4 - B	**Cafeteria**	**Brown Mastic of 1' x 1' Fissure Ceiling Tile**	**Asbestos: 3% Chrysotile**
5 - A	Cafeteria	1' x 1' Fissure Ceiling Tile	NAD
5 - B	Cafeteria	Brown Mastic of 1' x 1' Fissure Ceiling Tile	N/A
6	Cafeteria	White Pipe Wrap (TSI) with White Mastic on Fiberglass	Wrap/Mastic - NAD
7	Cafeteria	White Pipe Wrap (TSI) with White Mastic on Fiberglass	Wrap/Mastic - NAD
8	Cafeteria	White Pipe Wrap (TSI) with White Mastic on Fiberglass	Wrap/Mastic - NAD
9	Kitchen	2' x 4' Gypsum Ceiling Tile	NAD
10	Kitchen	2' x 4' Gypsum Ceiling Tile	NAD
11	**Kitchen**	**Black Mastic on Duct Wrap**	**Asbestos: 8% Chrysotile**
12	Kitchen	Black Mastic on Duct Wrap	N/A
13	Kitchen	4" Ceramic Wall Compound	NAD
14	Kitchen	4" Ceramic Wall Compound	NAD
15 - A	Kitchen Storage	4" Black Cove Base	NAD
15 - B	Kitchen Storage	Dark Yellow Mastic of 4" Black Cove Base	NAD

Table Notes:
NAD = No Asbestos Detected
N/A = Sample Not Analyzed; Positive Stop
Bold - Asbestos Containing Materials

TABLE 2
BULK SAMPLING OF SUSPECT ASBESTOS-CONTAINING MATERIALS

Sample #	Sampling Location	Material/Description	Analytical Results
16 - A	Kitchen Storage	4" Black Cove Base	NAD
16 - B	Kitchen Storage	Dark Yellow Mastic of 4" Black Cove Base	NAD
17 - A	Kitchen Storage	12" x 12" White Floor Tile with Black Flecks (Top Layer)	NAD
17 - B	Kitchen Storage	Mastic of 12" x 12" White Floor Tile (Top Layer)	NAD
18 - A	Kitchen Storage	12" x 12" White Floor Tile with Black Flecks (Top Layer)	NAD
18 - B	Kitchen Storage	Mastic of 12" x 12" White Floor Tile (Top Layer)	NAD
19 - A	Kitchen Storage	12" x 12" Light Green Floor Tile (Bottom Layer)	NAD
19 - B	Kitchen Storage	Yellow Mastic of 12" x 12" Light Green Floor Tile (Bottom Layer)	NAD
20 - A	Kitchen Storage	12" x 12" Light Green Floor Tile (Bottom Layer)	NAD
20 - B	Kitchen Storage	Yellow Mastic of 12" x 12" Light Green Floor Tile (Bottom Layer)	NAD
21 - A	Kitchen Office Hallway	12" x 12" Green Heavy Mottled Floor Tile	NAD
21 - B	Kitchen Office Hallway	Black Mastic of 12" x 12" Green Heavy Mottled Floor Tile	NAD
22 - A	Kitchen Office Hallway	12" x 12" Green Heavy Mottled Floor Tile	NAD
22 - B	Kitchen Office Hallway	Black Mastic of 12" x 12" Green Heavy Mottled Floor Tile	NAD
23 - A	Cafeteria	12" x 12" Green Floor Tile with Dark Green Specs (Top Layer)	NAD
23 - B	Cafeteria	Green Mastic of 12" x 12" Green Floor Tile (Top Layer)	NAD
24 - A	Cafeteria	12" x 12" Green Floor Tile with Dark Green Specs (Top Layer)	NAD
24 - B	Cafeteria	Green Mastic of 12" x 12" Green Floor Tile (Top Layer)	NAD
25 - A	Cafeteria	12" x 12" White Floor Tile (Bottom Layer)	NAD
25 - B	Cafeteria	Brown Mastic of 12" x 12" White Floor Tile (Bottom Layer)	NAD

Table Notes:
NAD = No Asbestos Detected
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TABLE 2
BULK SAMPLING OF SUSPECT ASBESTOS-CONTAINING MATERIALS

Sample #	Sampling Location	Material/Description	Analytical Results
26 - A	Cafeteria	12" x 12" White Floor Tile (Bottom Layer)	NAD
26 - B	Cafeteria	Brown Mastic of 12" x 12" White Floor Tile (Bottom Layer)	NAD
27 - A	Cafeteria	12" x 12" Red Floor Tile	NAD
27 - B	Cafeteria	Yellow/Brown Mastic of 12" x 12" Red Floor Tile	NAD
28 - A	Cafeteria	12" x 12" Red Floor Tile	NAD
28 - B	Cafeteria	Yellow/Brown Mastic of 12" x 12" Red Floor Tile	NAD
29 - A	Cafeteria	12" x 12" Tan Floor Tile with Brown Specks (Top Layer)	NAD
29 - B	Cafeteria	Yellow Mastic of 12" x 12" Tan Floor Tile (Top Layer)	NAD
30 - A	Cafeteria	12" x 12" Tan Floor Tile with Brown Specks (Top Layer)	NAD
30 - B	Cafeteria	Yellow Mastic of 12" x 12" Tan Floor Tile (Top Layer)	NAD
31 - A	Cafeteria	Gray Floor Level Compound	NAD
31 - B	Cafeteria	Yellow/Dark Brown Mastic on Gray Floor Level Compound	NAD
32 - A	Cafeteria	Gray Floor Level Compound	NAD
32 - B	Cafeteria	Yellow/Dark Brown Mastic on Gray Floor Level Compound	NAD
33	Cafeteria	Interior White Window Caulk	NAD
34	Cafeteria	Interior White Window Caulk	NAD
35 - A	**Kitchen Hallway to Lockers**	**Black Residual Wall Mastic**	**Asbestos: 5% Chrysotile**
35 - B	**Kitchen Hallway to Lockers**	**Drywall Joint Compound adhered to Black Residual Wall Mastic**	**Asbestos: 2% Chrysotile**
36 - A	Café Office Hallway	Black Residual Wall Mastic	N/A
36 - B	Café Office Hallway	Drywall Joint Compound adhered to Black Residual Wall Mastic	N/A

Table Notes:
NAD = No Asbestos Detected
N/A = Sample Not Analyzed; Positive Stop
Bold - Asbestos Containing Materials

TABLE 2
BULK SAMPLING OF SUSPECT ASBESTOS-CONTAINING MATERIALS

Sample #	Sampling Location	Material/Description	Analytical Results
37	**Café Janitor's Office**	**Interior Tan Door Caulk**	**Asbestos: 2% Chrysotile**
38	Café Janitor's Office	Interior Tan Door Caulk	N/A
39 - A	Café Janitor's Office	Swirl Ceiling Texture	NAD
39 - B	Café Janitor's Office	Swirl Ceiling Texture - Plaster Base	NAD
39 - C	**Café Janitor's Office**	**Brown Mastic on Swirl Ceiling Texture**	**Asbestos: 2% Chrysotile**
40 - A	Café Janitor's Office	Swirl Ceiling Texture	NAD
40 - B	Café Janitor's Office	Brown Mastic on Swirl Ceiling Texture	N/A
41 - A	Café Janitor's Office	Swirl Ceiling Texture	NAD
41 - B	Café Janitor's Office	Swirl Ceiling Texture - Plaster Base	NAD
41 - C	Café Janitor's Office	Brown Mastic on Swirl Ceiling Texture	N/A
42	Weight Room	Yellow Floor Padding Mastic	NAD
43	Weight Room	Yellow Floor Padding Mastic	NAD
44	**Weight Room**	**Dark Brown Ceiling Tile Mastic**	**Asbestos: <1%Anthophyllite 2%Chrysotile**
45	Weight Room	Dark Brown Ceiling Tile Mastic	N/A
46	Dance Room	1' x 1' Decorative Pinhole Ceiling Tile	NAD
47	Dance Room	1' x 1' Decorative Pinhole Ceiling Tile	NAD
48	Dance Room	Black Pipe Wrap (TSI) on Fiberglass	NAD
49	Dance Room	Black Pipe Wrap (TSI) on Fiberglass	NAD
50	Dance Room	Black Pipe Wrap (TSI) on Fiberglass	NAD
51	Dance Room	Black and Tan Pipe Wrap (TSI) on Fiberglass	NAD

Table Notes:
NAD = No Asbestos Detected
N/A = Sample Not Analyzed; Positive Stop
Bold - Asbestos Containing Materials

TABLE 2
BULK SAMPLING OF SUSPECT ASBESTOS-CONTAINING MATERIALS

Sample #	Sampling Location	Material/Description	Analytical Results
52	Dance Room	Black and Tan Pipe Wrap (TSI) on Fiberglass	NAD
53	Dance Room	Black and Tan Pipe Wrap (TSI) on Fiberglass	NAD
54	Dance Room	Interior White Door Caulk	NAD
55	Dance Room	Interior White Door Caulk	NAD
56 - A	Dance Room	Wood Pattern Sheet Floor	NAD
56 - B	Dance Room	Padding of Wood Pattern Sheet Floor	NAD
56 - C	Dance Room	Clear Mastic of Wood Pattern Sheet Floor	NAD
57 - A	Dance Room	Wood Pattern Sheet Floor	NAD
57 - B	Dance Room	Padding of Wood Pattern Sheet Floor	NAD
57 - C	Dance Room	Clear Mastic of Wood Pattern Sheet Floor	NAD
58	Cafeteria	Drywall Wallboard	NAD
59 - A	Kitchen	Drywall Wallboard	NAD
59 - B	**Kitchen**	**Drywall Wallboard Joint Compound**	**Asbestos: 2% Chrysotile**
60	Weight Room Ceiling	Drywall Wallboard	NAD
61	Weight Room Wall	Drywall Wallboard	NAD
62	Dance Ceiling	Drywall Wallboard	NAD
63	Cafeteria at Kitchen	Drywall Joint Compound	NAD
64	Weight Room Ceiling	Drywall Joint Compound	NAD
65	Weight Room Wall	Drywall Joint Compound	NAD

Table Notes:
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Bold - Asbestos Containing Materials

Appendix III: Laboratory Report(s)

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

AIHA LAP, LLC ACCREDITED LABORATORY INDUSTRIAL HYGIENE LAB #173190

NVLAP Lab Code: 200664-0

Customer: ECS Chantilly
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151

Attn: Beverly Sedon

Project: 47:1519C

Lab Order ID: 1624222
Analysis ID: 1624222_PLM
Date Received: 12/8/2016
Date Reported: 12/9/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
1 *1624222PLM_1*	Ceiling Plaster *finish layer only*	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous Crushed
2 - A *1624222PLM_2*	Ceiling Plaster *finish*	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous Crushed
2 - B *1624222PLM_66*	Ceiling Plaster *base - small sample*	**None Detected**		**80% Other** **20% Perlite**	Gray Non Fibrous Heterogeneous Crushed
3 - A *1624222PLM_3*	Ceiling Plaster *finish*	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous Crushed
3 - B *1624222PLM_67*	Ceiling Plaster *base - small sample*	**None Detected**		**100% Other**	Gray Non Fibrous Heterogeneous Crushed
4 - A *1624222PLM_4*	1' x 1' Fissure Ceiling Tile with Brown Mastic *ceiling tile*	**None Detected**	**90% Mineral Wool**	**10% Other**	White Fibrous Heterogeneous Teased
4 - B *1624222PLM_68*	1' x 1' Fissure Ceiling Tile with Brown Mastic *mastic*	**3% Chrysotile**		**97% Other**	Brown Non Fibrous Homogeneous Dissolved
5 - A *1624222PLM_5*	1' x 1' Fissure Ceiling Tile with Brown Mastic *ceiling tile*	**None Detected**	**90% Mineral Wool**	**10% Other**	White Fibrous Heterogeneous Teased

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Sharon Donald (99)

Analyst

Approved Signatory

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

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Project: 47:1519C

Lab Order ID: 1624222
Analysis ID: 1624222_PLM
Date Received: 12/8/2016
Date Reported: 12/9/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
5 - B	1' x 1' Fissure Ceiling Tile with Brown Mastic	**Not Analyzed**			
1624222PLM_69	*mastic*				
6	White Pipe Wrap (TSI) with White Mastic on Fiberglass	**None Detected**	**10% Cellulose** **5% Fiber Glass**	**85% Other**	White Non Fibrous Heterogeneous
1624222PLM_6	*wrap/mastic*				Dissolved
7	White Pipe Wrap (TSI) with White Mastic on Fiberglass	**None Detected**	**10% Cellulose** **5% Fiber Glass**	**85% Other**	White Non Fibrous Heterogeneous
1624222PLM_7	*wrap/mastic*				Dissolved
8	White Pipe Wrap (TSI) with White Mastic on Fiberglass	**None Detected**	**10% Cellulose** **5% Fiber Glass**	**85% Other**	White Non Fibrous Heterogeneous
1624222PLM_8	*wrap/mastic*				Dissolved
9	2' x 4' Gypsum Ceiling Tile	**None Detected**	**20% Cellulose** **5% Fiber Glass**	**75% Gypsum**	Brown, White Fibrous Heterogeneous
1624222PLM_9					Teased
10	2' x 4' Gypsum Ceiling Tile	**None Detected**	**20% Cellulose** **5% Fiber Glass**	**60% Gypsum** **15% Other**	Brown, White Fibrous Heterogeneous
1624222PLM_10					Teased
11	Black Mastic on Duct Wrap	**8% Chrysotile**		**92% Other**	Black Non Fibrous Heterogeneous
1624222PLM_11					Dissolved
12	Black Mastic on Duct Wrap	**Not Analyzed**			
1624222PLM_12					

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Sharon Donald (99)

Analyst

Approved Signatory

P-F-002 r15 1/15/2018

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

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Lab Order ID: 1624222
Analysis ID: 1624222_PLM
Date Received: 12/8/2016
Date Reported: 12/9/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
13 *1624222PLM_13*	4" Ceramic Wall Compound	None Detected		100% Other	White Non Fibrous Heterogeneous Crushed
14 *1624222PLM_14*	4" Ceramic Wall Compound	None Detected		100% Other	White Non Fibrous Heterogeneous Crushed
15 - A *1624222PLM_15*	4" Black Cove Base with Dark Yellow Mastic *cove base*	None Detected		100% Other	Black Non Fibrous Homogeneous Ashed
15 - B *1624222PLM_70*	4" Black Cove Base with Dark Yellow Mastic *mixed mastics*	None Detected	5% Cellulose	95% Other	Brown, Yellow Non Fibrous Heterogeneous Dissolved
16 - A *1624222PLM_16*	4" Black Cove Base with Dark Yellow Mastic *cove base*	None Detected		100% Other	Black Non Fibrous Homogeneous Ashed
16 - B *1624222PLM_71*	4" Black Cove Base with Dark Yellow Mastic *mastic*	None Detected		100% Other	Yellow Non Fibrous Homogeneous Dissolved
17 - A *1624222PLM_17*	12" x 12" White Floor Tile with Black Flecks (Top Layer) *tile*	None Detected		100% Other	White Non Fibrous Heterogeneous Dissolved
17 - B *1624222PLM_72*	12" x 12" White Floor Tile with Black Flecks (Top Layer) *mastic*	None Detected		100% Other	Yellow Non Fibrous Homogeneous Dissolved

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P-F-002 r15 1/15/2018

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Project: 47:1519C

Lab Order ID: 1624222
Analysis ID: 1624222_PLM
Date Received: 12/8/2016
Date Reported: 12/9/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
18 - A *1624222PLM_18*	12" x 12" White Floor Tile with Black Flecks (Top Layer) *tile*	None Detected		100% Other	White Non Fibrous Heterogeneous Dissolved
18 - B *1624222PLM_73*	12" x 12" White Floor Tile with Black Flecks (Top Layer) *mastic*	None Detected		100% Other	Yellow Non Fibrous Homogeneous Dissolved
19 - A *1624222PLM_19*	12" x 12" Light Green Floor Tile with Yellow Mastic (Bottom Layer) *tile*	None Detected		100% Other	Green Non Fibrous Heterogeneous Dissolved
19 - B *1624222PLM_74*	12" x 12" Light Green Floor Tile with Yellow Mastic (Bottom Layer) *mastic*	None Detected		100% Other	Yellow Non Fibrous Homogeneous Dissolved
20 - A *1624222PLM_20*	12" x 12" Light Green Floor Tile with Yellow Mastic (Bottom Layer) *tile*	None Detected		100% Other	Green Non Fibrous Heterogeneous Dissolved
20 - B *1624222PLM_75*	12" x 12" Light Green Floor Tile with Yellow Mastic (Bottom Layer) *mastic*	None Detected		100% Other	Yellow Non Fibrous Homogeneous Dissolved
21 - A *1624222PLM_21*	12" x 12" Green Heavy Mottled Floor Tile with Black Mastic *tile*	None Detected		100% Other	Green Non Fibrous Heterogeneous Dissolved
21 - B *1624222PLM_76*	12" x 12" Green Heavy Mottled Floor Tile with Black Mastic *mastic*	None Detected	3% Cellulose	97% Other	Black Non Fibrous Homogeneous Dissolved

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Analyst

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P-F-002 r15 1/15/2018

Bulk Asbestos Analysis

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EPA Method: 600/R-93/116 and 600/M4-82-020

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Date Received: 12/8/2016
Date Reported: 12/9/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
22 - A	12" x 12" Green Heavy Mottled Floor Tile with Black Mastic	None Detected		100% Other	Green Non Fibrous Heterogeneous
1624222PLM_22	*tile*				Dissolved
22 - B	12" x 12" Green Heavy Mottled Floor Tile with Black Mastic	None Detected	3% Cellulose	97% Other	Black Non Fibrous Homogeneous
1624222PLM_77	*mastic*				Dissolved
23 - A	12" x 12" Green Floor Tile with Dark Green Specs with Green Mastic (Top Layer)	None Detected		100% Other	Green Non Fibrous Heterogeneous
1624222PLM_23	*tile*				Dissolved
23 - B	12" x 12" Green Floor Tile with Dark Green Specs with Green Mastic (Top Layer)	None Detected		100% Other	Yellow Non Fibrous Homogeneous
1624222PLM_78	*mastic*				Dissolved
24 - A	12" x 12" Green Floor Tile with Dark Green Specs with Green Mastic (Top Layer)	None Detected		100% Other	Green Non Fibrous Heterogeneous
1624222PLM_24	*tile*				Dissolved
24 - B	12" x 12" Green Floor Tile with Dark Green Specs with Green Mastic (Top Layer)	None Detected		100% Other	Yellow Non Fibrous Homogeneous
1624222PLM_79	*mastic*				Dissolved
25 - A	12" x 12" White Floor Tile with Brown Mastic (Bottom Layer)	None Detected		100% Other	White Non Fibrous Heterogeneous
1624222PLM_25	*tile*				Dissolved
25 - B	12" x 12" White Floor Tile with Brown Mastic (Bottom Layer)	None Detected		100% Other	Brown Non Fibrous Homogeneous
1624222PLM_80	*mastic*				Dissolved

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Sharon Donald (99)

Analyst

Approved Signatory

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

AIHA LAP, LLC ACCREDITED LABORATORY INDUSTRIAL HYGIENE LAB #173190

NVLAP Lab Code: 200664-0

Customer: ECS Chantilly
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151

Attn: Beverly Sedon

Project: 47:1519C

Lab Order ID: 1624222
Analysis ID: 1624222_PLM
Date Received: 12/8/2016
Date Reported: 12/9/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
26 - A	12" x 12" White Floor Tile with Brown Mastic (Bottom Layer)	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous
1624222PLM_26	*tile*				Dissolved
26 - B	12" x 12" White Floor Tile with Brown Mastic (Bottom Layer)	**None Detected**		**100% Other**	Brown Non Fibrous Homogeneous
1624222PLM_81	*mastic*				Dissolved
27 - A	12" x 12" Red Floor Tile with Yellow/Brown Mastic	**None Detected**		**100% Other**	Red Non Fibrous Heterogeneous
1624222PLM_27	*tile*				Dissolved
27 - B	12" x 12" Red Floor Tile with Yellow/Brown Mastic	**None Detected**		**100% Other**	Brown Non Fibrous Homogeneous
1624222PLM_82	*mastic*				Dissolved
28 - A	12" x 12" Red Floor Tile with Yellow/Brown Mastic	**None Detected**		**100% Other**	Red Non Fibrous Heterogeneous
1624222PLM_28	*tile*				Dissolved
28 - B	12" x 12" Red Floor Tile with Yellow/Brown Mastic	**None Detected**		**100% Other**	Brown Non Fibrous Homogeneous
1624222PLM_83	*mastic*				Dissolved
29 - A	12" x 12" Tan Floor Tile with Brown Specks with Yellow Mastic (Top Layer)	**None Detected**		**100% Other**	Tan Non Fibrous Heterogeneous
1624222PLM_29	*tile*				Dissolved
29 - B	12" x 12" Tan Floor Tile with Brown Specks with Yellow Mastic (Top Layer)	**None Detected**		**100% Other**	Yellow Non Fibrous Homogeneous
1624222PLM_84	*mastic*				Dissolved

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Attn: Beverly Sedon

Project: 47:1519C

Lab Order ID: 1624222
Analysis ID: 1624222_PLM
Date Received: 12/8/2016
Date Reported: 12/9/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
30 - A *1624222PLM_30*	12" x 12" Tan Floor Tile with Brown Specks with Yellow/Dark Brown Mastic (T *tile*	None Detected		100% Other	Tan Non Fibrous Heterogeneous Dissolved
30 - B *1624222PLM_85*	12" x 12" Tan Floor Tile with Brown Specks with Yellow/Dark Brown Mastic (T *mastic*	None Detected		100% Other	Yellow Non Fibrous Homogeneous Dissolved
31 - A *1624222PLM_31*	Gray Floor Level Compound with Yellow/Dark Brown Mastic *level compound*	None Detected		100% Other	Gray Non Fibrous Heterogeneous Crushed
31 - B *1624222PLM_86*	Gray Floor Level Compound with Yellow/Dark Brown Mastic *mastic*	None Detected		100% Other	Brown, Yellow Non Fibrous Heterogeneous Dissolved
32 - A *1624222PLM_32*	Gray Floor Level Compound with Yellow/Dark Brown Mastic *level compound*	None Detected		100% Other	Gray Non Fibrous Heterogeneous Crushed
32 - B *1624222PLM_87*	Gray Floor Level Compound with Yellow/Dark Brown Mastic *mastic*	None Detected		100% Other	Brown, Yellow Non Fibrous Heterogeneous Dissolved
33 *1624222PLM_33*	Interior White Window Caulk	None Detected		100% Other	White Non Fibrous Homogeneous Ashed
34 *1624222PLM_34*	Interior White Window Caulk	None Detected		100% Other	White Non Fibrous Homogeneous Ashed

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NVLAP
NVLAP Lab Code: 200664-0

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14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151

Attn: Beverly Sedon

Project: 47:1519C

Lab Order ID: 1624222
Analysis ID: 1624222_PLM
Date Received: 12/8/2016
Date Reported: 12/9/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
35 - A *1624222PLM_35*	Black Residual Wall Mastic *mastic*	**5% Chrysotile**		**95% Other**	Black Non Fibrous Homogeneous Dissolved
35 - B *1624222PLM_88*	Black Residual Wall Mastic *joint compound*	**2% Chrysotile**		**98% Other**	Cream Non Fibrous Homogeneous Crushed
36 - A *1624222PLM_36*	Black Residual Wall Mastic *mastic*	**Not Analyzed**			
36 - B *1624222PLM_89*	Black Residual Wall Mastic *joint compound*	**Not Analyzed**			
37 *1624222PLM_37*	Interior Tan Door Caulk	**2% Chrysotile**		**98% Other**	Tan Non Fibrous Homogeneous Dissolved
38 *1624222PLM_38*	Interior Tan Door Caulk	**Not Analyzed**			
39 - A *1624222PLM_39*	Swirl Ceiling Texture with Brown Mastic *texture*	**None Detected**		**100% Other**	White, Blue Non Fibrous Heterogeneous Crushed
39 - B *1624222PLM_90*	Swirl Ceiling Texture with Brown Mastic *base plaster*	**None Detected**		**100% Other**	Gray Non Fibrous Heterogeneous Crushed

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Project: 47:1519C

Lab Order ID: 1624222
Analysis ID: 1624222_PLM
Date Received: 12/8/2016
Date Reported: 12/9/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
39 - C	Swirl Ceiling Texture with Brown Mastic	**2% Chrysotile**		**98% Other**	Brown Non Fibrous Homogeneous
1624222PLM_91	*mastic*				Dissolved
40 - A	Swirl Ceiling Texture with Brown Mastic	**None Detected**		**100% Other**	White, Blue Non Fibrous Heterogeneous
1624222PLM_40	*texture*				Crushed
40 - B	Swirl Ceiling Texture with Brown Mastic	**Not Analyzed**			
1624222PLM_92	*mastic - small sample*				
41 - A	Swirl Ceiling Texture with Brown Mastic	**None Detected**		**100% Other**	White, Blue Non Fibrous Heterogeneous
1624222PLM_41	*texture*				Crushed
41 - B	Swirl Ceiling Texture with Brown Mastic	**None Detected**		**100% Other**	Gray Non Fibrous Heterogeneous
1624222PLM_93	*base plaster*				Crushed
41 - C	Swirl Ceiling Texture with Brown Mastic	**Not Analyzed**			
1624222PLM_94	*mastic*				
42	Yellow Floor Padding Mastic	**None Detected**		**100% Other**	Yellow Non Fibrous Homogeneous
1624222PLM_42	*mastic only*				Dissolved
43	Yellow Floor Padding Mastic	**None Detected**		**100% Other**	Yellow Non Fibrous Homogeneous
1624222PLM_43	*mastic only*				Dissolved

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EPA Method: 600/R-93/116 and 600/M4-82-020

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LAB #173190

NVLAP
NVLAP Lab Code: 200664-0

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14026 Thunderbolt Place
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Attn: Beverly Sedon

Project: 47:1519C

Lab Order ID: 1624222
Analysis ID: 1624222_PLM
Date Received: 12/8/2016
Date Reported: 12/9/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
44 *1624222PLM_44*	Dark Brown Ceiling Tile Mastic	**2% Chrysotile** **< 1% Anthophyllite**		**98% Other**	Brown Non Fibrous Homogeneous Dissolved
45 *1624222PLM_45*	Dark Brown Ceiling Tile Mastic	**Not Analyzed**			
46 *1624222PLM_46*	1' x 1' Decorative Pinhole Ceiling Tile	**None Detected**	**60% Mineral Wool** **10% Cellulose**	**30% Other**	Gray, White Fibrous Heterogeneous Teased
47 *1624222PLM_47*	1' x 1' Decorative Pinhole Ceiling Tile	**None Detected**	**60% Mineral Wool** **10% Cellulose**	**30% Other**	Gray, White Fibrous Heterogeneous Teased
48 *1624222PLM_48*	Black Pipe Wrap (TSI) on Fiberglass	**None Detected**	**70% Cellulose**	**30% Other**	Black Non Fibrous Heterogeneous Dissolved
49 *1624222PLM_49*	Black Pipe Wrap (TSI) on Fiberglass	**None Detected**	**70% Cellulose**	**30% Other**	Black Non Fibrous Heterogeneous Dissolved
50 *1624222PLM_50*	Black Pipe Wrap (TSI) on Fiberglass	**None Detected**	**70% Cellulose**	**30% Other**	Black Non Fibrous Heterogeneous Dissolved
51 *1624222PLM_51*	Black and Tan Pipe Wrap (TSI) on Fiberglass	**None Detected**	**70% Cellulose**	**30% Other**	Black Non Fibrous Heterogeneous Dissolved

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14026 Thunderbolt Place
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Chantilly, VA 20151

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Project: 47:1519C

Lab Order ID: 1624222
Analysis ID: 1624222_PLM
Date Received: 12/8/2016
Date Reported: 12/9/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
52 *1624222PLM_52*	Black and Tan Pipe Wrap (TSI) on Fiberglass	**None Detected**	**70% Cellulose**	**30% Other**	Black Fibrous Heterogeneous Teased, Dissolved
53 *1624222PLM_53*	Black and Tan Pipe Wrap (TSI) on Fiberglass	**None Detected**	**70% Cellulose**	**30% Other**	Black Fibrous Heterogeneous Teased, Dissolved
54 *1624222PLM_54*	Interior White Door Caulk	**None Detected**		**100% Other**	White, Blue Non Fibrous Homogeneous Ashed
55 *1624222PLM_55*	Interior White Door Caulk	**None Detected**		**100% Other**	White, Blue Non Fibrous Homogeneous Ashed
56 - A *1624222PLM_56*	Wood Pattern Sheet Floor With Padding and Clear Mastic *sheet flooring*	**None Detected**		**100% Other**	Brown Non Fibrous Homogeneous Ashed
56 - B *1624222PLM_95*	Wood Pattern Sheet Floor With Padding and Clear Mastic *padding*	**None Detected**		**100% Other**	Blue Non Fibrous Homogeneous Ashed
56 - C *1624222PLM_96*	Wood Pattern Sheet Floor With Padding and Clear Mastic *mastic*	**None Detected**		**100% Other**	Transparent Non Fibrous Homogeneous Dissolved
57 - A *1624222PLM_57*	Wood Pattern Sheet Floor With Padding and Clear Mastic *sheet flooring*	**None Detected**		**100% Other**	Brown Non Fibrous Homogeneous Ashed

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Bulk Asbestos Analysis

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AIHA LAP, LLC ACCREDITED LABORATORY INDUSTRIAL HYGIENE LAB #173190

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Customer: ECS Chantilly
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151

Attn: Beverly Sedon

Project: 47:1519C

Lab Order ID: 1624222
Analysis ID: 1624222_PLM
Date Received: 12/8/2016
Date Reported: 12/9/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
57 - B *1624222PLM_97*	Wood Pattern Sheet Floor With Padding and Clear Mastic *padding*	**None Detected**		**100% Other**	Blue Non Fibrous Homogeneous Ashed
57 - C *1624222PLM_98*	Wood Pattern Sheet Floor With Padding and Clear Mastic *mastic*	**None Detected**		**100% Other**	Transparent Non Fibrous Homogeneous Dissolved
58 *1624222PLM_58*	Drywall Wallboard	**None Detected**	**20% Cellulose**	**80% Gypsum**	Brown, White Fibrous Heterogeneous Teased
59 - A *1624222PLM_59*	Drywall Wallboard *drywall*	**None Detected**	**15% Cellulose**	**70% Gypsum** **15% Other**	Brown, Green Fibrous Heterogeneous Teased
59 - B *1624222PLM_99*	Drywall Wallboard *joint compound*	**2% Chrysotile**		**98% Other**	Cream Non Fibrous Homogeneous Crushed
60 *1624222PLM_60*	Drywall Wallboard	**None Detected**	**20% Cellulose**	**80% Gypsum**	Brown, White Fibrous Heterogeneous Teased
61 *1624222PLM_61*	Drywall Wallboard	**None Detected**	**15% Cellulose**	**85% Gypsum**	Brown, Gray Fibrous Heterogeneous Teased
62 *1624222PLM_62*	Drywall Wallboard	**None Detected**	**15% Cellulose** **5% Fiber Glass**	**80% Gypsum**	Brown, White Fibrous Heterogeneous Teased

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LAB #173190

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Suite 100
Chantilly, VA 20151

Attn: Beverly Sedon

Project: 47:1519C

Lab Order ID: 1624222
Analysis ID: 1624222_PLM
Date Received: 12/8/2016
Date Reported: 12/9/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
63	Drywall Joint Compound	None Detected		100% Other	White Non Fibrous Homogeneous
1624222PLM_63					Crushed
64	Drywall Joint Compound	None Detected		100% Other	White Non Fibrous Homogeneous
1624222PLM_64					Crushed
65	Drywall Joint Compound	None Detected		100% Other	White Non Fibrous Homogeneous
1624222PLM_65					Crushed

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Analyst

Approved Signatory

1624222

Client:	ECS Mid-Atlantic, LLC
Contact:	Beverly Sedon
Address:	14026 Thunderbolt Place, Suite
Phone:	301-672-2096 (cell)
Fax:	
Email:	bsedon@ecslimited.com
Project:	47:1519C
Client Notes:	**Positive Stop, Except for Samples 58-65**
P.O. #:	47:1519C
Date Submitted:	11/10/2016 0:00
Analysis:	PLM EPA 600/R-93/116
TurnAroundTime:	2 Day TAT

Instructions:
Use Column "B" for your contact info

To See an Example Click the bottom Example Tab.

Enter samples between "<<" and ">>"
Begin Samples with a "<< "above the first sample and end with a ">>" below the last sample.

Only Enter your data on the first sheet "Sheet1"

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.

Scientific Analytical Institute

4604 Dundas Drive
Greensboro, NC 27407
Phone: 336.292.3888
Fax: 336.292.3313
Email: lab@sailab.com

Sample Number	Data 1	Sample Description	Data 2
<<			
1	HA1	Ceiling Plaster	Café Area 1
2	HA1	Ceiling Plaster	Café Area 1
3	HA1	Ceiling Plaster	Café Area 2
4	HA2	1' x 1' Fissure Ceiling Tile with Brown Mastic	Cafeteria
5	HA2	1' x 1' Fissure Ceiling Tile with Brown Mastic	Cafeteria
6	HA3	White Pipe Wrap (TSI) with White Mastic on Fiberglass	Cafeteria
7	HA3	White Pipe Wrap (TSI) with White Mastic on Fiberglass	Cafeteria
8	HA3	White Pipe Wrap (TSI) with White Mastic on Fiberglass	Cafeteria
9	HA5	2' x 4' Gypsum Ceiling Tile	Kitchen
10	HA5	2' x 4' Gypsum Ceiling Tile	Kitchen
11	HA6	Black Mastic on Duct Wrap	Kitchen
12	HA6	Black Mastic on Duct Wrap	Kitchen
13	HA7	4" Ceramic Wall Compound	Kitchen
14	HA7	4" Ceramic Wall Compound	Kitchen
15	HA8	4" Black Cove Base with Dark Yellow Mastic	Kitchen Storage
16	HA8	4" Black Cove Base with Dark Yellow Mastic	Kitchen Storage
17	HA9	12" x 12" White Floor Tile with Black Flecks (Top Layer	Kitchen Storage

Accepted ☑

Rejected ☐

12/9 10:30am

110424222

18	HA9	12" x 12" White Floor Tile with Black Flecks (Top Layer	Kitchen Storage
19	HA10	12" x 12" Light Green Floor Tile with Yellow Mastic (Bot	Kitchen Storage
20	HA10	12" x 12" Light Green Floor Tile with Yellow Mastic (Bot	Kitchen Storage
21	HA11	12" x 12" Green Heavy Mottled Floor Tile with Black Ma	Kitchen Office Hallway
22	HA11	12" x 12" Green Heavy Mottled Floor Tile with Black Ma	Kitchen Office Hallway
23	HA12	12" x 12" Green Floor Tile with Dark Green Specs with	Cafeteria
24	HA12	12" x 12" Green Floor Tile with Dark Green Specs with	Cafeteria
25	HA13	12" x 12" White Floor Tile with Brown Mastic (Bottom L	Cafeteria
26	HA13	12" x 12" White Floor Tile with Brown Mastic (Bottom L	Cafeteria
27	HA14	12" x 12" Red Floor Tile with Yellow/Brown Mastic	Cafeteria
28	HA14	12" x 12" Red Floor Tile with Yellow/Brown Mastic	Cafeteria
29	HA15	12" x 12" Tan Floor Tile with Brown Specks with Yellow	Cafeteria
30	HA15	12" x 12" Tan Floor Tile with Brown Specks with Yellow	Cafeteria
31	HA16	Gray Floor Level Compound with Yellow/Dark Brown M	Cafeteria
32	HA16	Gray Floor Level Compound with Yellow/Dark Brown M	Cafeteria
33	HA17	Interior White Window Caulk	Cafeteria
34	HA17	Interior White Window Caulk	Cafeteria
35	HA18	Black Residual Wall Mastic	Café Office Hallway
36	HA18	Black Residual Wall Mastic	Café Office Hallway
37	HA19	Interior Tan Door Caulk	Café Janitor's Office
38	HA19	Interior Tan Door Caulk	Café Janitor's Office
39	HA20	Swirl Ceiling Texture with Brown Mastic	Café Janitor's Office
40	HA20	Swirl Ceiling Texture with Brown Mastic	Café Janitor's Office
41	HA20	Swirl Ceiling Texture with Brown Mastic	Café Janitor's Office
42	HA21	Yellow Floor Padding Mastic	Weight Room
43	HA21	Yellow Floor Padding Mastic	Weight Room
44	HA22	Dark Brown Ceiling Tile Mastic	Weight Room
45	HA22	Dark Brown Ceiling Tile Mastic	Weight Room
46	HA23	1' x 1' Decorative Pinhole Ceiling Tile	Dance Room
47	HA23	1' x 1' Decorative Pinhole Ceiling Tile	Dance Room
48	HA24	Black Pipe Wrap (TSI) on Fiberglass	Dance Room
49	HA24	Black Pipe Wrap (TSI) on Fiberglass	Dance Room
50	HA24	Black Pipe Wrap (TSI) on Fiberglass	Dance Room
51	HA25	Black and Tan Pipe Wrap (TSI) on Fiberglass	Dance Room
52	HA25	Black and Tan Pipe Wrap (TSI) on Fiberglass	Dance Room
53	HA25	Black and Tan Pipe Wrap (TSI) on Fiberglass	Dance Room
54	HA26	Interior White Door Caulk	Dance Room

1024222

55	HA26	Interior White Door Caulk	Dance Room
56	HA27	Wood Pattern Sheet Floor With Padding and Clear Ma	Dance Room
57	HA27	Wood Pattern Sheet Floor With Padding and Clear Ma	Dance Room
58	HA28	Drywall Wallboard	Cafeteria
59	HA28	Drywall Wallboard	Kitchen
60	HA28	Drywall Wallboard	Weight Room Ceiling
61	HA28	Drywall Wallboard	Weight Room Wall
62	HA28	Drywall Wallboard	Dance Ceiling
63	HA29	Drywall Joint Compound	Cafeteria at Kitchen
64	HA29	Drywall Joint Compound	Weight Room Ceiling
65	HA29	Drywall Joint Compound	Weight Room Wall

>>

GEORGE WASHINGTON MIDDLE 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 the Table 3.

TABLE 1
ASBESTOS-CONTAINING MATERIALS SUMMARY

Location	Material	Friability
REPORTED ON PRIOR SURVEYS		
Hallways (Observed in other Areas)	Fire Door Insulation	Friable
North Boiler Room (Wall Opening at Ceiling)	Black Paper under Plaster Wrap*	Category II Non-Friable
Room 317 on 3rd Floor (Assumed in other Areas)	Black Tar Paper under Carpet	Category I Non-Friable
Classroom A111 on 1st Floor (Observed above Drop Ceiling Tile in other Areas)	Brown Adhesive Divot**	Category II Non-Friable
SAMPLED BY ECS IN NOVEMBER 20, 2013		
Storage Room in Lobby at Exit 29 on 1st Floor (Assumed in other Areas)	9" x 9" Tan Flecked Floor Tile	Category I Non-Friable
Storage Room in Lobby at Exit 29 on 1st Floor (Assumed in other Areas)	Plaster Wall (Finish Layer)	Friable
Storage Room in South Boiler Room on 1st Floor (through Wall) (Assumed in other Areas)	Mudded Pipe Insulation*	Friable

Location	Material	Friability
Cafeteria on 1st Floor (Observed above Drop Ceiling Tile in other Areas)	Brown Glue Dot associated with 1' x 1' White Fissured Ceiling Tile**	Category II Non-Friable
Classroom A210 on 2nd Floor (Assumed under Carpet in other Areas)	Tan Floor Tile and associated Black Mastic	Category I Non-Friable
Classroom A214 on 2nd Floor (Assumed under 12" x 12" Floor Tiles throughout the Building)	Tan Floor Tile and associated Mastic (under 12" x 12" Gray Floor Tile)	Category I Non-Friable
MATERIALS ASSUMED TO CONTAIN ASBESTOS *		
Throughout Building	Interior Pipe Wrap associated with Water Fountains and Radiators	Category II Non-Friable
Classrooms	Chalkboards and associated Mastics	Category II Non-Friable
Hallways	Boards and associated Mastics	Category II Non-Friable
Exercise Room, Main Gym and Stage on 1st Floor	Wood Floor Underlayment and associated Mastic	Category I Non-Friable
Mini Gym on 1st Floor	Tectum Sound Wall Boards and associated Mastic	Category II Non-Friable
Classrooms	Boards above Doors	Category II Non-Friable
Cafeteria on 1st Floor	Mastic associated with Wall Panels	Category II Non-Friable
Main Gym on 1st Floor (Assumed throughout the Building)	Pin Mastic associated with Fiberglass Duct Insulation	Category II Non-Friable
Pipes within chases behind walls and above ceiling throughout the building	Thermal System Insulation (TSI)	Friable

Location	Material	Friability
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
Elevator	Switch Deflector Plates, Brakes, Cab and Doors	Unknown
Roof	Asphalt-Based Roofing Materials and Caulks/Sealants	Non-Friable
Roof	Roof Sheathing (Bottom Layer)***	Category II Non-Friable

Notes: * These materials were observed damaged in the above listed locations.
** Degraded plaster ceiling and 1' x 1' ceiling tiles with residual of these materials were observed in the above listed locations. Water stained and missing ceiling tiles associated with these materials were also observed throughout the building.
*** 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
Hallways (Observed in other Areas)	Fire Door	7 – Any Remaining Friable ACBM
Storage Room in Lobby at Exit 29 on 1st Floor	Plaster Wall (Finish Layer)	6 – ACBM with Potential for Significant Damage

Location	Material	Physical Assessment Category
Storage Room in South Boiler Room on 1st Floor (Through Wall)	Mudded Pipe Insulation	1 – Damaged or Significantly Damaged TSI ACBM

Recommendations

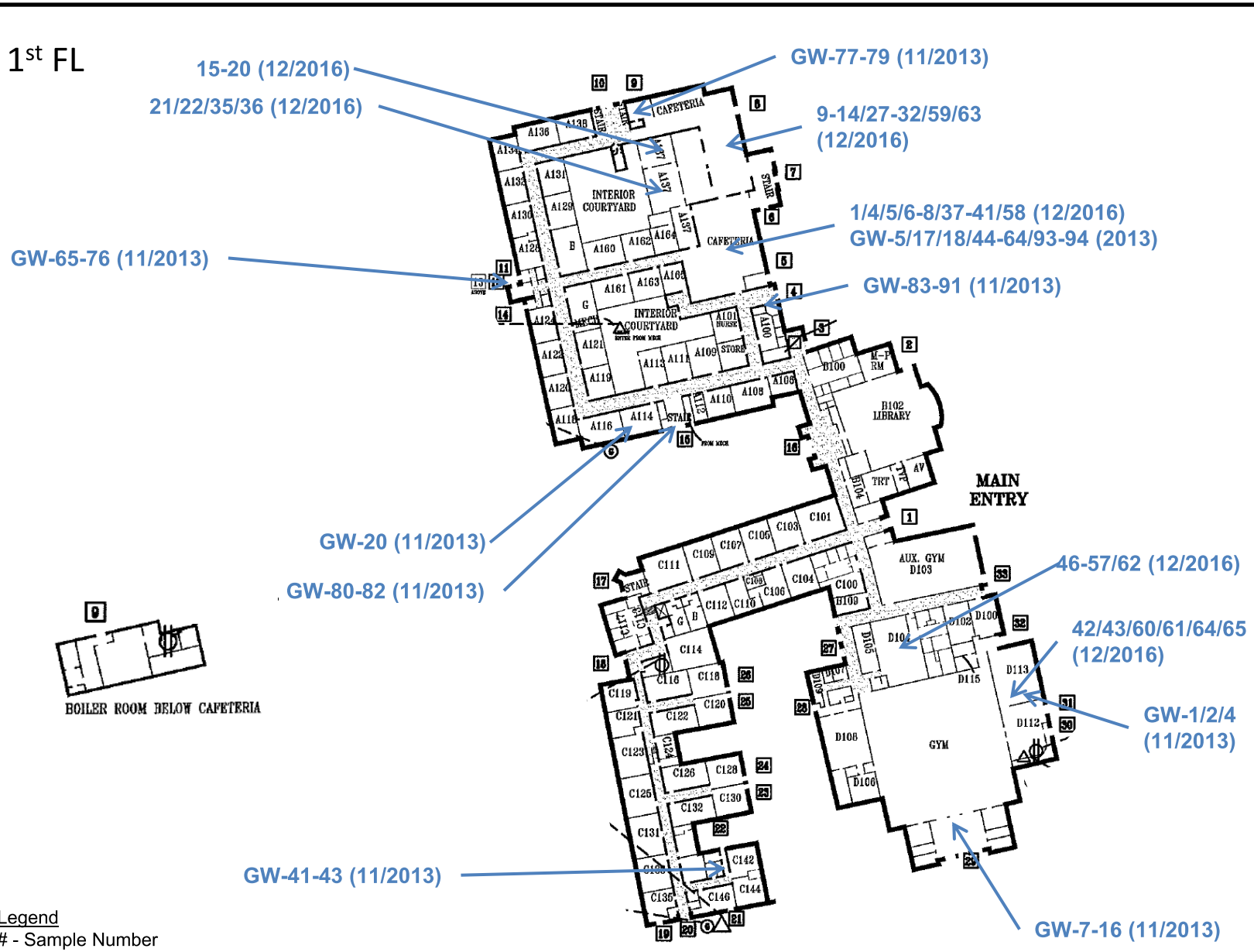
1) The following friable material was observed damaged and should be repaired or removed by a Commonwealth of Virginia licensed asbestos abatement contractor:
   - Mudded pipe insulation at the storage room in the South Boiler Room on 1st floor.

2) The following non-friable materials were observed damaged and should be removed or repaired by personnel designated by the School and trained in Operations & Maintenance asbestos activities:
   - Black paper under plaster wrap in the North Boiler Room (wall opening at ceiling).

3) The asbestos identified asbestos-containing brown adhesive divot and glue dots appeared to consist of the same type of material. Degraded plaster ceiling and 1' x 1' ceiling tiles with brown adhesive divot/glue dots residual were observed in the Auditorium Stage Access, and above the drop ceiling tiles in the Classroom A111 and Weight Room on 1st floor. Water stained and missing 1' x 1' ceiling tiles associated with this material were also observed throughout the building. Any damaged 1' x 1' ceiling tile and residual brown adhesive divot or glue dots should be removed by personnel designated by the School and trained in Operations & Maintenance asbestos activities. Missing 1' x 1' ceiling tiles should be replaced as soon as possible to avoid future damage to the asbestos containing adhesive divot or glue dots.

APPENDIX B

FLOOR PLANS



Legend
- Sample Number

Notes
1. Sample Locations are estimated
2. Samples GW 23-40 are from South Boiler Room (not depicted) (11/2013)

GEORGE WASHINGTON
1005 MOUNT VERNON AVENUE
ALEXANDRIA, VIRGINIA

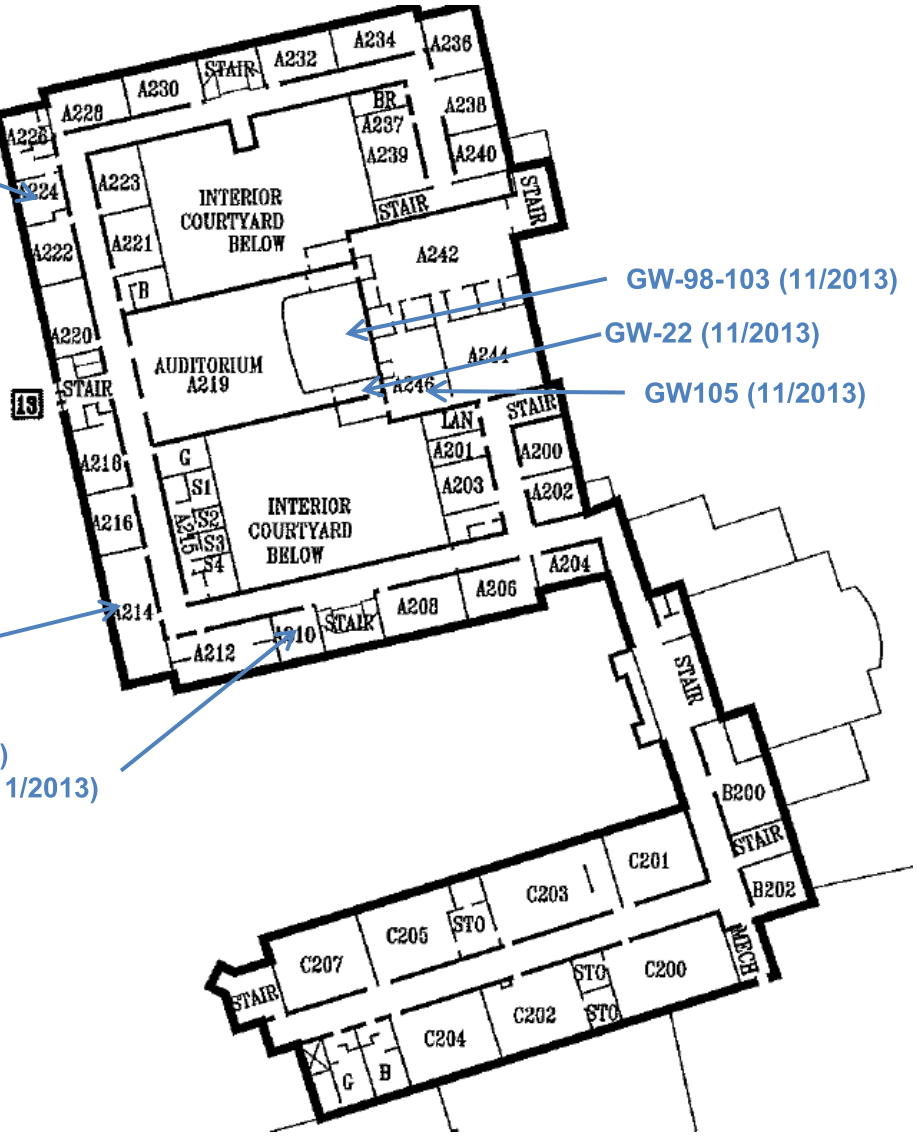
SAMPLING LOCATIONS
ACPS

SCALE NTS

Project No. 47:1519-D

Date 3/31/2017

2nd FL



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- Sample Number

Notes
1. Sample Locations are estimated

GEORGE WASHINGTON
1005 MOUNT VERNON AVENUE
ALEXANDRIA, VIRGINIA

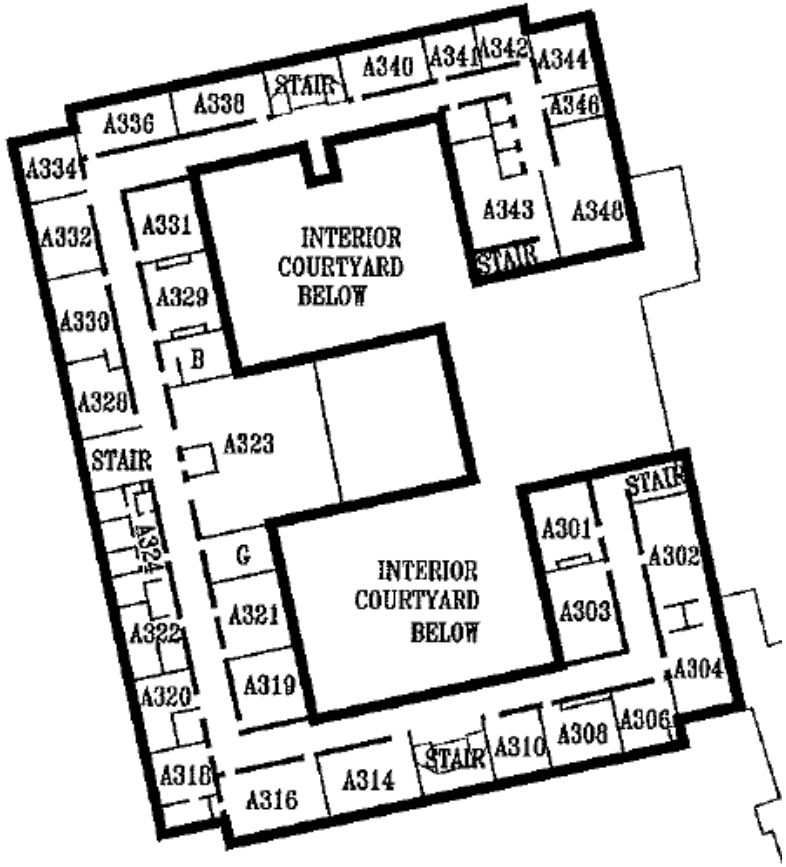
SAMPLING LOCATIONS
ACPS

SCALE NTS

Project No. 47:1519-D

Date 3/31/2017

3rd FL



Legend
- Sample Number

Notes
1. Sample Locations are estimated

GEORGE WASHINGTON
1005 MOUNT VERNON AVENUE
ALEXANDRIA, VIRGINIA

SAMPLING LOCATIONS
ACPS

SCALE NTS

Project No. 47:1519-D

Date 3/31/2017

APPENDIX C

ASBESTOS SUMMARY TABLES

GEORGE WASHINGTON MIDDLE SCHOOL
ACPS ASBESTOS CONTAINING MATERIALS SUMMARY

Updated as of December 29, 2016

MATERIAL	LOCATION	FRIABILITY	CONDITION	COMMENTS	LAST INSPECTION DATE	RECOMMENDATION	SEMI-ANNUAL INSPECTION DATE	REMARKS
MATERIALS REPORTED AS ASBESTOS-CONTAINING MATERIALS ON PRIOR SURVEYS								
Fire Doors	Hallways	F	Intact	None	29-Dec-16	Maintain in O & M Plan		Verify Analytical Results
Black paper under Plaster Wrap	North Boiler Room (Opening in Wall at Ceiling)	NF	Intact	Material is mostly removed	29-Dec-16	Maintain in O & M Plan		Verify Analytical Results
Roofing Felt	North Boiler Room/ Concrete Walls and Ceiling	NF	Intact	Material is behind mortar on ramp	29-Dec-16	Maintain in O & M Plan		Verify Analytical Results
Black Tar Paper Under Carpet	Room 317	NF	Intact	Material may be under existing partition walls, fixtures, cabinets, etc. throughout the building	29-Dec-16	Maintain in O & M Plan		Verify Analytical Results
Brown Adhesive Divot	Room A111	NF	Intact	Material is above drop ceiling and assumed to be in other areas	29-Dec-16	Maintain in O & M Plan		Verify Analytical Results
Plaster Ceiling	Old Gym Weight Room	F	Intact	Material is above ceiling	29-Dec-16	Maintain in O & M Plan		Reported to have been Removed
MATERIALS REPORTED AS ASBESTOS-CONTAINING MATERIALS ON PRIOR SURVEYS THAT WERE NOT IDENTIFIED/OBSERVED BY ECS IN NOVEMBER 20, 2013 SURVEY								
White Fire block	Old Clinic and 2nd Floor A Wing	NF	Intact	This material is reported as ACM; however it was not observed in this area	29-Dec-16	Maintain in O & M Plan		Sample if proposed to be disturbed
TSI-6" Mudded Elbows/Joints	Room 119	F	Unable to Locate	This material is reported as ACM; however it was not observed in this area	29-Dec-16	Maintain in O & M Plan		Sample if proposed to be disturbed
9" x 9" Maroon w/Black Trim Floor tiles	Room s 302, 301, 344	NF	Intact	This material is reported as ACM; however it was not observed in this area	29-Dec-16	Maintain in O & M Plan		Sample if proposed to be disturbed
Grey Mastic on TSI and Ducts	Room A111	NF	Intact	This material is reported as ACM; however it was not observed in this area	29-Dec-16	Maintain in O & M Plan		Sample if proposed to be disturbed
9" x 9" Brown Floor tiles	Old clinic 2nd Floor Wing A/ 2nd Floor Custodial Closet by Auditorium Entrance	NF	Intact	Material may be under existing partition walls, fixtures, cabinets, etc. throughout the building/Under 12"x12"	29-Dec-16	Maintain in O & M Plan		No Clinic on 2nd Floor Observed
Wiring	Stage	F	N/A	Not Observed	29-Dec-16	Repair or Remove ASAP		Not observed - Verify removal
Glue Dots	Room 120	NF	N/A	Not Observed	29-Dec-16	Maintain in O & M Plan		Not observed - Verify removal

GEORGE WASHINGTON MIDDLE SCHOOL
ACPS ASBESTOS CONTAINING MATERIALS SUMMARY

MATERIAL	LOCATION	FRIABILITY	CONDITION	COMMENTS	LAST INSPECTION DATE	RECOMMENDATION	SEMI-ANNUAL INSPECTION DATE	REMARKS
Plaster Walls	Throughout Building	F	N/A	PACM until tested	29-Dec-16	Add to O & M Plan		Not observed - Verify removal
ASBESTOS CONTAINING MATERIALS SAMPLED BY ECS IN NOVEMBER 20, 2013 SURVEY								
9" x 9" Tan Fleck Floor Tile	Storage Room in Lobby at Exit 29	NF	Intact	Materials may be under existing partition walls, fixtures, cabinets, etc. throughout the building	29-Dec-16	Add in O & M Plan		Asbestos: Floor Tile -5% Chrysotile
Plaster Wall/Ceiling	Storage Room in Lobby at Exit 29	F	Intact	Sampled as NAD at Cafeteria, Custodial Office, Classroom A114,Room A224, Exit Door 10, and Ramp to Stair Stage	29-Dec-16	Add in O & M Plan		Asbestos: Finish - 2% Chrysotile
Mudded Pipe Insulation	Storage Room in South Boiler Room behind wall	F	Intact	Materials may be under existing partition walls, fixtures, cabinets, etc. throughout the building	29-Dec-16	Add in O & M Plan		Asbestos: 5% Chrysotile
Brown Glue Dot associated with 1' x 1' White Fissured Ceiling Tile	Cafeteria	NF	Intact	May be located in other areas of the building	29-Dec-16	Add in O & M Plan		Asbestos: 3% Chrysotile
Tan Floor Tile and associated Black Mastic	Classroom A210 (under carpet)	NF	Intact	Materials may be under existing partition walls, fixtures, cabinets, etc. throughout the building	29-Dec-16	Add in O & M Plan		Asbestos : Floor Tile -3% Chrysotile Mastic - 8% Chrysotile
Tan Floor Tile and associated Mastic under 12" x 12" Grey Floor Tile	Classroom A214	NF	Intact	Materials may be under existing partition walls, fixtures, cabinets, etc. throughout the building	29-Dec-16	Add in O & M Plan		Asbestos: Floor Tile -3% Chrysotile Mastic - 5% Chrysotile
ASBESTOS CONTAINING MATERIALS SAMPLED BY ECS IN July 2015 SURVEY								
Black Floor Mastic of Gray Floor Tile (Unknown Size)	A206	NF	Intact		29-Dec-16	Add in O & M Plan		Asbestos: 8% Chrysotile
Black Floor Mastic of Brown Floor Tile (Unknown Size)	A200	NF	Intact		29-Dec-16	Add in O & M Plan		Asbestos: 8% Chrysotile
Black Floor Mastic of Black Floor Tile (Unknown Size)	A208	NF	Intact		29-Dec-16	Add in O & M Plan		Asbestos: 8% Chrysotile
Gray (Unknown Size) Floor Tile	A216	NF	Intact		29-Dec-16	Add in O & M Plan		Asbestos: 2% Chrysotile

GEORGE WASHINGTON MIDDLE SCHOOL
ACPS ASBESTOS CONTAINING MATERIALS SUMMARY

MATERIAL	LOCATION	FRIABILITY	CONDITION	COMMENTS	LAST INSPECTION DATE	RECOMMENDATION	SEMI-ANNUAL INSPECTION DATE	REMARKS
ASBESTOS CONTAINING MATERIALS SAMPLED BY ECS IN December 2, 2016 SURVEY								
Brown Mastic of 1" x 1" Fissure Ceiling Tile	Cafeteria	NF	Intact	Located Above Drop Ceilings	12/02/16	Remain in O&M Plan		Asbestos: 3% Chrysotile
Black Mastic on Duct Wrap	Kitchen	NF	Intact	Located Above Drop Ceiling in Kitchen	12/02/16	Add to O&M Plan		Asbestos: 5% Chrysotile
Black Residual Wall Mastic	Kitchen Hallway	NF	Intact	Associated with Mirror	12/02/16	Add to O&M Plan		Asbestos: 8% Chrysotile
Drywall Joint Compound	Kitchen Hallway	NF	Intact	Associated with Drywall	12/02/16	Add to O&M Plan		Asbestos: 2% Chrysotile
Brown Mastic on Swirl Ceiling Texture	Café Storage Room - Janitor's Office	NF	Intact	Associated with Texture Ceiling	12/02/16	Add to O&M Plan		Asbestos: 2% Chrysotile
Interior Tan Door Caulk	Café Storage Room - Janitor's Office	NF	Intact	Interior Metal Frame Door	12/02/16	Add to O&M Plan		Asbestos: 2% Chrysotile
Dark Brown Ceiling Tile Mastic	Dance Room	NF	Intact	Above Drop Ceilings	12/02/16	Add to O&M Plan		Asbestos: 2% Chrysotile; <1% Anthophyllite
MATERIALS ASSUMED TO CONTAIN ASBESTOS								
Plaster Ceiling	Boiler Room in Main Original Building	F	Intact	Sampled as NAD in Cafeteria, Custodial Office, Classroom A114,Room A224, Exit Door 10, and Ramp to Stair Stage by ECS.	29-Dec-16	Remove from O & M Plan		None
Cove Base and Associated Mastic	1st Floor Men Restroom in Main Original Building	NF	Intact	PACM until tested; Bathrooms observed to have Ceramic Flooring/Bases	29-Dec-16	Maintain in O & M Plan		Sample if proposed to be disturbed
Interior Window Caulking	Throughout Building	NF	Intact	Sampled NAD in Classroom A214, Room A224, and Stair by Classroom A246	29-Dec-16	Remove from O & M Plan		None
Textured Plaster Ceiling	Entrance by Cafeteria/Under Stairs in Main Original building	F	Intact	Sampled NAD by ECS.	29-Dec-16	Remove from O & M Plan		None
Hardwood Floor Underlayment and Associated Mastic	Main Gym Building and Exercise Room next to the Weight Room	NF	Intact	PACM until tested	29-Dec-16	Maintain in O & M Plan		Sample if proposed to be disturbed
Tectum Sound Board on Walls	Mini-Gym Building	NF	Intact	PACM until tested	29-Dec-16	Maintain in O & M Plan		Sample if proposed to be disturbed

GEORGE WASHINGTON MIDDLE SCHOOL
ACPS ASBESTOS CONTAINING MATERIALS SUMMARY

MATERIAL	LOCATION	FRIABILITY	CONDITION	COMMENTS	LAST INSPECTION DATE	RECOMMENDATION	SEMI-ANNUAL INSPECTION DATE	REMARKS
Pin Mastic associated with Fiberglass Duct Insulation	Main Gym on 1st Floor (Assumed throughout the Building)	NF	Intact	PACM until tested	29-Dec-16	Maintain in O & M Plan		Sample if proposed to be disturbed
Stucco Under Windows	Gym Building/Lobby at Exit 29	F	Intact	PACM until tested	29-Dec-16	Maintain in O & M Plan		Sample if proposed to be disturbed
Floor tiles	Annex Building	NF	Intact	12" x 12" floor tiles in the annex were sampled NAD by ECS	29-Dec-16	Remove from O & M Plan		Sample if proposed to be disturbed
Interior Window and Door Caulking	Annex Building	NF	Intact	Various door and window caulks were sampled NAD by ECS.	29-Dec-16	Remove from O & M Plan		Sample if proposed to be disturbed
Thermal System Insulation (TSI)	Throughout the Building	F	Intact	PACM until tested	29-Dec-16	Add to O & M Plan		Sample if proposed to be disturbed
Pipe Flange Gaskets	Throughout the Building	Unknown	Intact	PACM until tested	29-Dec-16	Add to O & M Plan		Sample if proposed to be disturbed
Switch Deflector Plates, Brakes, Cab and Doors	Elevator	Unknown	Intact	PACM until tested	29-Dec-16	Add to O & M Plan		Sample if proposed to be disturbed
Electrical Panels: Transite Components	Mechanical Rooms	NF	Intact	PACM until tested	29-Dec-16	Add to O & M Plan		Sample if proposed to be disturbed
Floor Felt under Wood Flooring	Stage or Throughout the Building	NF	Intact	PACM until tested	29-Dec-16	Add to O & M Plan		Sample if proposed to be disturbed
Mirror Mastic	Bathrooms	NF	Intact	PACM until tested	29-Dec-16	Add to O & M Plan		Sample if proposed to be disturbed
Chalkboards and Associated Mastics	Classrooms	NF	Intact	PACM until tested	29-Dec-16	Add to O & M Plan		Sample if proposed to be disturbed
Interior Pipe Wrap Associated with Water Fountains and Radiators	Throughout the Building	F	Intact	PACM until tested	29-Dec-16	Add to O & M Plan		Sample if proposed to be disturbed
Waterproofing Membranes/Mastics	Behind Interior Finishes, Exterior Veneer and/or Subgrade Walls, and Under Ceramic Flooring	NF	Intact	PACM until tested	29-Dec-16	Add to O & M Plan		Sample if proposed to be disturbed
Asphalt-Based Roofing Material and Caulks/Sealants	Roof	NF	Intact	PACM until tested	29-Dec-16	Add to O & M Plan		Sample if proposed to be disturbed
Older Floor Tiles in Mop Closets	Mop Closets throughout Building	NF	Damaged	Damaged in some areas or missing tiles	29-Dec-16	Add to O & M Plan		PACM

GEORGE WASHINGTON MIDDLE SCHOOL
ACPS ASBESTOS CONTAINING MATERIALS SUMMARY

MATERIAL	LOCATION	FRIABILITY	CONDITION	COMMENTS	LAST INSPECTION DATE	RECOMMENDATION	SEMI-ANNUAL INSPECTION DATE	REMARKS
NON-ASBESTOS CONTAINING MATERIALS SAMPLED BY ECS IN NOVEMBER 20, 2013 SURVEY								
Drywall	Weight Room, Cafeteria, and Room A224	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Joint Compound	Weight Room, Cafeteria, and Room A225	N/A	N/A	N/A	N/A	N/A	N/A	NAD
4" Brown Cove Base and Associated Brown Mastic	Storage Room in the Lobby at Exit 29	N/A	N/A	N/A	N/A	N/A	N/A	Cove Base - NAD Mastic - NAD
Black Interior Door Caulk	Exit Door 29	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Gray Interior Window Glazing	South Boiler Room	N/A	N/A	N/A	N/A	N/A	N/A	NAD
White Block Wall	South Boiler Room (Incinerator)	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Black Waterproofing	South Boiler Room	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Beige Pipe Bridging Mastic	South Boiler Room	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Yellow Board Mastic	Storage Room in South Boiler Room	N/A	N/A	N/A	N/A	N/A	N/A	NAD
12" x 12" Light Grey with White/Grey Flecks Floor Tile and Leveling Compound	Hallway in Annex Building at Exit 22	N/A	N/A	N/A	N/A	N/A	N/A	Floor Tile - NAD Mastic - NAD Leveling Compound - NAD
Swirl Plaster Ceiling	Custodian Office in Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Grey Mastic on Metal Duct	Custodian Office in Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	NAD
2' x 4' White Pinhole Punch Ceiling Tile	Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	NAD
4" Grey Cove Base and Associated Beige Mastic	Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	Cove Base - NAD Mastic - NAD
1' x 1' White Fissured Ceiling Tile	Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	NAD

GEORGE WASHINGTON MIDDLE SCHOOL
ACPS ASBESTOS CONTAINING MATERIALS SUMMARY

MATERIAL	LOCATION	FRIABILITY	CONDITION	COMMENTS	LAST INSPECTION DATE	RECOMMENDATION	SEMI-ANNUAL INSPECTION DATE	REMARKS
2' x 4' White Pinhole Punch Fissured Ceiling Tile	Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	NAD
12" x 12" White with Color Flecks Floor Tile	Boy's Restroom on 1st Floor by Exit 11-12	N/A	N/A	N/A	N/A	N/A	N/A	Floor Tile - NAD Mastic - NAD
12" x 12" Blue Flecked Floor Tile	Boy's Restroom on 1st Floor by Exit 11-12	N/A	N/A	N/A	N/A	N/A	N/A	Floor Tile - NAD Mastic - NAD
12" x 12" Red Flecked Floor Tile	Boy's Restroom on 1st Floor by Exit 11-12	N/A	N/A	N/A	N/A	N/A	N/A	Floor Tile - NAD Mastic - NAD
Off White Floor Tile and Associated Brown Mastic under 12" x 12" Floor Tile	Boy's Restroom on 1st Floor by Exit 11-12	N/A	N/A	N/A	N/A	N/A	N/A	Floor Tile - NAD Mastic - NAD
12" x 12" Green Mottled Floor Tile and Associated Black Mastic	Food Storage A137	N/A	N/A	N/A	N/A	N/A	N/A	Floor Tile - NAD Mastic - NAD
Black Stair Tread and Associated Black Mastic	Stairwell at Exit 15	N/A	N/A	N/A	N/A	N/A	N/A	Stair Tread - NAD Mastic - NAD
Black Solid Stair Tread	Stairwell at Exit 4	N/A	N/A	N/A	N/A	N/A	N/A	NAD
1' x 1' White Small Pinhole Ceiling Tile	Exit Door 4	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Brown Glue Dot Associated with 1' x 1' White Small Pinhole Ceiling Tile	Exit Door 4	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Black with White Flecks Stair Tread and Associated Yellow Mastic	Stairwell behind Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	Stair Tread - NAD Mastic - NAD
Gray Sink Undercoat	Teacher's Lounge Room A224	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Dark Blue Fire Rate Stage Curtain	Stage	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Blue Fire Rate Stage Curtain	Stage	N/A	N/A	N/A	N/A	N/A	N/A	NAD
White Interior Window Caulk	Classroom A214, Room A224, and Stair by Classroom A246	N/A	N/A	N/A	N/A	N/A	N/A	NAD
12" x 12" Grey with White/Grey Flecks Floor Tile (Top Layer)	Classroom A214	N/A	N/A	N/A	N/A	N/A	N/A	Floor Tile - NAD Mastic - NAD Leveling - NAD
Black Mastic associated with 9" x 9" Tan Fleck Floor Tile	Storage Room in Lobby at Exit 29	N/A	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	Mastic - NAD

GEORGE WASHINGTON MIDDLE SCHOOL
ACPS ASBESTOS CONTAINING MATERIALS SUMMARY

MATERIAL	LOCATION	FRIABILITY	CONDITION	COMMENTS	LAST INSPECTION DATE	RECOMMENDATION	SEMI-ANNUAL INSPECTION DATE	REMARKS
Plaster Wall/Ceiling	Cafeteria, Custodial Office, Classroom A114,Room A224, Exit Door 10, and Ramp to Stair Stage	N/A	N/A	N/A	N/A	N/A	N/A	Finish - NAD Base - NAD
Felt associated with Tan Floor Tile under 12" x 12" Grey Floor Tile	Classroom A214	N/A	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	Felt - NAD
NON-ASBESTOS CONTAINING MATERIALS SAMPLED BY ECS DECEMBER 2, 2016 SURVEY								
Ceiling Plaster - Finish	Café Area 1	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Ceiling Plaster - Base	Café Area 1	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Ceiling Plaster - Finish	Café Area 2	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Ceiling Plaster - Base	Café Area 2	N/A	N/A	N/A	N/A	N/A	N/A	NAD
1' x 1' Fissure Ceiling Tile	Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	NAD
White Pipe Wrap (TSI) with White Mastic on Fiberglass	Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	NAD
White Pipe Wrap (TSI) with White Mastic on Fiberglass	Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	NAD
2' x 4' Gypsum Ceiling Tile	Kitchen	N/A	N/A	N/A	N/A	N/A	N/A	NAD
4" Ceramic Wall Compound	Kitchen	N/A	N/A	N/A	N/A	N/A	N/A	NAD
4" Black Cove Base with Dark Yellow Mastic	Kitchen Storage	N/A	N/A	N/A	N/A	N/A	N/A	NAD
12" x 12" White Floor Tile with Black Flecks (Top Layer) with Mastic	Kitchen Storage	N/A	N/A	N/A	N/A	N/A	N/A	NAD
12" x 12" Light Green Floor Tile (Bottom Layer) with Yellow Mastic	Kitchen Storage	N/A	N/A	N/A	N/A	N/A	N/A	NAD
12" x 12" Green Heavy Mottled Floor Tile with Black Mastic	Kitchen Office Hallway	N/A	N/A	N/A	N/A	N/A	N/A	NAD

GEORGE WASHINGTON MIDDLE SCHOOL
ACPS ASBESTOS CONTAINING MATERIALS SUMMARY

MATERIAL	LOCATION	FRIABILITY	CONDITION	COMMENTS	LAST INSPECTION DATE	RECOMMENDATION	SEMI-ANNUAL INSPECTION DATE	REMARKS
12" x 12" Green Floor Tile with Dark Green Specs (Top Layer) with Green Mastic	Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	NAD
12" x 12" White Floor Tile (Bottom Layer) with Brown Mastic	Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	NAD
12" x 12" Red Floor Tile with Yellow/Brown Mastic	Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	NAD
12" x 12" Tan Floor Tile with Brown Specks (Top Layer) with Yellow Mastic	Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Gray Floor Level Compound with Yellow/Dark Brown Mastic	Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Interior White Window Caulk	Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Swirl Ceiling Texture	Café Janitor's Office	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Swirl Ceiling Texture - Plaster Base	Café Janitor's Office	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Yellow Floor Padding Mastic	Weight Room	N/A	N/A	N/A	N/A	N/A	N/A	NAD
1' x 1' Decorative Pinhole Ceiling Tile	Dance Room	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Black Pipe Wrap (TSI) on Fiberglass	Dance Room	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Black and Tan Pipe Wrap (TSI) on Fiberglass	Dance Room	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Interior White Door Caulk	Dance Room	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Wood Pattern Sheet Floor	Dance Room	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Padding of Wood Pattern Sheet Floor	Dance Room	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Clear Mastic of Wood Pattern Sheet Floor	Dance Room	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Drywall Wallboard	Cafeteria	N/A	N/A	N/A	N/A	N/A	N/A	NAD

GEORGE WASHINGTON MIDDLE SCHOOL
ACPS ASBESTOS CONTAINING MATERIALS SUMMARY

MATERIAL	LOCATION	FRIABILITY	CONDITION	COMMENTS	LAST INSPECTION DATE	RECOMMENDATION	SEMI-ANNUAL INSPECTION DATE	REMARKS
Drywall Wallboard	Kitchen	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Drywall Wallboard	Weight Room Ceiling	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Drywall Wallboard	Weight Room Wall	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Drywall Wallboard	Dance Ceiling	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Drywall Joint Compound	Cafeteria at Kitchen	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Drywall Joint Compound	Weight Room Ceiling	N/A	N/A	N/A	N/A	N/A	N/A	NAD
Drywall Joint Compound	Weight Room Wall	N/A	N/A	N/A	N/A	N/A	N/A	NAD
NON-ASBESTOS CONTAINING MATERIALS SAMPLED BY ECS DECEMBER 29, 2016 SURVEY								
Gray Sheet Flooring	A 210	N/A	N/A	N/A	N/A	N/A	N/A	NAD

TABLE 1

BULK SAMPLING OF SUSPECT ASBESTOS-CONTAINING MATERIALS

Sample #	Sampling Location	Material/Description	Analytical Results
66	A 210	Gray Sheet Flooring (Top Layer)	NAD
67	A 210	Gray Sheet Flooring (Top Layer)	NAD

Table Notes:
NAD = No Asbestos Detected
N/A = Sample Not Analyzed; Positive Stop
Bold = Asbestos-Containing Materials

APPENDIX Q

HISTORICAL INFORMATION

A.F. Meyer and Associates, Inc.

George Washington Junior High School

Alexandria, Virginia

Management Plan

for

Asbestos-Containing Materials

Environmental, System Safety, and Occupational Health Consultants

EC.033 5/88

Virginia Department of Education
Energy and Facilities Services

AHERA MANAGEMENT PLAN COVER SHEET

LEA: Alexandria City Public Schools
Address: 3801 W. Braddock Road
Alexandria, VA 22302
County: City of Alexandria
Phone: 1-703-998-2102

GEORGE WASHINGTON JR. H.S.

Management Plan Submission: ☐ Original ☐ Resubmittal ☐ Building Occupied After Oct. 12, 1988

List of Documents Attached:

☐ A School Buildings
☐ B Previous Inspections
☐ C Determination of Sampling Locations
☐ D Description of Each Sample Area
☐ E Bulk Sample Analysis
☐ F Assessment of Materials
☐ G Response Actions Recommended
☐ H Preventive Measures and Response Actions Scheduled
☐ I Operations and Maintenance Plan
☐ J Resources Needed
☐ K Steps to Inform Others
☐ L Periodic Surveillance Plan
☐ M Reinspection Plan

LEA AHERA DESIGNEE

Typed Name: William A. Simms
Mailing Address: 3801 W. Braddock Road
Alexandria, VA 22302
Phone: Office 823-9666 Home 836-7565

Name of Training Course: Inspection (3 Days) Supervision (1 Day)
Year 88 Month 10 Day 3-6 Total Hours of Course 48
Name of Training Agency: Biospherics Inc.

MANAGEMENT PLANNER - I certify as a management planner that I have prepared or assisted in the preparation of such plan or have reviewed such plan, and that such plan is in compliance with 40 CFR Part 763 subpart E.

Typed Name: John B. Love
Signature: _____
Accreditation Number: 8802-02-100
Agency: Tufts University

For persons who performed inspections, and recommend(ed) design, or carry out response actions (except for operations and maintenance) the local education agency used or will use persons who have been accredited by a state which has adopted a contractor accreditation plan under section 206(b) of Title II of the Act or is accredited by an EPA-approved course under section 206(c) of the Title II of the Act. In addition, the LEA has considered whether any conflict of interest may arise from the interrelationship among accredited personnel, such as abatement activities being performed by an inspector or management planner, and whether that should influence the selection of accredited personnel to perform activities under this AHERA program.

The signatories below certify that the general local education agency responsibilities, as stipulated by Part 763.84 have been met or will be met.

Signature: William A. Simms
LEA AHERA Designee
Date: 4-28-89

Signature: Paul W. Mason
LEA Superintendent
P.W. Mason
Typed Name of Superintendent
Date: 4-28-89

FOR REVIEWING AGENCY USE ONLY

☐ Reviewed
☐ Returned for Reasons Stated Below

State I.D.# _____

Reviewer's Signature: _____
Date: _____

PHOTOCOPYING PERMITTED

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: Annex
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: M01
9" x 9" floor tile off white and light green
Field Documents:(See Appendices)
Sample Location : ACGWSA01
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM01001	8088627-1530			AML	Tan, easily crushed, material
			TOTAL:	<1		

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM01010	01A	Chrysotile	Tr. <1	BIO	
			TOTAL:	Tr. <1		

Homogeneous Area Name: Homogeneous Area ID Number: M02
2" x 4" acoustical ceiling tile, serpentine craters crosswise
Field Documents:(See Appendices)
Sample Location : ACGWSA01
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM02002	8088628-1530			AML	Tan, layered, fibrous material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: Annex
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: M03
9" x 9" floor tile, peach with streaks
Field Documents:(See Appendices)
Sample Location : ACGWSA01
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM03003	8088629-1530			AML	Brown, easily crushed, material
			TOTAL:	<1		

Homogeneous Area Name: Homogeneous Area ID Number: M04
1' x 1' acoustical ceiling tile with serpentine holes
Field Documents:(See Appendices)
Sample Location : ACGWSA01
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM04004	8088630-1530			AML	Tan, layered, fibrous material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: Annex
Analysis Method: PLM

Homogeneous Area Name:
1' x 1' floor tile off white with speckles

Homogeneous Area ID Number: M05

Field Documents:(See Appendices)
Sample Location : ACGWSA01
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM05005	8088631-1530			AML	Beige, solid, material
			TOTAL:	<1		

Homogeneous Area Name:
Resilient floor sheet

Homogeneous Area ID Number: M06

Field Documents:(See Appendices)
Sample Location : ACGWSA01
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM06006	8088632-1530			AML	Beige, flexible, material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: Annex
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: M07
1' x 1' floor tile, off white with beige and gray
Field Documents:(See Appendices)
Sample Location : ACGWSA01
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM07007	8088633-1530	Chrysotile	Tr. <1	AML	Tan, easily crushed, material
			TOTAL:	Tr. <1		

Homogeneous Area Name: Homogeneous Area ID Number: M08
Gypsum board ceiling
Field Documents:(See Appendices)
Sample Location : ACGWSA01
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM08008	8088634-1530			AML	Tan, powdery, material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: Annex
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: M17
1' x 1' floor tile, off white with beige streaks
Field Documents:(See Appendices)
Sample Location : ACGWSA01
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM17009	8088635-1530			AML	Tan, easily crushed, material
			TOTAL:	<1		

Homogeneous Area Name: Homogeneous Area ID Number: T01
Aircell pipe insulation above the suspended ceilings
Field Documents:(See Appendices)
Sample Location : ACGWSA01
Homogeneous Area: ACGWHA01

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWT01011	8088636-1530	Chrysotile	30-35	AML	Tan, paper-like, fibrous material
			TOTAL:	30-35		
06/08/88	ACGWT01012	8088637-1530	Chrysotile	35-40	AML	Tan, paper-like, fibrous material
			TOTAL:	35-40		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: Annex
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: T02
Hard elbows on water line above suspended ceilings
Field Documents:(See Appendices)
Sample Location : ACGWSA01
Homogeneous Area: ACGWHA01

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWT02014	8088638-1530	Chrysotile	40-45	AML	White, fluffy, fibrous material
			TOTAL:	40-45		
06/08/88	ACGWT02015	8088639-1530	Chrysotile	40-45	AML	White, fluffy, fibrous material
			TOTAL:	40-45		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: M20
1' x 1' acoustical ceiling tile, smooth surface
Field Documents:(See Appendices)
Sample Location : ACGWSA05
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM20045	8088600-1530			AML	Orange & white, soft, fibrous material
			TOTAL:	<1		

Homogeneous Area Name: Homogeneous Area ID Number: M21
9" x 9" floor tile, beige with white streaks
Field Documents:(See Appendices)
Sample Location : ACGWSA05
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM21046	8088601-1530			AML	Tan, easily crushed, material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: M22
2' x 4' acoustical ceiling tile with serpentine holes crosswise
Field Documents:(See Appendices)
Sample Location : ACGWSA06
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM22047	8088602-1530			AML	Beige, layered, fibrous material
			TOTAL:	<1		

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM22088	04A			BIO	
			TOTAL:	NAFD		

Homogeneous Area Name: Homogeneous Area ID Number: M23
1' x 1' floor tile, off white, beige white and gray
Field Documents:(See Appendices)
Sample Location : ACGWSA05
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM23048	8088493-1530			AML	Beige, solid, material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: M24
9" x 9" floor tile, dark brown plain
Field Documents:(See Appendices)
Sample Location : ACGWSA05
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM24049	8088494-1530			AML	Brown, solid material
			TOTAL:	<1		

Homogeneous Area Name: Homogeneous Area ID Number: M25
2' x 4' acoustical ceiling tile with small medium holes
Field Documents:(See Appendices)
Sample Location : ACGWSA05
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM25050	8088495-1530			AML	Tan, layered, fibrous material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: M26
1' x 1' floor tile, light gray, gray and black
Field Documents:(See Appendices)
Sample Location : ACGWSA05
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM26051	8088496-1530			AML	Tan, solid material
			TOTAL:	<1		

Homogeneous Area Name: Homogeneous Area ID Number: M28
1' x 1' acoustical ceiling tiles with deep canyons
Field Documents:(See Appendices)
Sample Location : ACGWSA06
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM28052	8088497-1530			AML	White, soft, fibrous material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: M29
1' x 1' floor tile, gray and white and peach
Field Documents: (See Appendices)
Sample Location : ACGWSA06
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM29053	8088498-1530			AML	Beige, easily crushed material
			TOTAL:	<1		

Homogeneous Area Name: Homogeneous Area ID Number: M30
1' x 1' acoustical ceiling tile, small holes and serpentine craters.
Field Documents: (See Appendices)
Sample Location : ACGWSA05
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM30054	8088499-1530			AML	White, soft, fibrous material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: M31
1' x 1' floor tile, off white with beige splotches
Field Documents:(See Appendices)
Sample Location : ACGWSA05
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM31055	8088500-1530			AML	Tan, solid, material
			TOTAL:	<1		

Homogeneous Area Name: Homogeneous Area ID Number: M32
2' x 4' acoustical ceiling tile with irregular pock marks
Field Documents:(See Appendices)
Sample Location : ACGWSA06
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM32056	8088501-1530			AML	Tan, layered, fibrous material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: M33
1' x 1' floor tile burnt orange with splotches
Field Documents:(See Appendices)
Sample Location : ACGWSA05
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM33057	8088502-1530			AML	White, solid, material
			TOTAL:	<1		

Homogeneous Area Name: Homogeneous Area ID Number: M34
2' x 4' acoustical ceiling tile with holes and irregular topography
Field Documents:(See Appendices)
Sample Location : ACGWSA05
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM34058	8088503-1530			AML	Tan, layered, fibrous material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: M35
1' x 1' acoustical ceiling tile with extensive canyons
Field Documents:(See Appendices)
Sample Location : ACGWSA05
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM35059	8088504-1530			AML	White, soft, fibrous material
			TOTAL:	<1		

Homogeneous Area Name: Homogeneous Area ID Number: M36
1' x 1' floor tile, peach with orange and white
Field Documents:(See Appendices)
Sample Location : ACGWSA05
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM36060	8088505-1530			AML	Red, solid, material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name:
Resilient sheet

Homogeneous Area ID Number: M37

Field Documents:(See Appendices)
Sample Location : ACGWSA05
Homogeneous Area: ACGWHA05

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM37061	8088506-1530	Chrysotile	20-25	AML	Beige, solid, material
			TOTAL:	20-25		

Homogeneous Area Name:
Plaster walls in auditorium

Homogeneous Area ID Number: S04

Field Documents:(See Appendices)
Sample Location : ACGWSA05
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWS04070	8088674-1530			AML	White, powdery material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name:
Plaster walls on stage

Homogeneous Area ID Number: S05

Field Documents:(See Appendices)
Sample Location : ACGWSA05
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWS05071	8088675-1530			AML	Brown, easily crushed material
			TOTAL:	<1		

Homogeneous Area Name:
Plaster lathe above acoustical tile in stairway (stage left)

Homogeneous Area ID Number: S06

Field Documents:(See Appendices)
Sample Location : ACGWSA05
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWS06072	8088676-1530			AML	Tan, solid material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: S07
Plaster lathe above acoustical ceiling stage right stairs
Field Documents:(See Appendices)
Sample Location : ACGWSA05
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWS07073	8088677-1530			AML	Tan, solid material
			TOTAL:	<1		

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWS07082	03A			BIO	
			TOTAL:	NAFD		

Homogeneous Area Name: Homogeneous Area ID Number: S08
Wall plaster in cafeteria and kitchen
Field Documents:(See Appendices)
Sample Location : ACGWSA06
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWS08074	8088678-1530			AML	White & brown, plaster-like material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: S09
Ceiling plaster in cafeteria air handling room
Field Documents: (See Appendices)
Sample Location : ACGWSA06
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWS09075	8088679-1530			AML	White, powdery material
			TOTAL:	<1		

Homogeneous Area Name: Homogeneous Area ID Number: S10
Ceiling plaster in new boiler room
Field Documents: (See Appendices)
Sample Location : ACGWSA07
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWS10076	8088680-1530			AML	Brown, soft fibrous material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: S11
Wall plaster in main hallways first floor
Field Documents:(See Appendices)
Sample Location : ACGWSA06
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWS11077	8088681-1530			AML	Tan, powdery material
			TOTAL:	<1		

Homogeneous Area Name: Homogeneous Area ID Number: S12
Plaster in classroom walls
Field Documents:(See Appendices)
Sample Location : ACGWSA06
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWS12078	8088682-1530			AML	White, powdery material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name:
Second floor wall plaster

Homogeneous Area ID Number: S13

Field Documents:(See Appendices)
Sample Location : ACGWSA05
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWS13079	8088683-1530			AML	Tan, powdery material
			TOTAL:	<1		

Homogeneous Area Name:
Third floor plaster walls

Homogeneous Area ID Number: S14

Field Documents:(See Appendices)
Sample Location : ACGWSA04
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWS14080	8088684-1530			AML	Tan, plaster-like material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: S15
Plaster ceiling above main hallway ceiling tile
Field Documents:(See Appendices)
Sample Location : ACGWSA04
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWS15081	8088685-1530			AML	Brown, powdery material
			TOTAL:	<1		

Homogeneous Area Name: Homogeneous Area ID Number: T07
North boiler room hard elbows
Field Documents:(See Appendices)
Sample Location : ACGWSA07
Homogeneous Area: ACGWHA06

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWT07039	8088594-1530	Chrysotile	45-50	AML	Brown, soft, fibrous material
			TOTAL:	45-50		
06/08/88	ACGWT07040	8088595-1530	Chrysotile	50-55	AML	Tan, fluffy, fibrous material
			TOTAL:	50-55		
06/08/88	ACGWT07041	8088596-1530	Chrysotile	50-55	AML	Brown, soft, fibrous material
			TOTAL:	50-55		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: T08
Aircell pipe insulation in new boiler room leading to crawl space
Field Documents:(See Appendices)
Sample Location : ACGWSA07
Homogeneous Area: ACGWHA06

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWT08042	8088597-1530	Chrysotile	35-40	AML	Beige, paper-like, fibrous material
			TOTAL:	35-40		
06/08/88	ACGWT08043	8088598-1530	Chrysotile	35-40	AML	Brown, paper-like, fibrous material
			TOTAL:	35-40		
06/08/88	ACGWT08044	8088599	Chrysotile	25-30	AML	Tan, paper-like, fibrous material
			TOTAL:	25-30		
06/08/88	ACGWT08089	8088691-1530	Chrysotile	20-25	AML	Brown, paper-like, fibrous material
			TOTAL:	20-25		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: T09
Pipe insulation above ceiling plaster first floor
Field Documents:(See Appendices)
Sample Location : ACGWSA06
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWT09062	8088507-1530			AML	Brown, layered, fibrous material
			TOTAL:	<1		

Homogeneous Area Name: Homogeneous Area ID Number: T10
Main 14" pipe line through basement and crawl spaces
Field Documents:(See Appendices)
Sample Location : ACGWSA07
Homogeneous Area: ACGWHA07

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWT10063	8088508-1530	Chrysotile	45-50	AML	White, fluffy, fibrous material
			TOTAL:	45-50		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name:
Pipe elbow on 14" line

Homogeneous Area ID Number: T11

Field Documents:(See Appendices)
Sample Location : ACGWSA07
Homogeneous Area: ACGWHA07

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWT11064	8088509-1530	Chrysotile	45-50	AML	Tan, fluffy, fibrous material
			TOTAL:	45-50		

Homogeneous Area Name:
South boiler room 8" pipe insulation

Homogeneous Area ID Number: T12

Field Documents:(See Appendices)
Sample Location : ACGWSA07
Homogeneous Area: ACGWHA07

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWT12065	8088510-1530	Chrysotile	45-50	AML	White, fluffy, fibrous material
			TOTAL:	45-50		
06/08/88	ACGWT12066	8088511-1530	Chrysotile	35-40	AML	White, fluffy, fibrous material
			TOTAL:	35-40		
06/08/88	ACGWT12067	8088512-1530	Chrysotile	50-55	AML	Pale yellow, fluffy, fibrous material
			TOTAL:	50-55		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name:
Boiler jacket in south boiler room

Homogeneous Area ID Number: T13

Field Documents:(See Appendices)
Sample Location : ACGWSA07
Homogeneous Area: ACGWHA09

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWT13068	8088672-1530	Chrysotile	30-35	AML	White, fluffy, fibrous material
			Amosite	30-35	AML	
			TOTAL:	65-70		

Homogeneous Area Name:
Stack insulation in south boiler room

Homogeneous Area ID Number: T14

Field Documents:(See Appendices)
Sample Location : ACGWSA07
Homogeneous Area: ACGWHA09

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWT14069	8088673-1530	Chrysotile	35-40	AML	White, fluffy, fibrous material
			Amosite	25-30	AML	
			TOTAL:	65-70		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: George Washington Jr. High
Analysis Method: PLM

Homogeneous Area Name:
Hot water tank in south boiler room

Homogeneous Area ID Number: T15

Field Documents:(See Appendices)
Sample Location : ACGWSA07
Homogeneous Area: ACGWHA09

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWT15083	8088686-1530	Chrysotile	35-40	AML	White, fluffy fibrous material
			TOTAL:	35-40		

Homogeneous Area Name:
Duct in north boiler room

Homogeneous Area ID Number: T16

Field Documents:(See Appendices)
Sample Location : ACGWSA07
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWT16085	8088688-1530			AML	White, fluffy fibrous material
			TOTAL:	<1		
06/08/88	ACGWT16086	8088689-1530			AML	White, fluffy fibrous material
			TOTAL:	<1		
06/08/88	ACGWT16087	8088690-1530			AML	Beige, fluffy fibrous material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: Gymnasium
Analysis Method: PLM

Homogeneous Area Name:
2' x 2' acoustical ceiling tile in rear lobby

Homogeneous Area ID Number: M09

Field Documents:(See Appendices)
Sample Location : ACGWSA02
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM09020	8088643-1530			AML	Beige, layered, fibrous material
			TOTAL:	<1		

Homogeneous Area Name:
Resilient floor sheet

Homogeneous Area ID Number: M10

Field Documents:(See Appendices)
Sample Location : ACGWSA02
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM10021	8088644-1530			AML	Off-white, flexible material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: Gymnasium
Analysis Method: PLM

Homogeneous Area Name:
1' x 1' acoustical ceiling tile

Homogeneous Area ID Number: M11

Field Documents:(See Appendices)
Sample Location : ACGWSA02
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM11022	8088645-1530			AML	Orange, layered, fibrous material
			TOTAL:	<1		

Homogeneous Area Name:
9" x 9" floor tile, gray, black and white

Homogeneous Area ID Number: M12

Field Documents:(See Appendices)
Sample Location : ACGWSA02
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM12023	8088646-1530			AML	Brown, easily crushed, material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: Gymnasium
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: M13
2' x 4' acoustical ceiling tile, with stucco surface
Field Documents:(See Appendices)
Sample Location : ACGWSA02
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM13024	8088580-1530			AML	Tan, layered, fibrous material
			TOTAL:	<1		

Homogeneous Area Name: Homogeneous Area ID Number: M14
9" x 9" floor tile, gray, white, orange and black
Field Documents:(See Appendices)
Sample Location : ACGWSA02
Homogeneous Area: ACGWHA02

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM14025	8088581-1530	Chrysotile	01-05	AML	Brown, easily crushed, material
			TOTAL:	01-05		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: Gymnasium
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: M15
9" x 9" floor tile, beige, black, blue, yellow and pink
Field Documents:(See Appendices)
Sample Location : ACGWSA02
Homogeneous Area: ACGWHA02

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM15026	8088582-1530	Chrysotile	01-05	AML	Tan, easily crushed, material
			TOTAL:	01-05		

Homogeneous Area Name: Homogeneous Area ID Number: M18
Gypsum board above acoustical ceiling tile
Field Documents:(See Appendices)
Sample Location : ACGWSA02
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWM18027	8088583-1530			AML	White & gold, semi-solid,
			TOTAL:	<1		fibrous material

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: Gymnasium
Analysis Method: PLM

Homogeneous Area Name:
Plaster ceiling in entranceway closets

Homogeneous Area ID Number: S01

Field Documents:(See Appendices)
Sample Location : ACGWSA02
Homogeneous Area: ACGWHA03

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWS01028	8088584-1530	Chrysotile	15-20	AML	Off-white, powdery fibrous material
			TOTAL:	15-20		

Homogeneous Area Name:
Plaster ceiling in boiler room

Homogeneous Area ID Number: S02

Field Documents:(See Appendices)
Sample Location : ACGWSA02
Homogeneous Area: ACGWHA03

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWS02029	8088585-1530	Chrysotile	10-15	AML	Tan, powdery, fibrous material
			TOTAL:	10-15		

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWS02038	02A	Chrysotile	01-02	BIO	
			TOTAL:	01-02		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: Gymnasium
Analysis Method: PLM

Homogeneous Area Name:
Plaster ceiling in laundry room

Homogeneous Area ID Number: S03

Field Documents: (See Appendices)
Sample Location : ACGWSA02
Homogeneous Area: ACGWHA03

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWS03030	8088586-1530	Chrysotile	01-05	AML	Tan, powdery, fibrous material
			TOTAL:	01-05		

Homogeneous Area Name:
Wall plaster in directors office

Homogeneous Area ID Number: S16

Field Documents: (See Appendices)
Sample Location : ACGWSA02
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWS16084	8088687-1530			AML	Brown, powdery material
			TOTAL:	<1		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: Gymnasium
Analysis Method: PLM

Homogeneous Area Name: Homogeneous Area ID Number: T03
Hard elbows above main entrance suspended ceiling
Field Documents:(See Appendices)
Sample Location : ACGWSA02
Homogeneous Area:

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWT03031	8088587-1530			AML	Tan, fluffy, fibrous material
			TOTAL:	<1		
06/08/88	ACGWT03032	8088588-1530			AML	White, easily separated,
			TOTAL:	<1		fibrous material
06/08/88	ACGWT03033	8088589-1530			AML	Tan, easily separated,
			TOTAL:	<1		fibrous material

Homogeneous Area Name: Homogeneous Area ID Number: T04
Boiler room boiler jacket
Field Documents:(See Appendices)
Sample Location : ACGWSA03
Homogeneous Area: ACGWHA04

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWT04034	8088590-1530	Chrysotile	Trace	AML	Tan, fluffy, fibrous material
			Amosite	40-45	AML	
			TOTAL:	40-45		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: Gymnasium
Analysis Method: PLM

Homogeneous Area Name:
Boiler room boiler jacket

Homogeneous Area ID Number: T04

Field Documents:(See Appendices)
Sample Location : ACGWSA03
Homogeneous Area: ACGWHA04

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWT04035	8088591-1530	Chrysotile	35-40	AML	Brown, soft, fibrous material
			TOTAL:	35-40		
06/08/88	ACGWT04036	8088592-1530	Chrysotile	45-50	AML	Gray, fluffy, fibrous material
			Amosite	15-20	AML	
			TOTAL:	65-70		

Homogeneous Area Name:
Hard elbows in boiler room

Homogeneous Area ID Number: T05

Field Documents:(See Appendices)
Sample Location : ACGWSA03
Homogeneous Area: ACGWHA04

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWT05017	8088640-1530	Chrysotile	05-10	AML	Beige, powdery material
			TOTAL:	05-10		
06/08/88	ACGWT05018	8088641-1530	Chrysotile	01-05	AML	Brown, powdery material
			TOTAL:	01-05		

See Appendix 1 for Laboratory Information and Certification Statements.

Virginia Department of Education
Energy and Facilities Services

B U L K S A M P L E
A N A L Y S I S

LEA: Alexandria City Public Schools
School: George Washington Junior High
Building: Gymnasium
Analysis Method: PLM

Homogeneous Area Name:
Hard elbows in boiler room

Homogeneous Area ID Number: T05

Field Documents:(See Appendices)
Sample Location : ACGWSA03
Homogeneous Area: ACGWHA04

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/23/88	ACGWT05019	8088642-1530	Chrysotile	01-05	AML	Brown, powdery, material
			TOTAL:	01-05		

Homogeneous Area Name:
Boiler room duct insulation

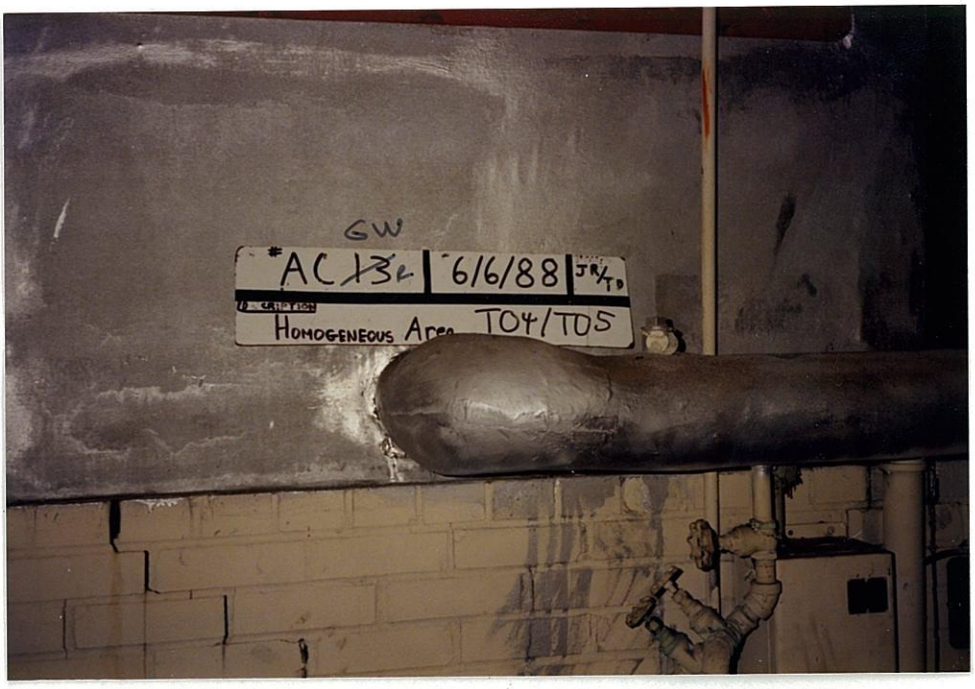
Homogeneous Area ID Number: T06

Field Documents:(See Appendices)
Sample Location : ACGWSA02
Homogeneous Area: ACGWHA04

Summary of Bulk Sample Analysis:

Sample Date	AFMA Sample ID	Laboratory ID	Asbestos	Percent	Laboratory	Comments
06/08/88	ACGWT06037	8088593-1530	Chrysotile	40-45	AML	White, fluffy, fibrous material
			Amosite	30-35	AML	
			TOTAL:	75-80		

See Appendix 1 for Laboratory Information and Certification Statements.



Building: G. WASHINGTON JR. H.S.

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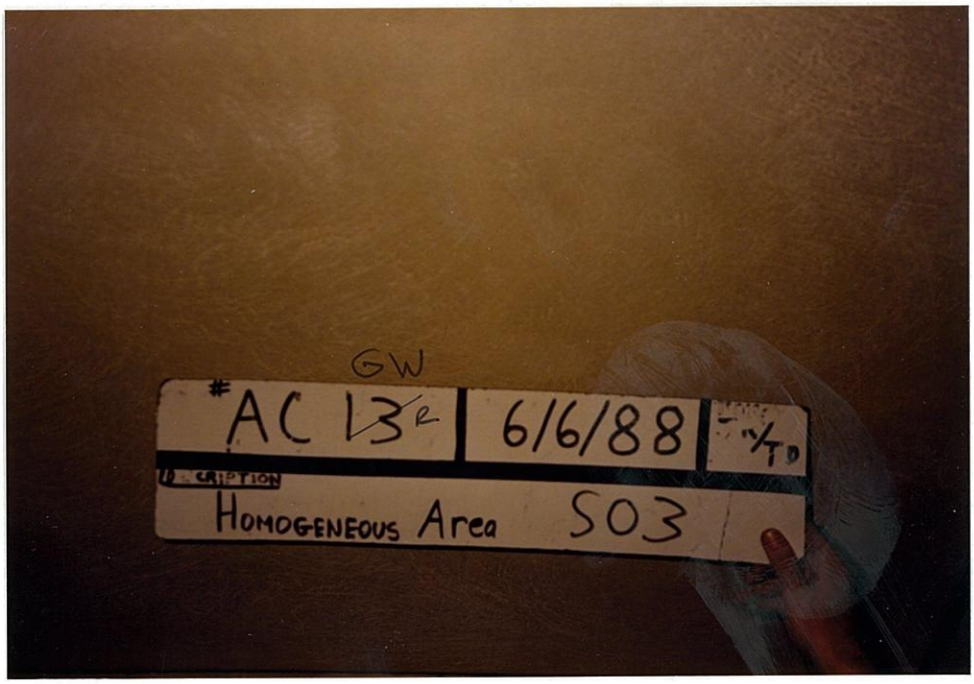
Building: G. WASHINGTON JR. H.S.

PICTURE ID. 02



Building: G. WASHINGTON JR. H.S.

PICTURE ID. 03



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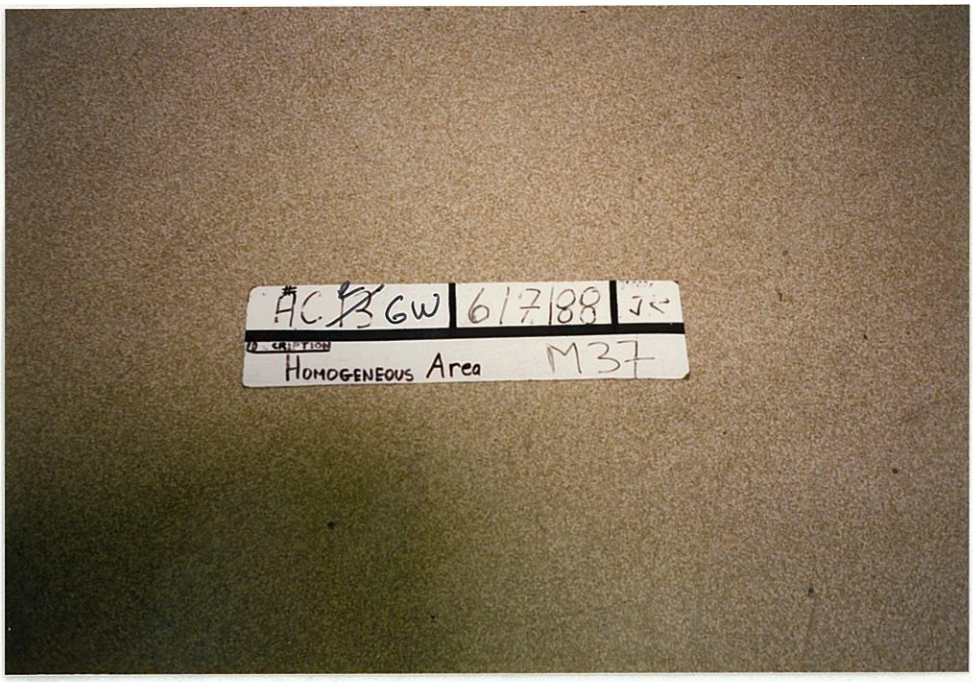

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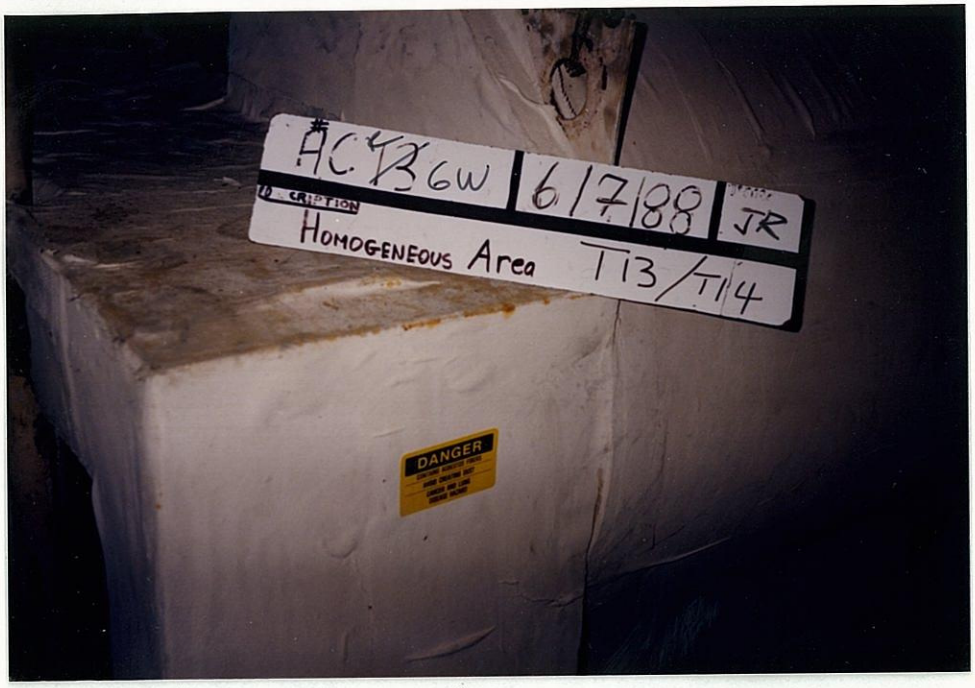

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Building: G. WASHINGTON JR. H.S.

PICTURE ID. 08

MasiMax
Resources, Inc.

THREE-YEAR REINSPECTION OF ASBESTOS-CONTAINING MATERIALS
ALEXANDRIA CITY PUBLIC SCHOOL SYSTEMS (ACPS)
George Washington Middle School
August 10, 2007

MasiMax Resources Inc. – Environmental Health & Safety Services (MasiMax) conducted the Three Year Re-Inspection of Asbestos-Containing Materials (ACM) at the George Washington Middle School on June 20, 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
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CHECKLIST FOR ALEXANDRIA CITY PUBIC SCHOOLS AHERA MANAGEMENT PLANS

SCHOOL NAME: George Washington

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: _____

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: 2004 re-inspection report present. Sections of 2001 re-inspection report are missing.

Yes No

☐ ■ 6-Month O&M Inspections

Comments: _____

Inspector (s): Bjarne Smith and Amy Chang Date: 6/20/2007

Management Planner: _____ Date: 08/21/2007

City of Alexandria - AHERA Inspection

School **George Washington** Date 6/20/2007 Inspector(s) Bjarne Smith & Amy Chang

Location	Material	Size	Color	Amount	Unit	Comment	Class	Friable	Damage	Damage Location	Damage Amount	Damage Description	Recommend-ation
A-1 storage Annex Bldg.	TSI-pipes,joints, elbows	4 in	Gray	500	LF	Removed	1	Yes	No	N/A	N/A	N/A	N/A
A-2 classroom	TSI-elbows	4 in	N/A	10	EA	Removed	5	No	No	N/A	N/A	N/A	N/A
Air Handler rooms	TSI-elbows, joints	4 in	N/A	N/A	N/A	Removed	5	No	No	N/A	N/A	N/A	N/A
Air Handler rooms	TSI-elbows, joints	4 in	N/A	N/A	EA	Removed	5	No	No	N/A	N/A	N/A	N/A
Annex-Headstart hallway outside room A-9	Mastic on ducts	ALL	White	ALL	ALL	Removed	5	No	No	Above drop ceiling	N/A	N/A	N/A

City of Alexandria - AHERA Inspection

School **George Washington** Date 6/20/2007 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	Floor Tile	9x9	Black	under	ALL	Removed 2004	5	No	No	N/A	N/A	N/A	N/A
Auditorium	Floor Tile	9x9	Maroon w/blk trim	ALL	ALL	Removed 2004	N/A	No	No	N/A	N/A	N/A	N/A
Auditorium	Wire insulation on stage lights	ALL	White	ALL	ALL	In tact	5	No	No	On stage	N/A	N/A	O & M
Basement chute	Pyrobar	2x4	Gray	~16	SF	Removed - could not access in 2007	5	Yes	Yes	Basement	~8 SF	Impact	Verify Repair/Removal
Basement crawl space	TSI-elbows	14 in	N/A	30	EA	Removed	0	No	No	N/A	N/A	N/A	N/A

City of Alexandria - AHERA Inspection

School **George Washington** Date 6/20/2007 Inspector(s) Bjarne Smith & Amy Chang

Location	Material	Size	Color	Amount	Unit	Comment	Class	Friable	Damage	Damage Location	Damage Amount	Damage Description	Recommend-ation
Basement crawl space	TSI-elbows, joints	14 in	N/A	850	LF	Removed	0	No	No	N/A	N/A	N/A	N/A
Both stage dressing rooms	Floor Tile	9x9	Maroon	100s	SF	Removed/replaced with 12x12	5	No	No	N/A	NA	N/A	N/A
Cafeteria	Floor Tile	9x9	Maroon w/blk trim	ALL	ALL	Removed	N/A	No	No	Stairs leading to cafeteria	N/A	N/A	N/A
Classrooms 324,-34, -43,-45	Sheet flooring	ALL	White	800	SF	Removed	5	No	No	N/A	N/A	N/A	N/A
Clinic (Old) 2nd Floor A Wing	in ceiling not on walls	ALL	White	~500	SF	Fireblock type X	5	Yes	Yes	where exposed	<1 SF	Impact	O & M

City of Alexandria - AHERA Inspection

School: **George Washington** Date 6/20/2007 Inspector(s) Bjarne Smith & Amy Chang

Location	Material	Size	Color	Amount	Unit	Comment	Class	Friable	Damage	Damage Location	Damage Amount	Damage Description	Recommend-ation
Entrance lobby closet	Plaster ceiling	ALL	White	100	SF	Removed	0	No	No	N/A	N/A	N/A	N/A
Gym-PE Director's room	Mastic on Air Conditioning	ALL	Black	ALL	ALL	Removed 2003	5	No	No	Above drop ceiling	N/A	N/A	N/A
Hallways	Fire Doors	door	N/A	ALL	ALL	Intact	5	No	No	N/A	N/A	N/A	O & M
Laundry room	Plaster ceiling	ALL	White	130	SF	Removed - Room no longer exists	5	No	No	N/A	N/A	N/A	N/A
Men's Coach's office	Floor Tile	9x9	grn/wh/ or/blk	120	SF	Removed	5	No	No	N/A	N/A	N/A	N/A

City of Alexandria - AHERA Inspection

School **George Washington** Date 6/20/2007 Inspector(s) Bjarne Smith & Amy Chang

Location	Material	Size	Color	Amount	Unit	Comment	Class	Friable	Damage	Damage Location	Damage Amount	Damage Description	Recommend-ation
North Boiler crawl space	TSI-pipe runs	4 in	Gray	<100	LF	Removed	1	Yes	No	No	N/A	N/A	N/A
North Boiler Room	TSI-elbows	6 in	N/A	20	EA	Removed	0	No	No	N/A	N/A	N/A	N/A
North Boiler Room (A wing)	Black paper under plaster wrap	ALL	Black	ALL	ALL	Mostly Removed. North Boiler room has ramp	0	No	Yes	Corner by ramp	5 SF	Impact	O & M
North Boiler Room Ramp (A wing)	Roofing felt	ALL	Black	unk	SF	Behind mortar on ramp	5	No	Yes	Bottom of ramp	5 SF	Impact	O & M
Old Clinic 2nd Floor Wing A	Floor tile	9x9, 4 SF	Brown			Good Condition	5	No	No	N/A	N/A	N/A	O & M

City of Alexandria - AHERA Inspection

School **George Washington** Date 6/20/2007 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 317	Black tar paper under carpet, top layer	ALL	Black	ALL	ALL	Under carpet. Now Room A329	0	No	No	Under rug	Throughout	Const/Demo	O & M
Room 317	Black tar paper, under board, bottom layer	ALL	Black	ALL	ALL	Unable to locate/under carpet. Now Room A329	0	No	No	Under board	Throughout	Const/Demo	O & M
Room 344	Floor Tile	9x9	Maroon w/blk trim	ALL	ALL	Old Rm cannot find, new 344 unable to find FT described	N/A	No	No	N/A	N/A	N/A	O & M
Room A11	Mastic on TSI & ducts	ALL	Gray	ALL	ALL	Above Suspended CT. GC & intact. Previously Room 135	0	No	No	N/A	N/A	N/A	O & M
Room A11	Adhesive divot	ALL	Brown	ALL	ALL	Above Suspended CT - Still present. Previously Room 135	0	No	No	* Various	Various	Const/Demo	O & M

City of Alexandria - AHERA Inspection

School **George Washington** Date 6/20/2007 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 A302	Floor Tile	9x9	Maroon w/blk trim	50	SF	New tile, Previously Room 342	N/A	No	No	2 closet areas	N/A	N/A	O & M
Room A304	Floor Tile	9x9	Maroon w/blk trim	150	SF	Removed. Previously Room 326	N/A	No	No	N/A	N/A	N/A	N/A
Room A304	Floor Tile	9x9	Maroon w/blk trim	70	SF	Unable to locate, may be under new tile. Was previously	N/A	No	No	2 closet areas	N/A	N/A	O & M
Room A304	Lab Hood	ALL	Gray	1	EA	Removed Previously Room 340	5	No	No	N/A	N/A	N/A	N/A
Room A304	Vibration Damper	ALL	N/A	1	EA	Removed. Previously Room 340	0	No	No	No	N/A	N/A	N/A

City of Alexandria - AHERA Inspection

School **George Washington** Date 6/20/2007 Inspector(s) Bjarne Smith & Amy Chang

Location	Material	Size	Color	Amount	Unit	Comment	Class	Friable	Damage	Damage Location	Damage Amount	Damage Description	Recommend-ation
South Boiler Room	TSI-pipe runs	8 in	N/A	ALL	LF	Removed	0	No	No	N/A	N/A	N/A	N/A
South Boiler Room Boiler	TSI-boiler insulation	ALL	White	2	EA	Removed	0	No	No	N/A	N/A	N/A	N/A
South Boiler Room HWTank	TSI-tank insulation	ALL	N/A	1	EA	Removed	0	No	No	N/A	N/A	N/A	N/A
South Boiler Room Stack	TSI-stack insulation	ALL	N/A	1	EA	Removed	0	No	No	N/A	N/A	N/A	N/A
Stage	Wiring (ACM)	ALL	White	~50	LF	6 OHD spotlights	4	Yes	Yes	Stage	ALL	Deterioriation	O & M

City of Alexandria - AHERA Inspection

School **George Washington** Date 6/20/2007 Inspector(s) Bjarne Smith & Amy Chang

Location	Material	Size	Color	Amount	Unit	Comment	Class	Friable	Damage	Damage Location	Damage Amount	Damage Description	Recommend-ation
Storage closet in room 340	Vibration damper	ALL	Tan	ALL	ALL	Removed	5	No	No	N/A	N/A	N/A	N/A
Throughout	Floor Tile	9x9	Maroon	ALL	ALL	Removed from: Stairs, 201,326,340 & 342	5	No	Yes	Various	<10 SF	Impact	O & M
Women's Coach's office	Floor Tile	9x9	b/b/bk/ y/p	200	SF	Removed	5	No	No	N/A	N/A	N/A	N/A
Wt Room (Old Gym Boiler Room)	TSI-elbows	6 in	N/A	65-75	EA	Removed 2003	5	No	No	N/A	N/A	N/A	N/A
Wt Room (Old Gym Boiler Room)	Plaster ceiling	ALL	N/A	1150	SF	Intact (above suspended ceiling)	5	No	No	N/A	N/A	N/A	O & M

City of Alexandria - AHERA Inspection

School **George Washington** Date 6/20/2007 Inspector(s) Bjarne Smith & Amy Chang

Location	Material	Size	Color	Amount	Unit	Comment	Class	Friable	Damage	Damage Location	Damage Amount	Damage Description	Recommend-ation
Wt Room (Old Gym Boiler Room)	TSI-duct insulation	ALL	N/A	18	LF	Removed 2003	5	No	No	N/A	N/A	N/A	N/A
Wt Room (Old Gym Boiler Room)	TSI-boiler breeching	ALL	N/A	1	EA	Removed	1	Yes	No	N/A	N/A	N/A	N/A

TABLE 3
BULK SAMPLING OF SUSPECT ASBESTOS CONTAINING MATERIALS
GEORGE MASON ELEMENTARY SCHOOL
2601 Cameron Mills Road, Alexandria, VA 22302

Sample Number	Sample Location	Material/Description	Analytical Results
GM - 1	Kitchen	6" Orange/Brown Cove Base with Yellow Mastic	Cove Base – NAD Mastic – NAD
GM - 2	Kitchen	6" Orange/Brown Cove Base with Yellow Mastic	Cove Base – NAD Mastic – NAD
GM - 3	Kitchen	6" Orange/Brown Cove Base with Yellow Mastic	Cove Base – NAD Mastic – NAD
GM - 7	Kitchen Mop Closet	12" x 12" Dark Blue Floor Tile with Tan Mastic	Floor Tile – NAD Mastic – NAD
GM - 8	Kitchen Mop Closet	12" x 12" Dark Blue Floor Tile with Tan Mastic	Floor Tile – NAD Mastic – NAD
GM - 9	Kitchen Mop Closet	12" x 12" Dark Blue Floor Tile with Tan Mastic	Floor Tile – NAD Mastic – NAD
GM - 10	Kitchen Mop Closet	Black Floor Tile with Black Mastic	Floor Tile – Asbestos: 5% Chrysotile Mastic – No Present
GM - 11	Kitchen Mop Closet	Black Floor Tile with Black Mastic	N/A
GM - 12	Kitchen Mop Closet	Black Floor Tile with Black Mastic	N/A
GM - 13	Kitchen Hallway	12" x 12" White Floor Tile with Yellow Mastic	Floor Tile – NAD Mastic – NAD
GM - 14	Kitchen Hallway	12" x 12" White Floor Tile with Yellow Mastic	Floor Tile – NAD Mastic – NAD
GM - 15	Kitchen Hallway	12" x 12" White Floor Tile with Yellow Mastic	Floor Tile – NAD Mastic – NAD
GM - 16	Cafeteria	Black Mastic on CMU Wall	NAD

Table Notes: NAD = No Asbestos Detected
N/A = Not Analyzed Due to Positive Stop

TABLE 3
BULK SAMPLING OF SUSPECT ASBESTOS CONTAINING MATERIALS
GEORGE MASON ELEMENTARY SCHOOL
2601 Cameron Mills Road, Alexandria, VA 22302

Sample Number	Sample Location	Material/Description	Analytical Results
GM - 17	Cafeteria	Black Mastic on CMU Wall	NAD
GM - 18	Cafeteria	Black Mastic on CMU Wall	NAD
GM - 19	Cafeteria	Ceiling Coating on Masonry	NAD
GM - 20	Cafeteria	Ceiling Coating on Masonry	Finish – NAD Base – NAD
GM - 21	Cafeteria	Ceiling Coating on Masonry	Finish – NAD Base – NAD
GM - 22	Kitchen Mop Closet	Wall Plaster	Finish – NAD Base – NAD
GM - 23	Kitchen Mop Closet	Wall Plaster	NAD
GM - 24	Kitchen Bathroom	Wall Plaster	Finish – NAD Base – NAD
GM - 25	Hallway	Wall Plaster	Finish – NAD Base – NAD
GM - 26	Room 18	Wall Plaster	Finish – NAD Base – NAD
GM - 27	Hall at Electric Room	Wall Plaster	Finish – NAD Base – NAD
GM - 28	Hall at Stairs	Wall Plaster	Compound – Asbestos: 2% Chrysotile Plaster – NAD
GM - 29	Kitchen	White TSI	NAD
GM - 30	Kitchen	White TSI	NAD
GM - 31	Kitchen	White TSI	NAD

Table Notes: NAD = No Asbestos Detected
N/A = Not Analyzed Due to Positive Stop

TABLE 3
BULK SAMPLING OF SUSPECT ASBESTOS CONTAINING MATERIALS
GEORGE MASON ELEMENTARY SCHOOL
2601 Cameron Mills Road, Alexandria, VA 22302

Sample Number	Sample Location	Material/Description	Analytical Results
GM - 32	Kitchen	Drywall Joint Compound	NAD
GM - 33	Room 18	Drywall Joint Compound	NAD
GM - 34	Mechanical Room	Drywall Joint Compound	NAD
GM - 38	Cafeteria	2' x 4' Pinhole Pinch Fissure Ceiling Tile	NAD
GM - 39	Cafeteria	2' x 4' Pinhole Pinch Fissure Ceiling Tile	NAD
GM - 40	Cafeteria	2' x 4' Pinhole Pinch Fissure Ceiling Tile	NAD
GM - 41	Kitchen	Drywall Wallboard	NAD
GM - 42	Mechanical Room	Drywall Wallboard	NAD
GM - 43	2nd Floor Library	Drywall Wallboard	NAD
GM - 44	Kitchen Break Room	White Sink Mastic	NAD
GM - 45	Kitchen Break Room	White Sink Mastic	NAD
GM - 46	Art Room	White Sink Mastic	NAD
GM - 47	Stairwell	Tan Stair Tread with Yellow Mastic	Stair Tread – NAD Mastic – NAD
GM - 48	Stairwell	Tan Stair Tread with Yellow Mastic	Stair Tread – NAD Mastic – NAD
GM - 49	Stairwell	Tan Stair Tread with Yellow Mastic	Stair Tread – NAD Mastic – NAD
GM - 50	Band Room	Gray Duct Mastic	NAD
GM - 51	Band Room	Gray Duct Mastic	NAD
GM - 52	Band Room	Gray Duct Mastic	NAD

Table Notes: NAD = No Asbestos Detected
N/A = Not Analyzed Due to Positive Stop

TABLE 3
BULK SAMPLING OF SUSPECT ASBESTOS CONTAINING MATERIALS
GEORGE MASON ELEMENTARY SCHOOL
2601 Cameron Mills Road, Alexandria, VA 22302

Sample Number	Sample Location	Material/Description	Analytical Results
GM - 53	2nd Floor Hallway	Yellow Carpet Mastic	NAD
GM - 54	2nd Floor Hallway	Yellow Carpet Mastic	NAD
GM - 55	2nd Floor Hallway	Yellow Carpet Mastic	NAD

Table Notes: NAD = No Asbestos Detected
N/A = Not Analyzed Due to Positive Stop

GEORGE WASHINGTON MIDDLE 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 the Table 3.

TABLE 1
ASBESTOS-CONTAINING MATERIALS SUMMARY

Location	Material	Friability
REPORTED ON PRIOR SURVEYS		
Hallways (Observed in other Areas)	Fire Door Insulation	Friable
North Boiler Room (Wall Opening at Ceiling)	Black Paper under Plaster Wrap*	Category II Non-Friable
Room 317 on 3rd Floor (Assumed in other Areas)	Black Tar Paper under Carpet	Category I Non-Friable
Classroom A111 on 1st Floor (Observed above Drop Ceiling Tile in other Areas)	Brown Adhesive Divot**	Category II Non-Friable
SAMPLED BY ECS IN NOVEMBER 20, 2013		
Storage Room in Lobby at Exit 29 on 1st Floor (Assumed in other Areas)	9" x 9" Tan Flecked Floor Tile	Category I Non-Friable
Storage Room in Lobby at Exit 29 on 1st Floor (Assumed in other Areas)	Plaster Wall (Finish Layer)	Friable
Storage Room in South Boiler Room on 1st Floor (through Wall) (Assumed in other Areas)	Mudded Pipe Insulation*	Friable

Location	Material	Friability
Cafeteria on 1st Floor (Observed above Drop Ceiling Tile in other Areas)	Brown Glue Dot associated with 1' x 1' White Fissured Ceiling Tile**	Category II Non-Friable
Classroom A210 on 2nd Floor (Assumed under Carpet in other Areas)	Tan Floor Tile and associated Black Mastic	Category I Non-Friable
Classroom A214 on 2nd Floor (Assumed under 12" x 12" Floor Tiles throughout the Building)	Tan Floor Tile and associated Mastic (under 12" x 12" Gray Floor Tile)	Category I Non-Friable
MATERIALS ASSUMED TO CONTAIN ASBESTOS *		
Throughout Building	Interior Pipe Wrap associated with Water Fountains and Radiators	Category II Non-Friable
Classrooms	Chalkboards and associated Mastics	Category II Non-Friable
Hallways	Boards and associated Mastics	Category II Non-Friable
Exercise Room, Main Gym and Stage on 1st Floor	Wood Floor Underlayment and associated Mastic	Category I Non-Friable
Mini Gym on 1st Floor	Tectum Sound Wall Boards and associated Mastic	Category II Non-Friable
Classrooms	Boards above Doors	Category II Non-Friable
Cafeteria on 1st Floor	Mastic associated with Wall Panels	Category II Non-Friable
Main Gym on 1st Floor (Assumed throughout the Building)	Pin Mastic associated with Fiberglass Duct Insulation	Category II Non-Friable
Pipes within chases behind walls and above ceiling throughout the building	Thermal System Insulation (TSI)	Friable

Location	Material	Friability
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
Elevator	Switch Deflector Plates, Brakes, Cab and Doors	Unknown
Roof	Asphalt-Based Roofing Materials and Caulks/Sealants	Non-Friable
Roof	Roof Sheathing (Bottom Layer)***	Category II Non-Friable

Notes: * These materials were observed damaged in the above listed locations.
** Degraded plaster ceiling and 1' x 1' ceiling tiles with residual of these materials were observed in the above listed locations. Water stained and missing ceiling tiles associated with these materials were also observed throughout the building.
*** 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
Hallways (Observed in other Areas)	Fire Door	7 – Any Remaining Friable ACBM
Storage Room in Lobby at Exit 29 on 1st Floor	Plaster Wall (Finish Layer)	6 – ACBM with Potential for Significant Damage

Location	Material	Physical Assessment Category
Storage Room in South Boiler Room on 1st Floor (Through Wall)	Mudded Pipe Insulation	1 – Damaged or Significantly Damaged TSI ACBM

Recommendations

1) The following friable material was observed damaged and should be repaired or removed by a Commonwealth of Virginia licensed asbestos abatement contractor:
   - Mudded pipe insulation at the storage room in the South Boiler Room on 1st floor.

2) The following non-friable materials were observed damaged and should be removed or repaired by personnel designated by the School and trained in Operations & Maintenance asbestos activities:
   - Black paper under plaster wrap in the North Boiler Room (wall opening at ceiling).

3) The asbestos identified asbestos-containing brown adhesive divot and glue dots appeared to consist of the same type of material. Degraded plaster ceiling and 1' x 1' ceiling tiles with brown adhesive divot/glue dots residual were observed in the Auditorium Stage Access, and above the drop ceiling tiles in the Classroom A111 and Weight Room on 1st floor. Water stained and missing 1' x 1' ceiling tiles associated with this material were also observed throughout the building. Any damaged 1' x 1' ceiling tile and residual brown adhesive divot or glue dots should be removed by personnel designated by the School and trained in Operations & Maintenance asbestos activities. Missing 1' x 1' ceiling tiles should be replaced as soon as possible to avoid future damage to the asbestos containing adhesive divot or glue dots.

LIMITED ASBESTOS-CONTAINING MATERIALS SURVEY

ACPS GEORGE WASHINGTON MIDDLE SCHOOL

1005 MOUNT VERNON AVENUE
ALEXANDRIA, VIRGINIA 22301

ECS PROJECT NO. 47:1519-C9

FOR: ALEXANDRIA CITY PUBLIC SCHOOLS

JUNE 25, 2020

June 25, 2020

Mr. John Finnigan
Alexandria City Public Schools
1340 Braddock Place
Suite 620
Alexandria, VA 22314

ECS Project No. 47:1519-C9

Reference: Limited Asbestos-Containing Materials Survey, ACPS George Washington Middle School, 1005 Mount Vernon Avenue, Alexandria, Virginia

Dear Mr. Finnigan:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Alexandria City Public Schools with the results of the above referenced Limited Asbestos-Containing Materials Survey performed at ACPS George Washington Middle School located at 1005 Mount Vernon 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 47:15069-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

John O'Neil
Assistant Staff Project Manager
joneil@ecslimited.com
703-471-8400

Diana Krass
Environmental Senior Project Manager
dkrass@ecslimited.com
703-471-8400

EXECUTIVE SUMMARY

The subject property consists of the George Washington Middle School located at 1005 Mt Vernon Ave in Alexandria, Virginia. The purpose of the survey was to determine if select asbestos-containing materials (ACMs) are present in the basement storage area, Room C124, and the first floor teacher's lounge of the subject property which may be impacted during proposed renovations. Mr. John Finnigan of Alexandria City Public Schools (ACPS) requested select ACMs to be sampled in the above-referenced locations. No other areas or building materials were included in this scope of work.

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

- Pipe Insulation Wrap;
- 9" x 9" Green Floor Tile;
- Unknown Size Green Floor Tile; and,
- Unknown Size Brown Floor Tile.

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.

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Appendix IV: Certifications/Licenses

1.0 SITE DESCRIPTION

The subject property consists of the George Washington Middle School located at 1005 Mt Vernon Ave in Alexandria, Virginia. This survey was limited to materials and areas in the basement storage area, Room C124, and the first floor teacher's lounge that may be impacted during the proposed renovations. At the time of the survey, ECS was escorted by Mr. John Finnigan of Alexandria City Public Schools (ACPS). As requested by the client, no other materials or areas were included in this survey.

2.0 PURPOSE

The purpose of the Limited Asbestos-Containing Materials Survey was to identify asbestos-containing materials (ACMs) which may require special handling and/or disposal if removed or disturbed during construction activities.

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-destructive asbestos survey was performed by an asbestos inspector who has received EPA accredited training and is 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. 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. 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. At the time of our survey, Rooms D115 and A236 were inaccessible; and therefore, were not included in the scope of work. 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 A, Subpart F, 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.

Scientific Analytical Institute, Inc. submitted a signed final laboratory report to ECS on June 9, 2020. Eleven of the bulk samples submitted for analysis were reported to contain asbestos in detectable concentrations. These materials are summarized below. In total, 31 bulk samples were submitted to the laboratory of which 56 layers were analyzed. 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.

Summary of Asbestos-Containing Materials Identified

Location	Material Description	Analytical Result	Category
Room C124	Pipe Wrap Insulation	50% Chrysotile	Friable
Teachers Lounge	Unknown Size Green Floor Tile (Second Layer) Green and Black Mastics	Tile - 4% Chrysotile Green and Black Mastics - No Asbestos Detected	Category I Non-Friable
Teachers Lounge	Unknown Size Brown Floor Tile (Third Layer) Green and Black Mastics	Tile - 3% Chrysotile Green and Black Mastics - No Asbestos Detected	Category I Non-Friable
Basement - Small Storage Room	9" x 9" Green Floor Tile Black Mastic	Tile - 3% Chrysotile Black Mastic - No Asbestos Detected	Category I Non-Friable

Flooring

In the first floor teacher's lounge, three layers of floor tile were observed throughout the surveyed area. The first layer of floor tiles comprised of 12" x 12" white floor tile with blue flecks, and 12" x 12" purple floor tile with white flecks. None of the first layer floor tiles in the first floor teacher's lounge area were reported to contain asbestos. The second layer of floor tiles comprised of asbestos-containing unknown size green floor tiles which was observed throughout the first floor teacher's lounge. The third layer of floor tile comprised of asbestos-containing unknown size brown floor tile which was also observed throughout the first floor teacher's lounge. None of the associated green or black mastics to the above-referenced floor tiles in the first floor teacher's lounge were identified as ACMs.

In the basement small storage room, ECS observed asbestos-containing 9" x 9" green floor tiles. The associated black mastic with the 9" x 9" green floor tile was not identified as ACM.

The above identified ACMs may be located in other areas of the building and also may be located under other flooring systems, partition walls, fixtures, cabinets, furniture, etc.

Pipe Insulation Wrap

Asbestos-containing white pipe insulation and associated wrap were observed on a pipe above the drop down ceiling in Room C124. The pipe run appeared to continue into the adjacent rooms. This asbestos-containing white pipe insulation wrap is located in other areas of the building including but not to limited to areas above ceilings, behind walls, and most likely in bathrooms and mechanical areas.

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.

5.0 RECOMMENDATIONS AND REGULATORY REQUIREMENTS

Based on our understanding of the purpose of the Limited 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.

Asbestos-containing materials to be disturbed as part of the renovations must be properly removed by a Virginia licensed asbestos abatement contractor prior to disturbance by construction activities. The Commonwealth of Virginia requires 20 calendar days notice prior to the removal of regulated ACMs. If applicable, the US EPA notification must be filed ten (10) business days prior to starting asbestos abatement activities. Notification requirements in general will be dependent on the means/ methods used by the contractor to abate these materials.

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 materials/findings of this survey should be added to this school building's AHERA Management Plan.

6.0 LIMITATIONS

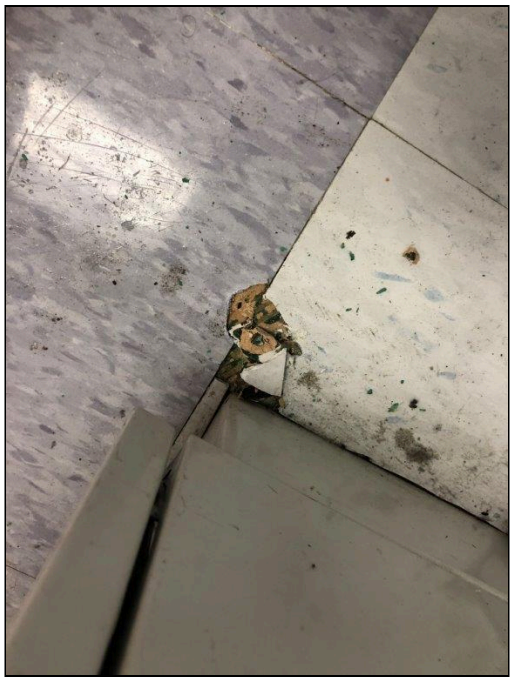
The conclusions and recommendations presented within this report are based upon a reasonable level of assessment within normal bounds and standards of professional practice for a site in this particular geographic setting. ECS is not responsible or liable for the discovery and elimination of hazards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

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: Site Photographs



1 - First Floor Teachers Lounge: View of Asbestos-Containing Unknown Size Green and Brown Floor Tiles. Sample Numbers 21-B and 23-A.



2 - Basement Storage Room: View of Asbestos-Containing 9" x 9" Green Floor Tile. Sample Number 17-A.



3 - Room C124: View of Asbestos-Containing Pipe Wrap Insulation. Sample Number 27.

Appendix II: Asbestos Bulk Sample Results

TABLE

SUSPECT ASBESTOS-CONTAINING MATERIALS BULK SAMPLING RESULTS

Sample #	Sampling Location	Material/Description	Analytical Results
1 - A	Basement - Bathroom Area	12" x 12" Tan Floor Tile with White Flecks with White Mastic - Tile	NAD
1 - B	Basement - Bathroom Area	12" x 12" Tan Floor Tile with White Flecks with White Mastic - Mastic	NAD
2 - A	Basement - Bathroom Area	12" x 12" Tan Floor Tile with White Flecks with White Mastic - Tile	NAD
2 - B	Basement - Bathroom Area	12" x 12" Tan Floor Tile with White Flecks with White Mastic - Mastic	NAD
3	Basement - Bathroom Area Under 1/2	Unkown Size White Floor Tile with Brown Mastic	NAD
4	Basement - Bathroom Area Under 1/2	Unkown Size White Floor Tile with Brown Mastic	NAD
5 - A	Basement - Large Storage Room	12" x 12" White Floor Tile with Brown and Gray Flecks with Brown Mastic - Tile	NAD
5 - B	Basement - Large Storage Room	12" x 12" White Floor Tile with Brown and Gray Flecks with Brown Mastic - Mastic	NAD
6 - A	Basement - Large Storage Room	12" x 12" White Floor Tile with Brown and Gray Flecks with Brown Mastic - Tile	NAD
6 - B	Basement - Large Storage Room	12" x 12" White Floor Tile with Brown and Gray Flecks with Brown Mastic - Mastic	NAD
7 - A	Basement Office	12" x 12" Tan Floor Tile with White Flecks with Brown Mastic - tile	NAD
7 - B	Basement Office	12" x 12" Tan Floor Tile with White Flecks with Brown Mastic - Mastic	NAD
8 - A	Basement Office	12" x 12" Tan Floor Tile with White Flecks with Brown Mastic - Tile	NAD
8 - B	Basement Office	12" x 12" Tan Floor Tile with White Flecks with Brown Mastic - Mastic	NAD
9	Basement - Hallway/HVAC Room	12" x 12" Blue Floor Tile with White Flecks with Brown Mastic - Tile	NAD
10 - A	Basement - Hallway/HVAC Room	12" x 12" Blue Floor Tile with White Flecks with Brown Mastic - Tile	NAD
10 - B	Basement - Hallway/HVAC Room	12" x 12" Blue Floor Tile with White Flecks with Brown Mastic - Mastic	NAD
11 - A	Basement - Hallway/HVAC Room - Under 9/10	12" x 12" Gray Floor Tile with Brown Mastic - Tile	NAD
11 - B	Basement - Hallway/HVAC Room - Under 9/10	12" x 12" Gray Floor Tile with Brown Mastic - Mastic	NAD
12 - A	Basement - Hallway/HVAC Room - Under 9/10	12" x 12" Gray Floor Tile with Brown Mastic - Tile	NAD
12 - B	Basement - Hallway/HVAC Room - Under 9/10	12" x 12" Gray Floor Tile with Brown Mastic - Mastic	NAD
13 - A	Basement - Small Hallway	12" x 12" White Floor Tile with Black Flecks with Yellow Mastic - Tile	NAD
13 - B	Basement - Small Hallway	12" x 12" White Floor Tile with Black Flecks with Yellow Mastic - Mastic	NAD
14 - A	Basement - Small Hallway	12" x 12" White Floor Tile with Black Flecks with Yellow Mastic - Tile	NAD
14 - B	Basement - Small Hallway	12" x 12" White Floor Tile with Black Flecks with Yellow Mastic - Mastic	NAD

Table Notes:
Bold = Asbestos-Containing Materials
N/A = Not Analyzed, Positive Stop
NAD = No Asbestos Detected

TABLE

SUSPECT ASBESTOS-CONTAINING MATERIALS BULK SAMPLING RESULTS

Sample #	Sampling Location	Material/Description	Analytical Results
15 - A	Basement - Small Hallway - Under 13/14	White Leveling Compound - Leveling Compound	NAD
15 - B	Basement - Small Hallway - Under 13/14	White Leveling Compound - Mastic	NAD
16 - A	Basement - Small Hallway - Under 13/14	White Leveling Compound - Leveling Compound	NAD
16 - B	Basement - Small Hallway - Under 13/14	White Leveling Compound - Mastic	NAD
17 - A	**Basement - Small Storage Room**	**9" x 9" Green Floor Tile with Black Mastic - Tile**	**Chrysotile 3%**
17 - B	Basement - Small Storage Room	9" x 9" Green Floor Tile with Black Mastic - Mastic	NAD
18 - A	**Basement - Small Storage Room**	**9" x 9" Green Floor Tile with Black Mastic - Tile**	**N/A**
18 - B	Basement - Small Storage Room	9" x 9" Green Floor Tile with Black Mastic - Mastic	NAD
19 - A	First Floor Teachers Lounge	12" x 12" White Floor Tile with Blue Flecks with Green Mastic - Tile	NAD
19 - B	First Floor Teachers Lounge	12" x 12" White Floor Tile with Blue Flecks with Green Mastic - Mastic	NAD
20 - A	First Floor Teachers Lounge	12" x 12" White Floor Tile with Blue Flecks with Green Mastic - Tile	NAD
20 - B	First Floor Teachers Lounge	12" x 12" White Floor Tile with Blue Flecks with Green Mastic - Mastic	NAD
21 - A	First Floor Teachers Lounge - Under 19/20	Unkown Size Brown Floor Tile with Black Mastic - Mastic 1	NAD
21 - B	**First Floor Teachers Lounge - Under 19/20**	**Unkown Size Brown Floor Tile with Black Mastic - Tile**	**Chrysotile 3%**
21 - C	First Floor Teachers Lounge - Under 19/20	Unkown Size Brown Floor Tile with Black Mastic - Mastic 2	NAD
22 - A	First Floor Teachers Lounge - Under 19/20	Unkown Size Brown Floor Tile with Black Mastic - Mastic 1	NAD
22 - B	**First Floor Teachers Lounge - Under 19/20**	**Unkown Size Brown Floor Tile with Black Mastic - Tile**	**N/A**
22 - C	First Floor Teachers Lounge - Under 19/20	Unkown Size Brown Floor Tile with Black Mastic - Mastic 2	NAD
23 - A	**First Floor Teachers Lounge - Under 21/22**	**Unkown Size Green Floor Tile with Black Mastic - Tile**	**Chrysotile 4%**
23 - B	First Floor Teachers Lounge - Under 21/22	Unkown Size Green Floor Tile with Black Mastic - Mastic	NAD
24 - A	**First Floor Teachers Lounge - Under 21/22**	**Unkown Size Green Floor Tile with Black Mastic - Tile**	**N/A**
24 - B	First Floor Teachers Lounge - Under 21/22	Unkown Size Green Floor Tile with Black Mastic - Mastic	NAD
25 - A	First Floor Teachers Lounge	12" x 12" Purple Floor Tile with White Flecks with Green Mastic - Tile	NAD
25 - B	First Floor Teachers Lounge	12" x 12" Purple Floor Tile with White Flecks with Green Mastic - Mastic	NAD
26 - A	First Floor Teachers Lounge	12" x 12" Purple Floor Tile with White Flecks with Green Mastic - Tile	NAD
26 - B	First Floor Teachers Lounge	12" x 12" Purple Floor Tile with White Flecks with Green Mastic - Mastic	NAD
27	**Room C124**	**White Insulation Wrap**	**Chrysotile 3%**

Table Notes:
Bold = Asbestos-Containing Materials
N/A = Not Analyzed, Positive Stop
NAD = No Asbestos Detected

TABLE

SUSPECT ASBESTOS-CONTAINING MATERIALS BULK SAMPLING RESULTS

Sample #	Sampling Location	Material/Description	Analytical Results
28	**Room C124**	**White Insulation Wrap**	**N/A**
29	**Room C124**	**White Pipe Insulation**	**N/A**
30	**Room C124**	**White Pipe Insulation**	**N/A**
31	**Room C124**	**White Pipe Insulation**	**N/A**

Table Notes:
Bold = Asbestos-Containing Materials
N/A = Not Analyzed, Positive Stop
NAD = No Asbestos Detected

Appendix III: 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 200644-0

INDUSTRIAL HYGIENE ISO/IEC 17025:2005 Accredited Laboratory AIHA LAP, LLC AIHAACCREDITEDLABS.ORG Lab ID # 173190

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

Attn: John O'Neil

Project: George Washington Middle School ACM Survey/ 47:1519-C9

Lab Order ID: 71943741
Analysis ID: 71943741_PLM
Date Received: 6/8/2020
Date Reported: 6/9/2020

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
1 - A *71943741PLM_1*	12" x 12" Tan Floor Tile with White Flecks with White Mastic *tile*	**None Detected**		**100% Other**	Tan Non Fibrous Heterogeneous Dissolved
1 - B *71943741PLM_32*	12" x 12" Tan Floor Tile with White Flecks with White Mastic *mastic*	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous Ashed
2 - A *71943741PLM_2*	12" x 12" Tan Floor Tile with White Flecks with White Mastic *tile*	**None Detected**		**100% Other**	Tan Non Fibrous Heterogeneous Dissolved
2 - B *71943741PLM_33*	12" x 12" Tan Floor Tile with White Flecks with White Mastic *mastic*	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous Ashed
3 *71943741PLM_3*	Unkown Size White Floor Tile with Brown Mastic *tile only*	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous Dissolved
4 *71943741PLM_4*	Unkown Size White Floor Tile with Brown Mastic *tile only*	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous Dissolved
5 - A *71943741PLM_5*	12" x 12" White Floor Tile with Brown and Gray Flecks with Brown Mastic *tile*	**None Detected**		**100% Other**	Gray Non Fibrous Heterogeneous Dissolved
5 - B *71943741PLM_34*	12" x 12" White Floor Tile with Brown and Gray Flecks with Brown Mastic *mastic - small sample*	**None Detected**		**100% Other**	Yellow 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%.

Jalen Moore (29)
Yanelis Delgado (27)

Analyst

Approved Signatory

Bulk Asbestos Analysis

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

NVLAP LAB CODE 200644-0

Customer: ECS Mid-Atlantic, LLC
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Attn: John O'Neil

Project: George Washington Middle School ACM Survey/ 47:1519-C9

Lab Order ID: 71943741
Analysis ID: 71943741_PLM
Date Received: 6/8/2020
Date Reported: 6/9/2020

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
6 - A *71943741PLM_6*	12" x 12" White Floor Tile with Brown and Gray Flecks with Brown Mastic *tile*	**None Detected**		**100% Other**	Gray Non Fibrous Heterogeneous Dissolved
6 - B *71943741PLM_35*	12" x 12" White Floor Tile with Brown and Gray Flecks with Brown Mastic *mastic - small sample*	**None Detected**		**100% Other**	Yellow Non Fibrous Heterogeneous Dissolved
7 - A *71943741PLM_7*	12" x 12" Tan Floor Tile with White Flecks with Brown Mastic *tile*	**None Detected**		**100% Other**	Tan Non Fibrous Heterogeneous Dissolved
7 - B *71943741PLM_36*	12" x 12" Tan Floor Tile with White Flecks with Brown Mastic *mastic*	**None Detected**		**100% Other**	Yellow Non Fibrous Heterogeneous Dissolved
8 - A *71943741PLM_8*	12" x 12" Tan Floor Tile with White Flecks with Brown Mastic *tile*	**None Detected**		**100% Other**	Tan Non Fibrous Heterogeneous Dissolved
8 - B *71943741PLM_37*	12" x 12" Tan Floor Tile with White Flecks with Brown Mastic *mastic*	**None Detected**		**100% Other**	Yellow Non Fibrous Heterogeneous Dissolved
9 *71943741PLM_9*	12" x 12" Blue Floor Tile with White Flecks with Brown Mastic *tile only*	**None Detected**		**100% Other**	Blue Non Fibrous Heterogeneous Dissolved
10 - A *71943741PLM_10*	12" x 12" Blue Floor Tile with White Flecks with Brown Mastic *tile*	**None Detected**		**100% Other**	Blue 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%.

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Yanelis Delgado (27)

Analyst

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Bulk Asbestos Analysis

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

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Analysis ID: 71943741_PLM
Date Received: 6/8/2020
Date Reported: 6/9/2020

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
10 - B *71943741PLM_38*	12" x 12" Blue Floor Tile with White Flecks with Brown Mastic *mastic - small sample*	**None Detected**		**100% Other**	Yellow Non Fibrous Heterogeneous Dissolved
11 - A *71943741PLM_11*	12" x 12" Gray Floor Tile with Brown Mastic *tile*	**None Detected**		**100% Other**	Gray Non Fibrous Heterogeneous Dissolved
11 - B *71943741PLM_39*	12" x 12" Gray Floor Tile with Brown Mastic *mastic - small sample*	**None Detected**		**100% Other**	Yellow Non Fibrous Heterogeneous Dissolved
12 - A *71943741PLM_12*	12" x 12" Gray Floor Tile with Brown Mastic *tile*	**None Detected**		**100% Other**	Gray Non Fibrous Heterogeneous Dissolved
12 - B *71943741PLM_40*	12" x 12" Gray Floor Tile with Brown Mastic *mastic - small sample*	**None Detected**		**100% Other**	Yellow Non Fibrous Heterogeneous Dissolved
13 - A *71943741PLM_13*	12" x 12" White Floor Tile with Black Flecks with Yellow Mastic *tile*	**None Detected**		**100% Other**	Gray Non Fibrous Heterogeneous Dissolved
13 - B *71943741PLM_41*	12" x 12" White Floor Tile with Black Flecks with Yellow Mastic *mastic - small sample*	**None Detected**		**100% Other**	Yellow Non Fibrous Heterogeneous Dissolved
14 - A *71943741PLM_14*	12" x 12" White Floor Tile with Black Flecks with Yellow Mastic *tile*	**None Detected**		**100% Other**	Gray 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%.

Jalen Moore (29)
Yanelis Delgado (27)

Analyst

Approved Signatory

Bulk Asbestos Analysis

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

NVLAP TESTING
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INDUSTRIAL HYGIENE ISO/IEC 17025:2005 Accredited Laboratory AIHA LAP, LLC AIHAACCREDITEDLABS.ORG Lab ID # 173190

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Analysis ID: 71943741_PLM
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Date Reported: 6/9/2020

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
14 - B *71943741PLM_42*	12" x 12" White Floor Tile with Black Flecks with Yellow Mastic *mastic - small sample*	**None Detected**		**100% Other**	Yellow Non Fibrous Heterogeneous Dissolved
15 - A *71943741PLM_15*	White Leveling Compound *leveling compound*	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous Crushed
15 - B *71943741PLM_43*	White Leveling Compound *mastic*	**None Detected**		**100% Other**	Yellow Non Fibrous Heterogeneous Dissolved
16 - A *71943741PLM_16*	White Leveling Compound *leveling compound*	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous Crushed
16 - B *71943741PLM_44*	White Leveling Compound *mastic*	**None Detected**		**100% Other**	Yellow Non Fibrous Heterogeneous Dissolved
17 - A *71943741PLM_17*	9" x 9" Green Floor Tile with Black Mastic *tile*	**3% Chrysotile**		**97% Other**	Green Non Fibrous Homogeneous Dissolved
17 - B *71943741PLM_45*	9" x 9" Green Floor Tile with Black Mastic *mastic/leveling compound*	**None Detected**		**100% Other**	Black, Gray Non Fibrous Heterogeneous Dissolved, Crushed
18 - A *71943741PLM_18*	9" x 9" Green Floor Tile with Black Mastic *tile*	**Not Analyzed**			

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%.

Jalen Moore (29)
Yanelis Delgado (27)

Analyst

Approved Signatory

P-F-002 r15 1/16/2021

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 200644-0

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

Attn: John O'Neil

Project: George Washington Middle School ACM Survey/ 47:1519-C9

Lab Order ID: 71943741
Analysis ID: 71943741_PLM
Date Received: 6/8/2020
Date Reported: 6/9/2020

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
18 - B *71943741PLM_46*	9" x 9" Green Floor Tile with Black Mastic *mastic/leveling compound*	**None Detected**		**100% Other**	Black, Gray Non Fibrous Heterogeneous Dissolved, Crushed
19 - A *71943741PLM_19*	12" x 12" White Floor Tile with Blue Flecks with Green Mastic *tile*	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Dissolved
19 - B *71943741PLM_47*	12" x 12" White Floor Tile with Blue Flecks with Green Mastic *mastic*	**None Detected**		**100% Other**	Green Non Fibrous Homogeneous Dissolved
20 - A *71943741PLM_20*	12" x 12" White Floor Tile with Blue Flecks with Green Mastic *tile*	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Dissolved
20 - B *71943741PLM_48*	12" x 12" White Floor Tile with Blue Flecks with Green Mastic *mastic*	**None Detected**		**100% Other**	Green Non Fibrous Homogeneous Dissolved
21 - A *71943741PLM_21*	Unkown Size Brown Floor Tile with Black Mastic *mastic 1*	**None Detected**		**100% Other**	Green Non Fibrous Homogeneous Dissolved
21 - B *71943741PLM_49*	Unkown Size Brown Floor Tile with Black Mastic *tile*	**3% Chrysotile**		**97% Other**	Tan Non Fibrous Homogeneous Dissolved
21 - C *71943741PLM_50*	Unkown Size Brown Floor Tile with Black Mastic *mastic 2*	**None Detected**		**100% Other**	Black 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%.

Jalen Moore (29)
Yanelis Delgado (27)

Analyst

Approved Signatory

Bulk Asbestos Analysis

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

NVLAP LAB CODE 200644-0

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

Attn: John O'Neil

Project: George Washington Middle School ACM Survey/ 47:1519-C9

Lab Order ID: 71943741
Analysis ID: 71943741_PLM
Date Received: 6/8/2020
Date Reported: 6/9/2020

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
22 - A *71943741PLM_22*	Unkown Size Brown Floor Tile with Black Mastic *mastic 1*	**None Detected**		**100% Other**	Green Non Fibrous Homogeneous Dissolved
22 - B *71943741PLM_51*	Unkown Size Brown Floor Tile with Black Mastic *tile*	**Not Analyzed**			
22 - C *71943741PLM_52*	Unkown Size Brown Floor Tile with Black Mastic *mastic 2*	**None Detected**		**100% Other**	Black Non Fibrous Homogeneous Dissolved
23 - A *71943741PLM_23*	Unkown Size Green Floor Tile with Black Mastic *tile*	**4% Chrysotile**		**96% Other**	Green Non Fibrous Homogeneous Dissolved
23 - B *71943741PLM_53*	Unkown Size Green Floor Tile with Black Mastic *mastic*	**None Detected**		**100% Other**	Black Non Fibrous Homogeneous Dissolved
24 - A *71943741PLM_24*	Unkown Size Green Floor Tile with Black Mastic *tile*	**Not Analyzed**			
24 - B *71943741PLM_54*	Unkown Size Green Floor Tile with Black Mastic *mastic*	**None Detected**		**100% Other**	Black Non Fibrous Homogeneous Dissolved
25 - A *71943741PLM_25*	12" x 12" Purple Floor Tile with White Flecks with Green Mastic *tile*	**None Detected**		**100% Other**	Purple 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%.

Jalen Moore (29)
Yanelis Delgado (27)

Analyst

Approved Signatory

Bulk Asbestos Analysis

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

NVLAP LAB CODE 200644-0

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

Attn: John O'Neil

Project: George Washington Middle School ACM Survey/ 47:1519-C9

Lab Order ID: 71943741
Analysis ID: 71943741_PLM
Date Received: 6/8/2020
Date Reported: 6/9/2020

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
25 - B *71943741PLM_55*	12" x 12" Purple Floor Tile with White Flecks with Green Mastic *mastic*	**None Detected**		**100% Other**	Green Non Fibrous Homogeneous Dissolved
26 - A *71943741PLM_26*	12" x 12" Purple Floor Tile with White Flecks with Green Mastic *tile*	**None Detected**		**100% Other**	Purple Non Fibrous Homogeneous Dissolved
26 - B *71943741PLM_56*	12" x 12" Purple Floor Tile with White Flecks with Green Mastic *mastic*	**None Detected**		**100% Other**	Green Non Fibrous Homogeneous Dissolved
27 *71943741PLM_27*	White Insulation Wrap	**50% Chrysotile**	**20% Cellulose**	**30% Other**	White Fibrous Heterogeneous Teased
28 *71943741PLM_28*	White Insulation Wrap	**Not Analyzed**			
29 *71943741PLM_29*	White Pipe Insulation	**Not Analyzed**			
30 *71943741PLM_30*	White Pipe Insulation	**Not Analyzed**			
31 *71943741PLM_31*	White Pipe Insulation	**Not Analyzed**			

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%.

Jalen Moore (29)
Yanelis Delgado (27)

Analyst

Approved Signatory

7194374 1

Client:	Ecs Mid Atlantic
Contact:	John O'Neil
Address:	14026 Thunderbolt Place
Phone:	(703)-471-8400
Fax:	
Email:	joneil@ecslimited.com
Project:	George Washington Middle School ACM Survey / 47:1519-C9
Client Notes:	**Positive Stop Except for Drywall and Joint Compound**
P.O. #.	47:1519-C9
Date Submitted:	
Analysis:	PLM EPA 600/R-93/116
Turnaround Time:	3 Day

Instructions:
Use Column "B" for your contact info

To See an Example Click the bottom Example Tab.

Enter samples between "<<" and ">>"
Begin Samples with a "<< "above the first sample and end with a ">>" below the last sample.
Only Enter your data on the first sheet "Sheet1"

Note: Date 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.

Scientific Analytical Institute

4604 Dundas Drive
Greensboro, NC 27407
Phone: 336.292.3888
Fax: 336.292.3313
Email: lab@sailab.com

Sample Number	Data 1	Sample Description	Data 2
<<			
	1	12" x 12" Tan Floor Tile with White Flecks with White Mastic	Basement - Bathroom Area
	2	12" x 12" Tan Floor Tile with White Flecks with White Mastic	Basement - Bathroom Area
	3	Unkown Size White Floor Tile with Brown Mastic	Basement - Bathroom Area Under 1/2
	4	Unkown Size White Floor Tile with Brown Mastic	Basement - Bathroom Area Under 1/2
	5	12" x 12" White Floor Tile with Brown and Gray Flecks with Brown Mastic	Basement - Large Storage Room
	6	12" x 12" White Floor Tile with Brown and Gray Flecks with Brown Mastic	Basement - Large Storage Room
	7	12" x 12" Tan Floor Tile with White Flecks with Brown Mastic	Basement Office
	8	12" x 12" Tan Floor Tile with White Flecks with Brown Mastic	Basement Office
JM	9	12" x 12" Blue Floor Tile with White Flecks with Brown Mastic	Basement - Hallway/HVAC Room
	10	12" x 12" Blue Floor Tile with White Flecks with Brown Mastic	Basement - Hallway/HVAC Room
	11	12" x 12" Gray Floor Tile with Brown Mastic	Basement - Hallwey/HVAC Room - Under 9/10
	12	12" x 12" Gray Floor Tile with Brown Mastic	Basement - Hallway/HVAC Room - Under 9/10
	13	12" x 12" White Floor Tile with Black Flecks with Yellow Mastic	Basement - Small Hallway
	14	12" x 12" White Floor Tile with Black Flecks with Yellow Mastic	Basement - Small Hallway
	15	White Leveling Compound	Basement - Small Hallway - Under 13/14
	16	White Leveling Compound	Basement - Small Hallway - Under 13/14
	17	9" x 9" Green Floor Tile with Black Mastic	Basement - Small Storage Room
	18	9" x 9" Green Floor Tile with Black Mastic	Basement - Small Storage Room
	19	12" x 12" White Floor Tile with Blue Flecks with Green Mastic	First Floor Teachers Lounge
	20	12" x 12" White Floor Tile with Blue Flecks with Green Mastic	First Floor Teachers Lounge
	21	Unkown Size Brown Floor Tile with Black Mastic	First Floor Teachers Lounge - Under 19/20
	22	Unkown Size Brown Floor Tile with Black Mastic	First Floor Teachers Lounge - Under 19/20
	23	Unkown Size Green Floor Tile with Black Mastic	First Floor Teachers Lounge - Under 21/22
	24	Unkown Size Green Floor Tile with Black Mastic	First Floor Teachers Lounge - Under 21/22
	25	12" x 12" Purple Floor Tile with White Flecks with Green Mastic	First Floor Teachers Lounge
	26	12" x 12" Purple Floor Tile with White Flecks with Green Mastic	First Floor Teachers Lounge
	27	White Insulation Wrap	Room C124
	28	White Insulation Wrap	Room C124
	29	White Pipe Insulation	Room C124
	30	White Pipe Insulation	Room C124
	31	White Pipe Insulation	Room C124

Accepted ☑

Rejected ☐

Relinquished By

6/2/20

Received By

6:8
10:30A

Appendix IV: 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
02-28-2021

NUMBER
3303004618

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

JOHN ALEXANDER O'NEIL
13112 TALL SHADOWS LN
FAIRFAX, VA 22033

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: 3303004618 EXPIRES: 02-28-2021

JOHN ALEXANDER O'NEIL
13112 TALL SHADOWS LN
FAIRFAX, VA 22033

(FOLD)

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

DPOR-PC (02/2017)

LIMITED ASBESTOS-CONTAINING MATERIALS SAMPLING EVENT

GEORGE WASHINGTON MIDDLE SCHOOL

1005 MOUNT VERNON AVENUE
ALEXANDRIA, VIRGINIA 22301

ECS PROJECT NO. 47:1519-CA

FOR: ALEXANDRIA CITY PUBLIC SCHOOLS

JUNE 25, 2020

June 25, 2020

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

ECS Project No. 47:1519-CA

Reference: Limited Asbestos-Containing Materials Sampling Event, George Washington Middle School, 1005 Mount Vernon Avenue, Alexandria, Virginia

Dear Mr. Finnigan:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Alexandria City Public Schools with the results of the above referenced Limited Asbestos-Containing Materials Sampling Event performed at George Washington Middle School located at 1005 Mount Vernon 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 47:15188-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

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

Diana Krass
Senior Project Manager
dkrass@ecslimited.com
703-471-8400

EXECUTIVE SUMMARY

The subject property consists of the George Washington Middle School which is located at 1005 Mount Vernon Avenue in Alexandria, Virginia. The school building reportedly consists of approximately 286,000 square feet and was reportedly built in 1950. Select renovations are planned for the Campagna area of the school. A sketch of the Campagna area is attached to this report. Reportedly, the renovations will consist of the replacement of the flooring materials within the Campagna area. This sampling event was limited to the Campagna area within the school building. No other areas or materials were included in this bulk sampling event.

None of the bulk samples submitted to Scientific Analytical Institute, Inc. were reported to contain detectable concentrations of asbestos. If additional suspect asbestos-containing materials are uncovered which were not accessible during this sampling event, it is recommended that these materials be sampled or tested immediately upon discovery for asbestos content by an asbestos inspector in accordance with 29 CFR 1926.1101.

The executive summary is an integral portion of this report, however, ECS recommends the report be read in its entirety.

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1.0 SITE DESCRIPTION

The subject property consists of the George Washington Middle School which is located at 1005 Mount Vernon Avenue in Alexandria, Virginia. The school building reportedly consists of approximately 286,000 square feet and was reportedly built in 1950. Select renovations are planned for the Campagna area of the school. Reportedly, the renovations will consist of the replacement of the flooring materials within the Campagna area. This sampling event was limited to the Campagna area within the school building. No other areas or materials were included in this bulk sampling event.

2.0 PURPOSE

The purpose of the Limited Asbestos-Containing Materials Sampling Event was to identify asbestos-containing materials (ACMs) which may require special handling and/or disposal if removed during construction activities.

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-destructive asbestos survey was performed by an asbestos inspector who has received EPA accredited training and is licensed by the Commonwealth of Virginia. Please note that due to the COVID-19 Pandemic, license renewals have been delayed and the validity of expired licenses during this time have been extended. 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. 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. 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. 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.

None of the bulk samples submitted to Scientific Analytical Institute, Inc. were reported to contain detectable concentrations of asbestos. In total, 22 bulk samples were submitted to the laboratory of which 40 layers were analyzed. A complete list of the sampled materials submitted for analysis and sample locations are located in appendix attached to this report.

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.

5.0 RECOMMENDATIONS AND REGULATORY REQUIREMENTS

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

5.1 Asbestos-Containing Materials

None of the bulk samples submitted to Scientific Analytical Institute, Inc. were reported to contain detectable concentrations of asbestos. If additional suspect asbestos-containing materials are uncovered which were not accessible during this sampling event, it is recommended that these materials be sampled or tested immediately upon discovery for asbestos content by an asbestos inspector in accordance with 29 CFR 1926.1101.

The materials/findings of this survey should be added to this school building's AHERA Management Plan.

6.0 LIMITATIONS

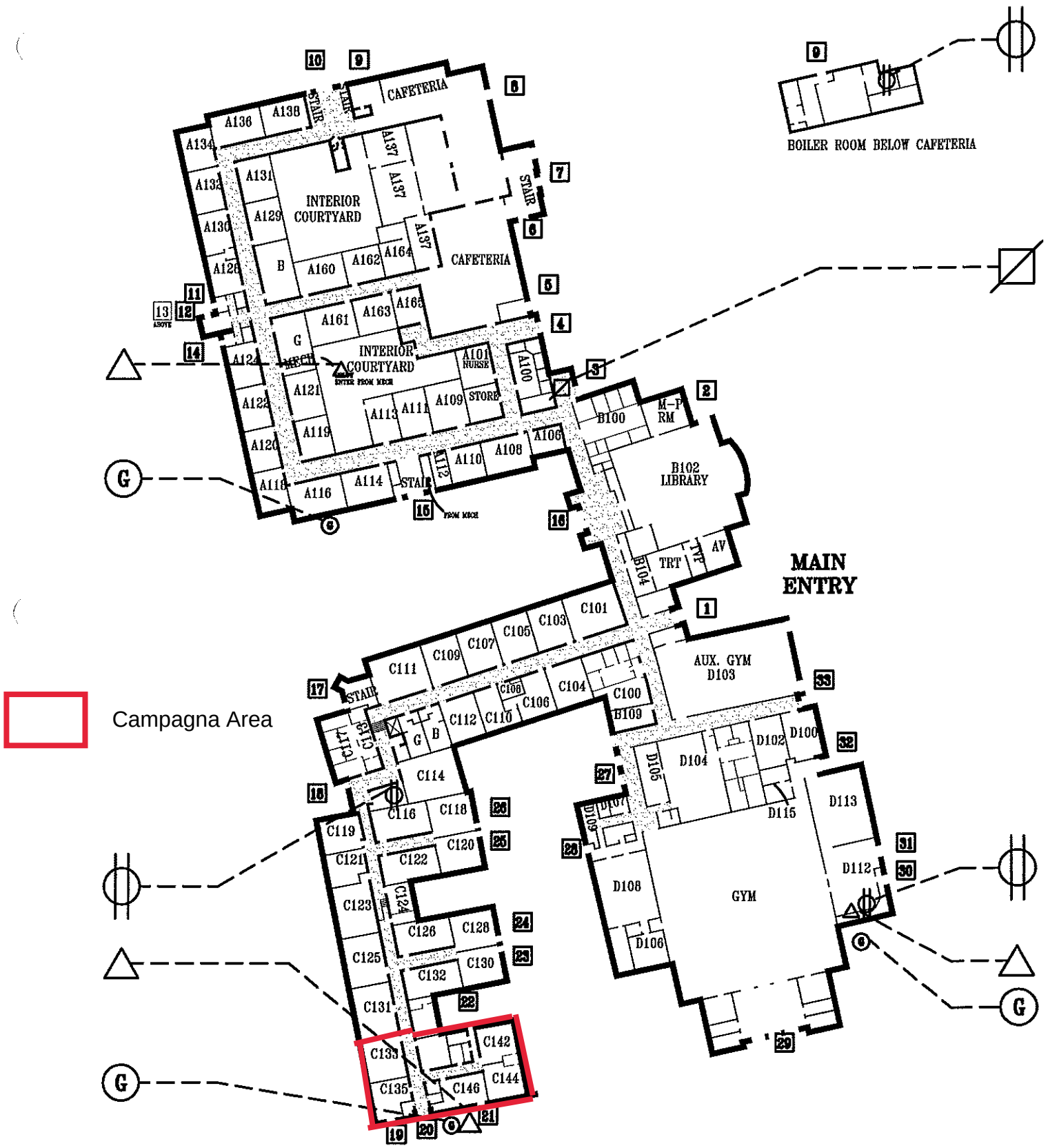
The conclusions and recommendations presented within this report are based upon a reasonable level of assessment within normal bounds and standards of professional practice for a site in this particular geographic setting. ECS is not responsible or liable for the discovery and elimination of hazards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

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: Drawings



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

GEORGE WASHINGTON MIDDLE SCHOOL

1005 Mount Vernon Ave.
Alexandria, Va 22301

(T) 703-706-4500 (F) 703-706-4507

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

Appendix II: Asbestos Bulk Sample Results

SUSPECT ASBESTOS-CONTAINING MATERIALS BULK SAMPLING RESULTS TABLE

Sample #	Sampling Location	Material/Description	Analytical Results
1 - A	Room C137	12" x 12" Turquoise Floor Tile	NAD
1 - B	Room C137	Yellow Mastic and Gray Leveling Compound associated with 12" x 12" Turquoise Floor Tile	NAD
2 - A	Room C144	12" x 12" Turquoise Floor Tile	NAD
2 - B	Room C144	Yellow Mastic and Gray Leveling Compound associated with 12" x 12" Turquoise Floor Tile	NAD
3 - A	South Campagna Hallway	12" x 12" Blue Floor Tile	NAD
3 - B	South Campagna Hallway	Yellow Mastic and Gray Leveling Compound associated with 12" x 12" Blue Floor Tile	NAD
4 - A	South Campagna Hallway	12" x 12" Blue Floor Tile	NAD
4 - B	South Campagna Hallway	Yellow Mastic and Gray Leveling Compound associated with 12" x 12" Blue Floor Tile	NAD
5 - A	South Campagna Hallway	12" x 12" Beige with Gray and White Streaks Floor Tile	NAD
5 - B	South Campagna Hallway	Yellow Mastic and Gray Leveling Compound associated with 12" x 12" Beige Floor Tile	NAD
6 - A	South Campagna Hallway	12" x 12" Beige with Gray and White Streaks Floor Tile	NAD
6 - B	South Campagna Hallway	Yellow Mastic and Gray Leveling Compound associated with 12" x 12" Beige Floor Tile	NAD
7 - A	South Campagna Hallway	12" x 12" Tan/Yellow Floor Tile	NAD
7 - B	South Campagna Hallway	Yellow Mastic and Gray Leveling Compound associated with 12" x 12" Tan/Yellow Floor Tile	NAD
8 - A	Room C148	12" x 12" Tan/Yellow Floor Tile	NAD
8 - B	Room C148	Yellow Mastic and Gray Leveling Compound associated with 12" x 12" Tan/Yellow Floor Tile	NAD
9 - A	Room C138	12" x 12" Beige Mottled Floor Tile	NAD
9 - B	Room C138	Yellow Mastic and Gray Leveling Compound associated with 12" x 12" Beige Mottled Floor Tile	NAD
10 - A	Room C138	12" x 12" Beige Mottled Floor Tile	NAD
10 - B	Room C138	Yellow Mastic and Gray Leveling Compound associated with 12" x 12" Beige Mottled Floor Tile	NAD
11 - A	Room C138	4" Black Cove Base	NAD
11 - B	Room C138	Cream Mastic associated with 4" Black Cove Base	NAD
12 - A	Room C138	4" Black Cove Base	NAD
12 - B	Room C138	Cream Mastic associated with 4" Black Cove Base	NAD
13	Room C138	Drywall Wallboard	NAD
14	Room C144	Drywall Wallboard	NAD
15	Room C138	Drywall Joint Compound	NAD
16	Room C144	Drywall Joint Compound	NAD
17 - A	Room C137	4" Gray Cove Base	NAD
17 - B	Room C137	Mixed Mastics associated with 4" Gray Cove Base	NAD
18 - A	North Campagna Hallway	4" Gray Cove Base	NAD

Table Notes:
Bold = Asbestos-Containing Materials
N/A = Not Analyzed
NAD = No Asbestos Detected

Sample #	Sampling Location	Material/Description	Analytical Results
18 - B	North Campagna Hallway	Mixed Mastics associated with 4" Gray Cove Base	NAD
19 - A	Room C140	12" x 12" Gray Mottled Floor Tile	NAD
19 - B	Room C140	Yellow Mastic associated with 12" x 12" Gray Mottled Floor Tile	NAD
20 - A	Room C140	12" x 12" Gray Mottled Floor Tile	NAD
20 - B	Room C140	Yellow Mastic associated with 12" x 12" Gray Mottled Floor Tile	NAD
21 - A	North Campagna Hallway	12" x 12" White with Multicolored Flecks Floor Tile	NAD
21 - B	North Campagna Hallway	Yellow Mastic associated with 12" x 12" White with Multicolored Flecks Floor Tile	NAD
22 - A	North Campagna Hallway	12" x 12" White with Multicolored Flecks Floor Tile	NAD
22 - B	North Campagna Hallway	Yellow Mastic associated with 12" x 12" White with Multicolored Flecks Floor Tile	NAD

Table Notes:
Bold = Asbestos-Containing Materials
N/A = Not Analyzed
NAD = No Asbestos Detected

Appendix III: 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 LAB CODE 200644-0

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

Attn: Michael Hamill

Project: 47:1519-C10/GWMS

Lab Order ID: 71943528
Analysis ID: 71943528_PLM
Date Received: 6/4/2020
Date Reported: 6/4/2020

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
1 - A *71943528PLM_1*	12" x 12" Turquoise Floor Tile with Yellow Mastic and Gray Leveling Compound *tile*	**None Detected**		**100% Other**	Blue Non Fibrous Homogeneous Dissolved
1 - B *71943528PLM_23*	12" x 12" Turquoise Floor Tile with Yellow Mastic and Gray Leveling Compound *mastic/leveling compound*	**None Detected**		**100% Other**	Yellow, Gray Non Fibrous Heterogeneous Dissolved
2 - A *71943528PLM_2*	12" x 12" Turquoise Floor Tile with Yellow Mastic and Gray Leveling Compound *tile*	**None Detected**		**100% Other**	Blue Non Fibrous Homogeneous Dissolved
2 - B *71943528PLM_24*	12" x 12" Turquoise Floor Tile with Yellow Mastic and Gray Leveling Compound *mastic/leveling compound*	**None Detected**		**100% Other**	Yellow, Gray Non Fibrous Heterogeneous Dissolved
3 - A *71943528PLM_3*	12" x 12" Blue Floor Tile with Yellow Mastic and Gray Leveling Compound *tile*	**None Detected**		**100% Other**	Blue Non Fibrous Homogeneous Dissolved
3 - B *71943528PLM_25*	12" x 12" Blue Floor Tile with Yellow Mastic and Gray Leveling Compound *mastic/leveling compound*	**None Detected**		**100% Other**	Yellow, Gray Non Fibrous Heterogeneous Dissolved
4 - A *71943528PLM_4*	12" x 12" Blue Floor Tile with Yellow Mastic and Gray Leveling Compound *tile*	**None Detected**		**100% Other**	Blue Non Fibrous Homogeneous Dissolved
4 - B *71943528PLM_26*	12" x 12" Blue Floor Tile with Yellow Mastic and Gray Leveling Compound *mastic/leveling compound*	**None Detected**		**100% Other**	Yellow, Gray 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 (40)
Analyst

Approved Signatory

P-F-002 r15 1/16/2021

Bulk Asbestos Analysis

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

NVLAP LAB CODE 200644-0

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

Attn: Michael Hamill

Project: 47:1519-C10/GWMS

Lab Order ID: 71943528
Analysis ID: 71943528_PLM
Date Received: 6/4/2020
Date Reported: 6/4/2020

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
5 - A *71943528PLM_5*	12" x 12" Beige with Gray and White Streaks Floor Tile with Yellow Mastic and Gray Level *tile*	None Detected		100% Other	Beige Non Fibrous Homogeneous Dissolved
5 - B *71943528PLM_27*	12" x 12" Beige with Gray and White Streaks Floor Tile with Yellow Mastic and Gray Level *mastic/leveling compound*	None Detected		100% Other	Yellow, Gray Non Fibrous Heterogeneous Dissolved
6 - A *71943528PLM_6*	12" x 12" Beige with Gray and White Streaks Floor Tile with Yellow Mastic and Gray Level *tile*	None Detected		100% Other	Beige Non Fibrous Homogeneous Dissolved
6 - B *71943528PLM_28*	12" x 12" Beige with Gray and White Streaks Floor Tile with Yellow Mastic and Gray Level *mastic/leveling compound*	None Detected		100% Other	Yellow, Gray Non Fibrous Heterogeneous Dissolved
7 - A *71943528PLM_7*	12" x 12" Tan/Yellow with Brown and White Streaks Floor Tile with Yellow Mastic *tile*	None Detected		100% Other	Cream Non Fibrous Homogeneous Dissolved
7 - B *71943528PLM_29*	12" x 12" Tan/Yellow with Brown and White Streaks Floor Tile with Yellow Mastic *mastic/leveling compound*	None Detected		100% Other	Yellow, Gray Non Fibrous Heterogeneous Dissolved
8 - A *71943528PLM_8*	12" x 12" Tan/Yellow with Brown and White Streaks Floor Tile with Yellow Mastic *tile*	None Detected		100% Other	Cream Non Fibrous Homogeneous Dissolved
8 - B *71943528PLM_30*	12" x 12" Tan/Yellow with Brown and White Streaks Floor Tile with Yellow Mastic *mastic/leveling compound*	None Detected		100% Other	Yellow, Gray Non Fibrous Heterogeneous Dissolved

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Yanelis Delgado (40)
Analyst

Approved Signatory

P-F-002 r15 1/16/2021

Bulk Asbestos Analysis

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

NVLAP LAB CODE 200644-0

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

Attn: Michael Hamill

Project: 47:1519-C10/GWMS

Lab Order ID: 71943528
Analysis ID: 71943528_PLM
Date Received: 6/4/2020
Date Reported: 6/4/2020

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
9 - A *71943528PLM_9*	12" x 12" Beige Mottled Floor Tile with Yellow Mastic and Gray Leveling Compound *tile*	**None Detected**		**100% Other**	Beige Non Fibrous Homogeneous Dissolved
9 - B *71943528PLM_31*	12" x 12" Beige Mottled Floor Tile with Yellow Mastic and Gray Leveling Compound *mastic/leveling compound*	**None Detected**		**100% Other**	Yellow, Gray Non Fibrous Heterogeneous Dissolved
10 - A *71943528PLM_10*	12" x 12" Beige Mottled Floor Tile with Yellow Mastic and Gray Leveling Compound *tile*	**None Detected**		**100% Other**	Beige Non Fibrous Homogeneous Dissolved
10 - B *71943528PLM_32*	12" x 12" Beige Mottled Floor Tile with Yellow Mastic and Gray Leveling Compound *mastic/leveling compound*	**None Detected**		**100% Other**	Yellow, Gray Non Fibrous Heterogeneous Dissolved
11 - A *71943528PLM_11*	4" Black Cove Base with Cream Mastic *covebase*	**None Detected**		**100% Other**	Black Non Fibrous Homogeneous Ashed
11 - B *71943528PLM_33*	4" Black Cove Base with Cream Mastic *mastic*	**None Detected**		**100% Other**	Cream Non Fibrous Homogeneous Dissolved
12 - A *71943528PLM_12*	4" Black Cove Base with Cream Mastic *covebase*	**None Detected**		**100% Other**	Black Non Fibrous Homogeneous Ashed
12 - B *71943528PLM_34*	4" Black Cove Base with Cream Mastic *mastic*	**None Detected**		**100% Other**	Cream Non Fibrous Homogeneous Dissolved

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Yanelis Delgado (40)

Analyst

Approved Signatory

P-F-002 r15 1/16/2021

Bulk Asbestos Analysis

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

NVLAP LAB CODE 200644-0

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

Attn: Michael Hamill

Project: 47:1519-C10/GWMS

Lab Order ID: 71943528
Analysis ID: 71943528_PLM
Date Received: 6/4/2020
Date Reported: 6/4/2020

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
13	Drywall Wallboard	None Detected		100% Other	Grayish Non Fibrous Homogeneous
71943528PLM_13					Dissolved
14	Drywall Wallboard	None Detected		100% Other	Grayish Non Fibrous Homogeneous
71943528PLM_14					Dissolved
15	Drywall Joint Compound	None Detected		100% Other	White Non Fibrous Homogeneous
71943528PLM_15					Dissolved
16	Drywall Joint Compound	None Detected		100% Other	White Non Fibrous Homogeneous
71943528PLM_16					Dissolved
17 - A	4" Gray Cove Base with Mixed Mastic	None Detected		100% Other	Gray Non Fibrous Homogeneous
71943528PLM_17	*covebase*				Ashed
17 - B	4" Gray Cove Base with Mixed Mastic	None Detected		100% Other	Cream Non Fibrous Homogeneous
71943528PLM_35	*mastic*				Dissolved
18 - A	4" Gray Cove Base with Mixed Mastic	None Detected		100% Other	Gray Non Fibrous Homogeneous
71943528PLM_18	*covebase*				Ashed
18 - B	4" Gray Cove Base with Mixed Mastic	None Detected		100% Other	Cream Non Fibrous Homogeneous
71943528PLM_36	*mastic*				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 (40)

Analyst

Approved Signatory

Bulk Asbestos Analysis

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

NVLAP LAB CODE 200644-0

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

Attn: Michael Hamill

Project: 47:1519-C10/GWMS

Lab Order ID: 71943528
Analysis ID: 71943528_PLM
Date Received: 6/4/2020
Date Reported: 6/4/2020

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
19 - A *71943528PLM_19*	12" x 12" Gray Mottled Floor Tile with Yellow Mastic *tile*	**None Detected**		**100% Other**	Gray Non Fibrous Homogeneous Dissolved
19 - B *71943528PLM_37*	12" x 12" Gray Mottled Floor Tile with Yellow Mastic *mastic/leveling compound*	**None Detected**		**100% Other**	Yellow, Gray Non Fibrous Heterogeneous Dissolved
20 - A *71943528PLM_20*	12" x 12" Gray Mottled Floor Tile with Yellow Mastic *tile*	**None Detected**		**100% Other**	Gray Non Fibrous Homogeneous Dissolved
20 - B *71943528PLM_38*	12" x 12" Gray Mottled Floor Tile with Yellow Mastic *mastic/leveling compound*	**None Detected**		**100% Other**	Yellow, Gray Non Fibrous Heterogeneous Dissolved
21 - A *71943528PLM_21*	12" x 12" White with Multicolored Flecks Floor Tile with Yellow Mastic *tile*	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Dissolved
21 - B *71943528PLM_39*	12" x 12" White with Multicolored Flecks Floor Tile with Yellow Mastic *mastic*	**None Detected**		**100% Other**	Yellow Non Fibrous Homogeneous Dissolved
22 - A *71943528PLM_22*	12" x 12" White with Multicolored Flecks Floor Tile with Yellow Mastic *tile*	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Dissolved
22 - B *71943528PLM_40*	12" x 12" White with Multicolored Flecks Floor Tile with Yellow Mastic *mastic*	**None Detected**		**100% Other**	Yellow 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 (40)

Analyst

Approved Signatory

71943528

Client:	ECS Mid-Atlantic, LLC	***Instructions:***	
Contact:	Michael Hamill	*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:	mhamill@ecslimited.com	***Enter samples between "<<" and ">>"***	
Project:	47:1519-C10/GWMS	***Begin Samples with a "<< "above the first sample and end with a ">>" below the last sample.***	
Client Notes:	Positive Stop	*Only Enter your data on the first sheet "Sheet1"*	
P.O. #.	47:1519-C10/GWMS	*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:	6/3/2020 0:00		
Analysis:	PLM EPA 600/R-93/116		
TurnAroundTime:	24-hr TAT		

Scientific Analytical Institute

4604 Dundas Drive
Greensboro, NC 27407
Phone: 336.292.3888
Fax: 336.292.3313
Email: lab@sailab.com

Sample Number	Data 1	Sample Description	Data 2
<<			
	1	12" x 12" Turquoise Floor Tile with Yellow Mastic and Gray Leveling Compound	C137
	2	12" x 12" Turquoise Floor Tile with Yellow Mastic and Gray Leveling Compound	C144
	3	12" x 12" Blue Floor Tile with Yellow Mastic and Gray Leveling Compound	South Campagna Hallway
	4	12" x 12" Blue Floor Tile with Yellow Mastic and Gray Leveling Compound	South Campagna Hallway
	5	12" x 12" Beige with Gray and White Streaks Floor Tile with Yellow Mastic and Gray Leveling Compound	South Campagna Hallway
	6	12" x 12" Beige with Gray and White Streaks Floor Tile with Yellow Mastic and Gray Leveling Compound	South Campagna Hallway
	7	Floor Tile with Yellow Mastic and Gray Leveling Compound	South Campagna Hallway
	8	Floor Tile with Yellow Mastic and Gray Leveling Compound	C148
	9	12" x 12" Beige Mottled Floor Tile with Yellow Mastic and Gray Leveling Compound	C138
	10	12" x 12" Beige Mottled Floor Tile with Yellow Mastic and Gray Leveling Compound	C138
	11	4" Black Cove Base with Cream Mastic	C138
	12	4" Black Cove Base with Cream Mastic	C138
	13	Drywall Wallboard	C138
	14	Drywall Wallboard	C144
	15	Drywall Joint Compound	C138
	16	Drywall Joint Compound	C144
	17	4" Gray Cove Base with Mixed Mastic	C137
	18	4" Gray Cove Base with Mixed Mastic	North Campagna Hallway
	19	12" x 12" Gray Mottled Floor Tile with Yellow Mastic	C140
	20	12" x 12" Gray Mottled Floor Tile with Yellow Mastic	C140
	21	12" x 12" White with Multicolored Flecks Floor Tile with Yellow Mastic	North Campagna Hallway
	22	12" x 12" White with Multicolored Flecks Floor Tile with Yellow Mastic	North Campagna Hallway
>>			

Accepted ☑

Rejected ☐

Relinquished By

Received By

6/4 11:30am

Appendix IV: Certifications/ Licenses

Certificate of Completion

This is to certify

MICHAEL P. HAMILL

has attended and satisfactorily completed the course entitled

4-Hour Asbestos Inspector Refresher

EPA Approved Under TCSA Title II

February 6, 2020	February 6, 2020	**ECS-20-1012**
Course Date	Examination Date	Certificate Number

14026 Thunderbolt Place Chantilly, VA 20151	February 6, 2021
Course Location	Expiration Date

Christopher J. Chapman
Training Program Manager

Robert Cienki
Instructor

ECS MID-ATLANTIC,LLC
7670 Enon Road, Suite 101, Roanoke, Virginia 24019
T: 540-362-2000 F:540-362-1202

License Details

Name	HAMILL, MICHAEL PETER
License Number	3303003941
License Description	Asbestos Inspector License
Rank	Asbestos Inspector
Address	NATIONAL HARBOR, MD 20745
Initial Certification Date	2014-04-16
Please Note:	**The validity of this license, certification, or registration has been extended until 30 days after the date which the state of emergency (Executive Order 51) is lifted.**

The license information in this application was last updated at Mon Jun 08 02:50:18 EDT.

License Lookup legal disclaimer

ASBESTOS CONTAINING MATERIALS SURVEY



GEORGE WASHINGTON MIDDLE SCHOOL

1005 MT. VERNON AVENUE
ALEXANDRIA, VIRGINIA

ECS PROJECT NO. 47:1519-C

FOR

ALEXANDRIA CITY PUBLIC SCHOOLS

DECEMBER 19, 2016

December 19, 2016

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

ECS Project No. 47:1519-C

Reference: Asbestos Containing Materials Survey, George Washington Middle School, 1005 Mt. Vernon Avenue, Alexandria, Virginia

Dear Mr. Finnigan:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Alexandria City Public Schools with the results of the above referenced Asbestos Containing Materials Survey performed at George Washington Middle School located at 1005 Mt. Vernon 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 47:47:2808-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

Beverly Sedon
Senior Project Manager
bsedon@ecslimited.com
703-471-8400

Christopher J. Chapman, CIH
Director of Industrial Hygiene
cchapman@ecslimited.com
703-471-8400

EXECUTIVE SUMMARY

The subject property is improved with the George Washington Middle School. The facility reportedly encompasses approximately 286,000 square feet and was built in 1950. The facility has had various renovations performed in the past. Select renovations are planned for the cafeteria, kitchen, weight room, and dance room. Upgrades to the ceiling and flooring materials are proposed for these areas. Therefore, the survey was limited to these areas within the building. No other areas of the structure were included in this assessment.

The purpose of the survey was to determine if asbestos-containing materials (ACMs) are present within the above referenced areas. ECS has previously performed asbestos testing services for the building in the past (ECS Project Nos. 01:22003, report dated June 6, 2014 and 01:24834). Analytical results of samples obtained from the subject areas during these surveys were also utilized for this current assessment.

During this assessment of the subject areas, a total of sixty-five (65) samples were collected from the subject areas in which a total of ninety-nine (99) layers were analyzed by the laboratory. Based on the laboratory analysis of the bulk samples collected during the survey, the following materials were reported to contain asbestos:

- Brown Ceiling Tile Mastic (Glue Dots)
- Dark Brown Ceiling Tile Mastic (Glue Dots)
- Black Mastic on HVAC Wrap
- Black Residual Wall Mastic
- Drywall Joint Compound
- Interior Tan Door Caulk
- Brown Mastic associated with Swirl Ceiling Texture

Additional asbestos containing materials are reported for other areas of the building in assessments previously performed. These materials are further referenced in Section 4. Recommendations regarding the identified ACMs and materials assumed to contain asbestos are further referenced in this report.

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Appendix III: Laboratory Report(s)

1.0 SITE DESCRIPTION

The subject property is improved with George Washington Middle School. The facility reportedly encompasses approximately 286,000 square feet and was built in 1950. The facility has had various renovations performed in the past. Select renovations are planned for the cafeteria, kitchen, weight room, and dance room. Upgrades to the ceiling and flooring materials are proposed for these areas. Therefore, the survey was limited to these areas within the building. No other areas of the structure were included in this assessment. The building was occupied at the time of our assessment.

Accessibility was limited in some areas and ECS was unable to survey areas above solid ceilings or behind solid walls. The weight room was also observed to have a drywall ceiling.

2.0 PURPOSE

The purpose of the Asbestos Containing Materials Survey was to identify asbestos-containing materials (ACMs) which may require special handling and/or disposal if removed during construction activities.

ECS has previously performed asbestos testing services for the building in the past (reference ECS Project No. 01:22003, report dated June 6, 2014 and 01:24834). Analytical results of samples obtained from the subject areas during these surveys were also utilized for this assessment.

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 a licensed Commonwealth of Virginia asbestos inspector who has received EPA accredited training 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.

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. 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. 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. Unidentified suspect ACMs may be located in these and/or other inaccessible areas.

ECS observed built-up walls in the cafeteria. Additional building materials may be present within these cavities that were not readily accessible during the survey. In addition, boxed-in counters were present within the cafeteria beneath the windows. Fan coil units were positioned along these counters. Additional materials may be present in these areas. Built-up flooring systems were observed throughout the surveyed areas. Additional flooring materials may be present and also present beneath walls, furniture, cabinets, etc.

In total, sixty-five (65) bulk samples were submitted to the laboratory of which ninety-nine (99) layers were analyzed.

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 A, Subpart F, 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 complete list of the sampled materials submitted for analysis is located in the Appendix.

Of the 65 bulk samples submitted to Scientific Analytical Institute, Inc., the following materials were reported to contain asbestos in detectable concentrations. A complete list of the sampled materials submitted for analysis and sample locations are located in Table 2 attached to 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.

Summary of Asbestos-Containing Materials Identified

Location	Material Description	Analytical Result	Category
Cafeteria Ceiling Cavity	Brown Ceiling Tile Mastic	3% Chrysotile	Category II Non-Friable
Kitchen Ceiling Cavity	Black Mastic on HVAC Insulation Wrap	8% Chrysotile	Category II Non-Friable
Kitchen Hallway to Locker Rooms	Black Residual Wall Mastic	5% Chrysotile	Category II Non-Friable
Kitchen Hallway to Locker Rooms & Kitchen	Drywall Joint Compound	2% Chrysotile	Category II Non-Friable
Cafeteria Janitor's Office at Cafe Entry	Interior Tan Door Caulk	2% Chrysotile	Category II Non-Friable
Cafeteria Janitor's Office at Cafe Entry	Brown Ceiling Mastic beneath Swirl Ceiling Texture	2% Chrysotile	Friable
Dance Room Ceiling Cavity	Dark Brown Ceiling Tile Mastic	2% Chrysotile <1% Anthophyllite	Category II Non-Friable
Note: The location provided specifies where the material was sampled. Materials identified as asbestos containing should be assumed to be located in other areas of the building if not otherwise identified.			

The asbestos containing brown and dark brown ceiling tile mastics (glue dots) were observed within the ceiling cavities of the cafeteria, kitchen, and dance room associated with 1' x 1' ceiling tiles. Some of the mastic was observed to be residual on the concrete decking where the ceiling tiles were missing. Asbestos containing black mastic on the HVAC duct wrap insulation was observed within the ceiling cavity of the kitchen. Residual black wall mastic that is asbestos containing was observed in the kitchen hallway near the office/locker rooms. This mastic is likely present in other areas of the building used as an adhesive for mirrors, signs, or boards, etc. The drywall joint compound within the kitchen hallway and kitchen was also reported as asbestos containing.

The ceiling in the Janitor's Office/storage room (located near the entrance of the cafeteria) was observed to have a swirled ceiling texture. The samples collected of the brown mastic associated with the textured ceiling plaster were identified as asbestos containing. Based upon our observations during sampling, the brown mastic and textured plaster are classified as one ceiling system thus ECS defined the material as friable (RACM). The interior tan door caulk of this room was also reported as asbestos containing and may be associated with other door caulks in other areas of the building.

The following asbestos containing materials were also previously reported by ECS or others to be present within the building:

- Black Paper under Plaster Wrap at North Boiler Room;
- Roofing Felt at North Boiler Room;
- Black Tar Paper Under Carpet of Room 317;
- Plaster Ceiling of Old Gym Weight Room;
- White Fire Block in the old clinic and 2nd Floor A Wing;
- TSI 6" Mudded Elbows/Joints in Room 119;
- 9" x 9" Maroon Floor Tile in Rooms 302, 301, 344;
- Gray Mastic on TSI and Ducts in Room A111;
- 9" x 9" Brown Floor Tiles in Old Clinic 2nd Floor Wing A; 2nd Floor Custodial Closet by Auditorium;
- Wiring on Stage;
- Glue Dots in Room 120;
- Plaster Walls (Presummed Until Tested);
- 9" x 9" Tan Floor Tile with Flecks of Storage Room in Lobby at Exit 29;
- Plaster Wall/Ceiling of Storage Room in Lobby at Exit 29;
- Mudded Pipe Insulation of Storage Room in South Boiler Room behind Walls;
- Tan Floor Tile and associated Black Mastic of Classroom A210 & A214;
- Black Floor Mastics of Rooms A206, A200, A208;
- Gray Floor Tile (Unknown Size) of Room A216

The above referenced materials may be present in other areas of the building including the areas sampled during this present survey. Materials similar to these materials should be assumed as asbestos containing or further sampled by a licensed asbestos inspector.

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:

- Thermal System Insulation (TSI) on pipes within chases behind walls and above ceilings;
- Pipe Flange Gaskets in heating and plumbing systems;

- Fire Door and associated Casing Insulation in locations requiring a rated fire door and door casing;
- Air Handler Components in the air handlers (interior components);
- HVAC Duct Pin Mastics associated with the insulation
- Concrete Masonry Unit (Blocks/Walls) with Vermiculite filler;
- Electrical Panels Asbestos Cement Components in electrical systems;
- Water Fountain Components in water fountains (pipe cloth);
- Waterproofing Membrane/Mastics/vapor barriers within exterior wall cavities, behind interior finishes, exterior veneer and/or subgrade walls;
- Boilers Components in boilers (gasket, fire brick, etc.);
- Light shield Insulation in light shields;
- Mirror Mastics behind/under mirrors;
- Wood Paneling Mastic/Felt Paper behind panels and/or paneling;
- Wood flooring felts
- Mastics or cement boards associated with Baseboard Heaters/Radiators Components/Wall Mounted Fan Coil Units in and/or behind radiators/baseboards;
- Elevator Components in elevators (Panels, Brake Shoes, Roping, etc.);
- Soffit and materials within exterior soffit cavity at exterior sidewalk/entry locations;
- Chalkboards and Chalkboard/Bulletin Board mastics
- Wall Compounds and Mastics associated with ceramic wall/floor tiles
- Roof Structures – roof systems;

Additionally, flooring underlayments or additional mastics/compounds may be present in other areas of the building beneath shelving, cabinetry, fixed furniture, etc.

5.0 RECOMMENDATIONS AND REGULATORY REQUIREMENTS

Based on our understanding of the purpose of the Asbestos Containing Materials Survey including future plans for renovation, the laboratory analysis, our findings and observations, ECS presents the following recommendations.

5.1 Asbestos-Containing Materials

By definition, materials which contain greater than one percent (> 1%) asbestos are considered asbestos-containing materials (ACMs). Friable materials (i.e., able to be crumbled, pulverized, and/or reduced to powder by hand pressure when dry) will easily produce airborne asbestos fibers if disturbed. Non-friable materials may also produce airborne asbestos fibers if disturbed.

The following materials were reported as asbestos containing from the subject surveyed areas: brown ceiling tile mastic; black residual wall mastic; black mastic on HVAC duct insulation; interior tan door caulk; brown ceiling mastic associated with swirled texture ceiling; and drywall joint compound.

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.

Suspect ACMs not observed due to inaccessibility or not sampled due to the destructive means that sampling would require may 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, behind solid walls/above solid ceilings, 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.

Federal and local regulations require asbestos-containing materials be removed prior to disturbance by renovation/demolition. ECS recommends the identified asbestos-containing materials reported to be present within the building during renovation activities be removed and disposed of by Commonwealth of Virginia certified asbestos abatement contractor if they are to be impacted.

Prior to abatement, a 20-day notification to Virginia Department of Labor and Industry and 10 Day notification to US EPA may be required. These notifications are normally filed by the abatement contractor.

If asbestos-containing materials are to be removed, it may be required that a Virginia licensed project monitor inspect the project daily dependent upon the type and amount of ACMs to be removed. ECS can provide this service if requested.

ECS recommends that a project specification be prepared to delineate and quantify known and suspect hazardous and regulated materials in the buildings and to outline proper procedures for the abatement. This will help protect the owner's liability in better defining the scope of work and contractors' roles and responsibilities in the abatement process and holding the contractor accountable for the performance of the project. The specification typically define the Contractor's scope of work and outline requirements and procedures that must be followed for this project. The intent of the specification is to give performance requirements for the Contractor so that the project can be completed safely and in compliance with applicable federal and state regulations. Typically, the specification document serves as part of the site owner's contract with the contractor.

The Asbestos management plan for the building should be updated to reflect the findings of this study. Appropriate training/information should also be relayed to maintenance staff and others including outside contractors who may incidentally impact/disturb these materials.

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.

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 other warranty, expressed or implied, is made

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: Site Photographs



1 - View of the cafeteria area



2 - View of cafeteria flooring materials



3 - View of the ceiling plaster, Samples 1-3



4 - View of the brown ceiling tile mastic (ACM), Samples 4-5



5 - View of TSI pipe wrap and mastic, Samples 6-8



6 - View of the kitchen area



7 - View of the drywall ceiling tile, Samples 9-10



8 - View of black mastic (ACM) on duct wrap, Samples 11-12



9 - View of ceramic wall compound, Samples 13-14



10 - View of black cove base, 12" x 12" white floor tile with black flecks (top layer) and 12" x 12" green floor tile (bottom layer), Samples 15-20



11 - View of 12" x 12" green floor tile with heavy mottles, Samples 21-22



12 - View of 12" x 12" light green floor tile with dark green specs (top layer) with 12" x 12" white floor tile (bottom layer), Samples 23-26



13 - View of 12" x 12" tan floor tile with brown specs and gray leveling compound, Samples 29-32



14 - View of the drywall wallboard in the cafeteria, Sample 58



15 - View of white interior window caulk, Samples 33-34



16 - View of black residual wall mastic (ACM) and drywall joint compound (ACM), Samples 35-36



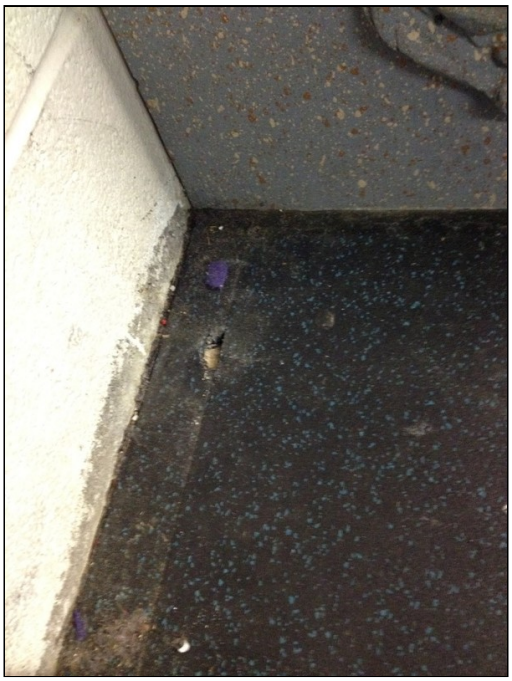
17 - View of tan interior door caulk (ACM), Samples 37-38



18 - View of the brown ceiling mastic (ACM) beneath ceiling texture, Samples 39-41



19 - View of the weight room



20 - View of yellow mastic of floor padding, Samples 42-43



21 - View of interior white door caulk, Samples 54-55



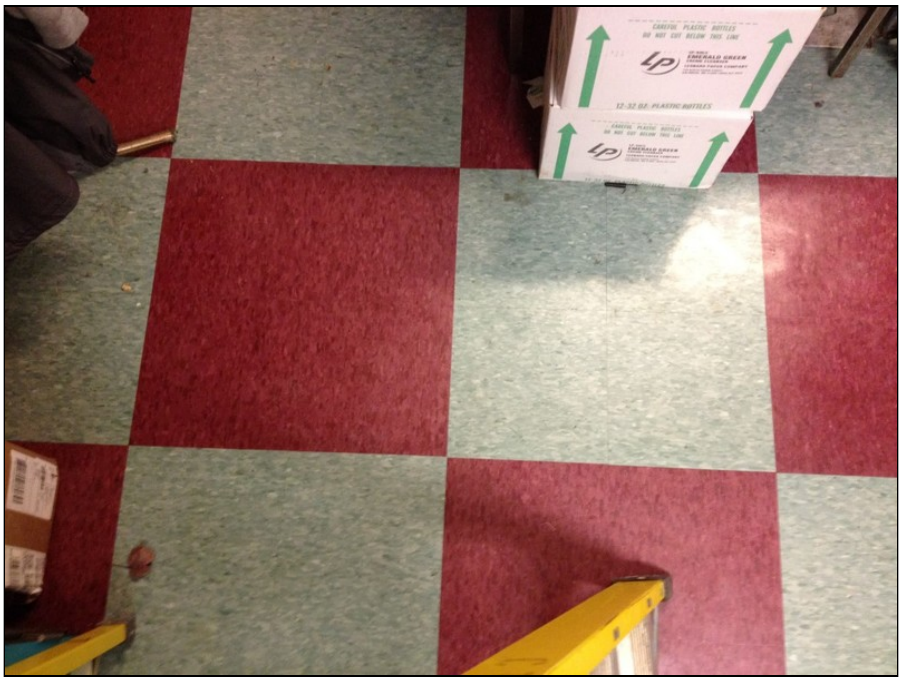
22 - View of wood-like sheet flooring, Samples 56-57



23 - View of the recessed ceilings in the cafeteria area



24 - View of the counters below windows, fan coil units, and water fountains



25 - View of similar floorings of Samples 21-22 in the Cafeteria Janitor's Office



26 - View of built-up wallboard systems

Appendix II: Asbestos Bulk Sample Results

TABLE 2
BULK SAMPLING OF SUSPECT ASBESTOS-CONTAINING MATERIALS

Sample #	Sampling Location	Material/Description	Analytical Results
1	Café Area 1	Ceiling Plaster - Finish	NAD
2 - A	Café Area 1	Ceiling Plaster - Finish	NAD
2 - B	Café Area 1	Ceiling Plaster - Base	NAD
3 - A	Café Area 2	Ceiling Plaster - Finish	NAD
3 - B	Café Area 2	Ceiling Plaster - Base	NAD
4 - A	Cafeteria	1' x 1' Fissure Ceiling Tile	NAD
4 - B	**Cafeteria**	**Brown Mastic of 1' x 1' Fissure Ceiling Tile**	**Asbestos: 3% Chrysotile**
5 - A	Cafeteria	1' x 1' Fissure Ceiling Tile	NAD
5 - B	Cafeteria	Brown Mastic of 1' x 1' Fissure Ceiling Tile	N/A
6	Cafeteria	White Pipe Wrap (TSI) with White Mastic on Fiberglass	Wrap/Mastic - NAD
7	Cafeteria	White Pipe Wrap (TSI) with White Mastic on Fiberglass	Wrap/Mastic - NAD
8	Cafeteria	White Pipe Wrap (TSI) with White Mastic on Fiberglass	Wrap/Mastic - NAD
9	Kitchen	2' x 4' Gypsum Ceiling Tile	NAD
10	Kitchen	2' x 4' Gypsum Ceiling Tile	NAD
11	**Kitchen**	**Black Mastic on Duct Wrap**	**Asbestos: 8% Chrysotile**
12	Kitchen	Black Mastic on Duct Wrap	N/A
13	Kitchen	4" Ceramic Wall Compound	NAD
14	Kitchen	4" Ceramic Wall Compound	NAD
15 - A	Kitchen Storage	4" Black Cove Base	NAD
15 - B	Kitchen Storage	Dark Yellow Mastic of 4" Black Cove Base	NAD

Table Notes:
NAD = No Asbestos Detected
N/A = Sample Not Analyzed; Positive Stop
Bold - Asbestos Containing Materials

TABLE 2
BULK SAMPLING OF SUSPECT ASBESTOS-CONTAINING MATERIALS

Sample #	Sampling Location	Material/Description	Analytical Results
16 - A	Kitchen Storage	4" Black Cove Base	NAD
16 - B	Kitchen Storage	Dark Yellow Mastic of 4" Black Cove Base	NAD
17 - A	Kitchen Storage	12" x 12" White Floor Tile with Black Flecks (Top Layer)	NAD
17 - B	Kitchen Storage	Mastic of 12" x 12" White Floor Tile (Top Layer)	NAD
18 - A	Kitchen Storage	12" x 12" White Floor Tile with Black Flecks (Top Layer)	NAD
18 - B	Kitchen Storage	Mastic of 12" x 12" White Floor Tile (Top Layer)	NAD
19 - A	Kitchen Storage	12" x 12" Light Green Floor Tile (Bottom Layer)	NAD
19 - B	Kitchen Storage	Yellow Mastic of 12" x 12" Light Green Floor Tile (Bottom Layer)	NAD
20 - A	Kitchen Storage	12" x 12" Light Green Floor Tile (Bottom Layer)	NAD
20 - B	Kitchen Storage	Yellow Mastic of 12" x 12" Light Green Floor Tile (Bottom Layer)	NAD
21 - A	Kitchen Office Hallway	12" x 12" Green Heavy Mottled Floor Tile	NAD
21 - B	Kitchen Office Hallway	Black Mastic of 12" x 12" Green Heavy Mottled Floor Tile	NAD
22 - A	Kitchen Office Hallway	12" x 12" Green Heavy Mottled Floor Tile	NAD
22 - B	Kitchen Office Hallway	Black Mastic of 12" x 12" Green Heavy Mottled Floor Tile	NAD
23 - A	Cafeteria	12" x 12" Green Floor Tile with Dark Green Specs (Top Layer)	NAD
23 - B	Cafeteria	Green Mastic of 12" x 12" Green Floor Tile (Top Layer)	NAD
24 - A	Cafeteria	12" x 12" Green Floor Tile with Dark Green Specs (Top Layer)	NAD
24 - B	Cafeteria	Green Mastic of 12" x 12" Green Floor Tile (Top Layer)	NAD
25 - A	Cafeteria	12" x 12" White Floor Tile (Bottom Layer)	NAD
25 - B	Cafeteria	Brown Mastic of 12" x 12" White Floor Tile (Bottom Layer)	NAD

Table Notes:
NAD = No Asbestos Detected
N/A = Sample Not Analyzed; Positive Stop
Bold - Asbestos Containing Materials

TABLE 2
BULK SAMPLING OF SUSPECT ASBESTOS-CONTAINING MATERIALS

Sample #	Sampling Location	Material/Description	Analytical Results
26 - A	Cafeteria	12" x 12" White Floor Tile (Bottom Layer)	NAD
26 - B	Cafeteria	Brown Mastic of 12" x 12" White Floor Tile (Bottom Layer)	NAD
27 - A	Cafeteria	12" x 12" Red Floor Tile	NAD
27 - B	Cafeteria	Yellow/Brown Mastic of 12" x 12" Red Floor Tile	NAD
28 - A	Cafeteria	12" x 12" Red Floor Tile	NAD
28 - B	Cafeteria	Yellow/Brown Mastic of 12" x 12" Red Floor Tile	NAD
29 - A	Cafeteria	12" x 12" Tan Floor Tile with Brown Specks (Top Layer)	NAD
29 - B	Cafeteria	Yellow Mastic of 12" x 12" Tan Floor Tile (Top Layer)	NAD
30 - A	Cafeteria	12" x 12" Tan Floor Tile with Brown Specks (Top Layer)	NAD
30 - B	Cafeteria	Yellow Mastic of 12" x 12" Tan Floor Tile (Top Layer)	NAD
31 - A	Cafeteria	Gray Floor Level Compound	NAD
31 - B	Cafeteria	Yellow/Dark Brown Mastic on Gray Floor Level Compound	NAD
32 - A	Cafeteria	Gray Floor Level Compound	NAD
32 - B	Cafeteria	Yellow/Dark Brown Mastic on Gray Floor Level Compound	NAD
33	Cafeteria	Interior White Window Caulk	NAD
34	Cafeteria	Interior White Window Caulk	NAD
35 - A	**Kitchen Hallway to Lockers**	**Black Residual Wall Mastic**	**Asbestos: 5% Chrysotile**
35 - B	**Kitchen Hallway to Lockers**	**Drywall Joint Compound adhered to Black Residual Wall Mastic**	**Asbestos: 2% Chrysotile**
36 - A	Café Office Hallway	Black Residual Wall Mastic	N/A
36 - B	Café Office Hallway	Drywall Joint Compound adhered to Black Residual Wall Mastic	N/A

Table Notes:
NAD = No Asbestos Detected
N/A = Sample Not Analyzed; Positive Stop
Bold - Asbestos Containing Materials

TABLE 2
BULK SAMPLING OF SUSPECT ASBESTOS-CONTAINING MATERIALS

Sample #	Sampling Location	Material/Description	Analytical Results
37	**Café Janitor's Office**	**Interior Tan Door Caulk**	**Asbestos: 2% Chrysotile**
38	Café Janitor's Office	Interior Tan Door Caulk	N/A
39 - A	Café Janitor's Office	Swirl Ceiling Texture	NAD
39 - B	Café Janitor's Office	Swirl Ceiling Texture - Plaster Base	NAD
39 - C	**Café Janitor's Office**	**Brown Mastic on Swirl Ceiling Texture**	**Asbestos: 2% Chrysotile**
40 - A	Café Janitor's Office	Swirl Ceiling Texture	NAD
40 - B	Café Janitor's Office	Brown Mastic on Swirl Ceiling Texture	N/A
41 - A	Café Janitor's Office	Swirl Ceiling Texture	NAD
41 - B	Café Janitor's Office	Swirl Ceiling Texture - Plaster Base	NAD
41 - C	Café Janitor's Office	Brown Mastic on Swirl Ceiling Texture	N/A
42	Weight Room	Yellow Floor Padding Mastic	NAD
43	Weight Room	Yellow Floor Padding Mastic	NAD
44	**Weight Room**	**Dark Brown Ceiling Tile Mastic**	**Asbestos: <1%Anthophyllite 2%Chrysotile**
45	Weight Room	Dark Brown Ceiling Tile Mastic	N/A
46	Dance Room	1' x 1' Decorative Pinhole Ceiling Tile	NAD
47	Dance Room	1' x 1' Decorative Pinhole Ceiling Tile	NAD
48	Dance Room	Black Pipe Wrap (TSI) on Fiberglass	NAD
49	Dance Room	Black Pipe Wrap (TSI) on Fiberglass	NAD
50	Dance Room	Black Pipe Wrap (TSI) on Fiberglass	NAD
51	Dance Room	Black and Tan Pipe Wrap (TSI) on Fiberglass	NAD

Table Notes:
NAD = No Asbestos Detected
N/A = Sample Not Analyzed; Positive Stop
Bold - Asbestos Containing Materials

TABLE 2
BULK SAMPLING OF SUSPECT ASBESTOS-CONTAINING MATERIALS

Sample #	Sampling Location	Material/Description	Analytical Results
52	Dance Room	Black and Tan Pipe Wrap (TSI) on Fiberglass	NAD
53	Dance Room	Black and Tan Pipe Wrap (TSI) on Fiberglass	NAD
54	Dance Room	Interior White Door Caulk	NAD
55	Dance Room	Interior White Door Caulk	NAD
56 - A	Dance Room	Wood Pattern Sheet Floor	NAD
56 - B	Dance Room	Padding of Wood Pattern Sheet Floor	NAD
56 - C	Dance Room	Clear Mastic of Wood Pattern Sheet Floor	NAD
57 - A	Dance Room	Wood Pattern Sheet Floor	NAD
57 - B	Dance Room	Padding of Wood Pattern Sheet Floor	NAD
57 - C	Dance Room	Clear Mastic of Wood Pattern Sheet Floor	NAD
58	Cafeteria	Drywall Wallboard	NAD
59 - A	Kitchen	Drywall Wallboard	NAD
59 - B	**Kitchen**	**Drywall Wallboard Joint Compound**	**Asbestos: 2% Chrysotile**
60	Weight Room Ceiling	Drywall Wallboard	NAD
61	Weight Room Wall	Drywall Wallboard	NAD
62	Dance Ceiling	Drywall Wallboard	NAD
63	Cafeteria at Kitchen	Drywall Joint Compound	NAD
64	Weight Room Ceiling	Drywall Joint Compound	NAD
65	Weight Room Wall	Drywall Joint Compound	NAD

Table Notes:
NAD = No Asbestos Detected
N/A = Sample Not Analyzed; Positive Stop
Bold - Asbestos Containing Materials

Appendix III: Laboratory Report(s)

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

AIHA LAP, LLC ACCREDITED LABORATORY INDUSTRIAL HYGIENE LAB #173190

NVLAP Lab Code: 200664-0

Customer: ECS Chantilly
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151

Attn: Beverly Sedon

Project: 47:1519C

Lab Order ID: 1624222
Analysis ID: 1624222_PLM
Date Received: 12/8/2016
Date Reported: 12/9/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
1 *1624222PLM_1*	Ceiling Plaster *finish layer only*	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous Crushed
2 - A *1624222PLM_2*	Ceiling Plaster *finish*	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous Crushed
2 - B *1624222PLM_66*	Ceiling Plaster *base - small sample*	**None Detected**		**80% Other** **20% Perlite**	Gray Non Fibrous Heterogeneous Crushed
3 - A *1624222PLM_3*	Ceiling Plaster *finish*	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous Crushed
3 - B *1624222PLM_67*	Ceiling Plaster *base - small sample*	**None Detected**		**100% Other**	Gray Non Fibrous Heterogeneous Crushed
4 - A *1624222PLM_4*	1' x 1' Fissure Ceiling Tile with Brown Mastic *ceiling tile*	**None Detected**	**90% Mineral Wool**	**10% Other**	White Fibrous Heterogeneous Teased
4 - B *1624222PLM_68*	1' x 1' Fissure Ceiling Tile with Brown Mastic *mastic*	**3% Chrysotile**		**97% Other**	Brown Non Fibrous Homogeneous Dissolved
5 - A *1624222PLM_5*	1' x 1' Fissure Ceiling Tile with Brown Mastic *ceiling tile*	**None Detected**	**90% Mineral Wool**	**10% Other**	White Fibrous Heterogeneous Teased

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%.

Sharon Donald (99)

Analyst

Approved Signatory

P-F-002 r15 1/15/2018

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

AIHA LAP, LLC ACCREDITED LABORATORY INDUSTRIAL HYGIENE LAB #173190

NVLAP Lab Code: 200664-0

Customer: ECS Chantilly
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151

Attn: Beverly Sedon

Project: 47:1519C

Lab Order ID: 1624222
Analysis ID: 1624222_PLM
Date Received: 12/8/2016
Date Reported: 12/9/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
5 - B *1624222PLM_69*	1' x 1' Fissure Ceiling Tile with Brown Mastic *mastic*	**Not Analyzed**			
6 *1624222PLM_6*	White Pipe Wrap (TSI) with White Mastic on Fiberglass *wrap/mastic*	**None Detected**	**10% Cellulose** **5% Fiber Glass**	**85% Other**	White Non Fibrous Heterogeneous Dissolved
7 *1624222PLM_7*	White Pipe Wrap (TSI) with White Mastic on Fiberglass *wrap/mastic*	**None Detected**	**10% Cellulose** **5% Fiber Glass**	**85% Other**	White Non Fibrous Heterogeneous Dissolved
8 *1624222PLM_8*	White Pipe Wrap (TSI) with White Mastic on Fiberglass *wrap/mastic*	**None Detected**	**10% Cellulose** **5% Fiber Glass**	**85% Other**	White Non Fibrous Heterogeneous Dissolved
9 *1624222PLM_9*	2' x 4' Gypsum Ceiling Tile	**None Detected**	**20% Cellulose** **5% Fiber Glass**	**75% Gypsum**	Brown, White Fibrous Heterogeneous Teased
10 *1624222PLM_10*	2' x 4' Gypsum Ceiling Tile	**None Detected**	**20% Cellulose** **5% Fiber Glass**	**60% Gypsum** **15% Other**	Brown, White Fibrous Heterogeneous Teased
11 *1624222PLM_11*	Black Mastic on Duct Wrap	**8% Chrysotile**		**92% Other**	Black Non Fibrous Heterogeneous Dissolved
12 *1624222PLM_12*	Black Mastic on Duct Wrap	**Not Analyzed**			

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%.

Sharon Donald (99)

Analyst

Approved Signatory

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

AIHA LAP, LLC ACCREDITED LABORATORY INDUSTRIAL HYGIENE
LAB #173190

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Suite 100
Chantilly, VA 20151

Attn: Beverly Sedon

Project: 47:1519C

Lab Order ID: 1624222
Analysis ID: 1624222_PLM
Date Received: 12/8/2016
Date Reported: 12/9/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
13 *1624222PLM_13*	4" Ceramic Wall Compound	None Detected		100% Other	White Non Fibrous Heterogeneous Crushed
14 *1624222PLM_14*	4" Ceramic Wall Compound	None Detected		100% Other	White Non Fibrous Heterogeneous Crushed
15 - A *1624222PLM_15*	4" Black Cove Base with Dark Yellow Mastic *cove base*	None Detected		100% Other	Black Non Fibrous Homogeneous Ashed
15 - B *1624222PLM_70*	4" Black Cove Base with Dark Yellow Mastic *mixed mastics*	None Detected	5% Cellulose	95% Other	Brown, Yellow Non Fibrous Heterogeneous Dissolved
16 - A *1624222PLM_16*	4" Black Cove Base with Dark Yellow Mastic *cove base*	None Detected		100% Other	Black Non Fibrous Homogeneous Ashed
16 - B *1624222PLM_71*	4" Black Cove Base with Dark Yellow Mastic *mastic*	None Detected		100% Other	Yellow Non Fibrous Homogeneous Dissolved
17 - A *1624222PLM_17*	12" x 12" White Floor Tile with Black Flecks (Top Layer) *tile*	None Detected		100% Other	White Non Fibrous Heterogeneous Dissolved
17 - B *1624222PLM_72*	12" x 12" White Floor Tile with Black Flecks (Top Layer) *mastic*	None Detected		100% Other	Yellow Non Fibrous Homogeneous Dissolved

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Sharon Donald (99)

Analyst

Approved Signatory

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

AIHA LAP, LLC ACCREDITED LABORATORY INDUSTRIAL HYGIENE LAB #173190

NVLAP Lab Code: 200664-0

Customer: ECS Chantilly
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151

Attn: Beverly Sedon

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18 - A *1624222PLM_18*	12" x 12" White Floor Tile with Black Flecks (Top Layer) *tile*	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous Dissolved
18 - B *1624222PLM_73*	12" x 12" White Floor Tile with Black Flecks (Top Layer) *mastic*	**None Detected**		**100% Other**	Yellow Non Fibrous Homogeneous Dissolved
19 - A *1624222PLM_19*	12" x 12" Light Green Floor Tile with Yellow Mastic (Bottom Layer) *tile*	**None Detected**		**100% Other**	Green Non Fibrous Heterogeneous Dissolved
19 - B *1624222PLM_74*	12" x 12" Light Green Floor Tile with Yellow Mastic (Bottom Layer) *mastic*	**None Detected**		**100% Other**	Yellow Non Fibrous Homogeneous Dissolved
20 - A *1624222PLM_20*	12" x 12" Light Green Floor Tile with Yellow Mastic (Bottom Layer) *tile*	**None Detected**		**100% Other**	Green Non Fibrous Heterogeneous Dissolved
20 - B *1624222PLM_75*	12" x 12" Light Green Floor Tile with Yellow Mastic (Bottom Layer) *mastic*	**None Detected**		**100% Other**	Yellow Non Fibrous Homogeneous Dissolved
21 - A *1624222PLM_21*	12" x 12" Green Heavy Mottled Floor Tile with Black Mastic *tile*	**None Detected**		**100% Other**	Green Non Fibrous Heterogeneous Dissolved
21 - B *1624222PLM_76*	12" x 12" Green Heavy Mottled Floor Tile with Black Mastic *mastic*	**None Detected**	**3% Cellulose**	**97% Other**	Black Non Fibrous Homogeneous Dissolved

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P-F-002 r15 1/15/2018

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22 - A *1624222PLM_22*	12" x 12" Green Heavy Mottled Floor Tile with Black Mastic *tile*	None Detected		100% Other	Green Non Fibrous Heterogeneous Dissolved
22 - B *1624222PLM_77*	12" x 12" Green Heavy Mottled Floor Tile with Black Mastic *mastic*	None Detected	3% Cellulose	97% Other	Black Non Fibrous Homogeneous Dissolved
23 - A *1624222PLM_23*	12" x 12" Green Floor Tile with Dark Green Specs with Green Mastic (Top Layer) *tile*	None Detected		100% Other	Green Non Fibrous Heterogeneous Dissolved
23 - B *1624222PLM_78*	12" x 12" Green Floor Tile with Dark Green Specs with Green Mastic (Top Layer) *mastic*	None Detected		100% Other	Yellow Non Fibrous Homogeneous Dissolved
24 - A *1624222PLM_24*	12" x 12" Green Floor Tile with Dark Green Specs with Green Mastic (Top Layer) *tile*	None Detected		100% Other	Green Non Fibrous Heterogeneous Dissolved
24 - B *1624222PLM_79*	12" x 12" Green Floor Tile with Dark Green Specs with Green Mastic (Top Layer) *mastic*	None Detected		100% Other	Yellow Non Fibrous Homogeneous Dissolved
25 - A *1624222PLM_25*	12" x 12" White Floor Tile with Brown Mastic (Bottom Layer) *tile*	None Detected		100% Other	White Non Fibrous Heterogeneous Dissolved
25 - B *1624222PLM_80*	12" x 12" White Floor Tile with Brown Mastic (Bottom Layer) *mastic*	None Detected		100% Other	Brown Non Fibrous Homogeneous Dissolved

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26 - A	12" x 12" White Floor Tile with Brown Mastic (Bottom Layer)	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous
1624222PLM_26	*tile*				Dissolved
26 - B	12" x 12" White Floor Tile with Brown Mastic (Bottom Layer)	**None Detected**		**100% Other**	Brown Non Fibrous Homogeneous
1624222PLM_81	*mastic*				Dissolved
27 - A	12" x 12" Red Floor Tile with Yellow/Brown Mastic	**None Detected**		**100% Other**	Red Non Fibrous Heterogeneous
1624222PLM_27	*tile*				Dissolved
27 - B	12" x 12" Red Floor Tile with Yellow/Brown Mastic	**None Detected**		**100% Other**	Brown Non Fibrous Homogeneous
1624222PLM_82	*mastic*				Dissolved
28 - A	12" x 12" Red Floor Tile with Yellow/Brown Mastic	**None Detected**		**100% Other**	Red Non Fibrous Heterogeneous
1624222PLM_28	*tile*				Dissolved
28 - B	12" x 12" Red Floor Tile with Yellow/Brown Mastic	**None Detected**		**100% Other**	Brown Non Fibrous Homogeneous
1624222PLM_83	*mastic*				Dissolved
29 - A	12" x 12" Tan Floor Tile with Brown Specks with Yellow Mastic (Top Layer)	**None Detected**		**100% Other**	Tan Non Fibrous Heterogeneous
1624222PLM_29	*tile*				Dissolved
29 - B	12" x 12" Tan Floor Tile with Brown Specks with Yellow Mastic (Top Layer)	**None Detected**		**100% Other**	Yellow Non Fibrous Homogeneous
1624222PLM_84	*mastic*				Dissolved

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30 - A *1624222PLM_30*	12" x 12" Tan Floor Tile with Brown Specks with Yellow/Dark Brown Mastic (T *tile*	None Detected		100% Other	Tan Non Fibrous Heterogeneous Dissolved
30 - B *1624222PLM_85*	12" x 12" Tan Floor Tile with Brown Specks with Yellow/Dark Brown Mastic (T *mastic*	None Detected		100% Other	Yellow Non Fibrous Homogeneous Dissolved
31 - A *1624222PLM_31*	Gray Floor Level Compound with Yellow/Dark Brown Mastic *level compound*	None Detected		100% Other	Gray Non Fibrous Heterogeneous Crushed
31 - B *1624222PLM_86*	Gray Floor Level Compound with Yellow/Dark Brown Mastic *mastic*	None Detected		100% Other	Brown, Yellow Non Fibrous Heterogeneous Dissolved
32 - A *1624222PLM_32*	Gray Floor Level Compound with Yellow/Dark Brown Mastic *level compound*	None Detected		100% Other	Gray Non Fibrous Heterogeneous Crushed
32 - B *1624222PLM_87*	Gray Floor Level Compound with Yellow/Dark Brown Mastic *mastic*	None Detected		100% Other	Brown, Yellow Non Fibrous Heterogeneous Dissolved
33 *1624222PLM_33*	Interior White Window Caulk	None Detected		100% Other	White Non Fibrous Homogeneous Ashed
34 *1624222PLM_34*	Interior White Window Caulk	None Detected		100% Other	White Non Fibrous Homogeneous Ashed

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Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
35 - A *1624222PLM_35*	Black Residual Wall Mastic *mastic*	**5% Chrysotile**		**95% Other**	Black Non Fibrous Homogeneous Dissolved
35 - B *1624222PLM_88*	Black Residual Wall Mastic *joint compound*	**2% Chrysotile**		**98% Other**	Cream Non Fibrous Homogeneous Crushed
36 - A *1624222PLM_36*	Black Residual Wall Mastic *mastic*	**Not Analyzed**			
36 - B *1624222PLM_89*	Black Residual Wall Mastic *joint compound*	**Not Analyzed**			
37 *1624222PLM_37*	Interior Tan Door Caulk	**2% Chrysotile**		**98% Other**	Tan Non Fibrous Homogeneous Dissolved
38 *1624222PLM_38*	Interior Tan Door Caulk	**Not Analyzed**			
39 - A *1624222PLM_39*	Swirl Ceiling Texture with Brown Mastic *texture*	**None Detected**		**100% Other**	White, Blue Non Fibrous Heterogeneous Crushed
39 - B *1624222PLM_90*	Swirl Ceiling Texture with Brown Mastic *base plaster*	**None Detected**		**100% Other**	Gray Non Fibrous Heterogeneous Crushed

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Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
39 - C	Swirl Ceiling Texture with Brown Mastic	**2% Chrysotile**		**98% Other**	Brown Non Fibrous Homogeneous
1624222PLM_91	*mastic*				Dissolved
40 - A	Swirl Ceiling Texture with Brown Mastic	**None Detected**		**100% Other**	White, Blue Non Fibrous Heterogeneous
1624222PLM_40	*texture*				Crushed
40 - B	Swirl Ceiling Texture with Brown Mastic	**Not Analyzed**			
1624222PLM_92	*mastic - small sample*				
41 - A	Swirl Ceiling Texture with Brown Mastic	**None Detected**		**100% Other**	White, Blue Non Fibrous Heterogeneous
1624222PLM_41	*texture*				Crushed
41 - B	Swirl Ceiling Texture with Brown Mastic	**None Detected**		**100% Other**	Gray Non Fibrous Heterogeneous
1624222PLM_93	*base plaster*				Crushed
41 - C	Swirl Ceiling Texture with Brown Mastic	**Not Analyzed**			
1624222PLM_94	*mastic*				
42	Yellow Floor Padding Mastic	**None Detected**		**100% Other**	Yellow Non Fibrous Homogeneous
1624222PLM_42	*mastic only*				Dissolved
43	Yellow Floor Padding Mastic	**None Detected**		**100% Other**	Yellow Non Fibrous Homogeneous
1624222PLM_43	*mastic only*				Dissolved

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44 *1624222PLM_44*	Dark Brown Ceiling Tile Mastic	**2% Chrysotile** **< 1% Anthophyllite**		**98% Other**	Brown Non Fibrous Homogeneous Dissolved
45 *1624222PLM_45*	Dark Brown Ceiling Tile Mastic	**Not Analyzed**			
46 *1624222PLM_46*	1' x 1' Decorative Pinhole Ceiling Tile	**None Detected**	**60% Mineral Wool** **10% Cellulose**	**30% Other**	Gray, White Fibrous Heterogeneous Teased
47 *1624222PLM_47*	1' x 1' Decorative Pinhole Ceiling Tile	**None Detected**	**60% Mineral Wool** **10% Cellulose**	**30% Other**	Gray, White Fibrous Heterogeneous Teased
48 *1624222PLM_48*	Black Pipe Wrap (TSI) on Fiberglass	**None Detected**	**70% Cellulose**	**30% Other**	Black Non Fibrous Heterogeneous Dissolved
49 *1624222PLM_49*	Black Pipe Wrap (TSI) on Fiberglass	**None Detected**	**70% Cellulose**	**30% Other**	Black Non Fibrous Heterogeneous Dissolved
50 *1624222PLM_50*	Black Pipe Wrap (TSI) on Fiberglass	**None Detected**	**70% Cellulose**	**30% Other**	Black Non Fibrous Heterogeneous Dissolved
51 *1624222PLM_51*	Black and Tan Pipe Wrap (TSI) on Fiberglass	**None Detected**	**70% Cellulose**	**30% Other**	Black Non Fibrous Heterogeneous Dissolved

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52 *1624222PLM_52*	Black and Tan Pipe Wrap (TSI) on Fiberglass	**None Detected**	**70% Cellulose**	**30% Other**	Black Fibrous Heterogeneous Teased, Dissolved
53 *1624222PLM_53*	Black and Tan Pipe Wrap (TSI) on Fiberglass	**None Detected**	**70% Cellulose**	**30% Other**	Black Fibrous Heterogeneous Teased, Dissolved
54 *1624222PLM_54*	Interior White Door Caulk	**None Detected**		**100% Other**	White, Blue Non Fibrous Homogeneous Ashed
55 *1624222PLM_55*	Interior White Door Caulk	**None Detected**		**100% Other**	White, Blue Non Fibrous Homogeneous Ashed
56 - A *1624222PLM_56*	Wood Pattern Sheet Floor With Padding and Clear Mastic *sheet flooring*	**None Detected**		**100% Other**	Brown Non Fibrous Homogeneous Ashed
56 - B *1624222PLM_95*	Wood Pattern Sheet Floor With Padding and Clear Mastic *padding*	**None Detected**		**100% Other**	Blue Non Fibrous Homogeneous Ashed
56 - C *1624222PLM_96*	Wood Pattern Sheet Floor With Padding and Clear Mastic *mastic*	**None Detected**		**100% Other**	Transparent Non Fibrous Homogeneous Dissolved
57 - A *1624222PLM_57*	Wood Pattern Sheet Floor With Padding and Clear Mastic *sheet flooring*	**None Detected**		**100% Other**	Brown Non Fibrous Homogeneous Ashed

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57 - B *1624222PLM_97*	Wood Pattern Sheet Floor With Padding and Clear Mastic *padding*	**None Detected**		**100% Other**	Blue Non Fibrous Homogeneous Ashed
57 - C *1624222PLM_98*	Wood Pattern Sheet Floor With Padding and Clear Mastic *mastic*	**None Detected**		**100% Other**	Transparent Non Fibrous Homogeneous Dissolved
58 *1624222PLM_58*	Drywall Wallboard	**None Detected**	**20% Cellulose**	**80% Gypsum**	Brown, White Fibrous Heterogeneous Teased
59 - A *1624222PLM_59*	Drywall Wallboard *drywall*	**None Detected**	**15% Cellulose**	**70% Gypsum** **15% Other**	Brown, Green Fibrous Heterogeneous Teased
59 - B *1624222PLM_99*	Drywall Wallboard *joint compound*	**2% Chrysotile**		**98% Other**	Cream Non Fibrous Homogeneous Crushed
60 *1624222PLM_60*	Drywall Wallboard	**None Detected**	**20% Cellulose**	**80% Gypsum**	Brown, White Fibrous Heterogeneous Teased
61 *1624222PLM_61*	Drywall Wallboard	**None Detected**	**15% Cellulose**	**85% Gypsum**	Brown, Gray Fibrous Heterogeneous Teased
62 *1624222PLM_62*	Drywall Wallboard	**None Detected**	**15% Cellulose** **5% Fiber Glass**	**80% Gypsum**	Brown, White Fibrous Heterogeneous Teased

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Date Reported: 12/9/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
63	Drywall Joint Compound	**None Detected**		**100% Other**	White Non Fibrous Homogeneous
1624222PLM_63					Crushed
64	Drywall Joint Compound	**None Detected**		**100% Other**	White Non Fibrous Homogeneous
1624222PLM_64					Crushed
65	Drywall Joint Compound	**None Detected**		**100% Other**	White Non Fibrous Homogeneous
1624222PLM_65					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%.

Sharon Donald (99)

Analyst

Approved Signatory

1624222

Client:	ECS Mid-Atlantic, LLC
Contact:	Beverly Sedon
Address:	14026 Thunderbolt Place, Suite
Phone:	301-672-2096 (cell)
Fax:	
Email:	bsedon@ecslimited.com
Project:	47:1519C
Client Notes:	**Positive Stop, Except for Samples 58-65**
P.O. #:	47:1519C
Date Submitted:	11/10/2016 0:00
Analysis:	PLM EPA 600/R-93/116
TurnAroundTime:	2 Day TAT

Instructions:

Use Column "B" for your contact info

To See an Example Click the bottom Example Tab.

Enter samples between "<<" and ">>"
Begin Samples with a "<< "above the first sample and end with a ">>" below the last sample.

Only Enter your data on the first sheet "Sheet1"

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.

Scientific Analytical Institute

4604 Dundas Drive
Greensboro, NC 27407
Phone: 336.292.3888
Fax: 336.292.3313
Email: lab@sailab.com

Sample Number	Data 1	Sample Description	Data 2
<<			
1	HA1	Ceiling Plaster	Café Area 1
2	HA1	Ceiling Plaster	Café Area 1
3	HA1	Ceiling Plaster	Café Area 2
4	HA2	1' x 1' Fissure Ceiling Tile with Brown Mastic	Cafeteria
5	HA2	1' x 1' Fissure Ceiling Tile with Brown Mastic	Cafeteria
6	HA3	White Pipe Wrap (TSI) with White Mastic on Fiberglass	Cafeteria
7	HA3	White Pipe Wrap (TSI) with White Mastic on Fiberglass	Cafeteria
8	HA3	White Pipe Wrap (TSI) with White Mastic on Fiberglass	Cafeteria
9	HA5	2' x 4' Gypsum Ceiling Tile	Kitchen
10	HA5	2' x 4' Gypsum Ceiling Tile	Kitchen
11	HA6	Black Mastic on Duct Wrap	Kitchen
12	HA6	Black Mastic on Duct Wrap	Kitchen
13	HA7	4" Ceramic Wall Compound	Kitchen
14	HA7	4" Ceramic Wall Compound	Kitchen
15	HA8	4" Black Cove Base with Dark Yellow Mastic	Kitchen Storage
16	HA8	4" Black Cove Base with Dark Yellow Mastic	Kitchen Storage
17	HA9	12" x 12" White Floor Tile with Black Flecks (Top Layer	Kitchen Storage

Accepted ☑

Rejected ☐

12/9 10:30am

1024222

18	HA9	12" x 12" White Floor Tile with Black Flecks (Top Layer	Kitchen Storage
19	HA10	12" x 12" Light Green Floor Tile with Yellow Mastic (Bot	Kitchen Storage
20	HA10	12" x 12" Light Green Floor Tile with Yellow Mastic (Bot	Kitchen Storage
21	HA11	12" x 12" Green Heavy Mottled Floor Tile with Black Ma	Kitchen Office Hallway
22	HA11	12" x 12" Green Heavy Mottled Floor Tile with Black Ma	Kitchen Office Hallway
23	HA12	12" x 12" Green Floor Tile with Dark Green Specs with	Cafeteria
24	HA12	12" x 12" Green Floor Tile with Dark Green Specs with	Cafeteria
25	HA13	12" x 12" White Floor Tile with Brown Mastic (Bottom L	Cafeteria
26	HA13	12" x 12" White Floor Tile with Brown Mastic (Bottom L	Cafeteria
27	HA14	12" x 12" Red Floor Tile with Yellow/Brown Mastic	Cafeteria
28	HA14	12" x 12" Red Floor Tile with Yellow/Brown Mastic	Cafeteria
29	HA15	12" x 12" Tan Floor Tile with Brown Specks with Yellow	Cafeteria
30	HA15	12" x 12" Tan Floor Tile with Brown Specks with Yellow	Cafeteria
31	HA16	Gray Floor Level Compound with Yellow/Dark Brown M	Cafeteria
32	HA16	Gray Floor Level Compound with Yellow/Dark Brown M	Cafeteria
33	HA17	Interior White Window Caulk	Cafeteria
34	HA17	Interior White Window Caulk	Cafeteria
35	HA18	Black Residual Wall Mastic	Café Office Hallway
36	HA18	Black Residual Wall Mastic	Café Office Hallway
37	HA19	Interior Tan Door Caulk	Café Janitor's Office
38	HA19	Interior Tan Door Caulk	Café Janitor's Office
39	HA20	Swirl Ceiling Texture with Brown Mastic	Café Janitor's Office
40	HA20	Swirl Ceiling Texture with Brown Mastic	Café Janitor's Office
41	HA20	Swirl Ceiling Texture with Brown Mastic	Café Janitor's Office
42	HA21	Yellow Floor Padding Mastic	Weight Room
43	HA21	Yellow Floor Padding Mastic	Weight Room
44	HA22	Dark Brown Ceiling Tile Mastic	Weight Room
45	HA22	Dark Brown Ceiling Tile Mastic	Weight Room
46	HA23	1' x 1' Decorative Pinhole Ceiling Tile	Dance Room
47	HA23	1' x 1' Decorative Pinhole Ceiling Tile	Dance Room
48	HA24	Black Pipe Wrap (TSI) on Fiberglass	Dance Room
49	HA24	Black Pipe Wrap (TSI) on Fiberglass	Dance Room
50	HA24	Black Pipe Wrap (TSI) on Fiberglass	Dance Room
51	HA25	Black and Tan Pipe Wrap (TSI) on Fiberglass	Dance Room
52	HA25	Black and Tan Pipe Wrap (TSI) on Fiberglass	Dance Room
53	HA25	Black and Tan Pipe Wrap (TSI) on Fiberglass	Dance Room
54	HA26	Interior White Door Caulk	Dance Room

1024222

55	HA26	Interior White Door Caulk	Dance Room
56	HA27	Wood Pattern Sheet Floor With Padding and Clear Ma	Dance Room
57	HA27	Wood Pattern Sheet Floor With Padding and Clear Ma	Dance Room
58	HA28	Drywall Wallboard	Cafeteria
59	HA28	Drywall Wallboard	Kitchen
60	HA28	Drywall Wallboard	Weight Room Ceiling
61	HA28	Drywall Wallboard	Weight Room Wall
62	HA28	Drywall Wallboard	Dance Ceiling
63	HA29	Drywall Joint Compound	Cafeteria at Kitchen
64	HA29	Drywall Joint Compound	Weight Room Ceiling
65	HA29	Drywall Joint Compound	Weight Room Wall

>>



ASBESTOS ABATEMENT PROJECT MONITORING DOCUMENTATION

GEORGE WASHINGTON MIDDLE SCHOOL
ASBESTOS ABATEMENT AIR MONITORING SERVICES
1005 MOUNT VERNON AVENUE
ALEXANDRIA, VIRGINIA

ECS PROJECT NO. 47:1519-C3

FOR

ALEXANDRIA CITY PUBLIC SCHOOLS

SEPTEMBER 4, 2018

September 4, 2018

Mr. John Finnigan
Alexandria County Public Schools
1340 Braddock Place
Alexandria, Virginia 22314
john.finnigan@aceps.k12.va.us

ECS Project No. 47:1519-C3

Reference: George Washington Middle School, 1005 Mount Vernon Avenue, Alexandria, Virginia 22301

Dear Mr. Finnigan:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Alexandria City Public Schools with this summary report of the work performed during the above-referenced project. ECS performed visual evaluations, monitoring, and air sampling during the removal of asbestos-containing materials within select areas of the above-referenced subject building that are proposed for renovations.

PROJECT DESCRIPTION

The asbestos abatement work was performed by Waco Inc. between March 26 - 30, 2018, and on May 5-6, 2018, at the above-referenced school building. ECS performed asbestos abatement monitoring activities on behalf of Alexandria City Public Schools during this time period. The work was performed by Waco Inc. in general accordance with applicable Commonwealth of Virginia regulations.

ECS has previously performed a asbestos-containing materials survey for the George Washington Middle School (ECS Project No, 47:1519-C). Based on ECS' asbestos-containing report, the following materials noted below were reported to contain asbestos:

1005 Mount Vernon (George Washington Middle School):

- Brown Dot Mastic associated with 1' x 1' Ceiling Tiles within the Cafeteria (limited area).
- Black Wall Mastic within the Staff Locker Room Area and Hallway Adjacent to the Lockers (limited area).

The above referenced asbestos-containing materials are still present in the areas referenced above as well as other areas of the school building. In addition, other identified asbestos-containing materials were observed in the Cafeteria, Staff Locker Room and associated hallway, and these materials were not removed during this abatement event. Other identified asbestos-containing materials are located in the school building. This abatement event included only limited areas that were proposed to be disturbed by limited renovations.

SCOPE OF WORK

ECS was requested to perform abatement monitoring services during material removal activities per ECS Proposal No. 47:7427-EP, dated March 23rd, 2018. Monitoring and testing services were performed by ECS staff. Daily field reports summarizing ECS's onsite observations, testing results, and findings of the on-site work activities were documented in daily field reports and issued via email correspondences to the Client and associated parties as requested.

ASBESTOS ABATEMENT

The asbestos abatement was performed by Waco Inc. within regulated work areas that consisted of negative pressurized enclosures constructed of 6-mil polyethylene sheeting. ECS reviewed the asbestos credentials of the abatement workers. The credential documentation reviewed was noted to be current at the time presented to ECS. The work was performed in general accordance to applicable Commonwealth of Virginia regulations.

During the asbestos abatement project, ECS collected and analyzed air samples using Phase Contrast Microscopy (PCM) in general accordance with applicable federal and Commonwealth of Virginia regulations and the NIOSH 7400 methodology. Samples were collected inside and outside the work areas to monitor airborne fiber concentrations. Based on the final collection and results of the air sampling events performed during the course of the abatement activities indicated that the engineering controls (i.e., polyethylene sheeting, negative air pressure, High Efficiency Particulate Air (HEPA) filtration) in general, were adequate to keep fiber concentrations collected outside the regulated work areas below the Commonwealth of Virginia PCM re-occupancy limit of 0.01 fibers per cubic centimeter (f/cc). Air sample results are included within the technicians' daily field reports attached to this report.

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

Upon completion of the material removal and cleaning efforts for each work area, ECS performed final clearance visual assessments to survey the work areas, evaluated that the asbestos-containing materials had been removed, and observed for dust and/or debris that may have remained in the work areas. Following the completion of the final clearance visual assessments, ECS reported the results of the evaluation to the on-site Supervisor of Waco Inc. and collected final clearance air samples from the work areas. The final clearance air samples were analyzed on-site using PCM (for removal activities in work areas that were less than 160 square feet) and TEM (for removal activities in work areas that were more than 160 square feet) in general accordance with applicable federal and Commonwealth of Virginia regulations.

The final results of the clearance air samples collected from the work areas for PCM analysis were reported to be below the Commonwealth of Virginia re-occupancy limit of 0.01 fibers per cubic centimeter (f/cc). The results of the final clearance air samples collected from the work areas for TEM analysis were reported to be below the Commonwealth of Virginia re-occupancy limit of 70 structures per square millimeter (70 s/mm^2). Based on our observations, the identified asbestos-containing materials have been removed from the select areas within the above referenced subject building.

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 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.

A copy of the ECS technician's daily monitoring reports is enclosed. If we can be of further assistance to you, please do not hesitate to contact us at (703) 471-8400.

Sincerely,

ECS MID-ATLANTIC SERVICES, LLC

Diana Krass
Senior Industrial Hygiene Manager

Beverly Sedon
Senior Industrial Hygiene Manager

ATTACHMENT

TECHNICIAN'S DAILY MONITORING REPORTS

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

LETTER OF TRANSMITTAL

March 28, 2018

Alexandria City Public Schools
1340 Braddock Place
Alexandria, VA 22314

ATTN: John Finnigan

RE: **ACPS - George Washington MS - Asbestos Abatement Monit.**

ECS Job # **47:1519-C3**

Permits:

Location: **1005 Mount Vernon Avenue**
Alexandria, VA

We are enclosing:

_X_ Field Reports
_X_ For your use
_X_ As requested

CC: **Alexandria City Public Schools - Derrick Fulcher**

ENCL:

Field Report # 1 03/26/2018

Stephen Geraci, E.I.T., CHMM
Regional Manager Environmental Services

Diana D. Krass
Environmental Senior 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.	47:1519-C3
Report No.	1
Day & Date	Monday 03/26/2018
Weather	40°/ Sunny
On-Site Time	8.00
Lab Time	0.00
Travel Time*	0.00
Total	8.00
Re Obs.Time	0.00

Project **ACPS - George Washington MS - Asbestos Abatement**

Location **Alexandria, VA**

Client **Alexandria City Public Schools - John Finnigan**

Remarks

Trip Charges* Tolls/Parking* Mileage*

Time of Arrival Departure
07:00A 03:00P

Chargeable Items

* 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.

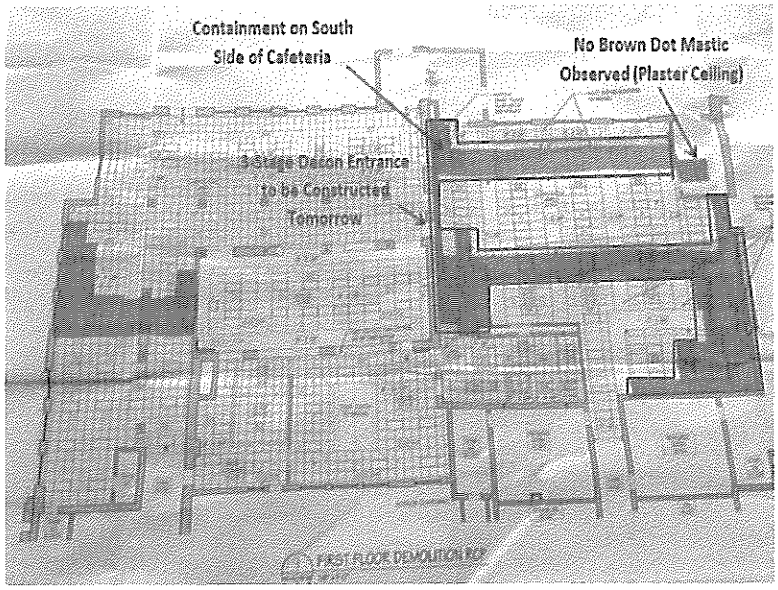
The undersigned arrived on-site, as requested, to perform air monitoring and observe asbestos abatement. Upon arrival, the undersigned spoke with Waco's Abatement's supervisor, Marcos, to discuss the activities for the day. The material specified to be removed during the abatement is brown dot mastic associated with the 1'x 1' non-asbestos ceiling tiles above the non-asbestos 2'x 4' drop down ceiling tiles within the cafeteria of the George Washington Middle School.

At 7:15 am, the abatement contactor began unloading materials and preparing the containment on the south side of the cafeteria. See attached diagram for the location of specified material removal.

At 9:00 am, the undersigned and the abatement supervisor walked around the cafeteria confirming the location and extent of materials to be included in this abatement according to the abatement supervisor's site diagram. Brown dot mastic was not visibly observed in the storage closet adjoining the cafeteria. A plaster ceiling was observed in the storage closet.

At 11:00 am, the abatement supervisor informed ECS that due to security concerns, no windows can be left open overnight on the first floor. Since the negative air machines exhaust out the first floor windows, the abatement contractor will seal the containment at the end of each work shift before shutting off the negative air machines and closing the windows for the night. The negative air machines will be turned the following morning.

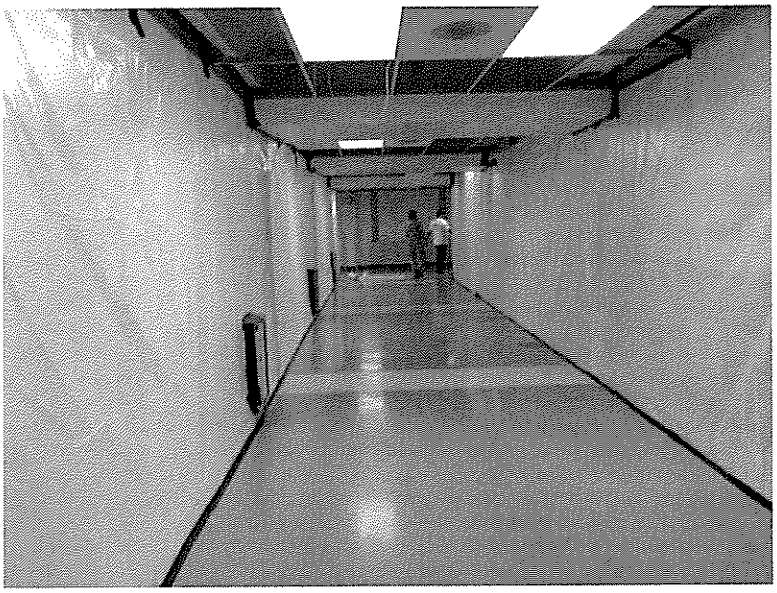
At 3:00 pm, the abatement contractor finished work for the day, and the undersigned departed the site. The abatement contractor is scheduled to finish setting up containment on the south side of the cafeteria and begin removal work tomorrow.



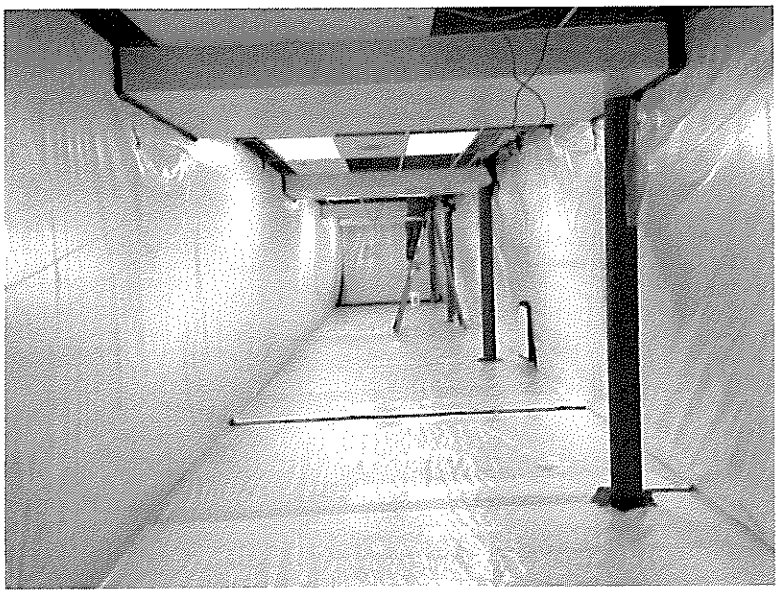
Attachment No. 1
Site Diagram



Attachment No. 2
Plaster Ceiling in Storage Closet



Attachment No. 3
Containment Set Up Progress



Attachment No. 4
Containment Set Up Progress

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

LETTER OF TRANSMITTAL

April 2, 2018

Alexandria City Public Schools
1340 Braddock Place
Alexandria, VA 22314

ATTN: John Finnigan

RE: **ACPS - George Washington MS - Asbestos Abatement Monit.**

ECS Job # **47:1519-C3**

Permits:

Location: **1005 Mount Vernon Avenue**
Alexandria, VA

We are enclosing:

X Field Reports
X For your use
X As requested

CC: **Alexandria City Public Schools - Derrick Fulcher**

ENCL:

Field Report # 2	03/27/2018
Field Report # 3	03/28/2018
Field Report # 4	03/29/2018

Stephen Geraci, E.I.T., CHMM
Regional Manager Environmental Services

Diana D. Krass
Environmental Senior 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.	47:1519-C3
Report No.	2
Day & Date	Tuesday 03/27/2018
Weather	45°/ Cloudy
On-Site Time	8.50
Lab Time	0.00
Travel Time*	0.00
Total	8.50
Re Obs.Time	0.00

Project ACPS - George Washington MS - Asbestos Abatement
Location Alexandria, VA
Client Alexandria City Public Schools - John Finnigan

Remarks

Trip Charges* Tolls/Parking* Mileage*

Chargeable Items

Time of Arrival 07:00A Departure 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 on-site, as requested, to perform air monitoring and observe asbestos abatement. Upon arrival, the undersigned spoke with the abatement supervisor, Marcos, to discuss the activities for the day. The material specified to be removed today is asbestos-containing brown dot mastic associated with the 1'x 1' ceiling tiles above the drop down non-asbestos ceiling tiles in the southern portion of the cafeteria.

At 7:00 am, the abatement contractor continued to set up the containment in the southern portion of the cafeteria.

At 11:20 am, the abatement contractor requested a pre-abatement survey of the regulated work area in Unit 1521. The Pre-Abatement Checklist was completed and is attached to this report.

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.

At 12:30 pm, PCM air samples were started inside and outside the work areas. The sampling pumps were calibrated using a rotameter to 3.5 liters per minute.

At 1:00 pm, the regulated work areas were surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklists were completed and are 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 applicable regulations.

At 3:30 pm, the sampling pumps were checked using a rotameter. The flow rate was 3.5 liters

per minute. The PCM air samples were stopped and gathered for analysis from inside and outside the work area.

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

At 3:30 pm, the workers ended today's work shift and the undersigned departed the site.

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 1519-C3

Date: 03/28/2018

Project Address:

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (min)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
032718-01AF	IWA- Cafeteria	12:30 PM	3:30 PM	3.5	3.5	3.5	180	630.0	11.0	100	0.009
032718-02AF	OWA by 3-Stage Decon	12:30 PM	3:30 PM	3.5	3.5	3.5	180	630.0	6.5	100	0.005
032718-03AF	OWA by Critical Barrier	12:30 PM	3:30 PM	3.5	3.5	3.5	180	630.0	11.0	100	0.009
032718-04AF	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
032718-05AF	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD

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

Notes:

ECS Technician: Anna Christina Franciosa

Date: 03/28/2018

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 1519-C3 **Date:** 03/28/2018

Project Address:

Work Area Location/Description: South Side of Cafeteria

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	7
	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 PAPR
	Type of Filters Used	P100
	Disposable Protective Clothing	Satisfactory
	Work Area Acceptable	Yes

Notes:

ECS Technician: Anna Christina Franciosa **Date:** 03/28/2018

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-C3 **Date:** 03/28/2018

Project Address:

Work Area Location/Description: South Side of Cafeteria

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: Anna Christina Franciosa **Date:** 03/28/2018

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.	47:1519-C3
Report No.	3
Day & Date	Wednesday 03/28/2018
Weather	50°/ Cloudy
On-Site Time	8.50
Lab Time	0.00
Travel Time*	0.00
Total	8.50
Re Obs.Time	0.00

Project	ACPS - George Washington MS - Asbestos Abatement
Location	Alexandria, VA
Client	Alexandria City Public Schools - John Finnigan

Remarks

Trip Charges* Tolls/Parking* Mileage*

Chargeable Items

Time of	Arrival	Departure
	07:00A	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 on-site, as requested, to perform air monitoring and observe asbestos abatement. Upon arrival, the undersigned spoke with the abatement supervisor, Marcos, to discuss the activities for the day. The material specified to be removed today is asbestos-containing brown dot mastic associated with the 1' x 1' ceiling tiles above the drop down non-asbestos containing ceiling tiles in the southern portion of the cafeteria.

At 7:14 am, PCM air samples were started inside and outside the work areas. The sampling pumps were calibrated using a rotameter to 3.0 liters per minute.

At 9:00 am, the regulated work areas were surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklists were completed and are attached to this report.

During the daily area survey, the abatement supervisor informed ECS that they were unable to reach the 1' x 1' ceiling tiles and asbestos-containing brown dot mastic above the metal covering that encloses some of the pipes in the cafeteria. The abatement contractor put poly sheeting covering the sides of the metal covering to ensure that no debris would fall on top of the metal covering or exposed pipes within that area.

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 applicable regulations. The waste bags were then placed on a poly outside the containment before being placed into a secondary transport container and put into the abatement contractors van for off-site disposal.

At 11:25 am, the sampling pumps were checked using a rotameter. The flow rate was 3.0 liters per minute. The PCM air samples were stopped and gathered for analysis from inside and outside the work area.

By **Anna Christina Franciosa, — Environmental Staff Project Manager** 1302

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. 47:1519-C3
Report No. 3
Project **ACPS - George Washington MS - Asbestos Abatement** Day & Date **Wednesday 03/28/2018**

At 11:30 am, PCM air samples were started inside and outside the work areas. The sampling pumps were calibrated using a rotameter to 3.0 liters per minute.

At 3:15 pm, the sampling pumps were checked using a rotameter. The flow rate was 3.0 liters per minute. The PCM air samples were stopped and gathered for analysis from inside and outside the work area.

The undersigned met with the abatement supervisor, and Mr. John Finnigan from ACPS, to discuss some of the other areas of the cafeteria that will need abatement. Two black residual mastic dots in the kitchen hallway adjacent to the lockers may be removed this week using a mini containment.

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

At 3:30 pm, the workers ended today's work shift and the undersigned departed from the site.

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 1519-C3

Date: 03/29/2018

Project Address:

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (min)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
032818-01AF	IWA - Cafeteria	7:14 AM	11:25 AM	3.0	3.0	3.0	251	753.0	11.0	100	0.007
032818-02AF	OWA by 3-Stage Decon	7:14 AM	11:25 AM	3.0	3.0	3.0	251	753.0	1.0	100	0.001
032818-03AF	OWA by Critical Barrier	7:14 AM	11:25 AM	3.0	3.0	3.0	251	753.0	2.0	100	0.001
032818-04AF	IWA - Cafeteria	11:30 AM	3:15 PM	3.0	3.0	3.0	225	675.0	10.0	100	0.007
032818-05AF	OWA by 3-Stage Decon	11:30 AM	3:15 PM	3.0	3.0	3.0	225	675.0	2.0	100	0.001
032818-06AF	OWA by Critical Barrier	11:30 AM	3:15 PM	3.0	3.0	3.0	225	675.0	3.0	100	0.002
032818-07AF	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
032818-08AF	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD

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

Notes: Sample 032818-01AF was overloaded.

ECS Technician: Anna Christina Franciosa

Date: 03/29/2018

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-C3 **Date:** 03/29/2018

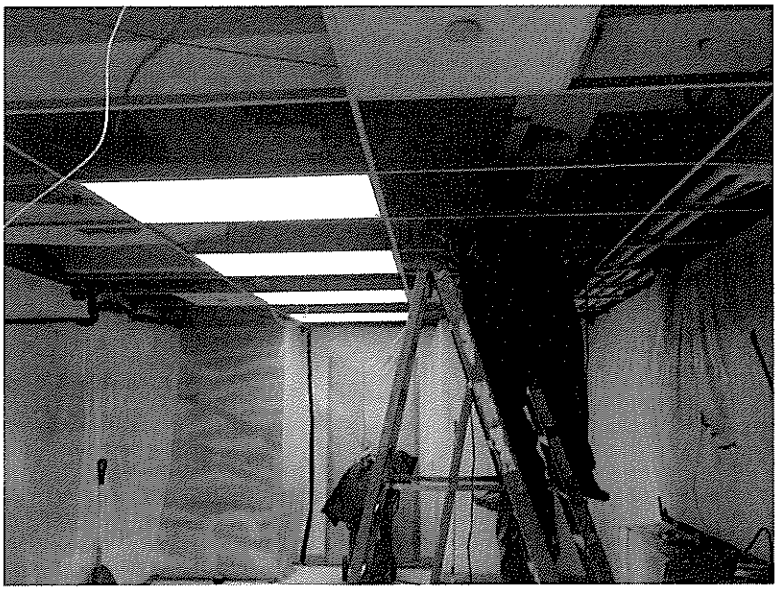
Project Address:

Work Area Location/Description: Southern Side of Cafeteria

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: Anna Christina Franciosa **Date:** 03/29/2018



Attachment No. 1
Abatement Activities



Attachment No. 2
Black Residual Mastic Dots in the Kitchen Area

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
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(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	47:1519-C3
Report No.	4
Day & Date	Thursday 03/29/2018
Weather	80°/ Cloudy
On-Site Time	8.00
Lab Time	0.00
Travel Time*	0.00
Total	8.00
Re Obs.Time	0.00

Project **ACPS - George Washington MS - Asbestos Abatement**

Location **Alexandria, VA**

Client **Alexandria City Public Schools - John Finnigan**

Remarks

Trip Charges* Tolls/Parking* Mileage*

Chargeable Items

Time of	Arrival	Departure
	07:00A	03:00P

* 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. Upon arrival, the undersigned spoke with the abatement supervisor, Marcos, to discuss the activities for the day. The material specified to be removed today is asbestos-containing brown dot mastic associated with the 1' x 1' ceiling tiles above the drop down non-asbestos containing ceiling in the southern portion of the cafeteria.

At 7:25 am, PCM air samples were started inside and outside the work areas. The sampling pumps were calibrated using a rotameter to 3.0 liters per minute.

At 9:00 am, the regulated work areas were surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklists were completed and are attached to this report.

During the daily area survey, the abatement supervisor informed ECS that they were unable to reach the 1' x 1' ceiling tiles and brown dot mastic above the metal covering that encloses some of the pipes in the cafeteria. The abatement contractor put poly sheeting covering the sides of the metal covering to ensure that no debris would fall on top of the metal covering or exposed pipes in that area.

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 applicable regulations. The waste bags were then placed on a poly outside the containment before being placed into a secondary transport container and put into the abatement contractors van for off-site disposal.

At 11:45 am, the sampling pumps were checked using a rotameter. The flow rate was 3.0 liters per minute. The PCM air samples were stopped and gathered for analysis from inside and outside the work area.

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FIELD REPORT

Project No. **47:1519-C3**
Report No. **4**
Project **ACPS - George Washington MS - Asbestos Abatement**
Day & Date **Thursday 03/29/2018**

At 11:50 pm, PCM air samples were started inside and outside the work areas. The sampling pumps were calibrated using a rotameter to 3.0 liters per minute.

At 3:00 pm, the sampling pumps were checked using a rotameter. The flow rate was 3.0 liters per minute. The PCM air samples were stopped and gathered for analysis from inside and outside the work area.

At 3:00 pm, PCM air samples were started inside and outside the work areas. The sampling pumps were calibrated using a rotameter to 3.0 liters per minute.

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

At 3:00 pm, the abatement workers ended today's work shift and the undersigned departed the site.

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 1519-C3

Project Address:

Date: 03/30/2018

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (min)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
1	IWA - Cafeteria	7:25 AM	11:45 AM	3.0	3.0	3.0	260	780.0	4.5	100	0.003
2	OWA - Decon Unit Entrance	7:25 AM	11:45 AM	3.0	3.0	3.0	260	780.0	5.0	100	0.003
3	OWA - Critical Barrier	7:25 AM	11:45 AM	3.0	3.0	3.0	260	780.0	4.5	100	0.003
4	IWA - Cafeteria	11:50 AM	3:00 PM	3.0	3.0	3.0	190	570.0	10.0	100	0.009
5	OWA - Decon Unit Entrance	11:50 AM	3:00 PM	3.0	3.0	3.0	190	570.0	3.5	100	0.003
6	OWA - Critical Barrier	11:50 AM	3:00 PM	3.0	3.0	3.0	190	570.0	5.0	100	0.004
7	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
8	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD

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

Notes:

ECS Technician: Jerry Kelly

Date: 03/30/2018

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-C3 **Date:** 03/30/2018

Project Address:

Work Area Location/Description: Cafeteria on South Side of Building

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:

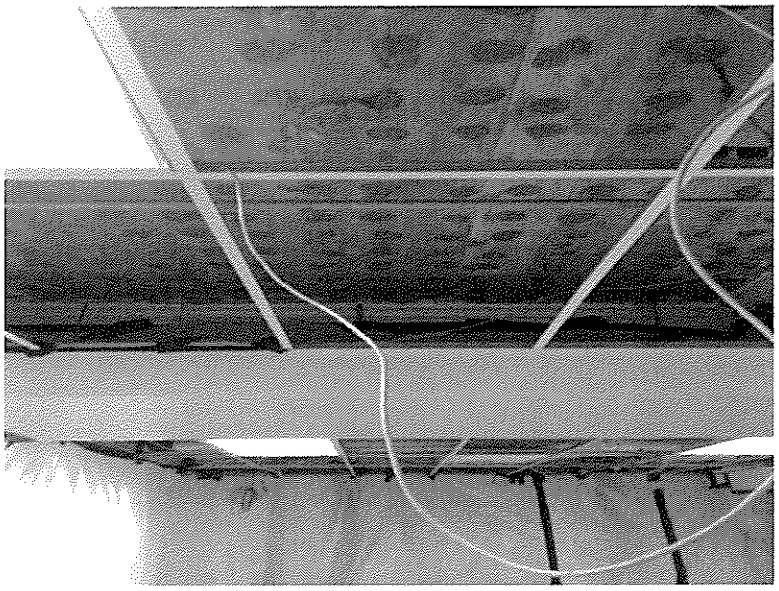
ECS Technician: Jerry Kelly **Date:** 03/30/2018



Attachment No. 1
View of Ceiling after removal



Attachment No. 2
View of Ceiling After Removal



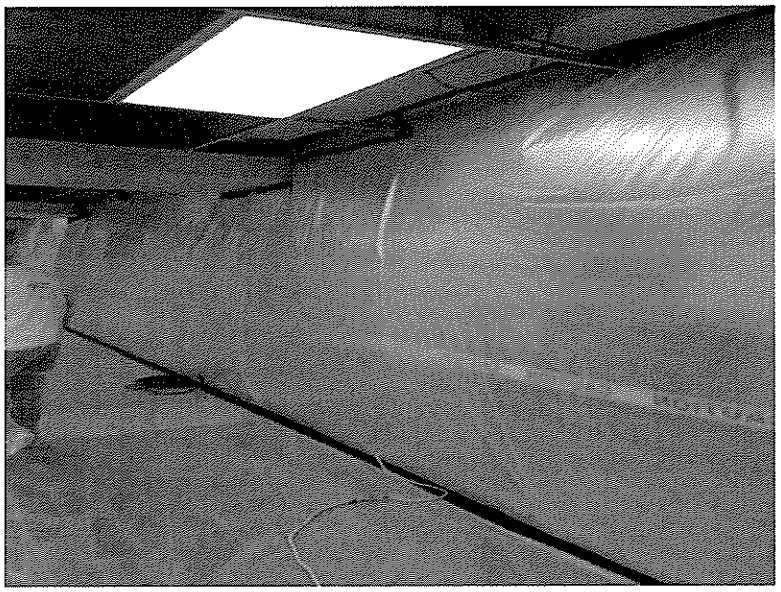
Attachment No. 3
View of Ceiling after removal



Attachment No. 4
View of Area before Encapsulation



Attachment No. 5
View of Work Area before encapsulation



Attachment No. 6
View of Walls after before encapsulation

ECS Mid-Atlantic, LLC
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LETTER OF TRANSMITTAL

April 6, 2018

Alexandria City Public Schools
1340 Braddock Place
Alexandria, VA 22314

ATTN: John Finnigan

RE: **ACPS - George Washington MS - Asbestos Abatement Monit.**

ECS Job # **47:1519-C3**

Permits:

Location: **1005 Mount Vernon Avenue**
Alexandria, VA

We are enclosing:

_X_ Field Reports
_X_ For your use
_X_ As requested

CC: **Alexandria City Public Schools - Derrick Fulcher**

ENCL:

Field Report # 5 03/30/2018

Stephen Geraci, E.I.T., CHMM
Regional Manager Environmental Services

Diana D. Krass
Environmental Senior 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
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(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	47:1519-C3
Report No.	5
Day & Date	Friday 03/30/2018
Weather	70°/ Sunny
On-Site Time	5.00
Lab Time	0.00
Travel Time*	0.00
Total	5.00
Re Obs.Time	0.00

Project **ACPS - George Washington MS - Asbestos Abatement**

Location **Alexandria, VA**

Client **Alexandria City Public Schools - John Finnigan**

Remarks

Trip Charges* Tolls/Parking* Mileage*

Chargeable Items

Time of	Arrival	Departure
	07:00A	12:00P

* 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. Upon arrival, the undersigned spoke with the abatement supervisor, Marcos, to discuss work activities for the day. The material scheduled to be removed today was asbestos-containing black wall mastic.

Staff Locker Room Area (Mini-Containment Area)

At 7:50 am, one (1) PCM air sample was started by the Staff Locker Area by the Cafeteria. This area was a mini-containment (see attached photo) and the asbestos-containing black wall mastic removed from this area was less than ten square feet. The air sampling pump was calibrated using a rotameter to 3.0 liters per minute. Due to a malfunction equipment error, ECS had to replace the air sample within this area. This air sample could not be analyzed. At 9:55 am, one (1) PCM air sample was started by the Staff Locker Room Area. The pump was calibrated using a rotameter to 15.0 liters per minute.

At 11:05 am, 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.

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.

Cafeteria

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

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FIELD REPORT

Project No. 47:1519-C3
Report No. 5
Project **ACPS - George Washington MS - Asbestos Abatement** Day & Date **Friday 03/30/2018**

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.

The sampling pumps were checked using a rotameter after the air within and outside the regulated work area was sampled using TEM cassettes for 127 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.

The Commonwealth of Virginia and US EPA 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 cafeteria found the airborne asbestos fiber concentrations to be less than the maximum allowable concentration.

The client and abatement contractor supervisor, Marcos, were informed of the results. A copy of the laboratory report and chain of custody is attached.

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 1519-C3

Date: 04/02/2018

Project Address:

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (min)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
033018-01JK	Locker Room Bathroom Entrance	7:50 AM	8:30 AM	3.0	3.0	3.0	40	120.0	N/A	N/A	
033018-02JK	Locker Room Bathroom Entrance	9:55 AM	11:05 AM	15.0	15.0	15.0	70	1050.0	6.0	100	0.003
033018-03JK	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0/0	100	NFD
033018-04JK	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD

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

Notes: Air sample 033018-01JK could not be analyzed due to a equipment malfunction. N/A = Not available.

ECS Technician: Jerry Kelly

Date: 04/02/2018

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

EMSL Order: 191803695
Customer ID: ECMA78
Customer PO:
Project ID:

Attention: Diana Krass
ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151
Project: 47:1519-C3

Phone: (703) 471-8400
Fax: (703) 471-8400
Received Date: 03/30/2018 12:15 PM
Analysis Date: 03/30/2018
Collected Date: 03/30/2018

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)
1	IWA-AGGRESSIVE AIR SAMPLING	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
191803695-0001										
2	IWA-AGGRESSIVE AIR SAMPLING	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
191803695-0002										
3	IWA-AGGRESSIVE AIR SAMPLING	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
191803695-0003										
4	IWA-AGGRESSIVE AIR SAMPLING	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
191803695-0004										
5	IWA-AGGRESSIVE AIR SAMPLING	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
191803695-0005										

Analyst(s)
Emily Baker (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: 03/30/2018 16:07 PM

OrderID: 191803695

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 191803695

PHONE:
FAX:

Company Name: ECS Mid-Atlantic LLC		**EMSL Customer ID:**	
Street: 14026 Thunderbolt Place Suite 100	**City:** Chantilly		**State/Province:** VA
Zip/Postal Code: 20151	**Country:** US	**Telephone #:** 703-471-8400	**Fax #:** 703-834-5527
Report To (Name): Diana Krass		**Please Provide Results:** ☐ Fax ☒ Email	
Email Address: dkrass@ecslimited.com		**Purchase Order:**	
Project Name/Number: 47?: 1519-C3		**EMSL Project ID** *(Internal Use Only)*:	
U.S. State Samples Taken: Virginia		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL Bill to: ☒ Same ☐ Different – If Bill to is Different note Instructions in Comments**
Third Party Billing requires written authorization from third party

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)
☐ NYS 198.8 SOF-V
☐ 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 EPA 600/R-93/116 with milling prep (<1%)
☐ 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 (BC only)

Other:
☐

☐ Check For Positive Stop – Clearly Identify Homogenous Group

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

Samplers Name:

Samplers Signature:

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1	IWA - Aggressive Air Sampling	1,200L	3/30 7:37 - 9:44
2	IWA - Aggressive Air Sampling	1,200L	3/30 7:37 - 9:44
3	IWA - Aggressive Air Sampling	1,200L	3/30 7:37 - 9:44
4	IWA - Aggressive Air Sampling	1,200L	3/30 7:37 - 9:44
5	IWA - Aggressive Air Sampling	1200L	3/30 7:37 - 9:44

Client Sample # (s): 1-13 **Total # of Samples:** 13

Relinquished (Client): Trevon Kelly **Date:** 3/30/18 **Time:**

Received (Lab): [signature] **Date:** 03/30/18 **Time:** 12:15PM

Comments/Special Instructions:
Do Not Analyze Outside Samples

Page 1 of 2 pages

Controlled Document – Asbestos COC – R10 – 05/09/2016

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
6	OWA	1200 L	3/30 7:40-9:49
7	OWA	1200 L	3/30 7:40-9:49
8	OWA	1200 L	3/30 7:40-9:49
9	OWA	1200 L	3/30 7:40-9:49
10	OWA	1200 L	3/30 7:40-9:49
11	IWA Blank	[illegible]	3/30
12	OWA Blank	[illegible]	3/30
13	Field Blank		3/30

***Comments/Special Instructions:**

Page ____ of 2 pages

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 1519-C3 **Date:** 04/02/2018

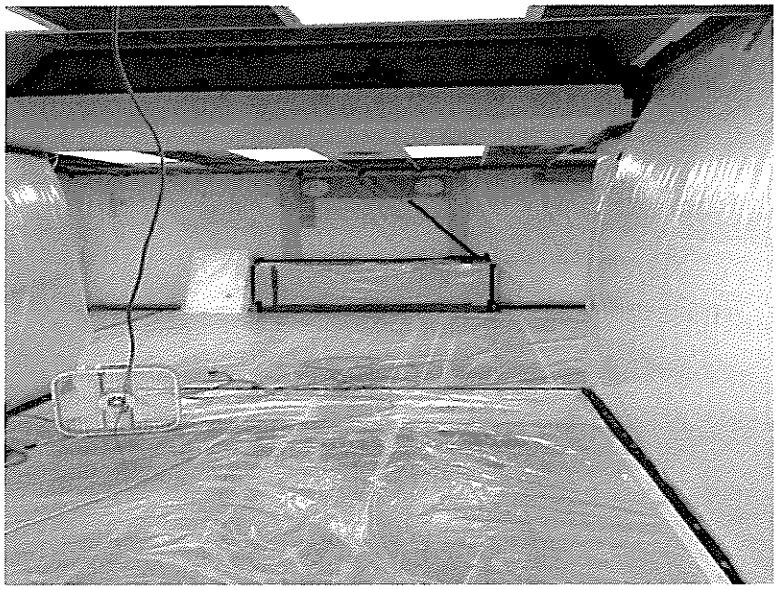
Project Address:

Work Area Location/Description: Cafeteria on South Side of School

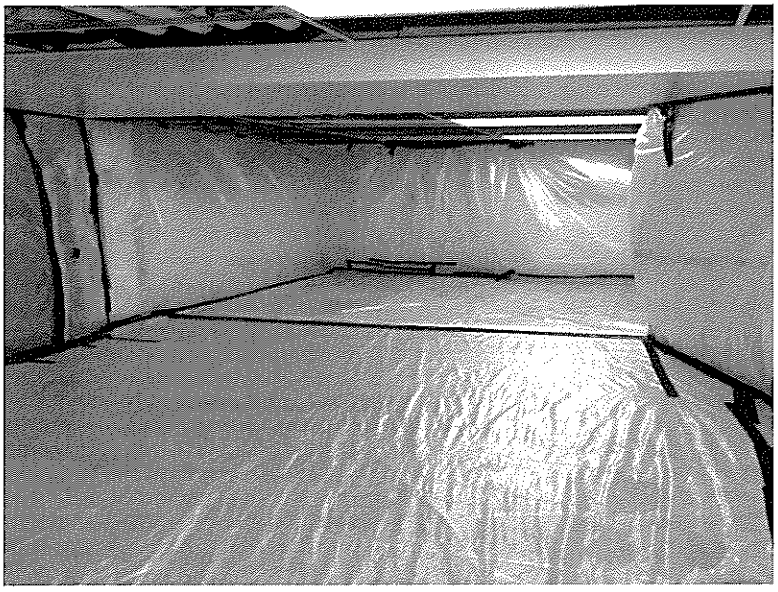
Decontamination Enclosure	Floors and Walls Clean	Satisfactory
	No Debris Present	Satisfactory
	Signage Intact	Satisfactory
	Shower Functioning	Satisfactory
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	Floors	Satisfactory
	Walls	Satisfactory
	Ceiling	Satisfactory
	Windows	N/A
	Mechanical Equipment	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	10 Plus 3 Blanks
	Sample Volume (liters)	9.5
	Work Area Acceptable	Yes

Notes:

ECS Technician: Jerry Kelly **Date:** 04/02/2018



Attachment No. 1
Cafeteria



Attachment No. 2
Cafeteria



Attachment No. 3
Mini Containment - Staff Locker Area



Attachment No. 4
Mini Containment - Staff Locker 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

May 8, 2018

Alexandria City Public Schools
1340 Braddock Place
Alexandria, VA 22314

ATTN: John Finnigan

RE: **ACPS - George Washington MS - Asbestos Abatement Monit.**

ECS Job # **47:1519-C3**

Permits:

Location: **1005 Mount Vernon Avenue**
Alexandria, VA

We are enclosing:

X Field Reports
X For your use
X As requested

CC: **Alexandria City Public Schools - Derrick Fulcher**

ENCL:

Field Report # 6	05/05/2018
Field Report # 7	05/06/2018

Stephen Geraci, E.I.T., CHMM
Regional Manager Environmental Services

Diana D. Krass
Environmental Senior Project Manager

This report (and any included attachments) shall not be reproduced, except in full, without the prior written approval of ECS.

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(703) 834-5527 [Fax]

FIELD REPORT

Project No.	47:1519-C3
Report No.	6
Day & Date	Saturday 05/05/2018
Weather	70°/ Sunny
On-Site Time	12.00
Lab Time	0.00
Travel Time*	0.00
Total	12.00
Re Obs.Time	0.00

Project	ACPS - George Washington MS - Asbestos Abatement
Location	Alexandria, VA
Client	Alexandria City Public Schools - John Finnigan

Remarks

Trip Charges* Tolls/Parking* Mileage*

Chargeable Items

Time of	Arrival	Departure
	07:00A	07:00P

* 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. Materials to be removed today are 1"x 1" ceiling tiles and asbestos-containing associated glue dots between the ceiling tiles and the ceiling above in the west corner of the cafeteria.

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.

Between 7:30 am and 7:35 am, PCM air samples were started inside and outside the work area. One sample was placed inside the work area, one was located outside the work area at the entrance to the decontamination unit, and one was placed located outside the work area at the exhaust point for the negative air machines. The sampling pumps were all calibrated using a rotameter to 2.0 liters per minute.

Between 12:45 pm and 12:47 pm, the sampling pumps were checked using a rotameter. The flow rates were 2.0 liters per minute. The PCM air samples were stopped and gathered from outside the work area and replaced with new air cassettes.

Between 5:24 pm and 5:26 pm, the sampling pumps were checked using a rotameter. The flow rates were 2.0 liters per minute. The PCM air samples were stopped and gathered from 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. Final clearance air sampling is scheduled to be performed during tomorrow's work shift.

GENERAL

By **Catey Bourne, — Field Technician** 1825

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FIELD REPORT

Project No. **47:1519-C3**
Report No. **6**
Project **ACPS - George Washington MS - Asbestos Abatement**
Day & Date **Saturday 05/05/2018**

The regulated work area was surveyed to evaluate general compliance with the project specifications and 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 applicable regulations. Waste bags were labeled and placed in a 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.

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 1519-C3 **Date:** 05/07/2018

Project Address: **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)
05051801CB	IWA - Cafeteria	7:35 AM	12:47 PM	2.0	2.0	2.0	312	624.0	10.0	100	0.008
05051802CB	OWA- Outside Decon. Unit	7:35 AM	12:47 PM	2.0	2.0	2.0	312	624.0	2.0	100	0.002
05051803CB	OWA- At Microtrap Exhaust Point	7:30 AM	12:48 PM	2.0	2.0	2.0	318	636.0	3.0	100	0.002
05051804CB	IWA - Cafeteria	12:47 PM	5:24 PM	2.0	2.0	2.0	277	554.0	10.5	100	0.009
05051805CB	OWA- At Decon. Unit	12:47 PM	5:24 PM	2.0	2.0	2.0	277	554.0	5.5	100	0.005
05051806CB	OWA- At Exhaust Point	12:48 PM	5:26 PM	2.0	2.0	2.0	278	556.0	1.0	100	0.001
05051807CB	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
05051808CB	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD

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

Notes:

ECS Technician: Catey Bourne **Date:** 05/07/2018

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 1519-C3 **Date:** 05/07/2018

Project Address:

Work Area Location/Description: West corner of Cafeteria

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	4
	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 APR
	Type of Filters Used	P100
	Disposable Protective Clothing	Satisfactory
	Work Area Acceptable	Yes

Notes:

ECS Technician: Catey Bourne **Date:** 05/07/2018

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-C3 **Date:** 05/07/2018

Project Address:

Work Area Location/Description: West corner of Cafeteria

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: Catey Bourne **Date:** 05/07/2018

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 1519-C3 **Date:** 05/07/2018

Project Address:

Work Area Location/Description: West corner of Cafeteria

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	
	Number of Samples Collected	
	Sample Volume (liters)	
	Work Area Acceptable	Yes

Notes: Final Clearance Air Sampling is scheduled to be performed during tomorrow's work shift.

ECS Technician: Catey Bourne **Date:** 05/07/2018

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FIELD REPORT

Project No.	47:1519-C3
Report No.	7
Day & Date	Sunday 05/06/2018
Weather	56°/ Cloudy
On-Site Time	3.00
Lab Time	0.00
Travel Time*	0.00
Total	3.00
Re Obs.Time	0.00

Project **ACPS - George Washington MS - Asbestos Abatement**

Location **Alexandria, VA**

Client **Alexandria City Public Schools - John Finnigan**

Remarks

Trip Charges* Tolls/Parking* Mileage*

Time of Arrival **07:45A** Departure **10:45A**

Chargeable Items

* 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 at 07:45 am as requested to perform final air sampling in the Cafeteria of the school building.

TEM Final Air Sampling Start at 08:00 am at Cafeteria

Following the successful completion of the final clearance visual survey on prior day, the abatement contractor applied an encapsulant to surfaces within the regulated work area. After waiting for the encapsulant to dry, aggressive TEM 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.

TEM Final Air Sampling Stop

At 10:30 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 Analytical Laboratory, Inc. (EMSL) in Beltsville, Maryland for analysis.

TEM Final Air Sample Results

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 Cafeteria found the airborne asbestos fiber

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FIELD REPORT

Project No. 47:1519-C3
Report No. 7
Project ACPS - George Washington MS - Asbestos Abatement
Day & Date Sunday 05/06/2018

concentrations to be less than the maximum allowable limits. A copy of the laboratory report is attached. The client and Waco abatement contractor supervisor were informed of the results.

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

EMSL Order: 191805135
Customer ID: ECMA78
Customer PO:
Project ID:

Attention: Diana Krass
ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151
Project: 47:1519-C3

Phone: (703) 471-8400
Fax: (703) 471-8400
Received Date: 05/06/2018 11:37 AM
Analysis Date: 05/06/2018
Collected Date: 05/06/2018

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)
050618-01 TEM YA *191805135-0001*	Final Clearance IWA-Clearance	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
050618-02 TEM YA *191805135-0002*	Final Clearance IWA-Clearance	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
050618-03 TEM YA *191805135-0003*	Final Clearance IWA-Clearance	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
050618-04 TEM YA *191805135-0004*	Final Clearance IWA-Clearance	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
050618-05 TEM YA *191805135-0005*	Final Clearance IWA-Clearance	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. 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: 05/06/2018 17:02 PM

OrderID: 191805135

EMSL Order Number (Lab Use Only)

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Company: ECS Mid Atlantic LLC	EMSL-Bill to: ☑ Same ☐ Different If Bill to is Different note instructions in Comments"
Street: 14026 Thunderbolt Place Suite 100	Third Party Billing requires written authorization from third party
City: 20151 Chantilly State/Province: VA	Zip/Postal Code: Country:
Report To (Name): Diana Krass	Telephone #:
Email Address: DKrass@ecslimited.com	Fax #: Purchase Order:
Project Name/Number: 47.1519-C3	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	TEM – Air ☐ 4-4.5hr TAT (AHERA only) ☑ AHERA 40 CFR, Part 763 ☐ NIOSH 7402 ☐ EPA Level II ☐ ISO 10312	TEM- Dust ☐ Microvac - ASTM D 5755 ☐ Wipe - ASTM D6480 ☐ Carpet Sonication (EPA 600/J-93/167)
PLM - Bulk (reporting limit) ☐ PLM EPA 600/R-93/116 (<1%) ☐ PLM EPA NOB (<1%)	TEM - Bulk ☐ TEM EPA NOB ☐ NYS NOB 198.4 (non-friable-NY)	Soil/Rock/Vermiculite ☐ PLM CARB 435 - A (0 25% sensitivity) ☐ PLM CARB 435 B (0.1% sensitivity)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield SOP ☐ TEM Mass Analysis-EPA 600 sec. 2 5	☐ TEM CARB 435 - B (0 1% sensitivity) ☐ TEM CARB 435 - C (0 01% sensitivity)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	TEM – Water: EPA 100 2 Fibers >10µm ☐ Waste ☐ Drinking	☐ TEM Qual via Filtration Technique ☐ TEM Qual. via Drop-Mount Technique
☐ NYS 198.1 (friable in NY) ☐ NYS 198.6 NOB (non-friable-NY) ☐ NIOSH 9002 (<1%)	All Fiber Sizes ☐ Waste ☐ Drinking	Other: ☐

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

Samplers Name: Samplers Signature:

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
050618-01-TEM-YA	Final Clearance IKA - Cafeteria	1200	05-06-18
-02-		1200	
-03-		1200	
-04-			
-05-	Final Clearance IKA - Cafeteria		
06-	Final clearance OKA - Cafeteria		
07			
08-			

Client Sample # (s): 050618-01-TEM-YA - 050618-13-TEM-YA Total # of Samples: 13

Relinquished (Client): Moises Abebe Date: 05/06/18 Time:

Received (Lab): ECS Date: 5/6/18 Time: 11:40 am

Comments/Special Instructions: Aggressive Sampling GW Middle School Permit # N-VASB43909-0 Dorfbo

OrderID: 191805135

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*

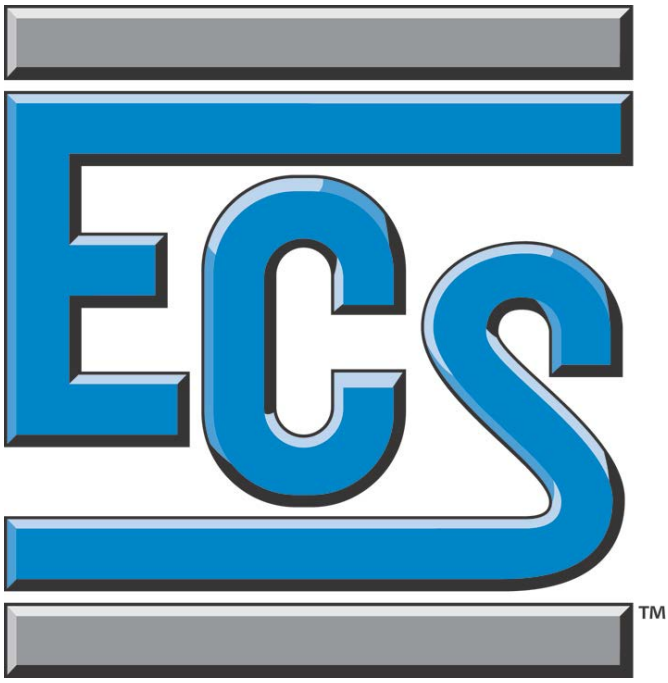
EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

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
050618-09-TEM-YA	Final Clearance OKA - Cafeteria	1200	05-06-18
-10-	" " "	1200	"
-11-	Field Blank (opened for 30 sec boyfriend)	N/A	
-12-	Field Blank (opened for 30 sec Ambi)	N/A	
-13-	Sealed Blank	N/A	

*Comments/Special Instructions:

Controlled Document – Asbestos COC – R5 – 4/11/2012



ASBESTOS ABATEMENT PROJECT MONITORING DOCUMENTATION

GEORGE WASHINGTON MIDDLE SCHOOL
ASBESTOS ABATEMENT MONITORING SERVICES
1005 MOUNT VERNON AVENUE
ALEXANDRIA, VIRGINIA

ECS PROJECT NO. 47:1519-C4

FOR

ALEXANDRIA CITY PUBLIC SCHOOLS

SEPTEMBER 6, 2018

September 6, 2018

Mr. John Finnigan
Alexandria County Public Schools
1340 Braddock Place
Alexandria, Virginia 22314

ECS Project No. 47:1519-C4

Reference: Asbestos Abatement Project Monitoring Documentation, George Washington Middle School, 1005 Mount Vernon Avenue, Alexandria, Virginia, 22301

Dear Mr. Finnigan:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Alexandria City Public Schools (ACPS) with this summary report for the abatement work performed at the above-referenced school. ECS performed visual evaluations, monitoring, and air sampling during the removal of asbestos-containing materials within the cafeteria/kitchen area of the school building.

PROJECT DESCRIPTION

At the request of the client, ECS was requested to perform background air sampling and project monitoring services during the disturbance of asbestos-containing material within the cafeteria/kitchen area of the school building.

ECS has previously performed an asbestos-containing materials survey for the George Washington Middle School (ECS Project No. 47:1519-C). At this time, the following material reported to contain asbestos was included in the abatement activities:

1005 Mount Vernon Avenue (George Washington Middle School)

- Mastic associated with HVAC Ductwork Insulation in the Cafeteria/Kitchen area.

The above referenced asbestos-containing material is still present in the general area of the cafeteria (and may be present in other areas of the building) and was selectively abated as part of repair activities. In addition, other identified asbestos-containing materials have been reported within the Cafeteria/Kitchen area and other portions of the school building not included during this abatement event. This abatement event included only isolated areas that were proposed to be disturbed by limited renovations.

The asbestos abatement work was performed, in general, on June 30, 2018, July 1, 2018, July 11-12, 2018, and on July 14, 2018. ECS performed asbestos abatement monitoring activities on behalf of ACPS for the subject building during this time period. The abatement work was performed by Waco, Inc. in general accordance with applicable regulations.

SCOPE OF WORK

ECS was tasked with performing visual evaluations, background air sampling, monitoring, and air sampling during and after the removal of the asbestos-containing mastic associated with the HVAC ductwork in the cafeteria/kitchen area of the George Washington Middle School. ECS services were provided in general accordance with ECS Proposal No. 47:8381-EP, dated June 25, 2018 and ACPS Contract No. #15-02-01.

The contractor's scope of work included removing the HVAC galvanized metal in whole sections without disturbing the HVAC mastic. No other areas or materials within the building were included in this scope of work for this project. Daily field reports summarizing ECS's onsite observations, testing results, and findings of the on-site work activities were documented and issued through an email correspondence to the Client as requested.

ASBESTOS ABATEMENT

The asbestos abatement was performed by Waco, Inc. ECS reviewed the asbestos credentials of the abatement workers prior to work activities. The credential documentation reviewed was noted to be current at the time presented to ECS. The asbestos abatement included the removal of the following identified material within the cafeteria/kitchen area:

- Mastic associated with HVAC ductwork above the ceiling tiles in the cafeteria/kitchen area.

ECS observed the contractor removing the HVAC galvanized metal in segments without disturbing the HVAC mastic. The removed sections were wrapped in poly plastic which was treated as asbestos-containing waste. The amount of asbestos-containing mastic that was removed from the kitchen/cafeteria was less than 160 square feet (in area).

During the asbestos abatement project, ECS collected and analyzed air samples using Phase Contrast Microscopy (PCM) in accordance with applicable regulations and the NIOSH 7400 methodology.

Samples were collected during the project outside and inside the work areas to monitor airborne fiber concentrations. Analysis of the air samples collected during the course of the abatement activities indicated that the engineering controls were adequate to keep airborne fiber levels outside the regulated work areas below the US EPA/Commonwealth of Virginia

PCM re-occupancy limit of 0.01 fibers per cubic centimeter (f/cc). Air sample results are included within the technicians' daily field report attached to this report.

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

Upon completion of the material removal and cleaning efforts for the work area, ECS performed a final clearance visual assessment of the work area, evaluated that the material had been removed, and observed the work area for dust and/or debris. Following the completion of the final clearance visual assessment, ECS reported the results of the evaluation to the onsite Supervisor of Waco, Inc. and collected final clearance air samples from the work area. The final clearance air samples were analyzed onsite using PCM in general accordance with applicable regulations. Analysis of the final air samples indicated that the work areas were acceptable for re-occupation and the results were below the US EPA/Commonwealth of Virginia PCM re-occupancy limit of 0.01 fibers per cubic centimeter (f/cc).

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 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.

A copy of the ECS technician's daily monitoring reports is enclosed. If we can be of further assistance to you, please do not hesitate to contact us at (703) 471-8400.

Sincerely,

ECS MID-ATLANTIC SERVICES, LLC

Diana Krass
Senior Environmental Project Manager

Beverly Sedon
Senior Environmental Project Manager

Attachment: Technician's Daily Monitoring Reports

\\S47-ARES2K8\data_e-projects\1501-1600\1519-C4 GW ACM Sampling & Abatement\1519-C4 Report.doc

ATTACHMENT

TECHNICIAN'S DAILY MONITORING REPORTS

ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
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LETTER OF TRANSMITTAL

July 6, 2018

Alexandria City Public Schools
1340 Braddock Place
Alexandria, VA 22314

ATTN: John Finnigan

RE: **ACPS - George Washing MS - Asbestos Abatement/Sampling**

ECS Job # **47:1519-C4**

Permits:

Location: **1005 Mount Vernon Avenue Alexandria, VA**

We are enclosing:

_X_ Field Reports
_X_ For your use
_X_ As requested

ENCL:

Field Report # 1 06/30/2018

Chris J. Chapman, CIH
Director of Industrial Hygiene Services

Diana D. Krass
Environmental Senior 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.	47:1519-C4
Report No.	1
Day & Date	Saturday 06/30/2018
Weather	94°/ Sunny
On-Site Time	13.50
Lab Time	0.00
Travel Time*	0.00
Total	13.50
Re Obs. Time	0.00

Project	ACPS - George Washing MS - Asbestos
Location	Alexandria, VA
Client	Alexandria City Public Schools - John Finnigan

Remarks

Trip Charges* Tolls/Parking* Mileage*

Chargeable Items

Time of	Arrival	Departure
	06:00A	07:30P

* 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 at 6:00 am as requested, to perform air monitoring and observe asbestos abatement. The materials specified to be removed today are non-asbestos containing ceiling materials to access HVAC ductwork with asbestos-containing mastic.

The undersigned meet with Mr. Marcos Cruz, abatement project supervisor of WACO onsite to discuss today's scope of work. The abatement contractor plans to not disturb the asbestos-containing mastic located on the HVAC metal ductwork, and take the ductwork apart and wrap the ductwork in poly plastic which will be treated as asbestos-containing waste.

Background Air Monitoring

Between 07:20 am and 07:21 am, two PCM air samples were started in the Kitchen Area. The sampling pumps were calibrated using a rotameter to 2.0 liters per minute.

Between 12:20 pm and 12:21 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 for analysis from the kitchen area.

Kitchen Area

The abatement contractor was requested to Pre-Abatement Survey prior to starting the removal of the HVAC metal ductwork. The pre-abatement survey was completed and is attached to this report.

Between 12:26 pm and 12:27 pm, two PCM air samples were started at inside and outside the kitchen work area. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

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FIELD REPORT

Project No. 47:1519-C4
Report No. 1
Project ACPS - George Washing MS - Asbestos
Day & Date Saturday 06/30/2018

Between 03:30 pm and 03:31 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 for analysis from inside and outside the work area. New PCM cassettes were started.

At 06:45 pm, the abatement contractor stated the specified materials had been removed and requested a visual survey to confirm compliance. The Final Clearance Visual Survey Checklist was completed and is attached to this report.

Between 07:05 pm and 07:06 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 for analysis from inside and outside work area.

Final clearance air sampling will be performed on the next scheduled work shift, tomorrow, Sunday, July 1, 2018.

General

The 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 applicable regulations. Waste bags were labeled and placed in a temporary waste 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.

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 1519-C4 **Date:** 07/01/2018

Project Address: **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)
063018-01-YA	Background Air Monitoring at kitchen area	7:20 AM	12:20 PM	2.0	2.0	2.0	300	600.0	2.0	100	0.002
063018-02-YA	Back ground Air Monitoring at Kitchen area	7:21 AM	12:21 PM	2.0	2.0	2.0	300	600.0	1.0	100	0.001
063018-03-YA	IWA-Kitchen Work Area-Removal of Plaster Ceiling Tile with Glue dots and Duct Insulation	12:26 PM	3:30 PM	2.5	2.5	2.5	184	460.0	5.5	100	0.006
063018-04-YA	OWA-Kitchen Work Area-Removal of Plaster Ceiling Tile with Glue dots and Duct Insulation	12:27 PM	3:31 PM	2.5	2.5	2.5	184	460.0	1.5	100	0.002
063018-05-YA	IWA-Kitchen Work Area-Removal of Plaster Ceiling Tile with Glue dots and Duct Insulation	3:31 PM	7:05 PM	2.5	2.5	2.5	214	535.0	3.0	100	0.003
063018-06-YA	OWA-Kitchen Work Area-Removal of Plaster Ceiling Tile with Glue dots and Duct Insulation	3:32 PM	7:06 PM	2.5	2.5	2.5	214	535.0	0.0	100	0.000
063018-07-YA	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
063018-08-YA	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD

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

Notes:

ECS Technician: Yonas Alemnew Abebe **Date:** 07/01/2018

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 1519-C4 **Date:** 07/01/2018

Project Address:

Work Area Location/Description: Kitchen Serving Room

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	P100
	Type of Filters Used	Half Face
	Disposable Protective Clothing	Satisfactory
	Work Area Acceptable	Yes

Notes:

ECS Technician: Yonas Alemnew Abebe **Date:** 07/01/2018

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-C4 **Date:** 07/01/2018

Project Address:

Work Area Location/Description: Kitchen Serving Room

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: Yonas Alemnew Abebe **Date:** 07/01/2018

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 1519-C4 **Date:** 07/01/2018

Project Address:

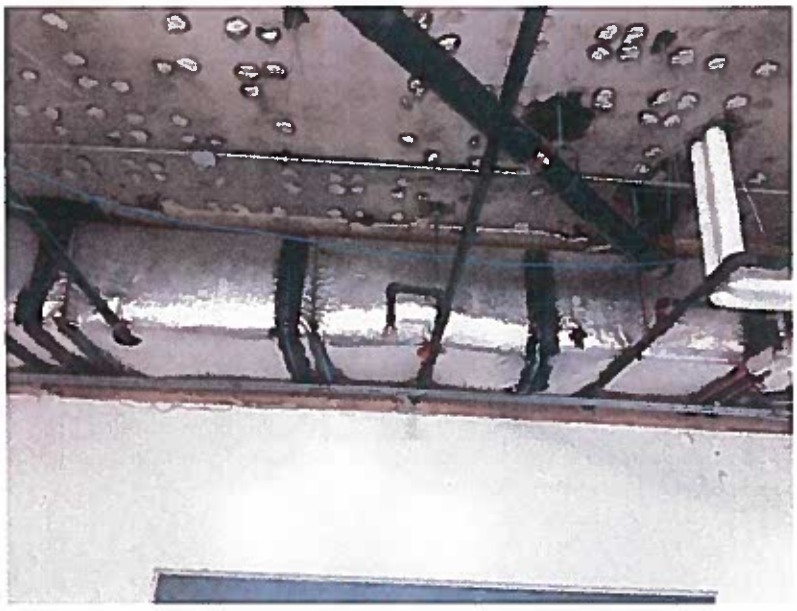
Work Area Location/Description: Kitchen Work Area

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	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	PCM
	Number of Samples Collected	5
	Sample Volume (liters)	1200
	Work Area Acceptable	Yes

Notes:

ECS Technician: Yonas Alemnew Abebe **Date:** 07/01/2018

ATTACHMENTS



Attachment No. 1
View of Pre-Abatement Survey kitchen work area



Attachment No. 2
View of Pre-Abatement Survey kitchen work area

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LETTER OF TRANSMITTAL

July 6, 2018

Alexandria City Public Schools
1340 Braddock Place
Alexandria, VA 22314

ATTN: John Finnigan

RE: **ACPS - George Washing MS - Asbestos Abatement/Sampling**

ECS Job # **47:1519-C4**

Permits:

Location: **1005 Mount Vernon Avenue Alexandria, VA**

We are enclosing:

X Field Reports
X For your use
X As requested

ENCL:

Field Report # 2 07/01/2018

Chris J. Chapman, CIH
Director of Industrial Hygiene Services

Diana D. Krass
Environmental Senior Project Manager

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FIELD REPORT

Project No.	47:1519-C4
Report No.	2
Day & Date	Sunday 07/01/2018
Weather	89°/ Sunny
On-Site Time	4.00
Lab Time	0.00
Travel Time*	0.00
Total	4.00
Re Obs. Time	0.00

Project	ACPS - George Washing MS - Asbestos
Location	Alexandria, VA
Client	Alexandria City Public Schools - John Finnigan

Remarks

Trip Charges* Tolls/Parking* Mileage*

Chargeable Items

Time of Arrival 07:00A Departure 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 at 7:00 am as requested, to perform final PCM air clearance.

Final PCM Clearance at Kitchen Serving Area

PCM Final Air Sample Start at 08:30 am

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 (from the previous day), aggressive air sampling was performed. Five PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute.

PCM Final Air Sample Stop at 10:30 am

Between 10:30 am to 10:35 am, the sampling pumps were checked using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 120 minutes at 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

PCM Final Air Sample Results

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 Kitchen Serving Area were reported to be less than the maximum allowable limits.

The abatement contractor supervisor, Mr. Marcos Cruz was informed of the results. A copy of the chain of custody and laboratory results are attached to this report.

By Yonas Alemnew Abebe, — Environmental Technician 1825

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FIELD REPORT

Project No. 47:1519-C4
Report No. 2
Day & Date Sunday 07/01/2018

Project ACPS - George Washing MS - Asbestos

General

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.

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 1519-C4 **Date:** 07/01/2018

Project Address: **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)
070118-01-YA	Final PCM Clearance at Kitchen Serving Area	8:30 AM	10:30 AM	10.0	10.0	10.0	120	1200.0	5.0	100	0.002
070118-02-YA	Final PCM Clearance at Kitchen Serving Area	8:30 AM	10:30 AM	10.0	10.0	10.0	120	1200.0	2.0	100	0.001
070118-03-YA	Final PCM Clearance at Kitchen Serving Area	8:32 AM	10:32 AM	10.0	10.0	10.0	120	1200.0	4.0	100	0.002
070118-04-YA	Final PCM Clearance at Kitchen Serving Area	8:35 AM	10:35 AM	10.0	10.0	10.0	120	1200.0	1.5	100	0.001
070118-05-YA	Final PCM Clearance at Kitchen Serving Area	8:35 AM	10:35 AM	10.0	10.0	10.0	120	1200.0	2.0	100	0.001
070118-06-YA	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
070118-07-YA	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD

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

Notes:

ECS Technician: Yonas Alemnew Abebe **Date:** 07/01/2018

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LETTER OF TRANSMITTAL

July 15, 2018

Alexandria City Public Schools
1340 Braddock Place
Alexandria, VA 22314

ATTN: John Finnigan

RE: **ACPS - George Washing MS - Asbestos Abatement/Sampling**

ECS Job # **47:1519-C4**

Permits:

Location: **1005 Mount Vernon Avenue**
Alexandria, VA

We are enclosing:

X Field Reports
X For your use
X As requested

ENCL:

Field Report # 3 07/11/2018

Diana D. Krass
Environmental Senior Project Manager

Anna Christina Franciosa, E.I.T.
Environmental Staff Project Manager

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FIELD REPORT

Project No.	47:1519-C4
Report No.	3
Day & Date	Wednesday 07/11/2018
Weather	83°/ Sunny
On-Site Time	9.00
Lab Time	0.00
Travel Time*	0.00
Total	9.00
Re Obs.Time	0.00

Project ACPS - George Washing MS - Asbestos
Location Alexandria, VA
Client Alexandria City Public Schools - John Finnigan

Remarks

Trip Charges* Tolls/Parking* Mileage*

Chargeable Items

Time of Arrival 12:00P Departure 09:00P

* 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 at 12:00 pm as requested, to perform air monitoring and observe asbestos abatement. The materials specified to be removed today are asbestos-containing plaster ceiling tile with associated glue dots, and HVAC ductwork insulation.

The undersigned meet with Mr. Ralph Austin (Bennett Group) and Mr. Marcos Cruz abatement project supervisor (Waco, Inc.) onsite to discuss daily work project progress and the regulated work area before the contractor started working.

Between 2:20 pm to 02:21 pm, two PCM air samples were started in the cafeteria area. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

At 2:40 pm, prior to starting the removal of the specified materials, the abatement notification was reviewed. The abatement contractor was informed that the notification was on-site, and the removal of the specified materials could begin.

The regulated work area was set up as specified in general accordance with Commonwealth of Virginia and US EPA regulations. The abatement contractor, the abatement contractor requested a pre-abatement survey of the regulated work area prior to starting the removal of the specified material. The Pre-Abatement Checklist was completed and is attached to this report.

At 5:05 pm, 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.

Between 5:16 pm to 05:17 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 for analysis from the Cafeteria area.

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(703) 834-5527 [Fax]

FIELD REPORT

Project No. 47:1519-C4
Report No. 3
Day & Date Wednesday 07/11/2018

Project **ACPS - George Washing MS - Asbestos**

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. At 6:30 pm, five PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute.

Between 08:30 pm to 08:35 pm, the sampling pumps were checked using a rotameter. The flow rate was 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

The US EPA and VA 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 Cafeteria Area were reported to be less than the maximum allowable limits set by applicable regulations, which meets the project requirements.

The abatement contractor supervisor, Mr. Marcos Cruz, was informed of the laboratory results. A copy of the chain of custody and laboratory results are attached to this report.

General:

The regulated work area was surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklist was completed and are 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 applicable regulations. Waste bags were labeled and placed in a temporary waste 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.

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 1519-C4 **Date:** 07/12/2018

Project Address: **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)
071118-01-YA	IWA-Cafeteria Area-Removal of Plaster Ceiling Tile with Glue dots	2:20 PM	5:16 PM	2.5	2.5	2.5	176	440.0	0.0	100	0.000
071118-02-YA	OWA-Cafeteria Area-Removal of Plaster Ceiling Tile with Glue dots	2:21 PM	5:17 PM	2.5	2.5	2.5	176	440.0	1.0	100	0.001
071118-03-YA	Final Clearance at Cafeteria Area-Removal of Plaster Ceiling Tile with Glue dots	6:30 PM	8:30 PM	10.0	10.0	10.0	120	1200.0	3.0	100	0.001
071118-04-YA	Final Clearance at Cafeteria Area-Removal of Plaster Ceiling Tile with Glue dots	6:30 PM	8:30 PM	10.0	10.0	10.0	120	1200.0	4.5	100	0.002
071118-05-YA	Final Clearance at Cafeteria Area-Removal of Plaster Ceiling Tile with Glue dots	6:31 PM	8:31 PM	10.0	10.0	10.0	120	1200.0	3.5	100	0.001
071118-06-YA	Final Clearance at Cafeteria Area-Removal of Plaster Ceiling Tile with Glue dots	6:33 PM	8:33 PM	10.0	10.0	10.0	120	1200.0	2.0	100	0.001
071118-07-YA	Final Clearance at Cafeteria Area-Removal of Plaster Ceiling Tile with Glue dots	6:33 PM	8:33 PM	10.0	10.0	10.0	120	1200.0	1.0	100	0.000
071118-08-YA	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
071118-09-YA	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD

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

Notes: Sample 071118-01-YA Water Impacted and therefore; could not be analyzed.

ECS Technician: Yonas Alemnew Abebe **Date:** 07/12/2018

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 1519-C4 **Date:** 07/12/2018

Project Address:

Work Area Location/Description: Cafeteria Area-Removal of Plaster Ceiling Tile with Glue dots

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	1
	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	N/A
	Disposable Towels	Satisfactory
	Soap	Satisfactory
	Equipment Room	Satisfactory
Personal Protective Equipment	Type of Respirator	Half Face
	Type of Filters Used	P-100
	Disposable Protective Clothing	Satisfactory
	Work Area Acceptable	Yes

Notes:

ECS Technician: Yonas Alemnew Abebe **Date:** 07/12/2018

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-C4 **Date:** 07/12/2018

Project Address:

Work Area Location/Description: Cafeteria Area-Removal of Plaster Ceiling Tile with Glue dots

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: Yonas Alemnew Abebe **Date:** 07/12/2018

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 1519-C4 **Date:** 07/12/2018

Project Address:

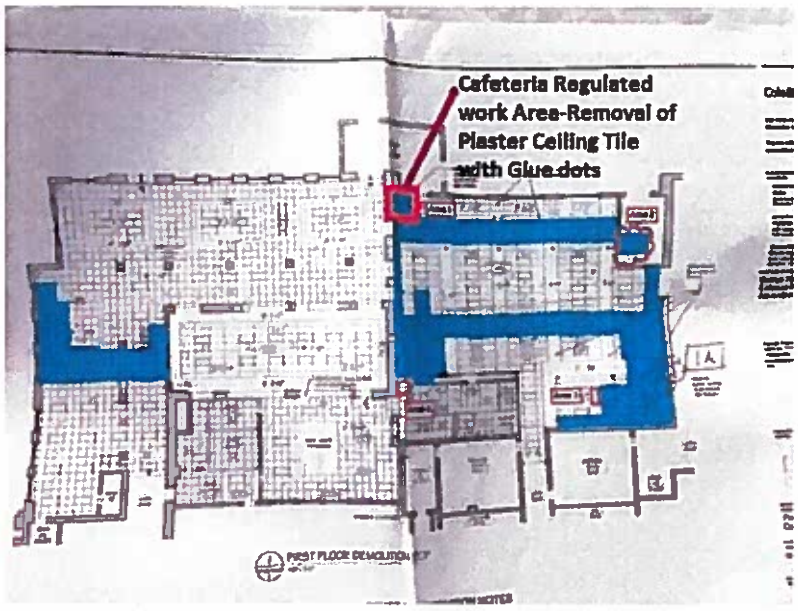
Work Area Location/Description: Cafeteria Area-Removal of Plaster Ceiling Tile with Glue dots

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	PCM
	Number of Samples Collected	5
	Sample Volume (liters)	1200
	Work Area Acceptable	Yes

Notes:

ECS Technician: Yonas Alemnew Abebe **Date:** 07/12/2018

ATTACHMENTS



Attachment No. 1
Site Diagram



Attachment No. 2
View of Cafeteria Work Area Preparation



Attachment No. 3
View of Cafeteria Area-Removal of Plaster Ceiling Tile with Glue Dots



Attachment No. 4
View of Cafeteria Regulated Work Area after Removal of Plaster Ceiling Tile with Glue Dots



Attachment No. 5
View of Cafeteria Regulated work Area after Removal of Plaster Ceiling Tile with Glue Dots

ECS Mid-Atlantic, LLC
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LETTER OF TRANSMITTAL

July 17, 2018

Alexandria City Public Schools
1340 Braddock Place
Alexandria, VA 22314

ATTN: John Finnigan

RE: **ACPS - George Washing MS - Asbestos Abatement/Sampling**

ECS Job # **47:1519-C4**

Permits:

Location: **1005 Mount Vernon Avenue**
Alexandria, VA

We are enclosing:

_X_ Field Reports
_X_ For your use
_X_ As requested

ENCL:

Field Report # 4 07/12/2018

Diana D. Krass
Environmental Senior Project Manager

Anna Christina Franciosa, E.I.T.
Environmental Staff Project Manager

This report (and any included attachments) shall not be reproduced, except in full, without the prior written approval of ECS.

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FIELD REPORT

Project No.	47:1519-C4
Report No.	4
Day & Date	Thursday 07/12/2018
Weather	81°/ Sunny
On-Site Time	15.00
Lab Time	0.00
Travel Time*	0.00
Total	15.00
Re Obs. Time	0.00

Project	ACPS - George Washing MS - Asbestos
Location	Alexandria, VA
Client	Alexandria City Public Schools - John Finnigan

Remarks

Trip Charges* Tolls/Parking* Mileage*

Chargeable Items

Time of Arrival Departure
06:00A 09:00P

* 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 at 6:00 am as requested, to perform air monitoring and observe asbestos abatement. The materials specified to be removed today are plaster ceiling tile with associated glue dots and duct insulation.

Upon arrival, the undersigned met with Miguel, the abatement project supervisor from Waco, Inc. to discuss the scope of work for today's shift.

Cafeteria Regulated Work Area (Area-2)

At 6:45 am, prior to starting the removal of the specified materials, the abatement notification was reviewed. The abatement contractor was informed that the notification was on-site and the removal of the specified materials could begin.

The regulated work area was set up as specified in general accordance with applicable regulations. The abatement contractor requested a Pre-Abatement Survey prior to starting the removal of the specified material. The pre-Abatement Survey was completed and is attached to this report.

Between 7:10 am to 7:11 am, two PCM air samples were started at Cafeteria Area 2. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

At 9:55 am, 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.

Between 10:06 am to 10:07 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 for analysis from cafeteria area.

By Yonas Alemnew Abebe, — Environmental Technician 1825

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FIELD REPORT

Project No. 47:1519-C4
Report No. 4
Day & Date Thursday 07/12/2018

Project ACPS - George Washing MS - Asbestos

Final PCM Clearance at Cafeteria Area (Area-2):

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. At 10:40 am, five PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute. Since the removal activities of the identified materials was below NESHAP size, PCM air sampling was performed instead of TEM air sampling.

Between 12:40 pm to 12:44 pm, the sampling pumps were checked using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 120 minutes at 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

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 Cafeteria Area-2 were reported to be less than the maximum allowable limits. The abatement contractor supervisor, Miguel, was informed of the results. A copy of the chain of custody and laboratory results are attached to this report.

Cafeteria Regulated work Area (Area-3)

At 3:05 pm, prior to starting the removal of the specified materials, the abatement notification was reviewed. The abatement contractor was informed that the notification was on-site and the removal of the specified materials could begin.

The regulated work area was set up as specified in general accordance with applicable regulations. The abatement contractor requested a Pre-Abatement Survey prior to starting the removal of the specified material. Pre-Abatement Survey was completed and is attached to this report.

Between 3:10 pm to 3:11 pm, two PCM air samples were started at Cafeteria Area 3. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

At 05:00 pm, 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

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FIELD REPORT

Project No. 47:1519-C4
Report No. 4
Project ACPS - George Washing MS - Asbestos
Day & Date Thursday 07/12/2018

Clearance Visual Survey Checklist was completed and is attached to this report.

Between 05:06 pm to 05:07 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 for analysis from Cafeteria Area 3.

Final PCM Clearance at Cafeteria Area (Area-3):

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. At 6:03 pm, five PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute. Since the removal activities of the identified materials was below NESHAP size, PCM air sampling was performed instead of TEM air sampling.

Between 8:03 pm to 8:06 pm, the sampling pumps were checked using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 120 minutes at 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

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 Cafeteria Area-3 were reported to be less than the maximum allowable limits. The abatement contractor supervisor, Miguel, was informed of the results. A copy of the chain of custody and laboratory results are attached to this report.

Cafeteria Regulated work Area (Area-4

At 4:05 pm, prior to starting the removal of the specified materials, the abatement notification was reviewed. The abatement contractor was informed that the notification was on-site and the removal of the specified materials could begin.

The regulated work area was set up as specified in general accordance with VA/Federal regulations. The abatement contractor was requested to Pre-Abatement Survey prior to starting the removal of the specified material. Pre-Abatement Survey was completed and is attached to this report.

Between 4:10 pm to 4:11 pm, two PCM air samples were started at Cafeteria Area 4. The

sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

At 6:15 pm, 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.

Between 6:17 pm to 6:18 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 for analysis from Cafeteria area.

Final PCM Clearance at Cafeteria Area (Area-4):

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. At 6:45 pm, five PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute. Since the removal activities of the identified materials was below NESHAP size, PCM air sampling was performed instead of TEM air sampling.

Between 08:45 pm to 08:47 pm, the sampling pumps were checked using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 120 minutes at 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

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 Cafeteria Area-4 were reported to be less than the maximum allowable limits. The abatement contractor supervisor, Miguel, was informed of the results. A copy of the chain of custody and laboratory results are attached to this report.

General:

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

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

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FIELD REPORT

Project No. 47:1519-C4
Report No. 4
Day & Date Thursday 07/12/2018

Project ACPS - George Washing MS - Asbestos

6-mil polyethylene bags which were double-bagged and sealed in general accordance with the project specifications and applicable regulations. Waste bags were labeled and placed in a temporary waste 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.

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 1519-C4

Date: 07/16/2018

Project Address:

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (min)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
071218-01-YA	IWA-Cafeteria Regulated work Area (Area-2)-Removal of Plaster Ceiling Tile with Glue dots	7:10 AM	10:06 AM	2.5	2.5	2.5	176	440.0	3.0	100	0.003
071218-02-YA	OWA-Cafeteria Regulated work Area (Area-2)-Removal of Plaster Ceiling Tile with Glue dots	7:10 AM	10:06 AM	2.5	2.5	2.5	176	440.0	1.0	100	0.001
071218-03-YA	Final Clearance at Cafeteria work Area (Area-2)	10:40 AM	12:40 PM	10.0	10.0	10.0	120	1200.0	5.5	100	0.002
071218-04-YA	Final Clearance at Cafeteria work Area (Area-2)	10:40 AM	12:40 PM	10.0	10.0	10.0	120	1200.0	7.0	100	0.003
071218-05-YA	Final Clearance at Cafeteria work Area (Area-2)	10:41 AM	12:41 PM	10.0	10.0	10.0	120	1200.0	2.0	100	0.001
071218-06-YA	Final Clearance at Cafeteria work Area (Area-2)	10:43 AM	12:43 PM	10.0	10.0	10.0	120	1200.0	4.0	100	0.002
071218-07-YA	Final Clearance at Cafeteria work Area (Area-2)	10:43 AM	12:43 PM	10.0	10.0	10.0	120	1200.0	4.5	100	0.002
071218-08-YA	IWA-Cafeteria Regulated work Area (Area-3)-Removal of Plaster Ceiling Tile with Glue dots	3:10 PM	5:06 PM	2.5	2.5	2.5	116	290.0	1.0	100	0.002
071218-09-YA	OWA-Cafeteria Regulated work Area (Area-3)-Removal of Plaster Ceiling Tile with Glue dots	3:10 PM	5:06 PM	2.5	2.5	2.5	116	290.0	0.0	100	0.000
071218-10-YA	Final Clearance at Cafeteria work Area (Area-3)	6:03 PM	8:03 PM	10.0	10.0	10.0	120	1200.0	2.0	100	0.001

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

Notes:

ECS Technician: Yonas Alemnew Abebe

Date: 07/16/2018

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 1519-C4 **Date:** 07/16/2018

Project Address:

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (min)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
071218-11-YA	Final Clearance at Cafeteria work Area (Area-3)	6:03 PM	8:03 PM	10.0	10.0	10.0	120	1200.0	4.0	100	0.002
071218-12-YA	Final Clearance Cafeteria work Area (Area-3)	6:04 PM	8:04 PM	10.0	10.0	10.0	120	1200.0	2.5	100	0.001
071218-13-YA	Final Clearance Cafeteria work Area (Area-3)	6:04 PM	8:04 PM	10.0	10.0	10.0	120	1200.0	2.0	100	0.001
071218-14-YA	Final Clearance Cafeteria work Area (Area-3)	6:05 PM	8:05 PM	10.0	10.0	10.0	120	1200.0	3.0	100	0.001
071218-15-YA	IWA-Cafeteria Regulated work Area (Area-4)-Removal of Plaster Ceiling Tile with Glue dots	4:10 PM	6:17 PM	2.5	2.5	2.5	127	317.5	2.0	100	0.003
071218-16-YA	OWA-Cafeteria Regulated work Area (Area-4)-Removal of Plaster Ceiling Tile with Glue dots	4:10 PM	6:17 PM	2.5	2.5	2.5	127	317.5	0.0	100	0.000
071218-17-YA	Final Clearance at Cafeteria work Area (Area-4)	6:45 PM	8:45 PM	10.0	10.0	10.0	120	1200.0	3.5	100	0.001
071218-18-YA	Final Clearance at Cafeteria work Area (Area-4)	6:45 PM	8:45 PM	10.0	10.0	10.0	120	1200.0	5.0	100	0.002
071218-19-YA	Final Clearance at Cafeteria work Area (Area-4)	6:46 PM	8:46 PM	10.0	10.0	10.0	120	1200.0	4.0	100	0.002
071218-20-YA	Final Clearance at Cafeteria work Area (Area-4)	6:46 PM	8:46 PM	10.0	10.0	10.0	120	1200.0	2.5	100	0.001

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

Notes:

ECS Technician: Yonas Alemnew Abebe **Date:** 07/16/2018

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 1519-C4 **Date:** 07/16/2018

Project Address: **Page:** 3 of 3

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (min)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
071218-21-YA	Final Clearance at Cafeteria work Area (Area-4)	6:47 PM	8:47 PM	10.0	10.0	10.0	120	1200.0	3.0	100	0.001
071218-22-YA	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
071218-23-YA	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD

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

Notes:

ECS Technician: Yonas Alemnew Abebe **Date:** 07/16/2018

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 1519-C4 **Date:** 07/16/2018

Project Address:

Work Area Location/Description: Cafeteria Regulated Work Area (Area-2), (Area-3) and (Area-4)-Removal of Plaster Ceiling Tile with Glue Dots

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	1
	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	N/A
	Disposable Towels	Satisfactory
	Soap	Satisfactory
	Equipment Room	Satisfactory
Personal Protective Equipment	Type of Respirator	Half Face
	Type of Filters Used	P 100
	Disposable Protective Clothing	Satisfactory
	Work Area Acceptable	Yes

Notes:

ECS Technician: Yonas Alemnew Abebe **Date:** 07/16/2018

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-C4 **Date:** 07/16/2018

Project Address:

Work Area Location/Description: Cafeteria Regulated Work Area (Area-2)-Removal of Plaster Ceiling Tile with Glue Dots

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: Yonas Alemnew Abebe **Date:** 07/16/2018

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-C4 **Date:** 07/16/2018

Project Address:

Work Area Location/Description: Cafeteria Regulated Work Area (Area-4)-Removal of Plaster Ceiling Tile with Glue Dots

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: Yonas Alemnew Abebe **Date:** 07/16/2018

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-C4 **Date:** 07/16/2018

Project Address:

Work Area Location/Description: Cafeteria Regulated Work Area (Area-3)-Removal of Plaster Ceiling Tile with Glue Dots

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: Yonas Alemnew Abebe **Date:** 07/16/2018

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 1519-C4 **Date:** 07/16/2018

Project Address:

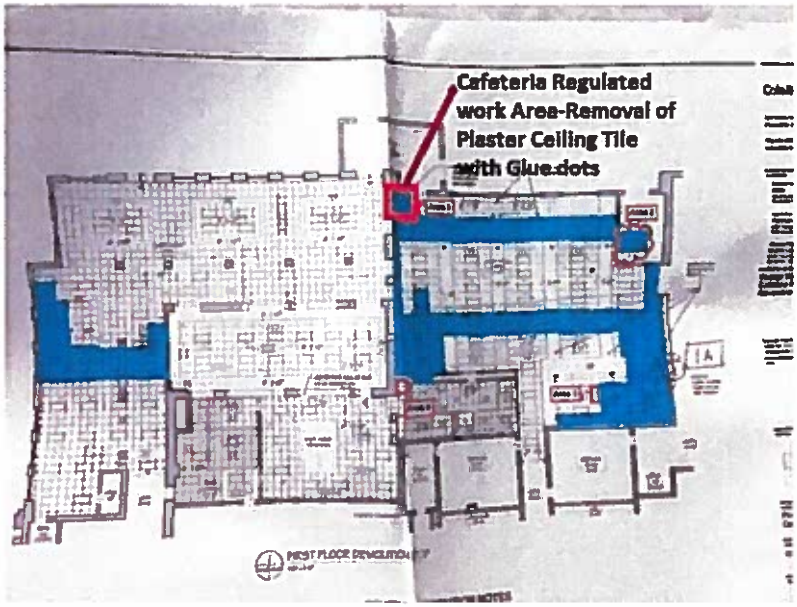
Work Area Location/Description: Cafeteria Regulated Work Area (Area-2), (Area-3) and (Area-4)-Removal of Plaster Ceiling Tile with Glue Dots

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	PCM
	Number of Samples Collected	5 for Each Regulated Work Area
	Sample Volume (liters)	1200
	Work Area Acceptable	Yes

Notes:

ECS Technician: Yns Alemnew Abebe **Date:** 07/16/2018

ATTACHMENTS



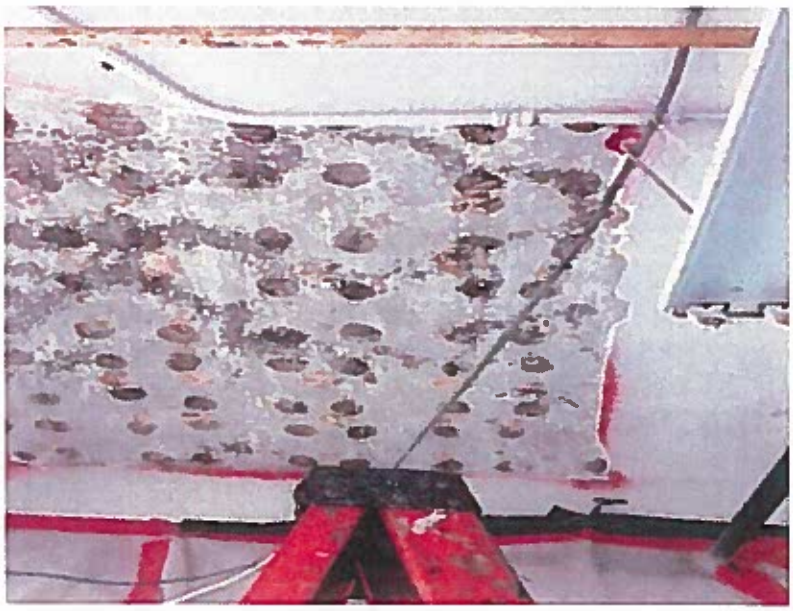
Attachment No. 1
View of floor drawing of Cafeteria Work Area for Removal of Plaster Ceiling Tile with Glue Dots



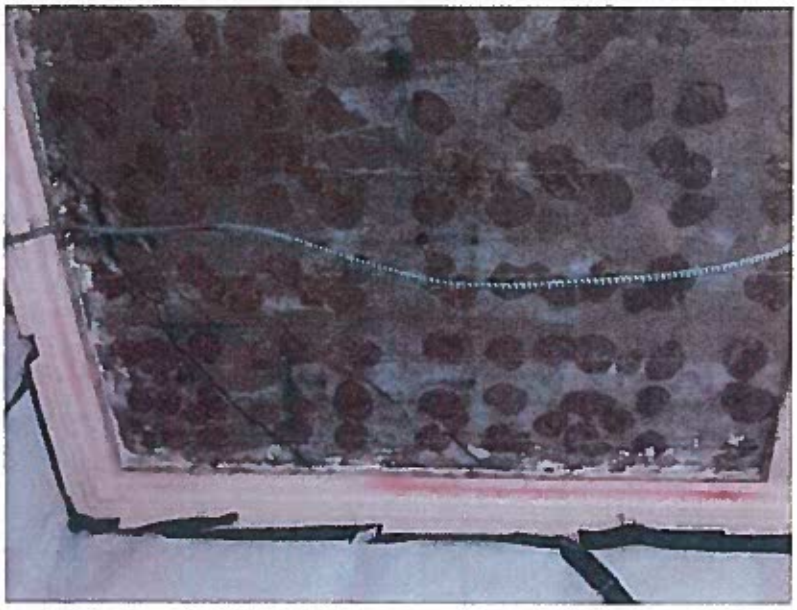
Attachment No. 2
View of Cafeteria Regulated Work Area 4 after Removal of Plaster Ceiling Tile with Glue Dots



Attachment No. 3
View of Cafeteria Regulated Work Area 4 after Removal of Plaster Ceiling Tile with Glue Dots



Attachment No. 4
View of Cafeteria Area-3 After Removal of Plaster Ceiling Tile with Glue Dots



Attachment No. 5
View of Cafeteria Area-2 After Removal of Plaster Ceiling Tile with Glue Dots

ASBESTOS ABATEMENT MONITORING SUMMARY LETTER

GEORGE WASHINGTON MIDDLE SCHOOL

1005 MOUNT VERNON AVENUE
ALEXANDRIA, VIRGINIA 22301

ECS PROJECT NO. 47:1519-CC

FOR: ALEXANDRIA CITY PUBLIC SCHOOLS

JANUARY 26, 2021

January 26, 2021

Mr. John Finnigan
Alexandria City Public Schools
1340 Braddock Place
Alexandria, Virginia 22314

ECS Project No. 47:1519-CC

Reference: Asbestos Abatement Monitoring Summary Letter, George Washington Middle School, 1005 Mount Vernon Avenue, Alexandria, Virginia

Dear Mr. Finnigan:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Alexandria City Public Schools 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.

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



Tim A. Wilmot
Environmental Technician
twilmot@ecslimited.com
703-471-8400

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

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Appendix II: Daily Field Reports with PCM Air Sample Results

Appendix III: Certifications/Licenses

1.0 PROJECT DESCRIPTION

The asbestos abatement work was performed by Waco, Inc, in general from January 7 through January 8, 2021 and included the removal of asbestos-containing pipe insulation from rooms D115, C116, C119, C121, C122, C123, C125, C126, C131, C132, C133, C135, C136, C138, the copy room, the hallway between classroom C116 and C122, the hallway between classroom C126 and C132, and the hallway between C119 and the copy room on the first floor. 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 work areas. Removal of the asbestos-containing pipe insulation was conducted using glove bags and wrap and cut methods. In general, work areas were constructed by placing 6-mil polyethylene sheeting drop cloths on floor surfaces, critical barriers on windows and doors, utilizing negative air machines, and demarcated work areas with barrier tape.

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 Commonwealth of 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 less than or equal to 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 Commonwealth of Virginia regulations (respirators, disposable protective clothing, eye protection, hard hats, gloves, etc.).

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 in general accordance with sampling protocol described in 40 CFR 763 Subpart E Appendix A and analyzed via Phase Contrast Microscopy (PCM) in accordance with federal and Virginia regulations. The results of the PCM final clearance air samples collected from the work areas were found to be below the Virginia PCM re-occupancy limit of less than or equal to 0.01 fibers per cubic centimeter (f/cc).

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.

The documentation of the above reference abatement activities should be add to the building'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.

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: Scope of Work Sketch

Approximate Location of Removed Thermal System Pipe Insulation

Note that ACM pipe insulation may remain in the outlined areas behind hard ceilings and walls, within wet walls, within vertical risers, etc.

George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA 22301

WORK AREA SKETCH FIRST FLOOR

Scale: NTS

Project No.
47:1519-CC

Appendix II: 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

January 12, 2021
Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: John Finnigan

RE: **GWMS Abatement Monitoring Services**
ECS Job # **47:1519-CC**

Permits:
Location: **1005 Mount Vernon Avenue**
Alexandria, VA 22301

We are enclosing:							
	X	Field Reports	X	For your use	X	As requested	

CC:

ENCL: Field Report # 1 1/7/2021

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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 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	**GWMS Abatement Monitoring Services**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Project No.	**47:1519-CC**
Report No.	**1**
Day & Date	**Thursday 1/7/2021**
Weather	**48 °/ Cloudy**
On-Site Time	**9.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**9.50**
Re Obs Time	**0.00**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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. ECS met with the abatement contractor supervisor Mr. Ever Martinez of Waco, Inc. (Waco) and discussed today's work activities.

The material to be removed today is asbestos-containing pipe insulation on the first floor in Classrooms C131, C135, C136, C133, C138, C132, C125, C123, C126, C119, C116, C121, hallway between copy room and classroom C119 using glove bags and wrap and cut methods. Abatement contractor supervisor informed ECS that they already setup glove bags and wrapped pipe insulation on the prior work shift.

Prior to starting the removal of the specified materials, the abatement notification was reviewed. The abatement contractor supervisor was informed that the notification was on-site and the removal of the specified materials could begin.

Prior to starting the removal of the specified materials, 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.

CLASSROOM C131 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.

At 7:43 am, a PCM air sample was started outside the double flap entry. The sampling pump was calibrated using a rotameter to 2.5 liters per minute.

The abatement contractor removed asbestos-containing pipe insulation utilizing pre-manufactured glove bags. The glove bags were observed visually checked prior to beginning work. Glove bag removal was

being performed by two licensed workers. The abatement contractor indicated that the glove bags were smoke tested prior to beginning removal.

ECS observed the abatement contractor cutting both ends of the wrapped pipe insulation using sawzall.

At 10:58 am, the sampling pump was checked using a rotameter. The flow rate was 2.5 liters per minute. The PCM air sample was stopped and gathered for analysis.

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.

At 9:55 am, two PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute.

At 11:55 am, the sampling pumps were calibrated using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 120 minutes at 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

The US EPA and Commonwealth of Virginia PCM 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 Classroom C131 were reported 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 of Waco, Inc. (Waco), were informed of the laboratory results.

CLASSROOM C135 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.

At 7:44 am, a PCM air sample was started outside the double flap entry. The sampling pump was calibrated using a rotameter to 2.5 liters per minute.

ECS observed the abatement workers cutting both ends of the wrapped pipe insulation using sawzall.

At 10:45 am, the sampling pump was checked using a rotameter. The flow rate was 2.5 liters per minute. The PCM air sample was stopped and gathered for analysis.

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.

At 7:49 am, two (2) PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute.

At 9:49 am, the sampling pumps were calibrated using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 120 minutes at 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

The US EPA and Commonwealth of Virginia PCM 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 Classroom C135 were reported 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 of Waco, Inc. (Waco), were informed of the laboratory results.

CLASSROOM C136 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.

At 7:53 am, PCM air sample was started at the decontamination unit entry. The sampling pump was calibrated using a rotameter to 10.0 liters per minute.

The abatement contractor was removing asbestos-containing pipe insulation utilizing pre-manufactured glove bags. The glove bags were observed visually checked prior to beginning work. Glove bag removal was being performed by two licensed workers. The abatement contractor indicated that the glove bags were smoke tested prior to beginning removal.

At 8:35 am, the sampling pump was checked using a rotameter. The flow rate was 10.0 liters per minute. The PCM air sample was stopped and gathered for analysis.

ECS observed wrapped pipe insulation remain in the room which is scheduled to be removed on the next business day.

CLASSROOM C133 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.

At 8:00 am, a PCM air sample was started outside the double flap entry. The sampling pump was calibrated using a rotameter to 10.0 liters per minute.

ECS observed the abatement workers cutting both ends of the wrapped pipe insulation using sawzall.

At 8:40 am, the sampling pump was checked using a rotameter. The flow rate was 10.0 liters per minute. The PCM air sample was stopped and gathered for analysis.

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.

At 9:30 am, two (2) PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute.

At 11:30 am, the sampling pumps were calibrated using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 120 minutes at 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

The US EPA and Commonwealth of Virginia PCM 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 Classroom C133 were reported 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 of Waco, Inc. (Waco), were informed of the laboratory results.

CLASSROOM C138 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.

At 8:12 am, a PCM air sample was started at decontamination unit entry. The sampling pump was calibrated using a rotameter to 10.0 liters per minute.

The abatement contractor was removing asbestos-containing pipe insulation utilizing pre-manufactured glove bags. The glove bags were observed visually checked prior to beginning work. Glove bag removal was being performed by two licensed workers. The abatement contractor indicated that the glove bags were smoke tested prior to beginning removal.

ECS observed the abatement workers cutting both ends of the wrapped pipe insulation using sawzall.

At 8:52 am, the sampling pump was checked using a rotameter. The flow rate was 2.5 liters per minute. The PCM air sample was stopped and gathered for analysis.

ECS observed wrapped pipe insulation in the room which is scheduled to be removed on the next business day.

CLASSROOM C125 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.

At 8:12 am, a PCM air sample was started outside the double flap entry. The sampling pump was calibrated using a rotameter to 10.0 liters per minute.

The abatement contractor was removing asbestos-containing pipe insulation utilizing pre-manufactured glove bags. The glove bags were observed visually checked prior to beginning work. Glove bag removal was being performed by two licensed workers. The abatement contractor indicated that the glove bags were smoke tested prior to beginning removal.

ECS observed the abatement workers cutting both ends of the wrapped pipe insulation using sawzall.

At 8:52 am, the sampling pump was checked using a rotameter. The flow rate was 10.0 liters per minute. The PCM air sample was stopped and gathered for analysis.

ECS observed wrapped pipe insulation remain in the room which is scheduled to be removed on next business day.

CLASSROOM C132 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.

At 8:19 am, PCM air sample was started at decontamination unit entry. The sampling pump was calibrated using a rotameter to 10.0 liters per minute.

ECS observed the abatement workers cutting both ends of the wrapped pipe insulation using sawzall.

At 9:00 am, the sampling pump was checked using a rotameter. The flow rate was 10.0 liters per minute. The PCM air sample was stopped and gathered for analysis.

ECS observed wrapped pipe insulation remain in the room which is scheduled to be removed on next business day.

CLASSROOM C123 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.

At 10:50 am, PCM air sample was started outside the double flap entry. The sampling pump was calibrated using a rotameter to 2.5 liters per minute.

The abatement contractor was removing asbestos-containing pipe insulation utilizing pre-manufactured glove bags. The glove bags were observed visually checked prior to beginning work. Glove bag removal was being performed by two licensed workers. The abatement contractor indicated that the glove bags were smoke tested prior to beginning removal.

ECS observed the abatement workers cutting both ends of the wrapped pipe insulation using sawzall.

At 1:30 pm, the sampling pump was checked using a rotameter. The flow rate was 2.5 liters per minute. The PCM air sample was stopped and gathered for analysis.

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.

At 12:42 pm, two (2) PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute.

At 2:42 pm, the sampling pumps were calibrated using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 120 minutes at 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

The US EPA and Commonwealth of Virginia PCM 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 classroom C123 were reported 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 of Waco, Inc. (Waco), were informed of the laboratory results.

HALLWAY BETWEEN COPY ROOM AND CLASSROOM 119

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 12:16 pm, PCM air sample was started outside the double flap entry. The sampling pump was calibrated using a rotameter to 10.0 liters per minute.

The abatement contractor was removing asbestos-containing pipe insulation utilizing pre-manufactured glove bags. The glove bags were observed visually checked prior to beginning work. Glove bag removal was being performed by two licensed workers. The abatement contractor indicated that the glove bags were smoke tested prior to beginning removal.

ECS observed the abatement workers cutting both ends of the wrapped pipe insulation using sawzall.

At 12:56 pm, the sampling pump was checked using a rotameter. The flow rate was 10.0 liters per minute. The PCM air sample was stopped and gathered for analysis.

ECS observed wrapped pipe insulation remain in the room which is scheduled to be removed on the next business day.

CLASSROOM C121

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.

ECS observed the abatement workers cutting both ends of the wrapped pipe insulation using sawzall.

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.

At 1:11 pm, two (2) PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 12.0 liters per minute.

At 2:51 pm, the sampling pumps were calibrated using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 100 minutes at 12.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

The US EPA and Commonwealth of Virginia PCM 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 Classroom C121 were reported 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 of Waco, Inc. (Waco), were informed of the laboratory results.

CLASSROOM C119

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.

ECS observed the abatement workers cutting both ends of the wrapped pipe insulation using sawzall.

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.

At 1:40 pm, two (2) PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 12.0 liters per minute.

At 3:20 pm, the sampling pumps were calibrated using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 100 minutes at 12.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

The US EPA and Commonwealth of Virginia PCM 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 classroom C119 were reported 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 of Waco, Inc. (Waco), were informed of the laboratory results.

General

The regulated work area was surveyed to evaluate general compliance with the project specifications and 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 abatement contractor's transport.

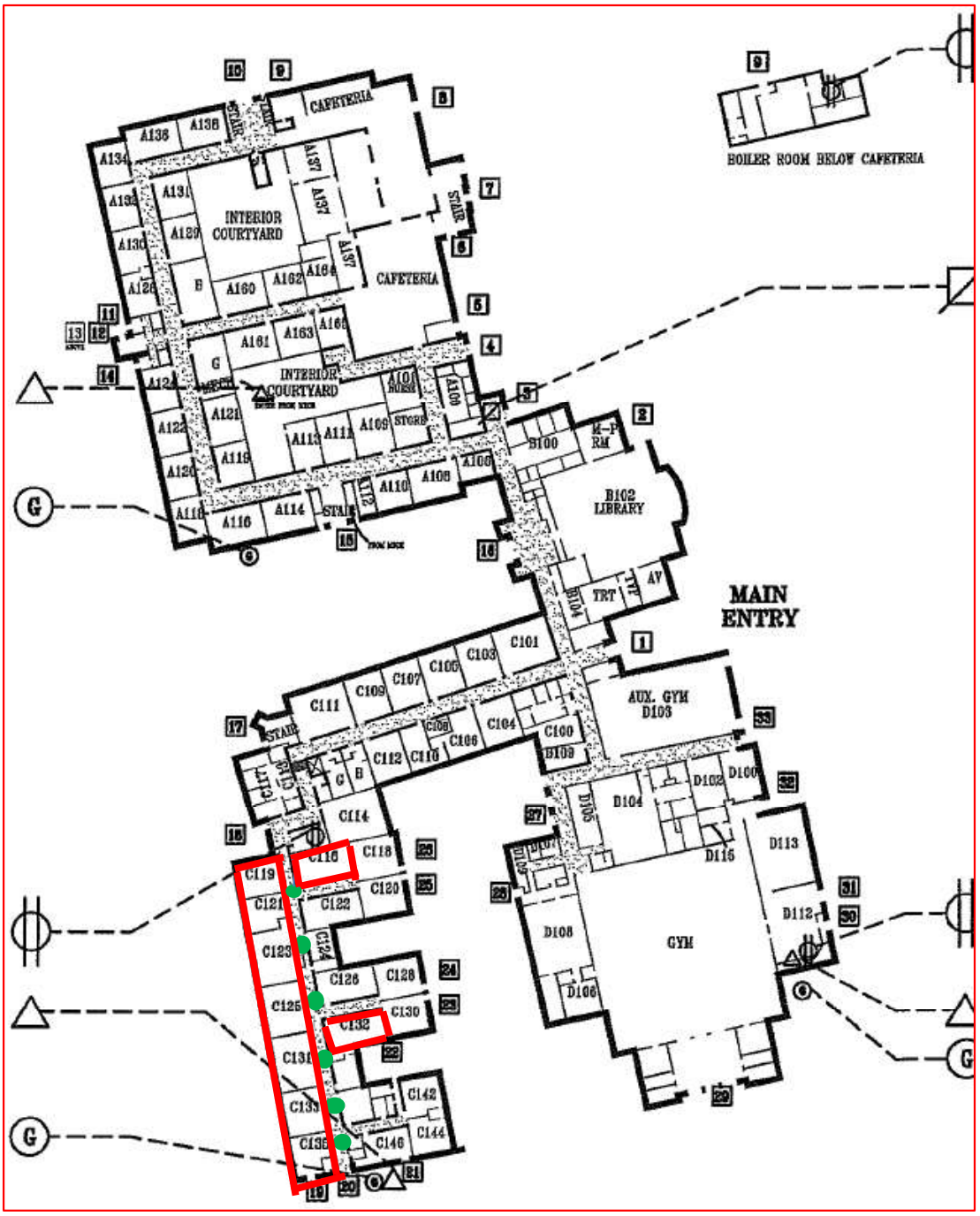
The undersigned prepared and analyzed the PCM air sample cassettes for total fiber concentration in general accordance with NIOSH Method 7400. Results were recorded on the PCM Chain of Custody which is attached.

The US EPA and Commonwealth of Virginia PCM re-occupancy limit is 0.01 fibers per cubic centimeter of air (f/cc). The results were less than or equal to 0.01 f/cc.

Please note that PCM air samples collected and analyzed are only reflective of conditions at the time of the sampling event. These parameters can vary rapidly over time, depending upon several conditions including site specific construction and/or environmental factors.

Approximate Location of Abated Pipe Insulation

OWA PCM Air Sampling Locations



Transmittal Page 9/15

Scale: NTS	Project No. 47:1519-CC	Date:1/7/21

WORK AREA SKETCH FIRST FLOOR

George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA 22301

Attachments



View of the wrapped pipe insulation in classroom 135.

Figure 1



View of the wrapped pipe insulation in classroom 121.

Figure 2

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 47:1519-CC
Project Address: 1005 Mount Vernon Avenue
Alexandria, VA-22301

Date: 1/8/2021
Page: 1 of 2

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (lpm)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
01072101SS	OWA/ Classroom C131, Outside the Double Flap Entry	7:43 AM	10:58 AM	2.5	2.5	2.5	195	487.5	0.5	100	0.001
01072102SS	OWA/ Classroom C135, Outside the Double Flap Entry	7:44 AM	10:45 AM	2.5	2.5	2.5	181	452.5	0.0	100	0.000
01072103SS	OWA/ Classroom C136, At Decontamination Unit Entry	7:53 AM	8:35 AM	10.0	10.0	10.0	42	420.0	1.0	100	0.001
01072104SS	OWA/ Classroom C133, Outside the Double Flap Entry	8:00 AM	8:40 AM	10.0	10.0	10.0	40	400.0	1.5	100	0.002
01072105SS	OWA/ Classroom C138, At Decontamination Unit Entry	8:12 AM	8:52 AM	10.0	10.0	10.0	40	400.0	0.0	100	0.000
01072106SS	OWA/ Classroom C125,Outside the Double Flap Entry	8:12 AM	8:52 AM	10.0	10.0	10.0	40	400.0	2.0	100	0.002
01072107SS	FC-IWA/Classroom C135	7:49 AM	9:49 AM	10.0	10.0	10.0	120	1200.0	1.0	100	0.000
01072108SS	FC-IWA/Classroom C135	7:49 AM	9:49 AM	10.0	10.0	10.0	120	1200.0	1.0	100	0.000
01072109SS	FC-IWA/Classroom C133	9:30 AM	11:30 AM	10.0	10.0	10.0	120	1200.0	1.0	100	0.000
01072110SS	FC-IWA/Classroom C133	9:30 AM	11:30 AM	10.0	10.0	10.0	120	1200.0	1.0	100	0.000
01072111SS	FC-IWA/Classroom C131	9:55 AM	11:55 AM	10.0	10.0	10.0	120	1200.0	0.5	100	0.000
01072112SS	FC-IWA/Classroom C131	9:55 AM	11:55 AM	10.0	10.0	10.0	120	1200.0	0.5	100	0.000
01072113SS	OWA/ Classroom C132, At Decontamination Unit Entry	8:19 AM	9:00 AM	10.0	10.0	10.0	41	410.0	1.0	100	0.001
01072114SS	OWA/ Classroom C123, At Double Flap Entry	10:50 AM	1:30 PM	2.5	2.5	2.5	160	400.0	2.0	100	0.002
01072115SS	OWA/ Hallway Between Copy Room and Classroom C119	12:16 PM	12:56 PM	10.0	10.0	10.0	40	400.0	0.0	100	0.000
01072116SS	FC-IWA/Classroom C123	12:42 PM	2:42 PM	10.0	10.0	10.0	120	1200.0	2.5	100	0.001
01072117SS	FC-IWA/Classroom C123	12:42 PM	2:42 PM	10.0	10.0	10.0	120	1200.0	3.5	100	0.001
01072118SS	FC-IWA/Classroom C121	1:11 PM	2:51 PM	12.0	12.0	12.0	100	1200.0	2.5	100	0.001

ECS Technician: Suhel Shafaat

Date: 1/8/2021

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 47:1519-CC
Project Address: 1005 Mount Vernon Avenue
Alexandria, VA-22301

Date: 1/8/2021
Page: 2 of 2

01072119SS	FC-IWA/Classroom C121	1:11 PM	2:51 PM	12.0	12.0	12.0	100	1200.0	3.0	100	0.001
01072120SS	FC-IWA/Classroom C119	1:40 PM	3:20 PM	12.0	12.0	12.0	100	1200.0	1.0	100	0.000
01072121SS	FC-IWA/Classroom C119	1:40 PM	3:20 PM	12.0	12.0	12.0	100	1200.0	0.0	100	0.000
010721FB01SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
010721FB02SS	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 US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fibers per cubic centimeter of air (f/cc). The samples collected were reported below the re-occupancy limit. FC = Final Clearance

ECS Technician: Suhel Shafaat **Date:** 1/8/2021

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 47:1519-CC **Date:** 1/8/2021

Project Address: 1005 Mount Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description:

	Work Area Location/Description	1st Floor Classrooms C131, C135,
Administrative	Training Certificates/Licenses	Satisfactory
	Permits	N/A
	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	N/A
	Waste Water Filtration In-Use	N/A
	Disposable Towels	N/A
	Soap	N/A
	Equipment Room	N/A
Personal Protective Equipment	Type of Respirator	Half-Face Respirator
	Type of Filters Used	P100
	Disposable Protective Clothing	Satisfactory
	Work Area Acceptable	Yes

Notes: One Stage Decontamination Unit and a double flap was placed at the door entry. A drop cloth was placed on the floor.

ECS Technician: Michael P. Hamill **Date:** 1/8/2021

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 47:1519-CC **Date:** 1/8/2021

Project Address: 1005 Mount Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description:

	Work Area Location/Description	1st Floor Classrooms C131, C135,
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	N/A
	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	N/A
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	9
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Michael P. Hamill **Date:** 1/8/2021

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 47:1519-CC **Date:** 1/8/2021

Project Address: 1005 Mount Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: 1st Floor Classrooms C131, C135, C133, C121, C123 and C119/ Removal of Pipe Insulation Using Glovebag and Wrap and Cut Method

	Work Area Location/Description	1st Floor Classrooms C131, C135,
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	N/A
	Windows	N/A
	Mechanical Equipment	N/A
	Ducts	N/A
	Pipes	Satisfactory
	Lighting	N/A
	Other Surfaces	Non-Compliant
	Specified ACM Removed	Satisfactory
	Work Area Encapsulated	Satisfactory
	Negative Air Filtration Functioning	Satisfactory
	Waste Bags Removed	Satisfactory
	Final Clearance Air Sample Type	PCM
	Number of Samples Collected	12 (2 in each classroom)
	Sample Volume (liters)	1200
	Work Area Acceptable	Yes

Notes:

ECS Technician: Michael P. Hamill **Date:** 1/8/2021

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

LETTER OF TRANSMITTAL

January 12, 2021
Alexandria City Public Schools
1340 Braddock Place Suite 620
Alexandria, VA 22314

ATTN: John Finnigan

RE: **GWMS Abatement Monitoring Services**
ECS Job # **47:1519-CC**

Permits:
Location: **1005 Mount Vernon Avenue**
Alexandria, VA 22301

We are enclosing:	X	Field Reports	X	For your use	X	As requested

CC:

ENCL: Field Report # 2 1/8/2021

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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 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.	**47:1519-CC**
Report No.	**2**
Day & Date	**Friday 1/8/2021**
Weather	**30 °/ Cloudy**
On-Site Time	**8.00**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**8.00**
Re Obs Time	**0.00**

Project	**GWMS Abatement Monitoring Services**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**2:00P**

* 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 onsite, as requested, to perform air monitoring and observe asbestos abatement. ECS met with the abatement contractor supervisor Mr. Ever Martinez of Waco, Inc. (Waco) and discussed today's work activities.

The material to be removed today is asbestos-containing pipe insulation using wrap and cut method in the first floor classrooms C122, C126, C132, C136, C138, Hallway between Classroom C116 and C122, copy room, and hallway between Classroom C126 and C132. Asbestos pipe insulation was also removed using glove bags in Room D115. A work area sketch and photographs are attached to this report.

FINAL CLEARANCE SAMPLING FOR CLASSROOM C116

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

At 6:42 am, two (2) PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute.

At 8:42 am, the sampling pumps were calibrated using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 120 minutes at 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

The US EPA and Commonwealth of Virginia PCM 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 Classroom C116 were reported 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 of Waco, Inc. (Waco), were informed of the laboratory results.

By Suhel Shafaat 1825

68327

FINAL CLEARANCE SAMPLING FOR CLASSROOM C125

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

At 6:56 am, two (2) PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute.

At 8:56 am, the sampling pumps were calibrated using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 120 minutes at 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

The US EPA and Commonwealth of Virginia PCM 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 Classroom C125 were reported 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 of Waco, Inc. (Waco), were informed of the laboratory results.

HALLWAY BETWEEN CLASSROOM C116 AND C122

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.

ECS observed the abatement workers cutting both ends of the wrapped pipe insulation using sawzall.

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

At 7:00 am, two (2) PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute.

At 9:00 am, the sampling pumps were calibrated using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 120 minutes at 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

The US EPA and Commonwealth of Virginia PCM 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 the hallway between Classroom C116 and C122 were reported 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 of Waco, Inc. (Waco), were informed of the laboratory results.

CLASSROOM C122 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.

At 7:15 am, PCM air sample was started outside the double flap entry. The sampling pump was calibrated using a rotameter to 2.5 liters per minute. The abatement contractor other two workers were cutting both end of the wrapped pipe insulation using sawzall.

At 10:52 am, the sampling pump was checked using a rotameter. The flow rate was 2.5 liters per minute. The PCM air sample was stopped and gathered for analysis.

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.

At 7:42 am, two (2) PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute.

At 9:42 am, the sampling pumps were calibrated using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 120 minutes at 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

The US EPA and Commonwealth of Virginia PCM 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 Classroom C122 were reported 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 of Waco, Inc. (Waco), were informed of the laboratory results.

COPY ROOM 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.

At 7:26 am, a PCM air sample was started outside the double flap entry. The sampling pump was calibrated using a rotameter to 2.5 liters per minute.

ECS observed the abatement workers cutting both ends of the wrapped pipe insulation using sawzall.

At 10:49 am, the sampling pump was checked using a rotameter. The flow rate was 2.5 liters per minute. The PCM air sample was stopped and gathered for analysis.

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.

At 8:07 am, two (2) PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute.

At 10:07 am, the sampling pumps were calibrated using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 120 minutes at 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

The US EPA and Commonwealth of Virginia PCM 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 the copy room were reported 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 of Waco, Inc. (Waco), were informed of the laboratory results.

CLASSROOM C126

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

At 8:32 am, two (2) PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute.

At 10:32 am, the sampling pumps were calibrated using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 120 minutes at 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

The US EPA and Commonwealth of Virginia PCM 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 the hallway between Classroom C126 were reported 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 of Waco, Inc. (Waco), were informed of the laboratory results.

CLASSROOM C132

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

At 9:17 am, two (2) PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute.

At 11:17 am, the sampling pumps were calibrated using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 120 minutes at 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

The US EPA and Commonwealth of Virginia PCM 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 the hallway between Classroom C132 were reported 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 of Waco, Inc. (Waco), were informed of the laboratory results.

CLASSROOM C136

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

At 10:12 am, two (2) PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute.

At 12:12 pm, the sampling pumps were calibrated using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 120 minutes at 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

The US EPA and Commonwealth of Virginia PCM 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 the hallway between Classroom C136 were reported 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 of Waco, Inc. (Waco), were informed of the laboratory results.

HALLWAY BETWEEN CLASSROOM C126 AND C132

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.

ECS observed the abatement workers cutting both ends of the wrapped pipe insulation using sawzall.

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

Between 8:43 am and 8:51 am, two (2) PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute.

Between 10:43 am and 10:51 am, the sampling pumps were calibrated using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 120 minutes at 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

The US EPA and Commonwealth of Virginia PCM 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 the hallway between Classroom C126 and C132 were reported 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 of Waco, Inc. (Waco), were informed of the laboratory results.

WORKROOM D115

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.

The abatement contractor was removing asbestos-containing pipe insulation utilizing pre-manufactured glove bags. The glove bags were observed visually checked prior to beginning work. Glove bag removal was being performed by two licensed workers. The abatement contractor indicated that the glove bags were smoke tested prior to beginning removal.

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.

At 10:34 am, 2 PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute.

At 12:34 pm, the sampling pumps were calibrated using a rotameter after the air within the regulated work area was sampled using PCM cassettes for 120 minutes at 10.0 liters per minute. The air sampling pumps were stopped and the cassettes were gathered for analysis.

The US EPA and Commonwealth of Virginia PCM 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 workroom D115 were reported 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 of Waco, Inc. (Waco), were informed of the laboratory results.

CLASSROOM C138

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.

At 10:45 am, two (2) PCM air samples were started within the regulated work area. The sampling pumps were calibrated using a rotameter to 10.0 liters per minute.

At 12:45 pm, the sampling pump was checked using a rotameter. The flow rate was 2.5 liters per minute. The PCM air sample was stopped and gathered for analysis.

The US EPA and Commonwealth of Virginia PCM 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 Classroom C138 were reported 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 of Waco, Inc. (Waco), were informed of the laboratory results.

General

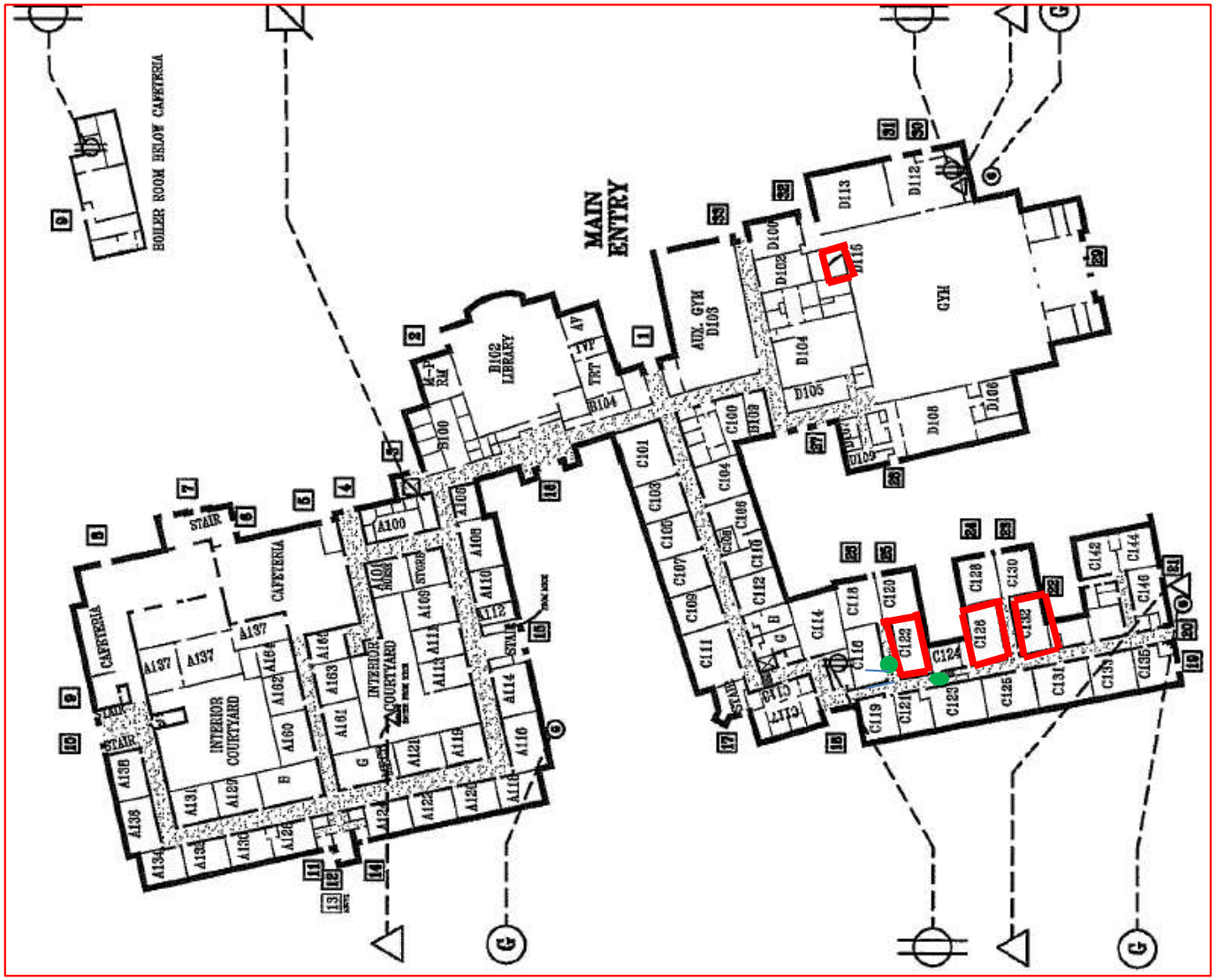
The regulated work area was surveyed to evaluate general compliance with the project specifications and applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

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 abatement contractor's transport.

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 PCM re-occupancy limit is 0.01 fibers per cubic centimeter of air (f/cc). The results were below this level.

Please note that PCM air samples collected and analyzed are only reflective of conditions at the time of the sampling event. These parameters can vary rapidly over time, depending upon several conditions including site specific construction and/or environmental factors.



Approximate Location of Abated Pipe Insulation

OWA PCM Air Sampling Locations

George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA 22301

WORK AREA SKETCH FIRST FLOOR

Scale: NTS

Project No. 47:1519-CC

Date:1/8/21

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 47:1519-CC
Project Address: 1005 Mount Vernon Avenue
Alexandria, VA-22301

Date: 1/8/2021
Page: 1 of 2

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (lpm)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
01082101SS	FC-IWA/ Classroom C136	6:42 AM	8:42 AM	10.0	10.0	10.0	120	1200.0	3.0	100	0.001
01082102SS	FC-IWA/ Classroom C136	6:42 AM	8:42 AM	10.0	10.0	10.0	120	1200.0	2.0	100	0.001
01082103SS	FC-IWA/ Classroom C125	6:56 AM	8:56 AM	10.0	10.0	10.0	120	1200.0	0.0	100	0.000
01082104SS	FC-IWA/ Classroom C125	6:56 AM	8:56 AM	10.0	10.0	10.0	120	1200.0	0.0	100	0.000
01082105SS	FC-IWA/ Hallway Between Classroom C116 & C122	7:00 AM	9:00 AM	10.0	10.0	10.0	120	1200.0	2.0	100	0.001
01082106SS	FC-IWA/ Hallway Between Classroom C116 & C122	7:00 AM	9:00 AM	10.0	10.0	10.0	120	1200.0	1.5	100	0.001
01082107SS	OWA/Hallway Outside Classroom C122	7:15 AM	10:52 AM	2.5	2.5	2.5	217	542.5	0.5	100	0.000
01082108SS	OWA/Copy Room, Outside the Double Flap Entry	7:26 AM	10:49 AM	2.5	2.5	2.5	203	507.5	0.0	100	0.000
01082109SS	FC-IWA/ Classroom C122	7:42 AM	9:42 AM	10.0	10.0	10.0	120	1200.0	0.0	100	0.000
01082110SS	FC-IWA/ Classroom C122	7:42 AM	9:42 AM	10.0	10.0	10.0	120	1200.0	0.0	100	0.001
01082111SS	FC-IWA/ Copy Room	8:07 AM	10:07 AM	10.0	10.0	10.0	120	1200.0	5.0	100	0.002
01082112SS	FC-IWA/ Copy Room	8:07 AM	10:07 AM	10.0	10.0	10.0	120	1200.0	3.5	100	0.001
01082113SS	FC-IWA/ Classroom C126	8:32 AM	10:32 AM	10.0	10.0	10.0	120	1200.0	3.5	100	0.001
01082114SS	FC-IWA/ Classroom C126	8:32 AM	10:32 AM	10.0	10.0	10.0	120	1200.0	3.5	100	0.001
01082115SS	FC-IWA/ Hallway Between Classroom C126 & C132	8:43 AM	10:43 AM	10.0	10.0	10.0	120	1200.0	1.0	100	0.000
01082116SS	FC-IWA/ Hallway Between Classroom C126 & C132	8:51 AM	10:51 AM	10.0	10.0	10.0	120	1200.0	1.5	100	0.001
01082117SS	FC-IWA/ Classroom 132	9:17 AM	11:17 AM	10.0	10.0	10.0	120	1200.0	0.0	100	0.000
01082118SS	FC-IWA/ Classroom 132	9:17 AM	11:17 AM	10.0	10.0	10.0	120	1200.0	0.0	100	0.000
01082119SS	FC-IWA/ Classroom C136	10:12 AM	12:12 PM	10.0	10.0	10.0	120	1200.0	2.5	100	0.001
01082120SS	FC-IWA/ Classroom C136	10:12 AM	12:12 PM	10.0	10.0	10.0	120	1200.0	2.5	100	0.001

ECS Technician: Suhel Shafaat **Date:** 1/8/2021

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 47:1519-CC
Project Address: 1005 Mount Vernon Avenue
Alexandria, VA-22301

Date: 1/8/2021

01082121SS	FC-IWA/ Work Room D115	10:34 AM	12:34 PM	10.0	10.0	10.0	120	1200.0	1.5	100	0.001
01082122SS	FC-IWA/ Work Room D115	10:34 AM	12:34 PM	10.0	10.0	10.0	120	1200.0	3.0	100	0.001
01082123SS	FC-IWA/ Classroom C138	10:45 AM	12:45 PM	10.0	10.0	10.0	120	1200.0	0.0	100	0.000
01082124SS	FC-IWA/ Classroom C138	10:45 AM	12:45 PM	10.0	10.0	10.0	120	1200.0	1.0	100	0.000
010821FB01SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
010821FB02SS	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 US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fibers per cubic centimeter of air (f/cc). The samples collected today were reported below the re-occupancy limit. FC = Final Clearance

ECS Technician: Suhel Shafaat **Date:** 1/8/2021

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 47:1519-CC **Date:** 1/8/2021

Project Address: 1005 Mount Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: Work Room D115/Glovebag Removal of Pipe Insulation

	Work Area Location/Description	Work Room D115/Glovebag
Administrative	Training Certificates/Licenses	Satisfactory
	Permits	N/A
	EPA/State/Local Notification	Satisfactory
Work Area	Public Access Restricted	Satisfactory
	Warning Signs/Tape Posted	Satisfactory
Negative Air Filtration	Number of Units	0
	Pre-Filters In-Use/Available	N/A
	Exhausted from Work Area	N/A
	Pressure Differential Monometer Operating	N/A
Equipment	HEPA Vacuum Available	Satisfactory
	Amended Water Sprayers	Satisfactory
Decontamination Enclosure	Clean Room	N/A
	Shower Water Available	N/A
	Waste Water Filtration In-Use	N/A
	Disposable Towels	N/A
	Soap	N/A
	Equipment Room	N/A
Personal Protective Equipment	Type of Respirator	Half-Face APR
	Type of Filters Used	P100
	Disposable Protective Clothing	Satisfactory
	Work Area Acceptable	Yes

Notes:

ECS Technician: Michael P. Hamill **Date:** 1/8/2021

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 47:1519-CC **Date:** 1/8/2021

Project Address: 1005 Mount Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: 1st Floor Classroom C122, Hallway Between Rooms C116 and C122, Hallway Between C126 and C132, Copy Room/ Removal of Pipe Insulation Using Wrap and Cut Method

	Work Area Location/Description	1st Floor Classroom C122, Hallway
Administrative	Training Certificates/Licenses	Satisfactory
	Permits	N/A
	EPA/State/Local Notification	Satisfactory
Work Area	Public Access Restricted	Satisfactory
	Warning Signs/Tape Posted	Satisfactory
Negative Air Filtration	Number of Units	0
	Pre-Filters In-Use/Available	N/A
	Exhausted from Work Area	N/A
	Pressure Differential Monometer Operating	N/A
Equipment	HEPA Vacuum Available	Satisfactory
	Amended Water Sprayers	Satisfactory
Decontamination Enclosure	Clean Room	N/A
	Shower Water Available	N/A
	Waste Water Filtration In-Use	N/A
	Disposable Towels	N/A
	Soap	N/A
	Equipment Room	N/A
Personal Protective Equipment	Type of Respirator	Half-Face APR
	Type of Filters Used	P100
	Disposable Protective Clothing	Satisfactory
	Work Area Acceptable	Yes

Notes: Double flap was used at the door entry and dropcloth was placed on the floor.

ECS Technician: Michael P. Hamill **Date:** 1/8/2021

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 47:1519-CC **Date:** 1/8/2021

Project Address: 1005 Mount Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: Work Room D115/Glovebag Removal of Pipe Insulation

	Work Area Location/Description	Work Room D115/Glovebag
Decontamination Enclosure	Floors and Walls Clean	N/A
	No Debris Present	N/A
	Signage Intact	Satisfactory
	Shower Functioning	N/A
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	N/A
	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	N/A
	Pre-Filters Clean	N/A
	Exhaust Properly Vented	N/A
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	N/A
	Debris Bagged/Sealed	Satisfactory
	Work Area Secured from Public Access	Satisfactory
Air Samples Collected	Number of PCM Air Samples	0
	Number of PCM Blank Samples	0
	Work Area Acceptable	Yes

Notes:

ECS Technician: Michael P. Hamill **Date:** 1/8/2021

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 47:1519-CC **Date:** 1/8/2021

Project Address: 1005 Mount Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: Work Room D115/Glovebag Removal of Pipe Insulation

	Work Area Location/Description	Work Room D115/Glovebag
Decontamination Enclosure	Floors and Walls Clean	N/A
	No Debris Present	N/A
	Signage Intact	Satisfactory
	Shower Functioning	N/A
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	Floors	Satisfactory
	Walls	Satisfactory
	Ceiling	N/A
	Windows	N/A
	Mechanical Equipment	N/A
	Ducts	N/A
	Pipes	Satisfactory
	Lighting	N/A
	Other Surfaces	Satisfactory
	Specified ACM Removed	Satisfactory
	Work Area Encapsulated	Satisfactory
	Negative Air Filtration Functioning	N/A
	Waste Bags Removed	Satisfactory
	Final Clearance Air Sample Type	PCM
	Number of Samples Collected	2
	Sample Volume (liters)	1200
	Work Area Acceptable	Yes

Notes:

ECS Technician: Michael P. Hamill **Date:** 1/8/2021

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 47:1519-CC **Date:** 1/8/2021

Project Address: 1005 Mount Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: 1st Floor Classrooms C122, C126, C132, C136, C138, Hallway Between Rooms C116 and C122, Copy Room, Hallway Between C126 and C132/ Removal of Pipe Insulation Using Wrap and Cut Method

	Work Area Location/Description	1st Floor Classrooms C122, C126,
Decontamination Enclosure	Floors and Walls Clean	N/A
	No Debris Present	N/A
	Signage Intact	Satisfactory
	Shower Functioning	N/A
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	All Critical Barriers Intact	N/A
	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	N/A
	Pre-Filters Clean	N/A
	Exhaust Properly Vented	N/A
	No Eating/Drinking/Smoking in Work Area	Satisfactory
End of Shift Checklist	Negative Air Filtration Machines Operating	N/A
	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: Michael P. Hamill **Date:** 1/8/2021

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 47:1519-CC **Date:** 1/8/2021

Project Address: 1005 Mount Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description:

	Work Area Location/Description	1st Floor Classrooms C116, C122,
Decontamination Enclosure	Floors and Walls Clean	N/A
	No Debris Present	N/A
	Signage Intact	Satisfactory
	Shower Functioning	N/A
	Used Suits/Towels in Waste Bag	Satisfactory
Interior of Work Area	Floors	Satisfactory
	Walls	Satisfactory
	Ceiling	N/A
	Windows	N/A
	Mechanical Equipment	N/A
	Ducts	N/A
	Pipes	Satisfactory
	Lighting	N/A
	Other Surfaces	Satisfactory
	Specified ACM Removed	Satisfactory
	Work Area Encapsulated	N/A
	Negative Air Filtration Functioning	N/A
	Waste Bags Removed	Satisfactory
	Final Clearance Air Sample Type	PCM
	Number of Samples Collected	20 (2 in each Classrooms and
	Sample Volume (liters)	1200
	Work Area Acceptable	Yes

Notes:

ECS Technician: Michael P. Hamill **Date:** 1/8/2021

Appendix III: Certifications/ Licenses

DPOR License Lookup License Number 3309001240

License Details

Name	SHAFAAT, SUHEL
License Number	3309001240
License Description	Asbestos Project Monitor License
Rank	Asbestos Project Monitor
Address	MANASSAS, VA 20109
Initial Certification Date	2003-09-10
Expiration Date	2020-10-31

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

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DPOR License Lookup build 1,410 (built 2020-07-20 04:21:46).

ASBESTOS ABATEMENT MONITORING AND BULK SAMPLING REPORT

DRAFT

GEORGE WASHINGTON MIDDLE SCHOOL
1005 MOUNT VERNON AVENUE
ALEXANDRIA, VIRGINIA 22301

ECS PROJECT NO. 47:1519-C7

FOR

ALEXANDRIA CITY PUBLIC SCHOOLS

OCTOBER 15, 2019

October 15, 2019

Mr. John Finnigan
Alexandria City Public Schools
1340 Braddock Place
Suite 620
Alexandria, Virginia 22314

ECS Project No. 47:1519-C7

DRAFT

Reference: Asbestos Abatement Monitoring and Bulk Sampling Report, George Washington Middle School, 1005 Mount Vernon Avenue, Alexandria, Virginia

Dear Mr. Finnigan:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Alexandria City Public Schools 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 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

Signature for Bobby L. Rhett
Bobby L. Rhett
Project Manager
brhett@ecslimited.com
703-471-8400

Signature for Diana Krass
Diana Krass
Senior Project Manager
dkrass@ecslimited.com
703-471-8400

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TABLE OF APPENDICES

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1.0 PROJECT DESCRIPTION

The asbestos abatement work was performed by WACO, Inc., in general from July 15, 2019 through August 23, 2019, and included the removal of the following asbestos-containing materials (ACMs):

- Floor Tile and Mastic - A130, A132, A134, A136, and A138;
- Floor Tile and Mastic - Stairwell near Entrance 34/35:
- Carpet Mastic - C116, C118, C120, C122.

2.0 ECS SCOPE OF WORK

ECS was tasked with performing visual assessments and evaluations, bulk sampling of suspect asbestos-containing materials, abatement activity 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 Bulk Sampling

The suspect asbestos-containing material sampling was performed by a Commonwealth of Virginia licensed asbestos inspector who has received EPA accredited training. 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. 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. 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.

The following suspect asbestos-containing materials (ACMs) were sampled and submitted for PLM analysis for asbestos content during the project:

- Yellow Carpet Mastic (no asbestos detected);
- Gray Floor Leveling Compound (no asbestos detected):
- Black Carpet Mastic (5% Chrysotile).

3.2 Asbestos Removal

Asbestos abatement was performed by WACO, Inc. within regulated work areas in each area of the building. The regulated work areas within the subject building consisted of isolated areas with critical barriers, signs, and danger tape. Floor tile and mastics were abated within enclosures constructed of 6-mil polyethylene sheeting placed under negative pressure.

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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.).

3.4 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, wet methods) adequate to keep fiber concentrations on air samples collected outside the regulated work areas below the EPA PCM re-occupancy limit of 0.01 fibers per cubic centimeter (f/cc). Air sample results are included with the attached daily field notes.

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.

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.

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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.

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Appendix I: Asbestos Bulk Sample Laboratory Reports

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Bulk Asbestos Analysis

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

NVLAP Lab Code: 200664-0

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

Attn: Diana Krass

Project: ACPS GW Middle School/47:1519-C7

Lab Order ID: 71920940
Analysis ID: 71920940_PLM
Date Received: 8/9/2019
Date Reported: 8/10/2019

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
1 *71920940PLM_1*	Yellow carpet masitc	None Detected		100% Other	Yellow Non Fibrous Homogeneous Dissolved
2 *71920940PLM_2*	Yellow carpet masitc	None Detected		100% Other	Yellow Non Fibrous Homogeneous Dissolved
3 *71920940PLM_3*	Gray leveling compound	None Detected		100% Other	Gray Non Fibrous Homogeneous Dissolved
4 *71920940PLM_4*	Gray leveling compound	None Detected		100% Other	Gray Non Fibrous Homogeneous Dissolved
5 *71920940PLM_5*	Black carpet mastic (2nd layer)	5% Chrysotile		95% Other	Black Non Fibrous Homogeneous Dissolved
6 *71920940PLM_6*	Black carpet mastic (2nd layer)	Not Analyzed			

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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%.

Anna Roseman (6)

Analyst

Approved Signatory

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

Lab Use Only
Lab Order ID: 1920940
Client Code: _____

Company Contact Information	
Company: ECS Mid-Atlantic	Contact: Diana Krass
Address: 14026 Thunderbolt Pl	Phone ☐:
Chantilly, VA 20151	Fax ☐:
	Email ☒: dkrass@ecslimited.com

Billing/Invoice Information	Turn Around Times			
Company:	90 Min.	☐	48 Hours	☐
Contact:	3 Hours	☐	72 Hours	☐
Address:	6 Hours	☐	96 Hours	☐
	12 Hours	☐	120 Hours	☐
	24 Hours	☒	144+Hours	☐

Asbestos Test Types	
PLM EPA 600/R-93/116 (PLM)	☒
Positive stop	☒
PLM Point Count 400 (PT4)	☐
PLM Point Count 1000 (PTM)	☐
PCM NIOSH 7400-A Rules (PCM)	☐
B Rules (PCB) ☐ TWA (PTA)	☐
TEM AHERA (AHE)	☐
TEM Level II (LII)	☐
TEM NIOSH 7402 (TNI)	☐
TEM Bulk Qualitative (TBL)	☐
TEM Bulk Chatfield (TBS)	☐
TEM Bulk Quantitative (TBQ)	☐
TEM Wipe ASTM D6480-05	☐
TEM Microvac ASTM D5755-02	☐
TEM Water EPA 100.2 (TW1)	☐
Other: _____	☐

PO Number: 47:1519-C7
Project Name/Number: GW Middle School (ACPS) /47:1519-C7

DRAFT

Sample ID #	Description/Location	~~Volume~~ Area / Location	Comments
1	Yellow carpet mastic	C118	
2	Yellow carpet mastic	C120	
3	gray leveling compound	C118	
4	gray leveling compound	C118	
5	black carpet mastic (2nd layer)	C120	
6	black carpet mastic (2nd layer	C120	

Accepted ☒
Rejected ☐

Total # of Samples 6

Relinquished by	Date/Time	Received by	Date/Time
Bourne	8/8/19	P Hurley	8/9 10:30 AM

A-F-017 EXP: 2/4/2021

Appendix II: Certifications/ Licenses

DRAFT

COMMONWEALTH of VIRGINIA

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

EXPIRES ON
07-31-2020

NUMBER
3303004293

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

CATHERINE GRACE BOURNE
525 N HOWARD ST
APT 204
ALEXANDRIA, VA 22304

DPOR

Mary Broz-Vaughan, Acting Director

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

DPOR-LIC (05/2015)

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

(DETACH HERE)

DPOR COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR ASBESTOS, LEAD, AND HOME INSPECTORS
ASBESTOS INSPECTOR LICENSE
NUMBER: 3303004293 EXPIRES: 07-31-2020

CATHERINE GRACE BOURNE
525 N HOWARD ST
APT 204
ALEXANDRIA, VA 22304

(FOLD)

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

DPOR-PC (05/2015)

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Appendix III: Daily Field Reports with Air Sample Results

DRAFT

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 19, 2019

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School - ACM Monitoring**

ECS Job # **47:1519-C7**

Permits:

Location: **1005 Mount Vernon Avenue Arlington, VA**

We are enclosing: **X** Field Reports **X** For your use **X** As requested

ENCL:

Field Report # 1 07/15/2019

DRAFT

Diana D. Krass
Environmental Senior Project Manager

Bobby 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 recorded 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.	47:1519-C7
Report No.	1
Day & Date	Monday 07/15/2019
Weather	91°/ Sunny
On-Site Time	9.50
Lab Time	0.00
Travel Time*	0.00
Total	9.50
Re Obs.Time	0.00

Project **ACPS - George Washington Middle School - ACM**

Location **Arlington, VA**

Client **Alexandria City Public Schools - John Finnigan**

Remarks

Trip Charges* Tolls/Parking* Mileage*

Chargeable Items

Time of Arrival **07:00A** Departure **04:30P**

* 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 floor tiles and associated mastic in Classrooms A130, A132, A134, A136, and A138. Photographs for today's regulated work area are attached to this report.

CLASSROOMS A130, A132, A134, A136 AND A138 WORK AREA MONITORING

Prior to starting the removal of the specified materials, 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.

Prior to starting the removal of the specified materials, the abatement notification was reviewed. The abatement contractor supervisor was informed that the notification was on-site and the removal of the specified materials could begin.

Between 7:10 am and 10:00 am, the abatement contractor workers were preparing the regulated 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.

Between 11:30 and 11:35 am, two PCM air samples were started outside the work area at the decontamination unit entry, critical barrier adjacent to Classroom A129 and one PCM sample also started inside the work area. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute. The abatement contractor workers were removing floor tiles in the classroom using hand tools.

Between 3:50 pm and 3:55 pm, the sampling pumps were checked using a rotameter. The flow

DRAFT

rate was 2.5 liters per minute. The PCM air samples were stopped and gathered for analysis.

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 applicable regulations. Waste bags were placed in a temporary location outside the regulated work area. The abatement contactor finished removing floor tiles in Classrooms A130 and A138 in today's work shift.

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.

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.

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ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 1519-C7

Project Address: 1005 Mount Vernon Avenue
Arlington, VA 22301

Date: 07/15/2019

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (min)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
07151901SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07151902SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07151903SS	OWA/1st floor, Classrooms A130 to A138, At Decontamination Unit Entry	11:30 AM	3:50 PM	2.5	2.5	2.5	260	650.0	1.5	100	0.001
07151904SS	OWA/1st floor, Classrooms A130 to A138,Critical Barrier near Clasroom A129	11:32 AM	3:52 PM	2.5	2.5	2.5	260	650.0	1.0	100	0.001
07151905SS	IWA/1st floor, Classrooms A130 to A138	11:35 AM	3:55 PM	2.5	2.5	2.5	260	650.0	2.0	100	0.002

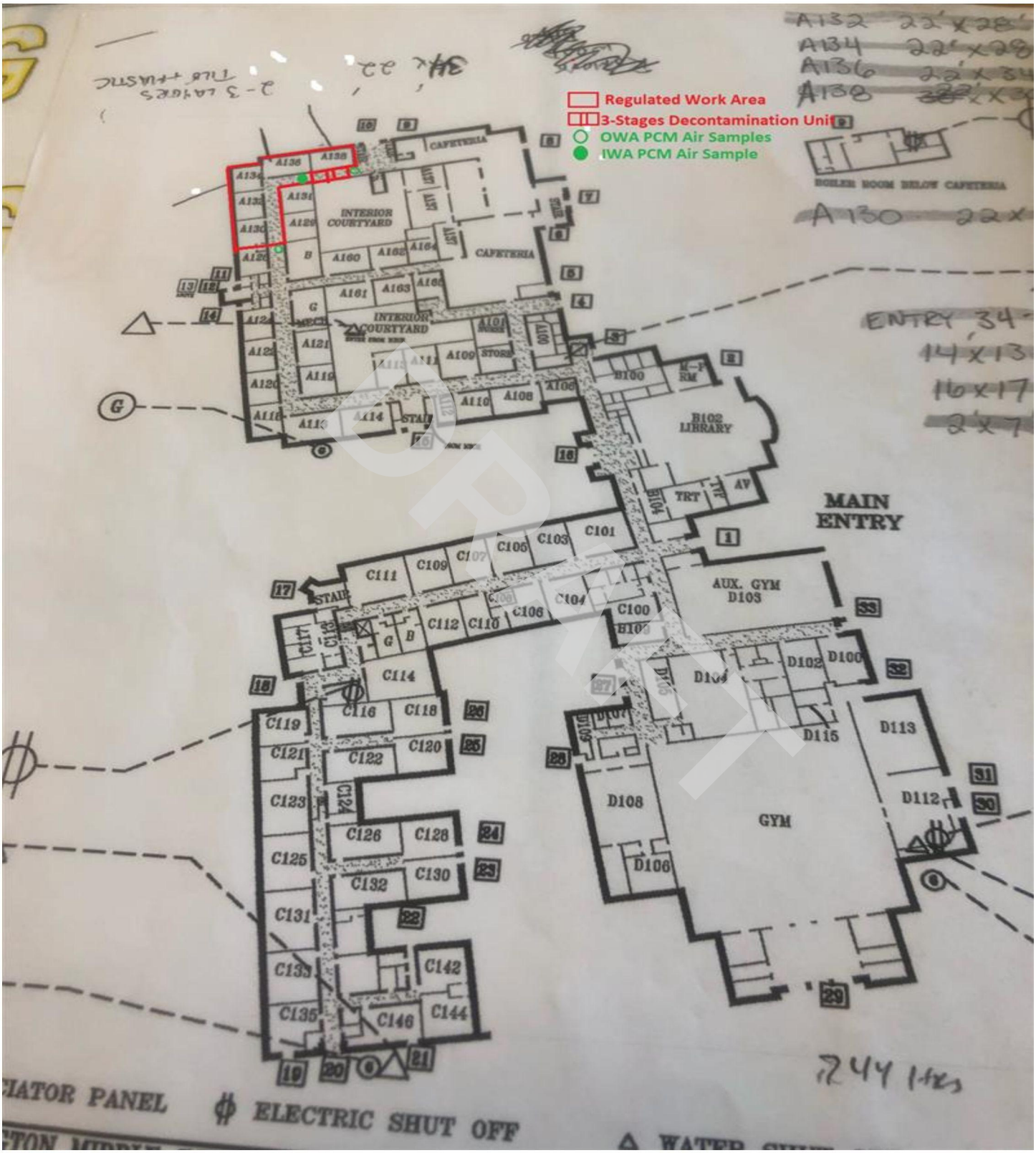
NFD = None Fibers Detected; OWA = Outside Work Area; IWA = Inside Work Area; FC = Final Clearance

Notes: The Commonwealth of Virginia re-occupancy limit is < or = 0.01 f/cc.

DRAFT

ECS Technician: Suhel Shafaat

Date: 07/15/2019



Attachment No. 1

Regulated Work Area and Sampling Location in Classrooms A130 to A138

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 1519-C7 **Date:** 07/15/2019

Project Address: 1005 Mount Vernon Avenue
Arlington, VA 22301

Work Area Location/Description: 1st Floor Classrooms A130, A132, A134, A136 and A138/Removal of Floor Tiles

Administrative	Training Certificates/Licenses	Satisfactory
	Permits	N/A
	EPA/State/Local Notification	Satisfactory
Work Area	Public Access Restricted	Satisfactory
	Warning Signs/Tape Posted	Satisfactory
Negative Air Filtration	Number of Units	7
	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	N/A
	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: Bucket of water was provided by the contractor for washing hands,face and respirator.

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ECS Technician: Suhel Shafaat **Date:** 07/15/2019

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-C7 **Date:** 07/15/2019

Project Address: 1005 Mount Vernon Avenue
Arlington, VA 22301

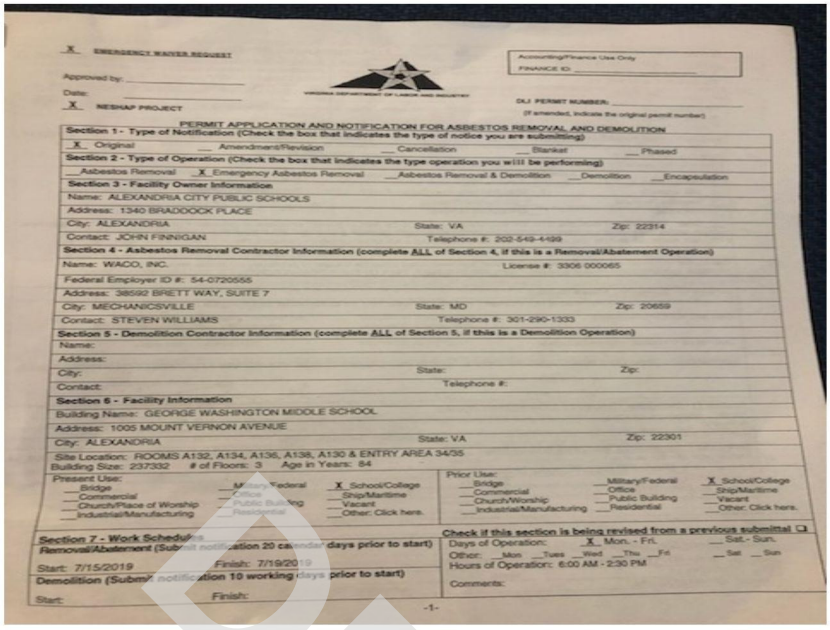
Work Area Location/Description: 1st Floor Classrooms A130, A132, A134, A136 and A138/Removal of Floor Tiles

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	3
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

DRAFT

ECS Technician: Suhel Shafaat **Date:** 07/15/2019



X EMERGENCY WAIVER REQUEST

Approved by: _____

Date: _____

X NESHAP PROJECT

Accounting/Finance Use Only

FINANCE ID: _____

DLI PERMIT NUMBER: _____

(If amended, indicate the original permit number)

PERMIT APPLICATION AND NOTIFICATION FOR ASBESTOS REMOVAL AND DEMOLITION

Section 1 - Type of Notification (Check the box that indicates the type of notice you are submitting)

X Original __ Amendment/Revision __ Cancellation __ Blanket __ Phased

Section 2 - Type of Operation (Check the box that indicates the type operation you will be performing)

__ Asbestos Removal X Emergency Asbestos Removal __ Asbestos Removal & Demolition __ Demolition __ Encapsulation

Section 3 - Facility Owner Information

Name: ALEXANDRIA CITY PUBLIC SCHOOLS

Address: 1340 BRADDOCK PLACE

City: ALEXANDRIA State: VA Zip: 22314

Contact: JOHN FINNIGAN Telephone #: 202-549-4199

Section 4 - Asbestos Removal Contractor Information (complete ALL of Section 4, if this is a Removal/Abatement Operation)

Name: WACO, INC. License #: 3306 000065

Federal Employer ID #: 54-0720555

Address: 38592 BRETT WAY, SUITE 7

City: MECHANICSVILLE State: MD Zip: 20659

Contact: STEVEN WILLIAMS Telephone #: 301-290-1333

Section 5 - Demolition Contractor Information (complete ALL of Section 5, if this is a Demolition Operation)

Name:

Address:

City: State: Zip:

Contact: Telephone #:

Section 6 - Facility Information

Building Name: GEORGE WASHINGTON MIDDLE SCHOOL

Address: 1005 MOUNT VERNON AVENUE

City: ALEXANDRIA State: VA Zip: 22301

Site Location: ROOMS A132, A134, A136, A138, A130 & ENTRY AREA 34/35

Building Size: 237332 # of Floors: 3 Age in Years: 64

Present Use: __Bridge __Commercial __Church/Place of Worship __Industrial/Manufacturing __Military/Federal __Office __Public Building __Residential X School/College __Ship/Maritime __Vacant __Other: Click here.

Prior Use: __Bridge __Commercial __Church/Worship __Industrial/Manufacturing __Military/Federal __Office __Public Building __Residential X School/College __Ship/Maritime __Vacant __Other: Click here.

Section 7 - Work Schedule

Removal/Abatement (Submit notification 20 calendar days prior to start)

Start: 7/15/2019 Finish: 7/19/2019

Demolition (Submit notification 10 working days prior to start)

Start: Finish:

Check if this section is being revised from a previous submittal ☐

Days of Operation: X Mon. - Fri. __ Sat.- Sun.

Other: __Mon __Tues __Wed __Thu __Fri __Sat __Sun

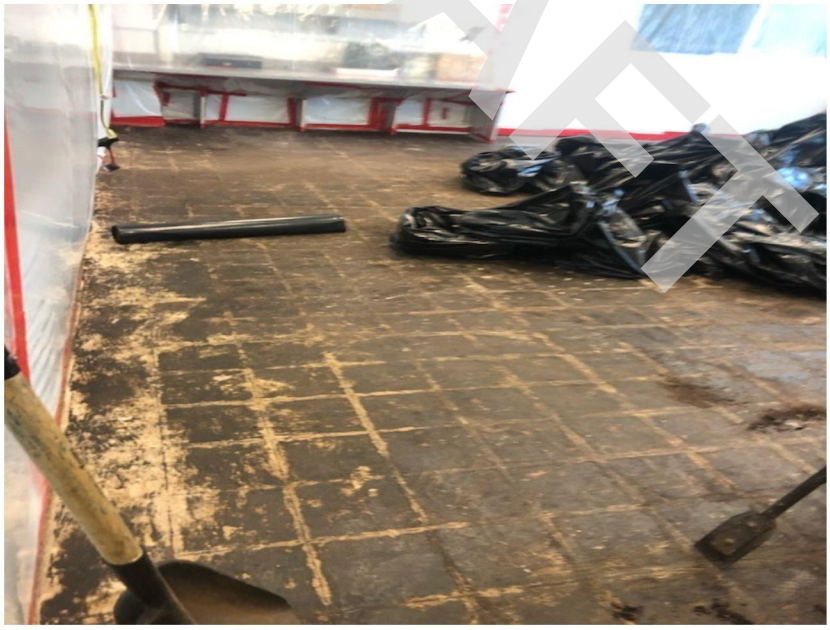
Hours of Operation: 6:00 AM - 2:30 PM

Comments:

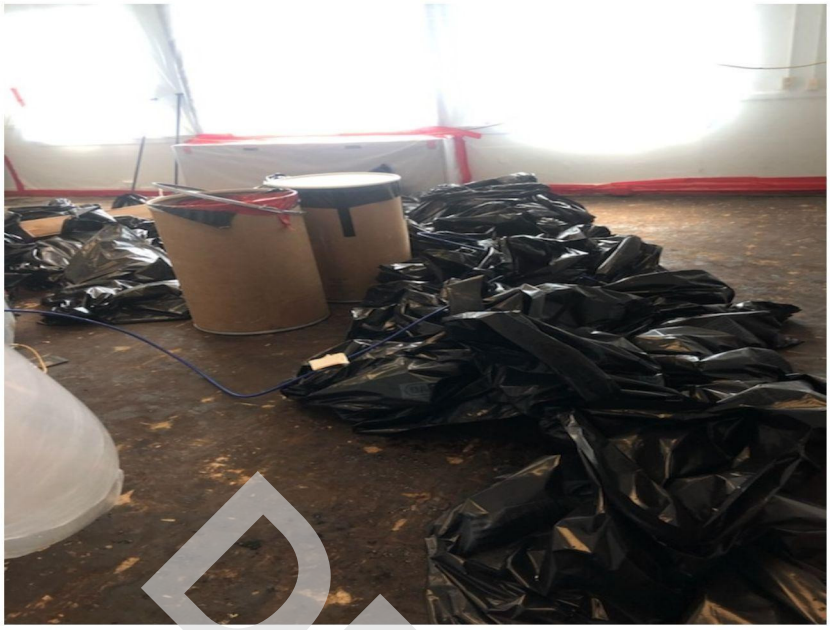
-1-

DRAFT

Attachment No. 1
View of the abatement notification



Attachment No. 2
View of the floor tiles removed in classroom A130



Attachment No. 3
View of the floor tiles removed in classroom A138

DRAFT

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 19, 2019

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School - ACM Monitoring**

ECS Job # **47:1519-C7**

Permits:

Location: **1005 Mount Vernon Avenue Arlington, VA**

We are enclosing: **X** Field Reports **X** For your use **X** As requested

ENCL:

Field Report # 2 07/16/2019

DRAFT

Diana D. Krass
Environmental Senior Project Manager

Bobby Rhett
Environmental Project Manager

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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 recorded 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.	47:1519-C7
Report No.	2
Day & Date	Tuesday 07/16/2019
Weather	93°/ Sunny
On-Site Time	10.50
Lab Time	0.00
Travel Time*	0.00
Total	10.50
Re Obs.Time	0.00

Project **ACPS - George Washington Middle School - ACM**

Location **Arlington, VA**

Client **Alexandria City Public Schools - John Finnigan**

Remarks

Trip Charges* Tolls/Parking* Mileage*

Chargeable Items

Time of Arrival **06:00A** Departure **04:30P**

* 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 to be removed today are asbestos-containing floor tile and associated mastic from Classrooms A130, A132, A134, A136, and A138. ECS noted that Classroom A130 had four layers of floor tile, and Classrooms A132, A134, A136, and A138 had three layers of floor tile. Photographs for today's regulated work area are attached to this report.

CLASSROOMS A130, A132, A134, A136, AND A138 WORK AREA MONITORING

Between 6:50 am and 6:55 am, two PCM air samples were started outside the work area at the decontamination unit entry, critical barrier adjacent to Classroom A129 and one PCM sample also started inside the work area. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute. The abatement contractor workers were removing floor tiles in Classrooms in A132, A134, A136, and floor mastic in Classroom A138.

Between 10:50 am and 10:55 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 for analysis. A new set of air samples were started.

ECS observed the abatement contractor placing the specified asbestos-containing materials in 6-mil polyethylene bags which were double-bagged, or lined waste barrels. The waste bags and barrels were sealed in general accordance with applicable regulations. Waste bags and barrels were placed in a temporary location inside the regulated work area.

Between 3:30 pm and 3:35 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 for analysis.

GENERAL

DRAFT

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. **47:1519-C7**
Report No. **2**
Project **ACPS - George Washington Middle School - ACM**
Day & Date **Tuesday 07/16/2019**

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.

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.

DRAFT

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 1519-C7 **Date:** 07/16/2019

Project Address: 1005 Mount Vernon Avenue, Arlington, VA 22301 **Page:** 1 of 1

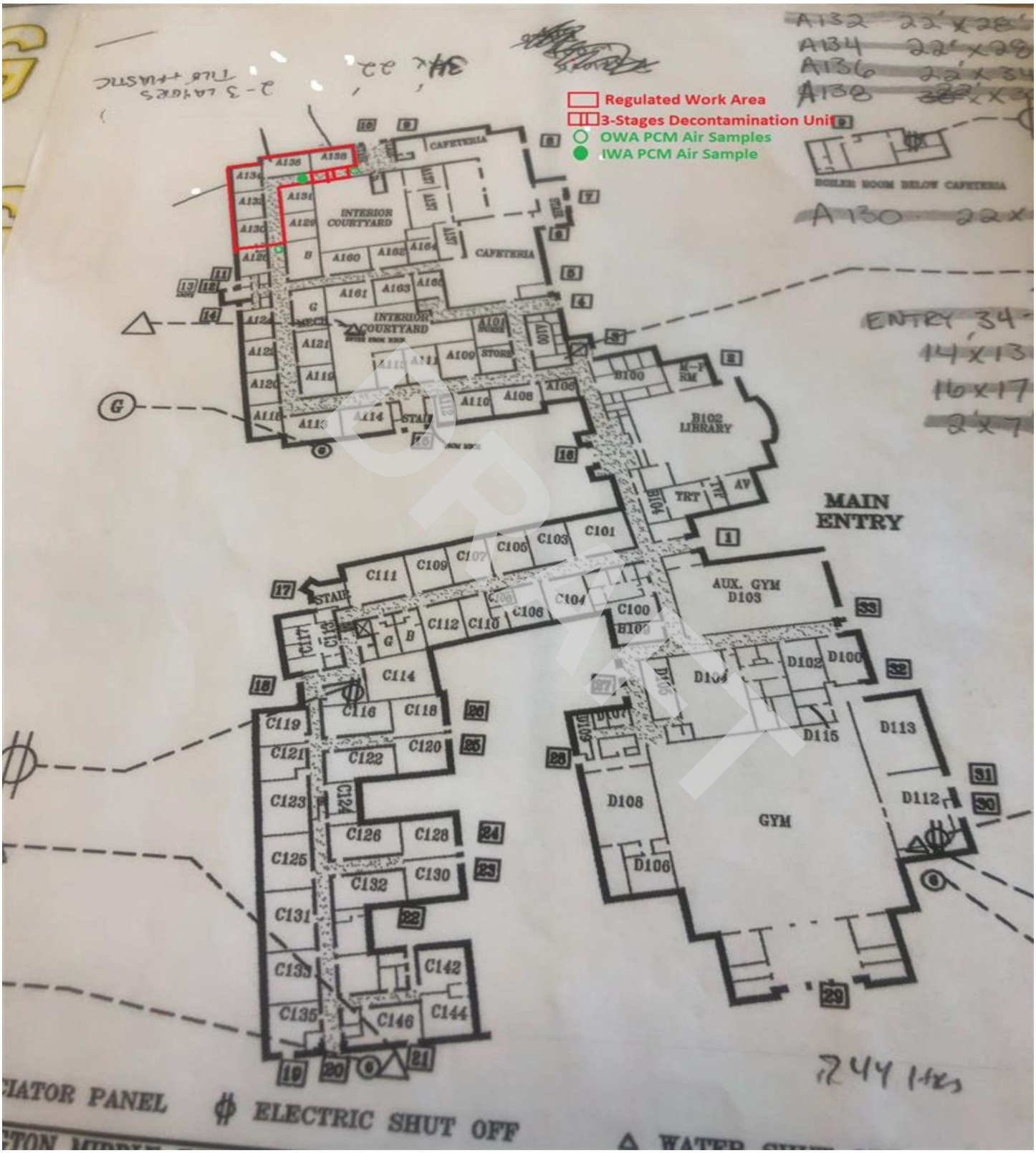
Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (min)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
07161901SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07161902SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07161903SS	OWA/1st floor, Classrooms A130 to A138, At Decontamination Unit Entry	6:50 AM	10:50 AM	2.5	2.5	2.5	240	600.0	2.0	100	0.002
07161904SS	OWA/1st floor, Classrooms A130 to A138,Critical Barrier near Clasroom A129	6:52 AM	10:52 AM	2.5	2.5	2.5	240	600.0	0.0	100	0.000
07161905SS	IWA/1st floor, Classrooms A130 to A138	6:55 AM	10:55 AM	2.5	2.5	2.5	240	600.0	4.0	100	0.003
07161906SS	OWA/1st floor, Classrooms A130 to A138, At Decontamination Unit Entry	10:50 AM	3:30 PM	2.5	2.5	2.5	280	700.0	3.0	100	0.002
07161907SS	OWA/1st floor, Classrooms A130 to A138,Critical Barrier near Clasroom A129	10:52 AM	3:32 PM	2.5	2.5	2.5	280	700.0	1.5	100	0.001
07161908SS	IWA/1st floor, Classrooms A130 to A138	10:55 AM	3:35 PM	2.5	2.5	2.5	280	700.0	3.0	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 < and = 0.01 f/cc.

DRAFT

ECS Technician: Suhel Shafaat **Date:** 07/16/2019


Regulated Work Area
3-Stages Decontamination Unit
OWA PCM Air Samples
IWA PCM Air Sample
A132 22'x28'
A134 22'x28
A136 22'x34
A138
A130 22x
ENTRY 34
14'x13
16x17
2x7
INTERIOR COURTYARD
CAFETERIA
BOILER ROOM BELOW CAFETERIA
A160
A161
A163
A164
A165
A166
A167
A168
A169
A170
A171
A172
A173
A174
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A202

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-C7 **Date:** 07/16/2019

Project Address: 1005 Mount Vernon Avenue
Arlington, VA 22301

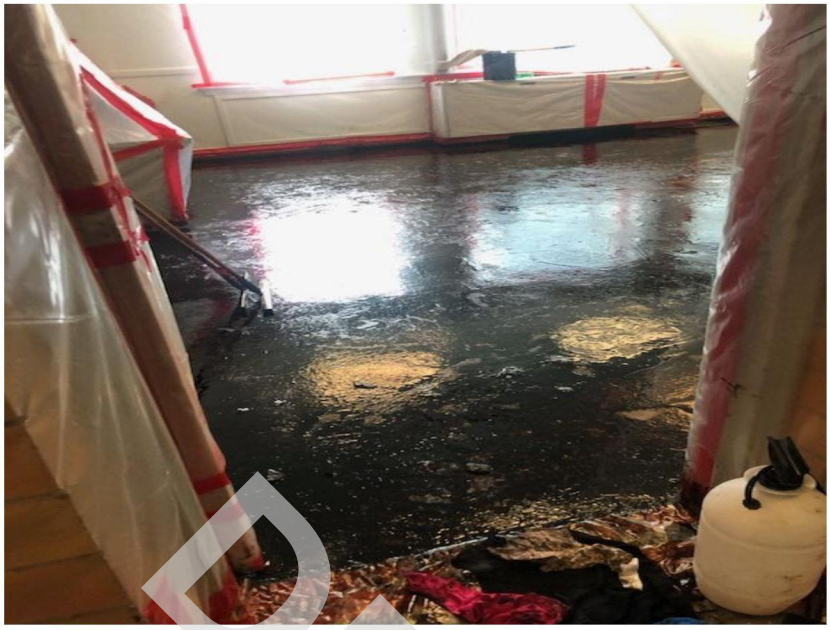
Work Area Location/Description: 1st Floor Classrooms A130,A132,A134,A136 and A138/ Removal of Floor Tiles and Associated Mastic

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	6
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

DRAFT

ECS Technician: Suhel Shafaat **Date:** 07/16/2019



Attachment No. 1
View of Classroom A134 following application of mastic solvent



Attachment No. 2
View of Classroom A130 following removal of floor tile

DRAFT

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

LETTER OF TRANSMITTAL

July 19, 2019

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School - ACM Monitoring**

ECS Job # **47:1519-C7**

Permits:

Location: **1005 Mount Vernon Avenue Arlington, VA**

We are enclosing: **X** Field Reports **X** For your use **X** As requested

ENCL:

Field Report # 3 07/17/2019

DRAFT

Diana D. Krass
Environmental Senior Project Manager

Bobby Rhett
Environmental Project Manager

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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.	47:1519-C7
Report No.	3
Day & Date	Wednesday 07/17/2019
Weather	97°/ Sunny
On-Site Time	12.50
Lab Time	0.00
Travel Time*	0.00
Total	12.50
Re Obs.Time	0.00

Project **ACPS - George Washington Middle School - ACM**

Location **Arlington, VA**

Client **Alexandria City Public Schools - John Finnigan**

Remarks

Trip Charges* Tolls/Parking* Mileage*

Chargeable Items

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

* 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 to be removed today are floor mastic on the first floor classrooms A130, A132, A134, A136, and A138. Sketch and Photographs for today's regulated work area is attached to this report.

WORK AREA MONITORING FOR THE 1ST FLOOR CLASSROOMS A130, A132, A134, A136, AND A138

Between 6:40 and 6:45 am, PCM air samples were started outside the work area at the decontamination unit entry and at the critical barrier adjacent to Classroom A129. A PCM sample was also started inside the work area. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute. Abatement contractor workers were removing floor mastic using buffer, wire brushes, hatchet and chemical solvent.

Between 10:00 and 10:05 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 for analysis. A new set of samples were started.

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 applicable regulations. Waste bags were labeled and placed in a waste hauling container.

Between 3:00 pm and 3:00 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 for analysis.

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. ECS noted that

DRAFT

asbestos-containing flooring materials likely remain beneath the cabinets. This material will be required to be removed at a later date when the cabinets are removed.

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

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.

DRAFT

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 1519-C7 **Date:** 07/17/2019

Project Address: 1005 Mount Vernon Avenue **Page:** 1 of 1
Arlington, VA 22301

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (min)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
07171901SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07171902SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07171903SS	OWA/1st floor, Classrooms A130 to A138, At Decontamination Unit Entry	6:40 AM	10:00 AM	2.5	2.5	2.5	200	500.0	3.0	100	0.003
07171904SS	OWA/1st floor, Classrooms A130 to A138,Critical Barrier near Clasroom A129	6:42 AM	10:02 AM	2.5	2.5	2.5	200	500.0	0.0	100	0.000
07171905SS	IWA/1st floor, Classrooms A130 to A138	6:45 AM	10:05 AM	2.5	2.5	2.5	200	500.0	2.0	100	0.002
07171906SS	OWA/1st floor, Classrooms A130 to A138, At Decontamination Unit Entry	10:00 AM	3:00 PM	2.5	2.5	2.5	300	750.0	0.5	100	0.000
07171907SS	OWA/1st floor, Classrooms A130 to A138,Critical Barrier near Clasroom A129	10:02 AM	3:02 PM	2.5	2.5	2.5	300	750.0	0.0	100	0.000
07171908SS	IWA/1st floor, Classrooms A130 to A138	10:05 AM	3:05 PM	2.5	2.5	2.5	300	750.0	2.0	100	0.001

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

Notes: The Commonwealth of Virginia re-occupancy limit is < and = 0.01 f/cc.

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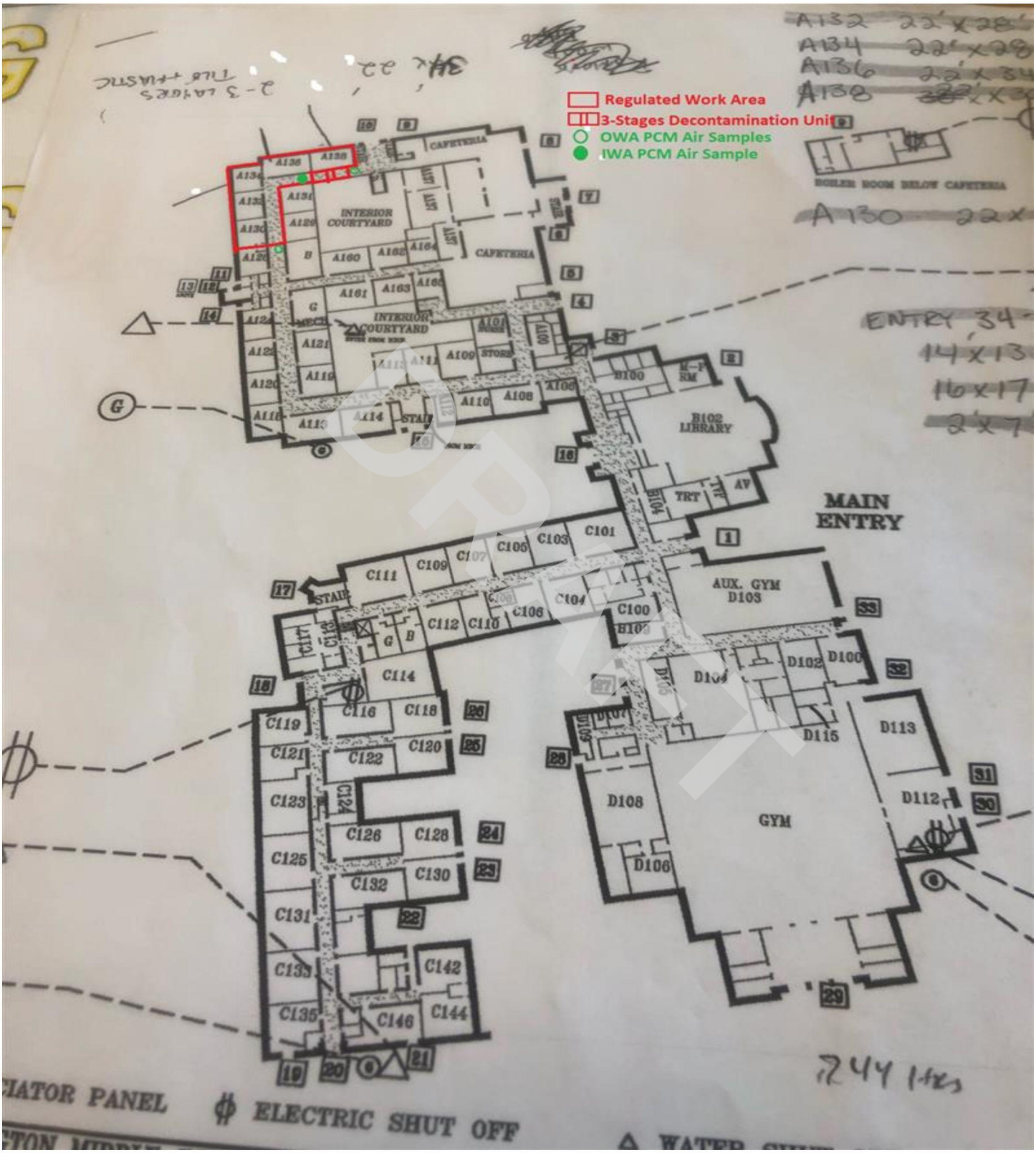
ECS Technician: Suhel Shafaat **Date:** 07/17/2019



Attachment No. 1

Regulated Work Area and Sampling Location in Classrooms A130 to A138

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-C7 **Date:** 07/17/2019

Project Address: 1005 Mount Vernon Avenue
Arlington, VA 22301

Work Area Location/Description: 1st Floor Classrooms A130, A132, A134, A136 and A138/Removal of Floor Mastic

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	6
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

DRAFT

ECS Technician: Suhel Shafaat **Date:** 07/17/2019

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 1519-C7 **Date:** 07/17/2019

Project Address: 1005 Mount Vernon Avenue
Arlington, VA 22301

Work Area Location/Description: 1st Floor Classrooms A130, A132, A134, A136 and A138/Removal of Floor Mastic

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	
	Number of Samples Collected	
	Sample Volume (liters)	
	Work Area Acceptable	Yes

Notes:
Work area encapsulated at 6 pm.
Asbestos contain material may be present under countertop and wooden cabinet in classroom A136 which was not accessible and not within the scope of work of the abatement contractor.
TEM Aggressive Final Clearance Samples will be collected on next business day.

DRAFT

ECS Technician: Suhel Shafaat **Date:** 07/17/2019



Attachment No. 1
View of Classroom A130 following removal of floor mastic



Attachment No. 2
View of Classroom A132 following removal of floor mastic

DRAFT



Attachment No. 3
View of Classroom A134 following removal of floor mastic



Attachment No. 4
View of Classroom A136 following removal of floor mastic

DRAFT



Attachment No. 5
View of Classroom A138 following removal of floor mastic

DRAFT

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

LETTER OF TRANSMITTAL

July 19, 2019

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School - ACM Monitoring**

ECS Job # **47:1519-C7**

Permits:

Location: **1005 Mount Vernon Avenue Arlington, VA**

We are enclosing: **X** Field Reports **X** For your use **X** As requested

ENCL:

Field Report # 4 07/18/2019

DRAFT

Stephen Geraci, E.I.T., CHMM
Principal, Environmental Manager

Bobby 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.	47:1519-C7
Report No.	4
Day & Date	Thursday 07/18/2019
Weather	91°/ Sunny
On-Site Time	4.00
Lab Time	0.00
Travel Time*	0.00
Total	4.00
Re Obs.Time	0.00

Project	ACPS - George Washington Middle School - ACM
Location	Arlington, VA
Client	Alexandria City Public Schools - John Finnigan

Remarks

Trip Charges* Tolls/Parking* Mileage*

Chargeable Items

Time of	Arrival	Departure
	06:00A	10:00A

* 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 onsite, as requested, to run final clearance samples on the 1st floor classrooms A130, A132, A134, A136 and A138. No abatement activities performed on this day. Abatement contractor supervisor Mr. Catalino Lopez of Waco, Inc. informed the undersigned that they will prepare the regulated work area in the stairwell near Entry 34/35 on next business day.

FINAL CLEARANCE SAMPLING ON THE 1ST FLOOR CLASSROOMS A130, A132, A134, A136 AND A138

After waiting from prior day 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.

Between 9:45 and 9:50 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 Analytical, Inc. for analysis.

The EPA and 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 equal to or less than 70 s/mm2. The EMSL laboratory informed ECS that the analytical results of the TEM final clearance air samples collected from the Classroom A130, A132, A134, A136, and A138 found the airborne asbestos fiber concentrations to be less than this maximum allowable concentration. The client and abatement contractor supervisor were informed of the results. A

DRAFT

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. **47:1519-C7**
Report No. **4**
Project **ACPS - George Washington Middle School - ACM**
Day & Date **Thursday 07/18/2019**

copy of the laboratory report is attached.

DRAFT

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: 191908456
Customer ID: ECMA78
Customer PO:
Project ID:

Attention: Bobby Rhett
ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151

Phone: (703) 471-8400
Fax: (703) 471-8400
Received Date: 07/18/2019 10:45 AM
Analysis Date: 07/18/2019
Collected Date: 07/18/2019

Project: GEORGE WASHINGTON MIDDLE SCHOOL/ 1519- C7/ AGGRESSIVE SAMPLING

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)
071819 01SS *191908456-0001*	FINAL CLEARANCE, IWA, 1ST FL CLASSRMS A130-A138	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
071819 02SS *191908456-0002*	FINAL CLEARANCE, IWA, 1ST FL CLASSRMS A130-A138	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
071819 03SS *191908456-0003*	FINAL CLEARANCE, IWA, 1ST FL CLASSRMS A130-A138	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
071819 04SS *191908456-0004*	FINAL CLEARANCE, IWA, 1ST FL CLASSRMS A130-A138	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
071819 05SS *191908456-0005*	FINAL CLEARANCE, IWA, 1ST FL CLASSRMS A130-A138	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049

DRAFT

Analyst(s)

Emily Baker (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: 07/18/2019 16:55 PM

OrderID: 191908456

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 191908456

PHONE:
FAX:

Company Name: ECS Mid-Atlantic, LLC		**EMSL Customer ID:**	
Street: 14026 Thunderbolt Place, Suite 100		**City:** Chantilly	**State/Province:** VA
Zip/Postal Code: 20151-3232	**Country:** USA	**Telephone #:** 571-329-2721	**Fax #:**
Report To (Name): Bobby Rhett		**Please Provide Results:** ☐ Fax ☒ Email	
Email Address: BRhett@ecslimited.com		**Purchase Order:**	
Project Name/Number: ACPS- George Washington Middle School 1519-CT		**EMSL Project ID** *(Internal Use Only)*:	
U.S. State Samples Taken: VA		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☒ Same ☐ Different - If Bill to is Different note Instructions in Comments**
Third Party Billing requires written authorization from third party

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)
☐ NYS 198.8 SOF-V
☐ 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 EPA 600/R-93/116 with milling prep (<1%)
☐ 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 (BC only)

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
071819 0155	Final Clearance, IWA, 1st Floor Classrooms A130-A138	1200 L	7/18/19
0255			
0355			
0455			
0555			

Client Sample # (s): 071819 0155 - 071819 0355 **Total # of Samples:** 13

Relinquished (Client): **Date:** 7/18/19 **Time:**

Received (Lab): L. Bosworth Walk In **Date:** **Time:**

Comments/Special Instructions: Please only analyze the IWA samples. Aggressive Sampling. IWA – Inside Work Area OWA – Outside Work Area

RECEIVED
EMSL ANALYTICAL, INC.
BELTSVILLE, MD
2019 JUL 18 A 10:45

Page 1 of 2 pages

Controlled Document – Asbestos COC – R10 – 05/09/2016

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EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*:

191908456

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
071819 0655	Final Clearance, OWA, 1st Floor classrooms A130-A138	1200 L	7/18/19
0755			
0855			
0955			
1055			
1155	Field Blank (open 30 sec before by entrance)	N/A	
1255	Field Blank (open 30 sec before in Ambient)		
1355	Sealed Blank (Not opened)		

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RECEIVED
EMSL ANALYTICAL, INC.
BELTSVILLE, MD
2019 JUL 18 A 10:45

***Comments/Special Instructions:**

Page 2 of 2 pages

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 22, 2019

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School - ACM Monitoring**

ECS Job # **47:1519-C7**

Permits:

Location: **1005 Mount Vernon Avenue Arlington, VA**

We are enclosing: **X** Field Reports **X** For your use **X** As requested

CC: **Waco Inc. - Chris Lanham**

ENCL:

Field Report # 5 07/20/2019

Diana D. Krass
Environmental Senior Project Manager

Bobby Rhett
Environmental Project Manager

DRAFT

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 recorded 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.	47:1519-C7
Report No.	5
Day & Date	Saturday 07/20/2019
Weather	84°/ Sunny
On-Site Time	15.25
Lab Time	0.00
Travel Time*	0.00
Total	15.25
Re Obs.Time	0.00

Project	ACPS - George Washington Middle School - ACM
Location	Arlington, VA
Client	Alexandria City Public Schools - John Finnigan
Contractor	Waco Inc. - Chris Lanham

Remarks

Trip Charges* Tolls/Parking* Mileage*

Chargeable Items

Time of Arrival 06:00A Departure 09:15P

* 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 floor tile and associated mastic from the stairwell near Entrance 34/35. Photographs for today's regulated work area are attached to this report.

STAIRWELL NEAR ENTRANCE 34/35 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.

Between 8:00 am and 8:02 am, two PCM air samples were started outside the work area at the decontamination unit entry, adjacent to negative air filtration unit exhaust and one PCM sample also started inside the work area. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute. Abatement contractor workers were removing floor tiles in the classroom using hand tools.

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 applicable regulations. Waste bags were labeled and placed in a waste hauling container.

Between 2:30 and 2:32 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 for analysis.

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

DRAFT

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.

Between 8:00 pm and 8:05 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 Analytical Laboratory, Inc. (EMSL) located in Beltsville, Maryland for analysis.

The US EPA and Commonwealth of Virginia maximum allowable airborne asbestos concentration following an asbestos response action is 70 structures per millimeter squared (s/mm2). In order to be deemed acceptable, the average of the interior samples analyzed must be less than or equal to 70 s/mm2. The EMSL laboratory informed ECS that the analytical results of the TEM final clearance air samples collected from the regulated area found the airborne asbestos fiber concentrations to be less than this maximum allowable concentration. The client and abatement contractor supervisor 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.

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.

DRAFT

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 1519-C7

Project Address: 1005 Mount Vernon Avenue
Arlington, VA 22301

Date: 07/20/2019

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (min)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
07201901SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07201902SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07201903SS	OWA/Stairway Vestibule (Entry 34/35), At Decontamination Unit Entry	8:00 AM	2:30 PM	2.5	2.5	2.5	390	975.0	1.0	100	0.001
07201904SS	OWA/Stairway Vestibule (Entry 34/35), At Negative Air Filtration Unit Exhaust	8:00 AM	2:30 PM	2.5	2.5	2.5	390	975.0	0.0	100	0.000
07201905SS	IWA/Stairway Vestibule (Entry 34/35)	8:02 AM	1:32 PM	2.5	2.5	2.5	330	825.0	6.0	100	0.004

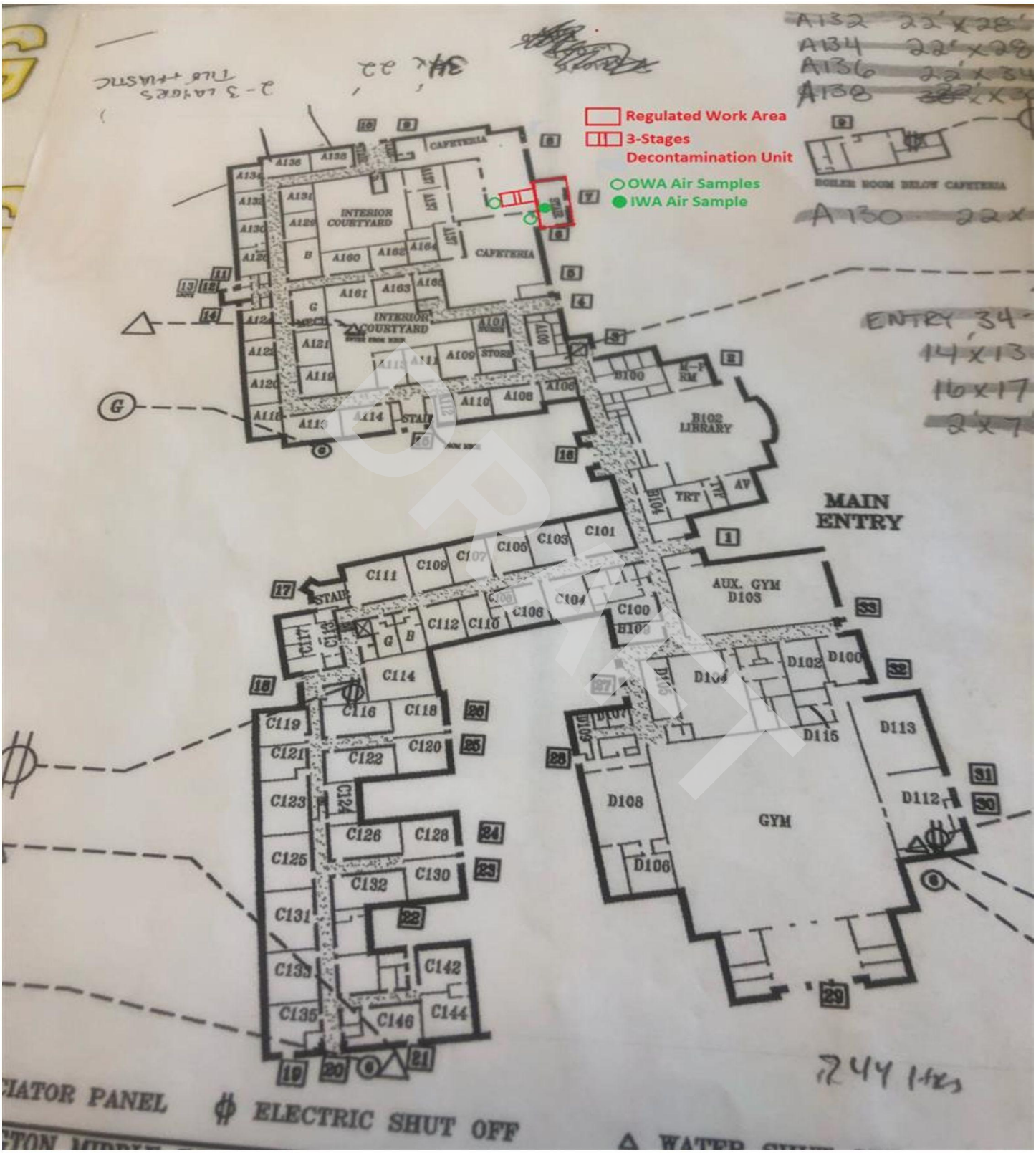
NFD = None Fibers Detected; OWA = Outside Work Area; IWA = Inside Work Area; FC = Final Clearance

Notes: The Commonwealth of Virginia re-occupancy limit is < or = 0.01 f/cc.

DRAFT

ECS Technician: Suhel Shafaat

Date: 07/20/2019



Attachment No. 1

Regulated Work Area and Sampling Location in Stairway Vestibule

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: 191908569
Customer ID: ECMA78
Customer PO:
Project ID:

Attention: Bobby Rhett
ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151
Project: ACP5 Geroge Washington MS/519/C7

Phone: (703) 471-8400
Fax: (703) 471-8400
Received Date: 07/20/2019 21:00 PM
Analysis Date: 07/21/2019
Collected Date: 07/20/2019

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)
072019-01 SS *191908569-0001*	Final Clearance IWA Stairway Vestibule (Entry 34/35)	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
072019-02 SS *191908569-0002*	Final Clearance IWA Stairway Vestibule (Entry 34/35)	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
072019-03 SS *191908569-0003*	Final Clearance IWA Stairway Vestibule (Entry 34/35)	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
072019-04 SS *191908569-0004*	Final Clearance IWA Stairway Vestibule (Entry 34/35)	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
072019-05 SS *191908569-0005*	Final Clearance IWA Stairway Vestibule (Entry 34/35)	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049

DRAFT

Analyst(s)
Emily Baker (5)

Joe Centifonti, Laboratory Manager
or other approved signatory

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

Initial report from: 07/21/2019 16:05 PM

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 1519-C7 **Date:** 07/20/2019

Project Address: 1005 Mount Vernon Avenue
Arlington, VA 22301

Work Area Location/Description: Stairway Vestibule (Entry 34/35)/ Removal of Floor Tiles and Associated Mastic

Administrative	Training Certificates/Licenses	Satisfactory
	Permits	N/A
	EPA/State/Local Notification	Satisfactory
Work Area	Public Access Restricted	Satisfactory
	Warning Signs/Tape Posted	Satisfactory
Negative Air Filtration	Number of Units	1
	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	N/A
	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: Bucket of water was provided by the contractor for washing hands,face and respirator.

DRAFT

ECS Technician: Suhel Shafaat **Date:** 07/20/2019

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-C7 **Date:** 07/20/2019

Project Address: 1005 Mount Vernon Avenue
Arlington, VA 22301

Work Area Location/Description: Stairway Vestibule (Entry 34/35)/ Removal of Floor Tiles and Associated Mastic

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	3
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

DRAFT

ECS Technician: Suhel Shafaat **Date:** 07/20/2019

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 1519-C7 **Date:** 07/20/2019

Project Address: 1005 Mount Vernon Avenue
Arlington, VA 22301

Work Area Location/Description: Stairway Vestibule (Entry 34/35)/ Removal of Floor Tiles and Associated Mastic

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	N/A
	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 4:30 pm.

DRAFT

ECS Technician: Suhel Shafaat **Date:** 07/20/2019



Attachment No. 1
View of the regulated work area prepared for the removal of floor tiles and associated mastic



Attachment No. 2
View of the regulated work area following removal of floor tile and mastic

DRAFT



Attachment No. 3
View of the regulated work area following removal of floor tile and mastic

DRAFT

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 23, 2019

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

ATTN: John Finnigan

RE: **ACPS (George Washington/Charles Barrett/Cora Kelly)**

ECS Job # **47:1519-C7**

Permits:

Location: **1005 Mount Vernon Avenue Arlington, VA**

We are enclosing: **X** Field Reports **X** For your use **X** As requested

CC: **Waco Inc. - Chris Lanham**

ENCL:

Field Report # 7 08/21/2019

DRAFT

Diana D. Krass
Environmental Senior Project Manager

Bobby Rhett
Environmental Project Manager

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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 recorded 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.	47:1519-C7
Report No.	7
Day & Date	Wednesday 08/21/2019
Weather	93°/ Sunny
On-Site Time	3.75
Lab Time	0.00
Travel Time*	0.00
Total	3.75
Re Obs.Time	0.00

Project	ACPS (George Washington/Charles Barrett/Cora Kelly)
Location	Arlington, VA
Client	Alexandria City Public Schools - John Finnigan
Contractor	Waco Inc. - Chris Lanham

Remarks

Trip Charges* Tolls/Parking* Mileage*

Chargeable Items

Times of	Arrival	Departure
	07:00A	09:45A
	02:45P	03:45P

* 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.

DRAFT

The undersigned arrived onsite, as requested, to perform air monitoring and observe asbestos abatement. The undersigned met with the abatement contractor supervisor, Mr. Miguel Sandoval of Waco, Inc. to discuss work activities for today work's shift. The materials to be removed today are asbestos-containing yellow carpet glue and black mastic in Classrooms C116, C118, C120, and C122. Photographs for today's regulated work area are attached to this report.

CLASSROOMS C116, C118, C120, AND C122 WORK AREA MONITORING

Between 7:00 am and 9:30 am, ECS observed the abatement contractor workers were preparing the regulated work area.

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

Prior to starting the removal of the specified materials, 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.

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.

Between 9:40 am and 9:42 am, PCM air samples were started outside the work area at the decontamination unit entry and adjacent to the negative air filtration unit exhaust. A PCM sample was also started inside the regulated work area. The sampling pumps were calibrated using a rotameter to 2.0 liters per minute. The abatement workers were removing carpet glue and black mastic using a buffer, wire brushes, and chemical solvent.

By **Suhel Shafaat, — Environmental Technician** 1825

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. **47:1519-C7**
Report No. **7**
Project **ACPS (George Washington/Charles Barrett/Cora Kelly)**
Day & Date **Wednesday 08/21/2019**

Between 3:00 pm and 3:02 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 for analysis. ECS observed that at the end of the day, abatement contractor workers were removing the black mastic in Classroom C122.

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.

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.

DRAFT

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 1519-C7

Project Address: 1005 Mount Vernon Avenue
Arlington, VA 22301

Date: 08/21/2019

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)
08211901SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08211902SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08211903SS	OWA/1st Floor Classrooms C116,C118,C120 and C122, At Decontamination Unit Entry	9:40 AM	3:00 PM	2.0	2.0	2.0	320	640.0	1.0	100	0.001
08211904SS	IWA/1st Floor Classrooms C116,C118,C120 and C122	9:40 AM	3:00 PM	2.0	2.0	2.0	320	640.0	9.0	100	0.007
08211905SS	OWA/1st Floor Classrooms C116,C118,C120 and C122, Adjacent to Negative Air Filtration Unit Exhaust	9:42 AM	3:02 PM	2.0	2.0	2.0	320	640.0	3.5	100	0.003

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

Notes: The Commonwealth of Virginia re-occupancy limit is < and = 0.01 f/cc.

DRAFT

ECS Technician: Suhel Shafaat

Date: 08/21/2019

Jobsite

X EMERGENCY WAIVER REQUEST

Approved by: _____

Date: _____

X NESHAP PROJECT

VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY

Accounting/Finance Use Only

FINANCE ID: _____

DLI PERMIT NUMBER: _____

(If amended, indicate the original permit number)

PERMIT APPLICATION AND NOTIFICATION FOR ASBESTOS REMOVAL AND DEMOLITION

Section 1 - Type of Notification (Check the box that indicates the type of notice you are submitting)

X Original __ Amendment/Revision __ Cancellation __ Blanket __ Phased

Section 2 - Type of Operation (Check the box that indicates the type operation you will be performing)

__Asbestos Removal X Emergency Asbestos Removal __Asbestos Removal & Demolition __Demolition __Encapsulation

Section 3 - Facility Owner Information

Name: ALEXANDRIA CITY PUBLIC SCHOOLS

Address: 1340 BRADDOCK PLACE

City: ALEXANDRIA State: VA Zip: 22314

Contact: JOHN FINNIGAN Telephone #: 202-549-4499

Section 4 - Asbestos Removal Contractor Information (complete ALL of Section 4, if this is a Removal/Abatement Operation)

Name: WACO, INC. License #: 3306 000065

Federal Employer ID #: 54-0720555

Address: 38592 BRETT WAY, SUITE 7

City: MECHANICSVILLE State: MD Zip: 20659

Contact: STEVEN WILLIAMS Telephone #: 301-290-1333

Section 5 - Demolition Contractor Information (complete ALL of Section 5, if this is a Demolition Operation)

Name:

Address:

City: State: Zip:

Contact: Telephone #:

Section 6 - Facility Information

Building Name: GEORGE WASHINGTON MIDDLE SCHOOL

Address: 1005 MOUNT VERNON AVENUE

City: ALEXANDRIA State: VA Zip: 22301

Site Location: ROOMS C118, C120, C116, C122

Building Size: 237332 # of Floors: 3 Age in Years: 84

Present Use:			Prior Use:		
__Bridge	__Military/Federal	X School/College	__Bridge	__Military/Federal	X School/College
__Commercial	__Office	__Ship/Maritime	__Commercial	__Office	__Ship/Maritime
__Church/Place of Worship	__Public Building	__Vacant	__Church/Worship	__Public Building	__Vacant
__Industrial/Manufacturing	__Residential	__Other: Click here.	__Industrial/Manufacturing	__Residential	__Other: Click here.

Section 7 - Work Schedules **Check if this section is being revised from a previous submittal** ☐

Removal/Abatement (Submit notification 20 calendar days prior to start)

Start: 8/20/2019 Finish: 8/23/2019

Demolition (Submit notification 10 working days prior to start)

Start: Finish:

Days of Operation: __ Mon. - Fri. __ Sat.- Sun.

Other: __Mon X Tues X Wed X Thu X Fri __ Sat __ Sun

Hours of Operation: 6:00 AM - 4:30 PM

Comments:

-1-

Attachment No. 1

View of the Abatement Notification

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 1519-C7 **Date:** 08/21/2019

Project Address: 1005 Mount Vernon Avenue
Arlington, VA 22301

Work Area Location/Description: 1st Floor, Classrooms C1116,C118,C120 and C122/ Removal of Yellow Carpet Glue and Black Mastic

Administrative	Training Certificates/Licenses	Satisfactory
	Permits	N/A
	EPA/State/Local Notification	Satisfactory
Work Area	Public Access Restricted	Satisfactory
	Warning Signs/Tape Posted	Satisfactory
Negative Air Filtration	Number of Units	3
	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	N/A
	Waste Water Filtration In-Use	Satisfactory
	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: Bucket of water was provided by the contractor for washing hands,face and respirator.

DRAFT

ECS Technician: Suhel Shafaat **Date:** 08/21/2019

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-C7 **Date:** 08/21/2019

Project Address: 1005 Mount Vernon Avenue
Arlington, VA 22301

Work Area Location/Description: 1st Floor, Classrooms C1116,C118,C120 and C122/ Removal of Carpet Glue and Black Mastic

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	3
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

DRAFT

ECS Technician: Suhel Shafaat **Date:** 08/21/2019



Attachment No. 1
View of the work area prepared for the removal of yellow carpet glue and black mastic



Attachment No. 2
View of black mastic under removed carpet inside the regulated work area

DRAFT

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 26, 2019

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

ATTN: John Finnigan

RE: **ACPS (George Washington/Charles Barrett/Cora Kelly)**

ECS Job # **47:1519-C7**

Permits:

Location: **1005 Mount Vernon Avenue Arlington, VA**

We are enclosing: **X** Field Reports **X** For your use **X** As requested

CC: **Waco Inc. - Chris Lanham**

ENCL:

Field Report # 8 08/22/2019

Diana D. Krass
Environmental Senior Project Manager

Bobby Rhett
Environmental Project Manager

DRAFT

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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 recorded 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.	47:1519-C7
Report No.	8
Day & Date	Thursday 08/22/2019
Weather	94°/ Sunny
On-Site Time	10.50
Lab Time	0.00
Travel Time*	0.00
Total	10.50
Re Obs.Time	0.00

Project	ACPS (George Washington/Charles Barrett/Cora Kelly)
Location	Arlington, VA
Client	Alexandria City Public Schools - John Finnigan
Contractor	Waco Inc. - Chris Lanham

Remarks

Trip Charges* Tolls/Parking* Mileage*

Time of Arrival 06:00A Departure 04:30P

Chargeable Items

* 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 at George Washington Middle School, as requested, to perform air monitoring and observe asbestos abatement. The materials to be removed today are continuation of asbestos-containing yellow carpet glue and black mastic in Classrooms C116, C118, C120, and C122. Photographs for today's regulated work area are attached to this report.

CLASSROOMS C116, C118, C120, AND C122 WORK AREA MONITORING

Between 7:00 am and 7:02 am, PCM air samples were started outside the work area at the decontamination unit entry, and adjacent to the negative air filtration unit exhaust. A PCM sample was also started inside the regulated work area. The sampling pumps were calibrated using a rotameter to 2.0 liters per minute. The abatement workers were removing carpet glue and black mastic using buffer, wire brushes, and/or chemical solvent.

ECS observed the abatement contractor placing the asbestos waste materials in 6-mil polyethylene bags which were double-bagged and sealed in general accordance with applicable regulations. Waste bags were placed in a temporary location inside the regulated work area.

Between 2:30 pm and 2:32 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 for analysis. ECS observed that at the end of the day, the abatement workers finished removing mastic in Classrooms C116, and C122.

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.

DRAFT

By **Suhel Shafaat, — Environmental Technician** 1825

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. **47:1519-C7**
Report No. **8**
Project **ACPS (George Washington/Charles Barrett/Cora Kelly)** Day & Date **Thursday 08/22/2019**

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.

DRAFT

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 1519-C7

Project Address: 1005 Mount Vernon Avenue
Arlington, VA 22301

Date: 08/22/2019

Sample #	Location/Description	Start	Stop	Start Flow (lpm)	Stop Flow (lpm)	Average Flow (lpm)	Total Time (min)	Volume (l)	Fibers (#)	Field (#)	Result (f/cc)
08221901SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08221902SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08221903SS	OWA/ Classrooms C116,C118, C120 and C122/ At Decontamination Unit Entry	7:00 AM	2:30 PM	2.0	2.0	2.0	450	900.0	4.0	100	0.002
08221904SS	IWA/ Classrooms C116,C118, C120 and C122	7:00 AM	2:30 PM	2.0	2.0	2.0	450	900.0	6.5	100	0.004
08221905SS	OWA/ Classrooms C116,C118, C120 and C122, At Negative Air Filtration Unit Exhaust	7:02 AM	2:32 PM	2.0	2.0	2.0	450	900.0	0.0	100	0.000

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

Notes: The Commonwealth of Virginia re-occupancy limit is < and = 0.01 f/cc.

DRAFT

ECS Technician: Suhel Shafaat

Date: 08/22/2019

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-C7 **Date:** 08/22/2019

Project Address: 1005 Mount Vernon Avenue
Arlington, VA 22301

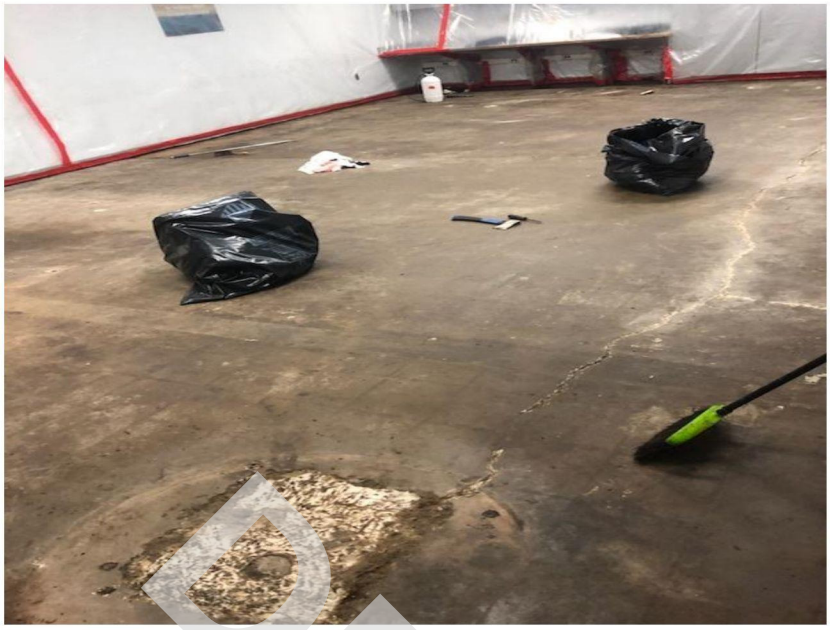
Work Area Location/Description: 1st Floor Classrooms C116,C118, C120 and C122/ Removal of Yellow Carpet Glue and Black Mastic

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:

DRAFT

ECS Technician: Suhel Shafaat **Date:** 08/22/2019



Attachment No. 1
View of Classroom C116 work area during cleanup of black mastic



Attachment No. 2
View of asbestos waste bags inside the regulated work area in Classroom C122

DRAFT



Attachment No. 3
View of the remaining floor mastic to be removed in Classroom C118



Attachment No. 4
View of the remaining carpet glue and black mastic to be removed in Classroom C120

DRAFT

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 26, 2019

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

ATTN: John Finnigan

RE: **ACPS (George Washington/Charles Barrett/Cora Kelly)**

ECS Job # **47:1519-C7**

Permits:

Location: **1005 Mount Vernon Avenue Arlington, VA**

We are enclosing: **X** Field Reports **X** For your use **X** As requested

CC: **Waco Inc. - Chris Lanham**

ENCL:

Field Report # 9 08/23/2019

DRAFT

Diana D. Krass
Environmental Senior Project Manager

Bobby Rhett
Environmental Project Manager

Disclaimer
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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 recorded 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.	47:1519-C7
Report No.	9
Day & Date	Friday 08/23/2019
Weather	76°/ Sunny
On-Site Time	12.25
Lab Time	0.00
Travel Time*	0.00
Total	12.25
Re Obs.Time	0.00

Project	ACPS (George Washington/Charles Barrett/Cora Kelly)
Location	Arlington, VA
Client	Alexandria City Public Schools - John Finnigan
Contractor	Waco Inc. - Chris Lanham

Remarks

Trip Charges* Tolls/Parking* Mileage*

Time of Arrival 06:00A Departure 06:15P

Chargeable Items

* 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 to be removed today are continuation of asbestos-containing black mastic in Classrooms C116, C118, C120, and C122. Photographs for today's regulated work area are attached to this report.

CLASSROOMS C116, C118, C120, AND C122 WORK AREA MONITORING

Between 6:35 am and 6:37 am, PCM air samples were started outside the work area at the decontamination unit entry and adjacent to the negative air filtration unit exhaust. A PCM sample was also started inside the regulated work area. The sampling pumps were calibrated using a rotameter to 2.0 liters per minute. The abatement workers were removing black mastic using buffer, wire brushes, and/or chemical solvent.

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 applicable regulations. Waste bags were labeled and placed in the abatement contractor's vehicle for transport.

Between 10:50 am and 10:52 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 for analysis.

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 for

DRAFT

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.

Between 6:00 pm and 6:05 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 Analytical Laboratory, Inc. (EMSL) located in Beltsville, Maryland for analysis.

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 be less than or equal to 70 s/mm2. EMSL informed ECS that the analytical results of the TEM final clearance air samples collected from Classrooms C116, C118, C120, and C122 found the airborne asbestos fiber concentrations to be less than this maximum allowable concentration. The client and abatement contractor supervisor, 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.

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.

DRAFT

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet
WORK AREA SAMPLES

Project Number: 1519-C7

Project Address: 1005 Mount Vernon Avenue
Arlington, VA 22301

Date: 08/23/2019

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)
08231901SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08231902SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08231903SS	OWA/1st Floor, Classrooms C116,C118,C120 and C122, At Decontamination Unit Entry	6:35 AM	10:50 AM	2.0	2.0	2.0	255	510.0	6.0	100	0.006
08231904SS	IWA/1st Floor, Classrooms C116,C118,C120 and C122	6:35 AM	10:50 AM	2.0	2.0	2.0	255	510.0	2.0	100	0.002
08231905SS	OWA/1st Floor Classrooms C116,C118,C120 and C122, At Negative Air Filtration Unit Exhaust	6:37 AM	10:52 AM	2.0	2.0	2.0	255	510.0	0.0	100	0.000

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

Notes: The Commonwealth of Virginia re-occupancy limit is < and = 0.01 f/cc.

DRAFT

ECS Technician: Suhel Shafaat

Date: 08/23/2019

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: 191910399
Customer ID: ECMA78
Customer PO:
Project ID:

Attention: Bobby Rhett
ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151
Project: ACPS George Washington / 1519 - C7

Phone: (703) 471-8400
Fax: (703) 471-8400
Received Date: 08/23/2019 19:14 PM
Analysis Date: 08/23/2019
Collected Date: 08/23/2019

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)
082319 - 01SS *191910399-0001*	IWA / Final Clearance, Classrooms C116, C118, C120 and C122	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
082319 - 02SS *191910399-0002*	IWA / Final Clearance, Classrooms C116, C118, C120 and C122	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
082319 - 03SS *191910399-0003*	IWA / Final Clearance, Classrooms C116, C118, C120 and C122	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
082319 - 04SS *191910399-0004*	IWA / Final Clearance, Classrooms C116, C118, C120 and C122	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
082319 - 05SS *191910399-0005*	IWA / Final Clearance, Classrooms C116, C118, C120 and C122	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049

DRAFT

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: 08/23/2019 23:17 PM

OrderID: 191910399

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number (*Lab Use Only*): 191910399

PHONE:
FAX:

Company Name: ECS Mid-Atlantic, LLC		**EMSL Customer ID:**	
Street: 14026 Thunderbolt Place, Suite 100		**City:** Chantilly	**State/Province:** VA
Zip/Postal Code: 20151	**Country:** USA	**Telephone #:** 571-327-2721	**Fax #:**
Report To (Name): Bobby Rhett		**Please Provide Results:** ☐ Fax ☒ Email	
Email Address: brhett@ecslimited.com		**Purchase Order:**	
Project Name/Number: ACPS George Washington/1519-C7		**EMSL Project ID** (*Internal Use Only*):	
U.S. State Samples Taken: VA		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☒ Same ☐ Different - If Bill to is Different note instructions in Comments**
Third Party Billing requires written authorization from third party

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)
☐ NYS 198.8 SOF-V
☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
☒ AHERA 40 CFR, Part 763
☐ NIOSH 7402 8/23/19
☐ 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 EPA 600/R-93/116 with milling prep (<1%)
☐ 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 (BC only)

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
082319-0155	IWA/Final Clearance, Classrooms C116, C118, C120 & C122	1200 L	8/23/19
0255			
0355			
0455			
0554			

RECEIVED
AUG 23 2019
EMSL ANALYTICAL
BELTSVILLE, MD

Client Sample # (s): 082319015S - 082319035S **Total # of Samples:** 5

Relinquished (Client): **Date:** 8/23/19 **Time:** 1700

Received (Lab): E. Unla **Date:** 8/23/19 **Time:** 1700 hrs

Comments/Special Instructions: Analyze IWA samples only. Aggressive sampling. Please cc results to MHamill@ecslimited.com and DKrass@ecslimited.com.

Controlled Document – Asbestos COC – R10 – 05/09/2016

DRAFT

OrderID: 191910399

EMSL ANALYTICAL, INC.
LABORATORY · PRODUCTS · TRAINING

Chain of Custody

EMSL Order Number *(Lab Use Only)*:

191910399

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
082319-0655	BWA Final Clearance, Classrooms C116, C118, C120, C122	1200 L	8/23/19
-0755			
-0855			
-0955			
1055			
1155	Field Blank (opened 30 secs before-by entrance)	N/A	
1255	Field Blank (opened 30 secs before-in ambient)		
1355	Sealed Blank (Not opened)		

***Comments/Special Instructions:**

RECEIVED
EMSL ANALYTICAL, INC.
BELLSVILLE, MD
2019 AUG 23 P 7:07

Analysis Completed in Accordance with EMSL's Terms and Conditions located in the Analytical Price Guide

Controlled Document-OneChain-R2-1/12/2010

DRAFT

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-C7 **Date:** 08/23/2019

Project Address: 1005 Mount Vernon Avenue
Arlington, VA 22301

Work Area Location/Description: 1st Floor Classrooms C116,C118,C120 and C122/Removal of Black Mastic

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:

DRAFT

ECS Technician: Suhel Shafaat **Date:** 08/23/2019

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 1519-C7 **Date:** 08/23/2019

Project Address: 1005 Mount Vernon Avenue
Arlington, VA 22301

Work Area Location/Description: 1st Floor Classrooms C116,C118,C120 and C122/Removal of Black Mastic

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	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 1:30 pm.

DRAFT

ECS Technician: Suhel Shafaat **Date:** 08/23/2019



Attachment No. 1
View of Classroom C116 following removal of black mastic



Attachment No. 2
View of Classroom C118 following removal of black mastic

DRAFT



Attachment No. 3
View of Classroom C120 following removal of black mastic



Attachment No. 4
View of Classroom C122 following removal of black mastic

DRAFT

ASBESTOS ABATEMENT PROJECT MONITORING SUMMARY LETTER

GEORGE WASHINGTON MIDDLE SCHOOL

1005 MOUNT VERNON AVENUE
ALEXANDRIA, VIRGINIA 22301

ECS PROJECT NO. 47:1519-CB

FOR: ALEXANDRIA CITY PUBLIC SCHOOLS

OCTOBER 12, 2020

October 12, 2020

Mr. John Finnigan
Alexandria City Public Schools
1340 Braddock Place
Facilities - 6th Floor
Alexandria, Virginia 22314
John.Finnigan@acps.k12.va.us

ECS Project No. 47:1519-CB

Reference: Asbestos Abatement Project Monitoring Summary Letter, George Washington Middle School, 1005 Mount Vernon Avenue, Alexandria, Virginia

Dear Mr. Finnigan:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Alexandria City Public Schools with this summary letter 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 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





Catey Bourne
Assistant Staff Project Manager
cbourne@ecslimited.com
703-471-8400

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

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1.0 PROJECT DESCRIPTION

The asbestos abatement work was performed by Waco, Inc., in general from July 28 through October 2, 2020 and included the removal of the asbestos-containing floor tile and mastic from the first, second, and third floor A-wing hallways, the third floor stairwell near room A301, and Rooms A100, A101A, A101B, A 129, and A131.

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 Commonwealth of Virginia regulations. Samples were collected during the project inside and 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 Commonwealth of Virginia PCM re-occupancy limit of less than or equal to0.01 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 Commonwealth of Virginia regulations (respirators, disposable protective clothing, eye protection, hard hats, gloves, etc.).

4.0 FINAL CLEARANCE AIR SAMPLING

After Waco, Inc. had removed the specified asbestos-containing materials (ACMs) and associated debris 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 Commonwealth of Virginia regulations. The results of the TEM final clearance air samples collected from each work area were found to be below the Commonwealth of 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.

The documentation of the above reference abatement activities should be add to the building's AHERA management plan.

6.0 LIMITATIONS

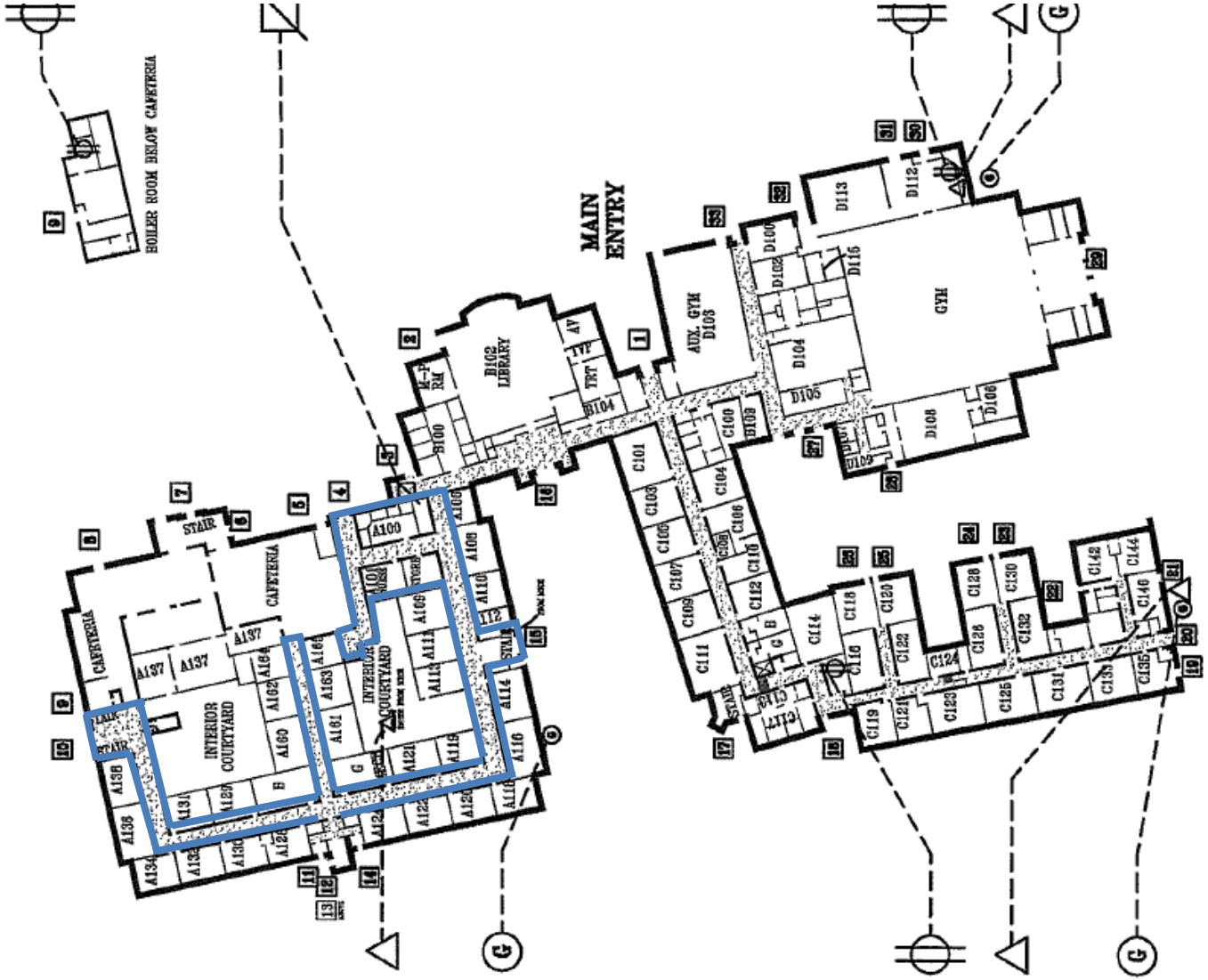
The conclusions and recommendations presented within this report are based upon a reasonable level of assessment within normal bounds and standards of professional practice for a site in this particular geographic setting. ECS is not responsible or liable for the discovery and elimination of hazards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

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: Drawings



George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA 22301

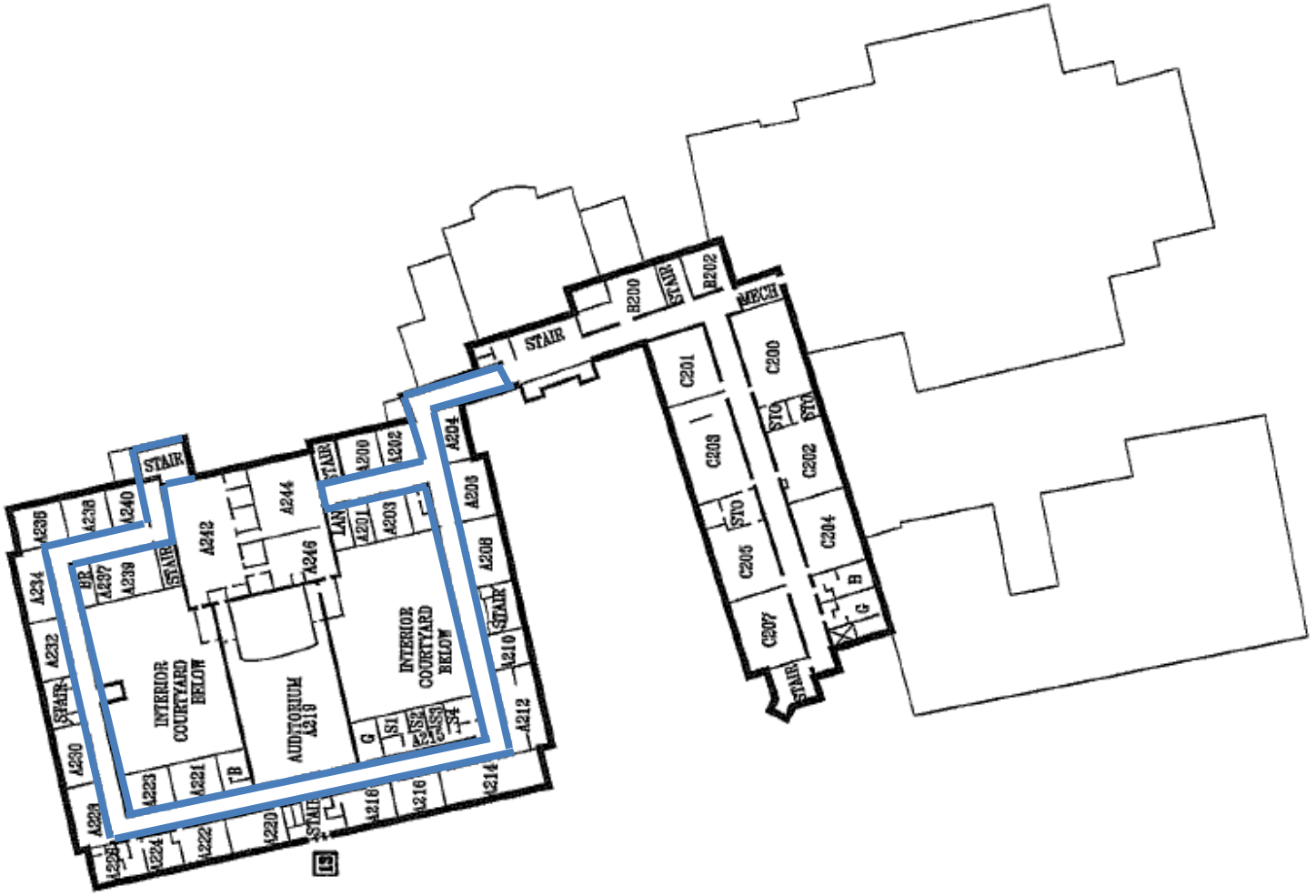
WORK AREA SKETCH FIRST FLOOR

Approximate Location of Abated Floor Tile and Mastic

Scale: NTS

Project No.
47:1519-CB

Note that ACM floor tile and/or mastic may remain in the outlined areas underneath partition walls, cabinets, furniture, etc.



Approximate Location of Abated Floor Tile and Mastic

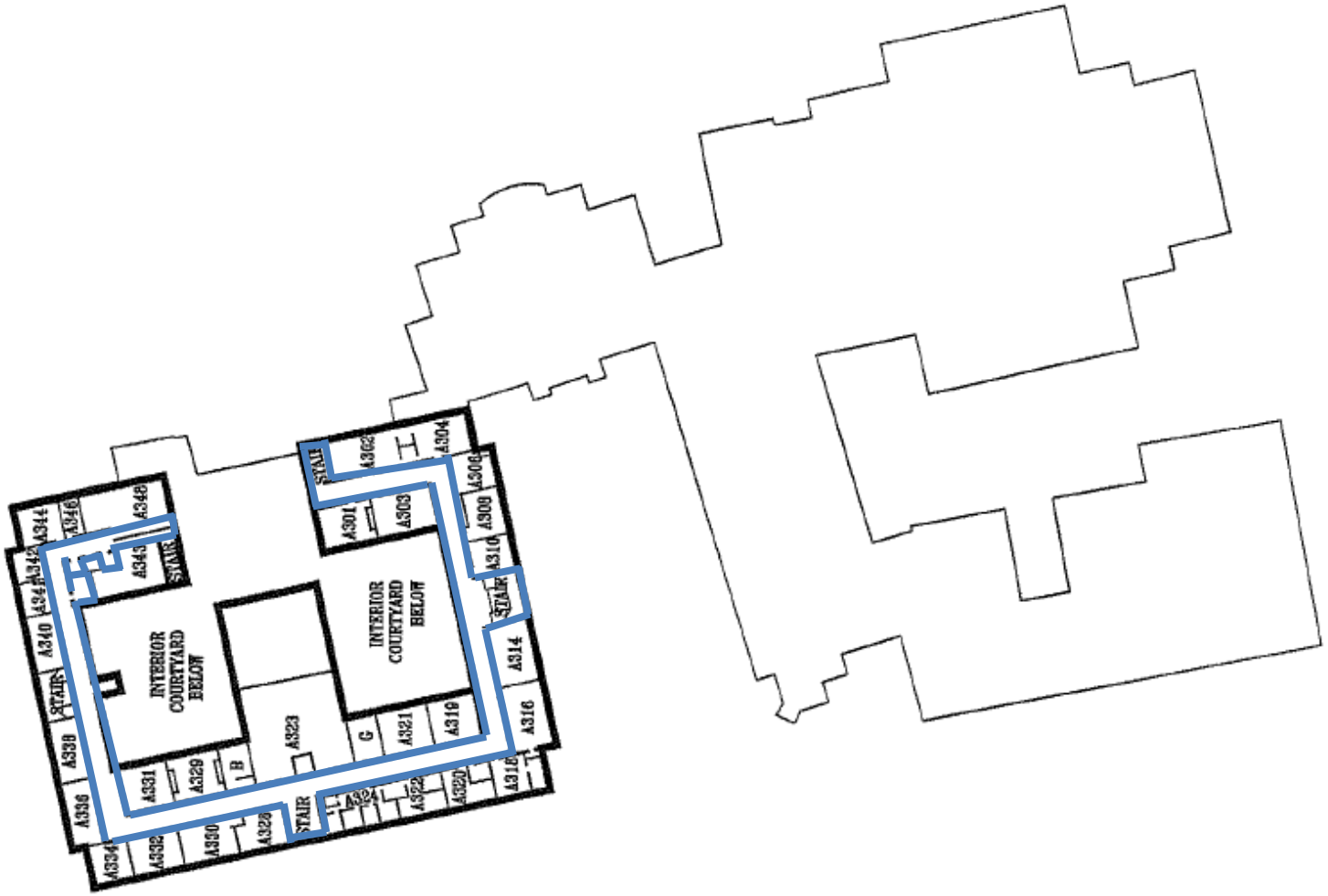
Note that ACM floor tile and/or mastic may remain in the outlined areas underneath partition walls, cabinets, furniture, etc.

George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA 22301

WORK AREA SKETCH SECOND FLOOR

Scale: NTS

Project No.
47:1519-CB



George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA 22301

ECSI

WORK AREA SKETCH THIRD FLOOR

Approximate Location of Abated Floor Tile and Mastic

Scale: NTS

Project No.
47:1519-CB

Note that ACM floor tile and/or mastic may remain in the outlined areas underneath partition walls, cabinets, furniture, etc.

Appendix II: Daily Field Reports with PCM Air Sample Results

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 29, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

CC:

ENCL: Field Report # 1 7/28/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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-CB**
Report No.	**1**
Day & Date	**Tuesday 7/28/2020**
Weather	**85 °/ Sunny**
On-Site Time	**7.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**7.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**7:00A**	**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 onsite, as requested, to perform air monitoring and observe asbestos abatement. The work planned for today includes removal of asbestos-containing floor tile and associated mastic from the second floor A Wing hallway. A work area sketch and photographs for today's regulated work area are attached to this report.

Prior to starting the removal of the specified materials, 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.

SECOND FLOOR A WING HALLWAY 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.

Between 7:50 am and 7:55 am, three PCM air samples were started outside the work area. One sample was set up at the decontamination unit entry in the hallway. One sample was set up inside the work area. The third sample was outside the critical barrier in the stairwell. The sampling pumps were calibrated using a rotameter to 2.0 liters per minute.

At 10:00 am, Mr. Michael Hamill of ECS arrived onsite to check on abatement activities.

The abatement workers were observed removing floor tile using a mechanical removal machine. Other abatement contractor workers were preparing an additional work area on the second floor hallway which will be added onto the current active containment.

Between 11:00 am and 11:45 am, the abatement workers took a lunch break.

By Suhel Shafaat 1825

66256

At 12:00 pm, the abatement workers continued with removing floor tiles in the hallway.

Between 1:30 pm and 1:35 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 for analysis.

GENERAL

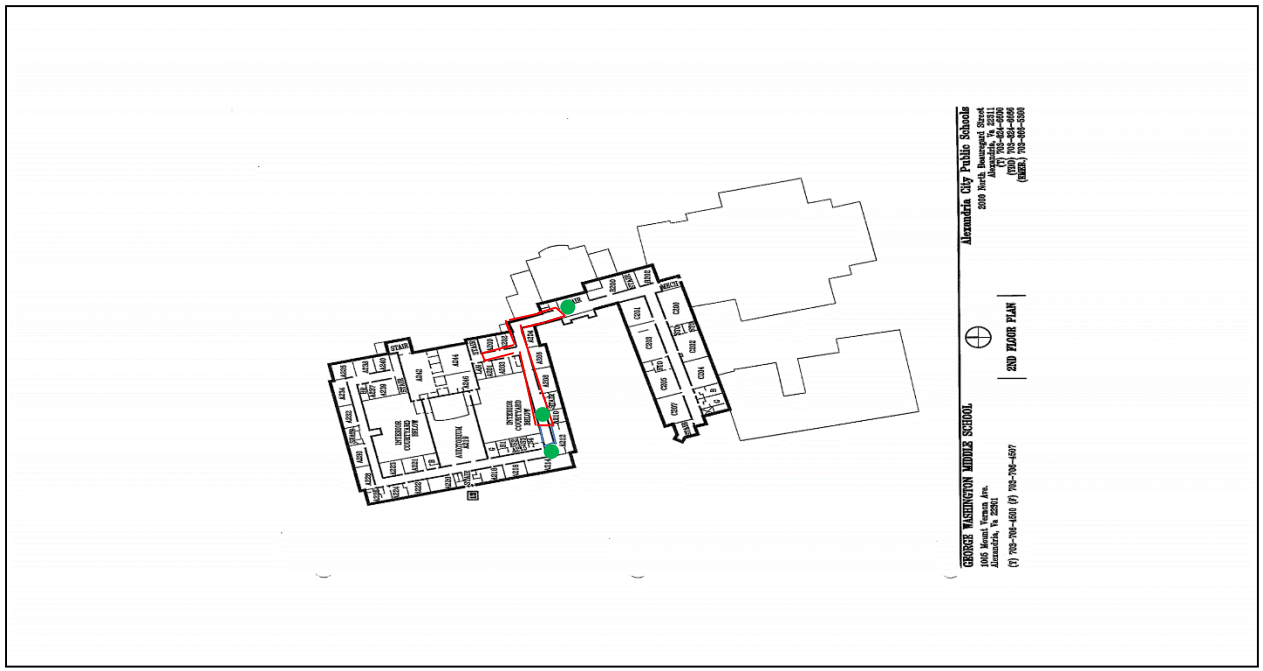
The regulated work area was surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

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 applicable regulations. Waste bags were labeled and placed in a 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 US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fibers per cubic centimeter of air (f/cc). The samples collected today were reported below the re-occupancy limit.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



Legend

- Regulated Work Area
- 3-Stages Decontamination Unit
- PCM Daily Air Sample Location

Transmittal Page 4/8

ACPS George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA

SAMPLING LOCATIONS
Alexandrian City Public School

SCALE NTS

Project No. 47:1519-CB

Date 7/28/20

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 7/28/2020
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)
07282001SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07282002SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07282003SS	OWA/2nd Floor A Wing Hallway, At Decontamination Unit Entry	7:50 AM	1:30 PM	2.0	2.0	2.0	340	680.0	2.5	100	0.002
07282004SS	IWA/2nd Floor A Wing Hallway	7:52 AM	1:31 PM	2.0	2.0	2.0	339	678.0	2.0	100	0.001
07282005SS	OWA/2nd Floor A Wing Hallway, Outside Critical Barrier in the Stairwell	7:55 AM	1:35 PM	2.0	2.0	2.0	340	680.0	0.0	100	0.000

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

Notes: The Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 f/cc. The samples collected today were reported below the re-occupancy limit.

ECS Technician: Suhel Shafaat **Date:** 7/28/2020

Attachments



View of the regulated work area following removal of floor tile

Figure 1



View of the regulated work area following removal of floor tile near double door

Figure 2

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 7/28/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: 2nd Floor A Wing Hallway/ Removal of Floor Tile and Associated Mastic

	Work Area Location/Description	2nd Floor A Wing Hallway/
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	3
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Michael P. Hamill **Date:** 7/28/2020

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 1519-CB **Date:** 7/28/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: 2nd Floor A Wing Hallway/ Removal of Floor Tiles and Associated Mastic

	Work Area Location/Description	2nd Floor A Wing Hallway/
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	N/A
	Disposable Towels	Satisfactory
	Soap	Satisfactory
	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: Abatement contractor had the permit application and notification for asbestos removal on site. The abatement permit will be provided on next business day. Bucket of water was provided by the contractor for washing hands, face and respirator.

ECS Technician: Michael P. Hamill **Date:** 7/28/2020

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 30, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

CC:

ENCL: Field Report # 2 7/29/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior Project Manager

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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-CB**
Report No.	**2**
Day & Date	**Wednesday 7/29/2020**
Weather	**74 °/ Sunny**
On-Site Time	**8.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**8.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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 onsite, as requested, to perform air monitoring and observe asbestos abatement. The material to be removed today is floor tile from the second floor east wing hallway. Abatement contractor workers were also continuing to prepare an additional area on the second floor hallway to include with the existing containment. A work area sketch and photographs for today's regulated work area are attached to this report.

SECOND FLOOR EAST WING HALLWAY WORK AREA

Between 6:48 am and 6:52 am, three PCM air samples were started. One sample was set up outside the work area at the decontamination unit entry. One sample was set up inside the work area. The third sample was outside the work area at the critical barrier in the stairwell. The sampling pumps were calibrated using a rotameter to 2.0 liters per minute.

The abatement workers were observed removing floor tiles using a floor tile removal machine and hand tools.

Between 11:00 am and 11:45 am, the abatement workers took a lunch break.

At 12:00 pm, the abatement workers continued with removing floor tiles as well as double-bagging ACM debris.

Between 1:30 pm and 1:33 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 for analysis.

GENERAL

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

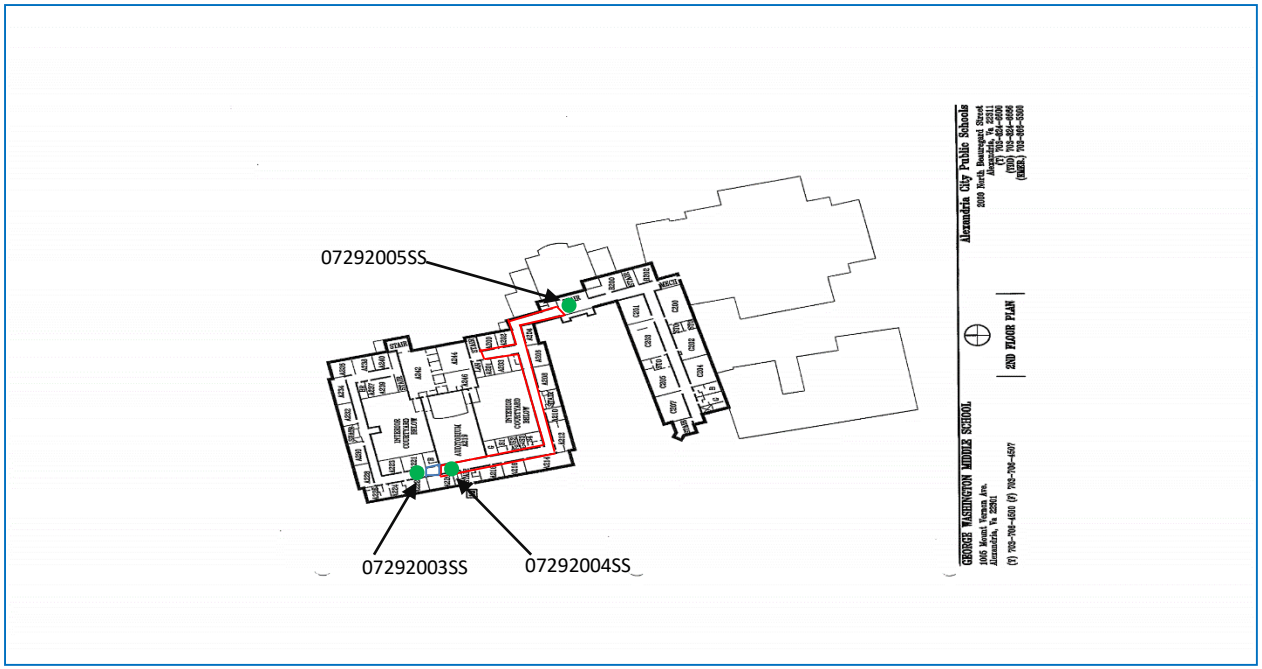
Daily Work Area Survey Checklist was completed and is attached to this report.

ECS observed the abatement contractor placing the specified asbestos-containing materials in waste barrels and 6-mil polyethylene bags which were double-bagged and sealed in general accordance with applicable regulations. Waste bags were placed in a temporary location inside the regulated work regulated 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 PCM re-occupancy limit is less than or equal to 0.01 fibers per cubic centimeter of air (f/cc). The analytical results of the daily PCM daily air samples collected from the second floor east wing hallway were reported to be less than the re-occupancy limit, which meet the project requirements.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



Legend

- Regulated Work Area
- 3-Stages Decontamination Unit
- PCM Daily Air Sample Location

Transmittal Page 4/6

ACPS George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA

SAMPLING LOCATIONS
Alexandrian City Public School

SCALE NTS

Project No. 47:1519-CB

Date 7/29/20

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 7/29/2020
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)
07292001SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07292002SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07292003SS	OWA/ 2nd Floor East Wing Hallway, At Decontamination Unit Entry	6:48 AM	1:30 PM	2.0	2.0	2.0	402	804.0	5.5	100	0.003
07292004SS	IWA/ 2nd Floor East Wing Hallway	6:49 AM	1:31 PM	2.0	2.0	2.0	402	804.0	3.5	100	0.002
07292005SS	OWA/ 2nd Floor East Wing Hallway, Outside Critical Barrier in the Stairwell	6:52 AM	1:33 PM	2.0	2.0	2.0	401	802.0	0.0	100	0.000

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

Notes: The US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fibers per cubic centimeter of air (f/cc). The analytical results of the daily PCM daily air samples collected from 2nd floor east wing hallway were reported to be less than the re-occupancy limit, which meet the project requirements.

ECS Technician: Suhel Shafaat **Date:** 7/29/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 7/29/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: 2nd Floor East Wing Hallway/ Removal of Floor Tiles and Associated Mastic

	Work Area Location/Description	2nd Floor East Wing 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	3
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Michael P. Hamill **Date:** 7/29/2020

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 3, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

CC:

ENCL: Field Report # 3 7/30/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior Project Manager

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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.*

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FIELD REPORT

Project No.	**1519-CB**
Report No.	**3**
Day & Date	**Thursday 7/30/2020**
Weather	**77 °/ Sunny**
On-Site Time	**8.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**8.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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 onsite, as requested, to perform air monitoring and observe asbestos abatement. The materials to be removed today are asbestos-containing floor tiles and associated mastic from the second floor east wing hallway.

Abatement workers continue with preparing the work area on the second floor hallway to include with the active containment. A work area sketch and photographs for today's regulated work area are attached to this report.

SECOND FLOOR EAST WING HALLWAY WORK AREA

Between 6:30 am and 6:33 am, three PCM air samples were started. One sample was set up at the decontamination unit entry. One sample was set up inside the work area. The third sample was outside the critical barrier in the stairwell. The sampling pumps were calibrated using a rotameter to 2.0 liters per minute.

The abatement workers were observed removing floor mastic while the other workers were observed double bagging ACM debris inside the work area.

Between 11:00 am and 11:45 am, the abatement workers took a lunch break.

At 12:00 pm, the abatement workers were moving the decontamination unit in the new section of the second floor hallway work area.

At 1:00 pm, the abatement workers were observed removing floor tiles in new section of the second floor hallway.

Between 1:30 pm and 1:35 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 for analysis.

GENERAL

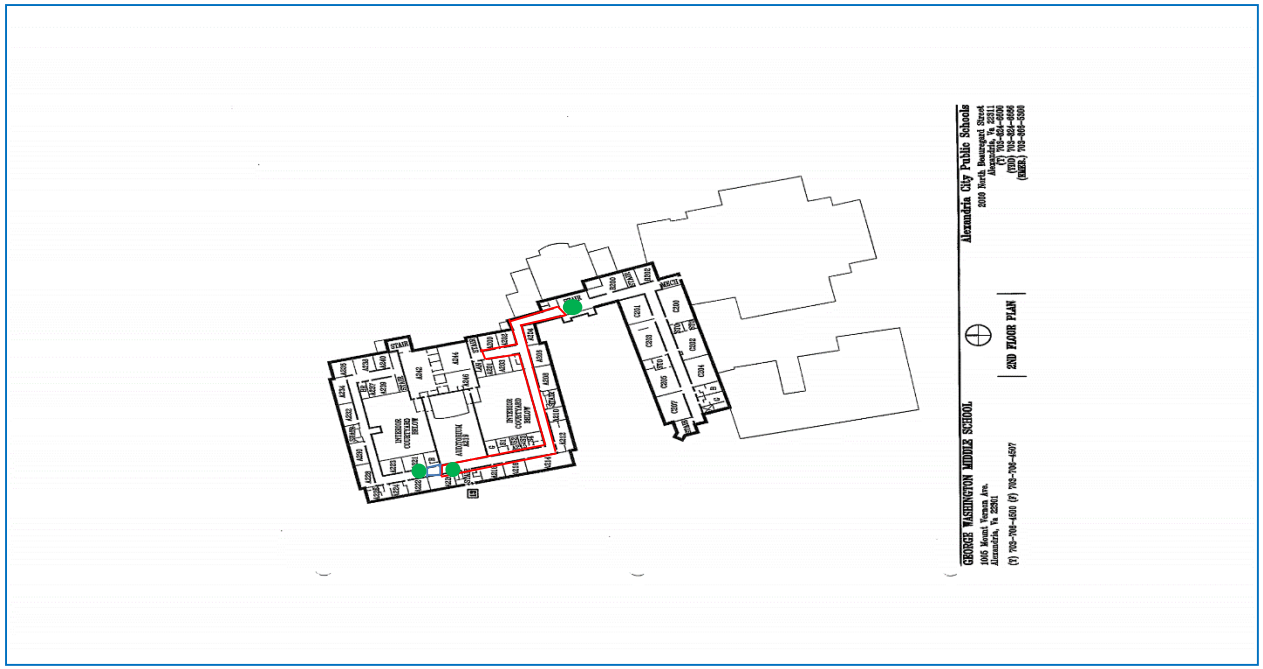
The regulated work area was surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

ECS observed the abatement contractor placing the specified asbestos-containing materials in waste barrels and 6-mil polyethylene bags which were double-bagged and sealed in general accordance with applicable regulations. Waste barrels and bags were labeled and placed in a 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 US EPA and Commonwealth of Virginia PCM re-occupancy limit is 0.01 fibers per cubic centimeter of air (f/cc). The analytical results of the daily PCM collected from the second floor east wing hallway were reported to be less than the re-occupancy limit which meet the project requirements.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



Legend

- Regulated Work Area
- 3-Stages Decontamination Unit
- PCM Daily Air Sample Location

Transmittal Page 4/9

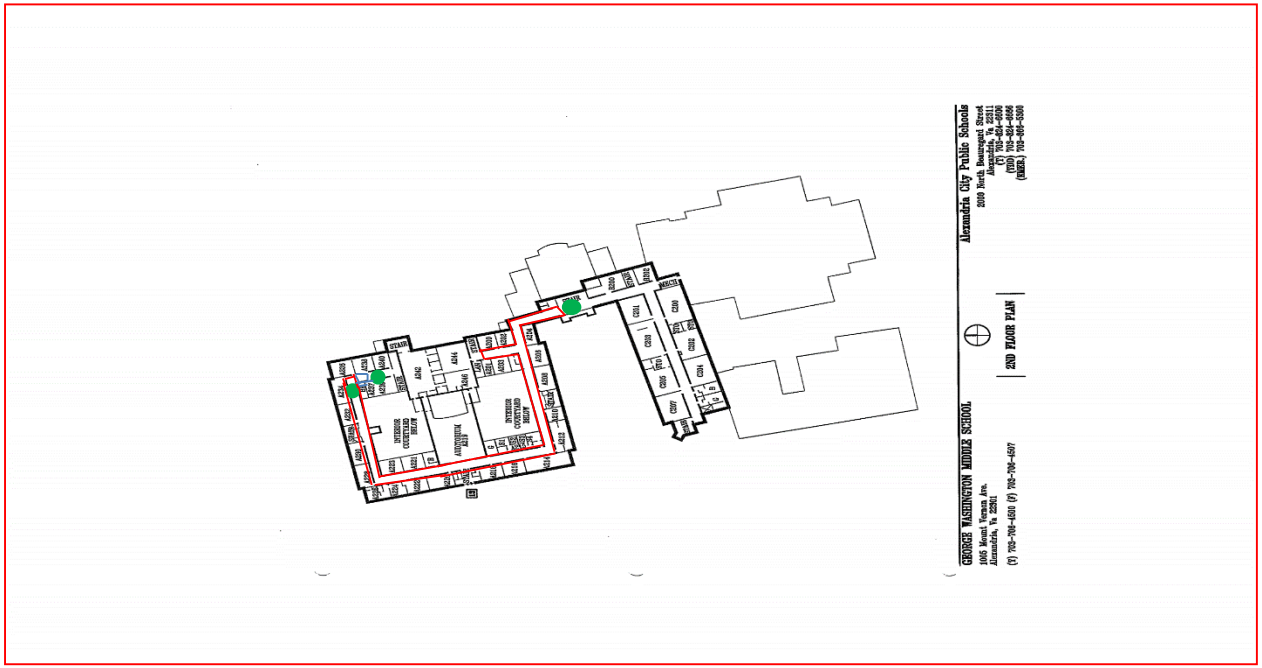
ACPS George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA

SAMPLING LOCATIONS
Alexandrian City Public School

SCALE NTS

Project No. 47:1519-CB

Date 7/30/20



Legend

- Regulated Work Area
- 3-Stages Decontamination Unit
- PCM Daily Air Sample Location

Transmittal Page 5/9

ACPS George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA

SAMPLING LOCATIONS
Alexandrian City Public School

SCALE NTS

Project No. 47:1519-CB

Date 7/30/20

Attachments



View of the work area during removal of floor mastic.

Figure 1



View of the work area during abatement activities.

Figure 2

Attachments



View of the work area during abatement activities.

Figure 3

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 7/30/2020
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)
07302001SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07302002SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07302003SS	OWA/ 2nd Floor East Wing Hallway, At Decontamination Unit Entry	6:30 AM	1:30 PM	2.0	2.0	2.0	420	840.0	0.5	100	0.000
07302004SS	IWA/ 2nd Floor East Wing Hallway	6:31 AM	1:31 PM	2.0	2.0	2.0	420	840.0	9.5	100	0.006
07302005SS	OWA/ 2nd Floor East Wing Hallway, Outside the Critical Barrier in the Stairwell	6:33 AM	1:35 PM	2.0	2.0	2.0	422	844.0	1.5	100	0.001

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

Notes: The US EPA and Commonwealth of Virginia PCM re-occupancy limit is 0.01 fibers per cubic centimeter of air (f/cc). The analytical results of the daily PCM daily air samples collected from the second floor east wing hallway were reported to be less than the re-occupancy limit which meet the project requirements.

ECS Technician: Suhel Shafaat **Date:** 7/30/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 7/30/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: 2nd Floor East Wing Hallway/ Removal of Floor Tiles and Associated Mastic

	Work Area Location/Description	2nd Floor East Wing 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	3
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Michael P. Hamill **Date:** 7/30/2020

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LETTER OF TRANSMITTAL

August 5, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

CC:

ENCL: Field Report # 4 7/31/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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-CB**
Report No.	**4**
Day & Date	**Friday 7/31/2020**
Weather	**77 °/ Rain**
On-Site Time	**8.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**8.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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 work planned for today includes removal of asbestos-containing floor tile and associated mastic from the second floor A wing hallway.

Prior to starting the removal of the specified materials, 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.

SECOND FLOOR A WING HALLWAY WORK AREA MONITORING

Between 6:15 am and 6:20 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 outside the work area. New PCM samples were started in similar locations. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

Between 2:15 pm and 2:30 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 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.

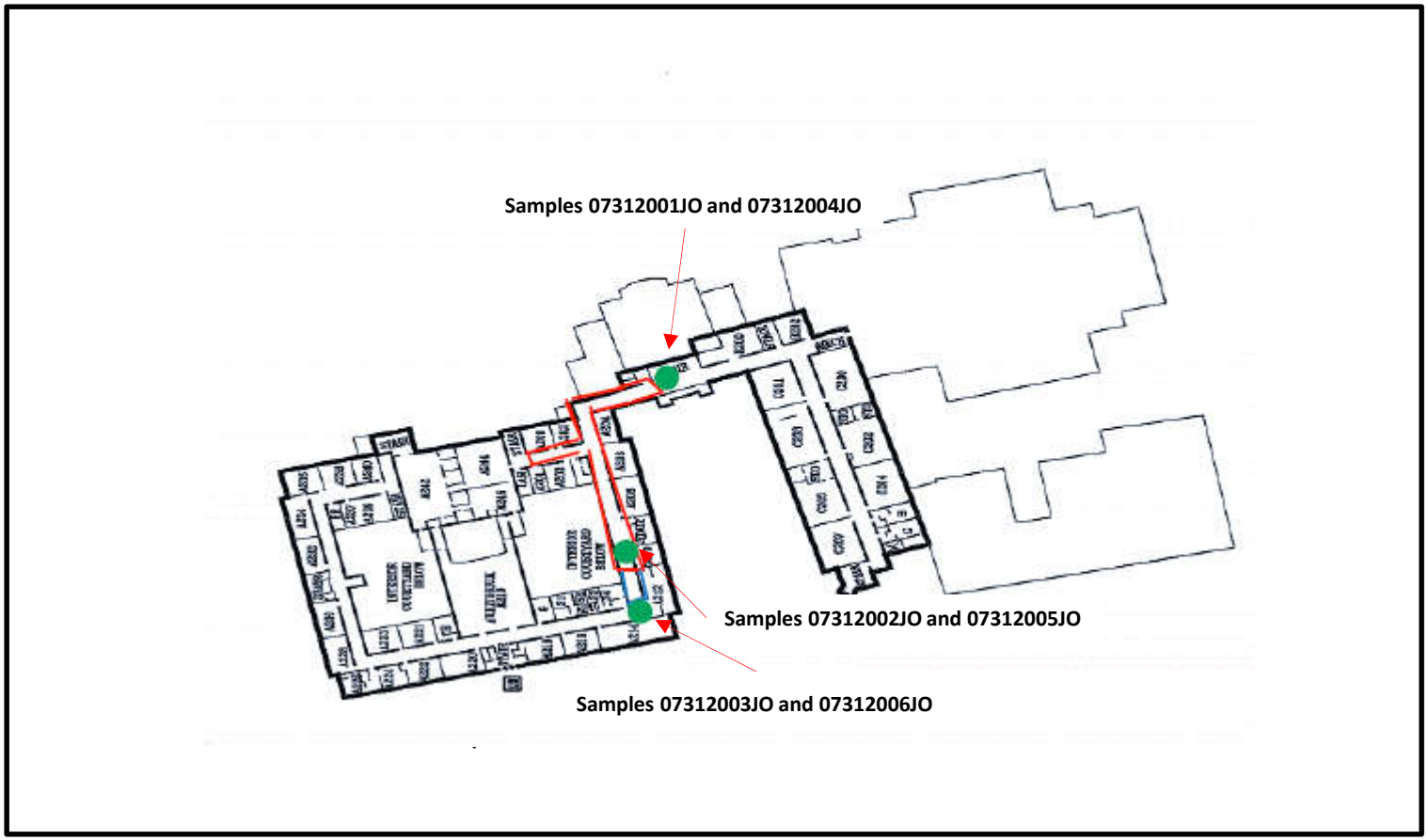
ECS observed the abatement contractor placing the specified asbestos-containing materials in 6-mil

polyethylene bags which were double-bagged and sealed in general accordance with the applicable regulations. Waste bags were labeled and 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 PCM re-occupancy limit is less than or equal to 0.01 fibers per cubic centimeter. The PCM air sample collected today were reported below the re-occupancy limit which meets the project requirements.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



Containment Area

Three stage decontamination unit

PCM Air Sample Locations

PCM Final Air Sample Locations

ACPS George Washington Middle School
1005 Mount Vernon Ave
Alexandria, VA

WORK AREA SKETCH
Second Floor

SCALE NTS

Project No
47-1519-CB

7/31/2020

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 8/2/2020
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)
07312001JO	Second Floor Hallway - OWA	6:15 AM	10:30 AM	2.5	2.5	2.5	255	637.5	0.0	100	0.000
07312002JO	Second Floor - IWA	6:20 AM	10:35 AM	2.5	2.5	2.5	255	637.5	5.0	100	0.004
07312003JO	Second Floor Hallway - OWA	6:20 AM	10:35 AM	2.5	2.5	2.5	255	637.5	1.0	100	0.001
07312004JO	Second Floor Hallway - OWA	10:30 AM	2:15 PM	2.5	2.5	2.5	225	562.5	1.0	100	0.001
07312005JO	Second Floor Hallway - IWA	10:35 AM	2:20 PM	2.5	2.5	2.5	225	562.5	3.0	100	0.003
07312006JO	Second Floor Hallway - OWA	10:35 AM	2:20 PM	2.5	2.5	2.5	225	562.5	1.5	100	0.001
07312007JO	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
07312008JO	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 US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fibers per cubic centimeter. The PCM air sample collected today were reported below the re-occupancy limit which meets the project requirements.

ECS Technician: John A O'Neil **Date:** 8/2/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 8/2/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: Second Floor Hallway

	Work Area Location/Description	Second 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	6
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Michael P. Hamill **Date:** 8/2/2020

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

LETTER OF TRANSMITTAL

August 4, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

CC:

ENCL: Field Report # 5 8/3/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior Project Manager

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ECS Mid-Atlantic, LLC
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Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
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FIELD REPORT

Project No.	**1519-CB**
Report No.	**5**
Day & Date	**Monday 8/3/2020**
Weather	**90 °/ Cloudy**
On-Site Time	**8.00**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**8.00**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:30A**	**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 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 the second floor hallways in the A wing. A sketch for today's work area are attached to this report.

Prior to starting the removal of the specified materials, the abatement permit application was reviewed. Noted that at this time the DOLI permit is not available. The abatement contractor was notified the permit application was on-site and the removal of the specified materials could begin.

Prior to starting the removal of the specified materials, 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.

An additional area was added to the Second Floor A Wing Hallway work area.

SECOND FLOOR - A WING - HALLWAYS WORK AREA

At 7:32 am, PCM air samples were started inside and outside the work area next to the decontamination unit. The sampling pumps were calibrated using a rotameter to 1.5 liters per minute.

At 7:42 am, a PCM air sample was started outside the work area in a stairwell near room A230. The sampling pump was calibrated using a rotameter to 1.5 liters per minute.

At 1:51 pm, the IWA and OWA sampling pumps near the decontamination unit were checked using a rotameter. The flow rates were 1.5 liters per minute. The PCM air samples were stopped and gathered for analysis.

At 1:57 pm, the OWA sampling pump in the stairwell near room A230 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

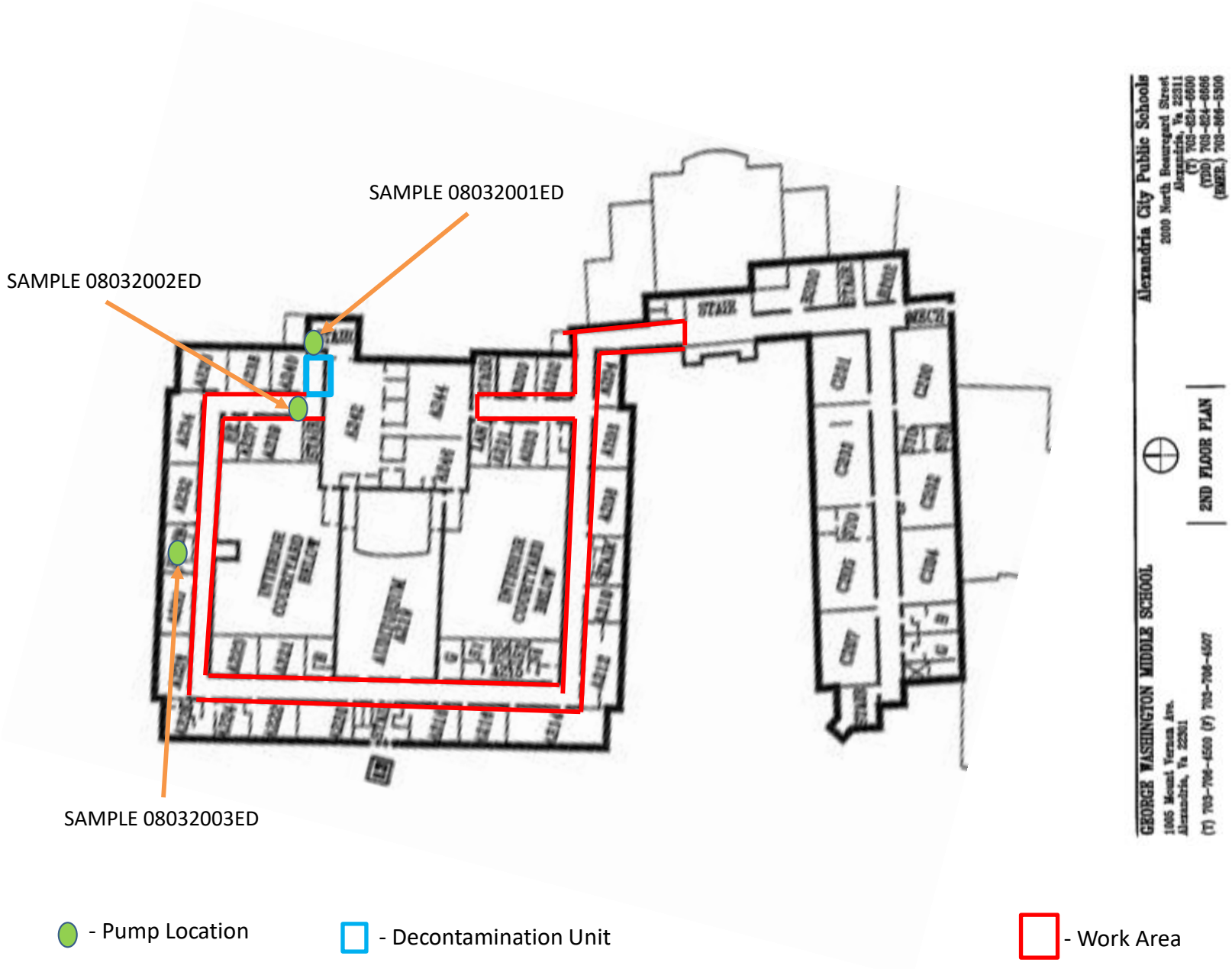
The work area was surveyed to evaluate general compliance with the applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

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 a container temporary waste 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 PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



Asbestos Abatement Monitoring
George Washington Middle School
Alexandria, VA

SAMPLE LOCATIONS

Alexandria City Public Schools

SCALE NTS

Project No. 47:1519-CB

Date 8/03/2020

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 8/3/2020
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)
08032001ED	OWA-Next to Decontamination Unit	7:32 AM	1:51 PM	1.5	1.5	1.5	379	568.5	4.5	100	0.004
08032002ED	IWA-Next to Decontamination Unit	7:32 AM	1:51 PM	1.5	1.5	1.5	379	568.5	7.5	100	0.006
08032003ED	OWA-Next to Containment in Stairwell near Room A230	7:42 AM	1:57 PM	1.5	1.5	1.5	375	562.5	0.0	100	0.000
08032004ED-FB	FIELD BLANK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08032005ED-FB	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 US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit, which meets the project requirements.

ECS Technician: Eric Davidoff **Date:** 8/3/2020

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 1519-CB **Date:** 8/3/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: SECOND FLOOR - A WING - HALLWAY WORK AREA ADDITIONAL AREA

	Work Area Location/Description	SECOND FLOOR - A WING -
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	
	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: Michael P. Hamill **Date:** 8/3/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 8/3/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: SECOND FLOOR - A WING - HALLWAYS

	Work Area Location/Description	SECOND FLOOR - A 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: Michael P. Hamill **Date:** 8/3/2020

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 6, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

CC:

ENCL: Field Report # 6 8/4/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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 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-CB**
Report No.	**6**
Day & Date	**Tuesday 8/4/2020**
Weather	**80 °/ Rain**
On-Site Time	**7.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**7.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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 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 the second floor hallways in the A wing. A work area sketch for today's work area are attached to this report.

Prior to starting the removal of the specified materials, 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.

SECOND FLOOR - A WING - HALLWAYS WORK AREA

At 6:17 am, a PCM air sample was started outside the work area in a stairwell by room A230. The sampling pump was calibrated using a rotameter to 1.5 liters per minute.

At 6:22 am, PCM air samples were started inside and outside the work area next to the decontamination unit. The sampling pumps were calibrated using a rotameter to 1.5 liters per minute.

At 1:15 pm, the sampling pump in the stairwell by room A230 was checked using a rotameter. The flow rate was 1.5 liters per minute. The PCM air sample was stopped and gathered for analysis.

At 1:21 pm, the sampling pumps near the decontamination unit were checked using a rotameter. The flow rates were 1.5 liters per minute. The PCM air samples were stopped and gathered for analysis.

GENERAL

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

By Eric Davidoff 1825

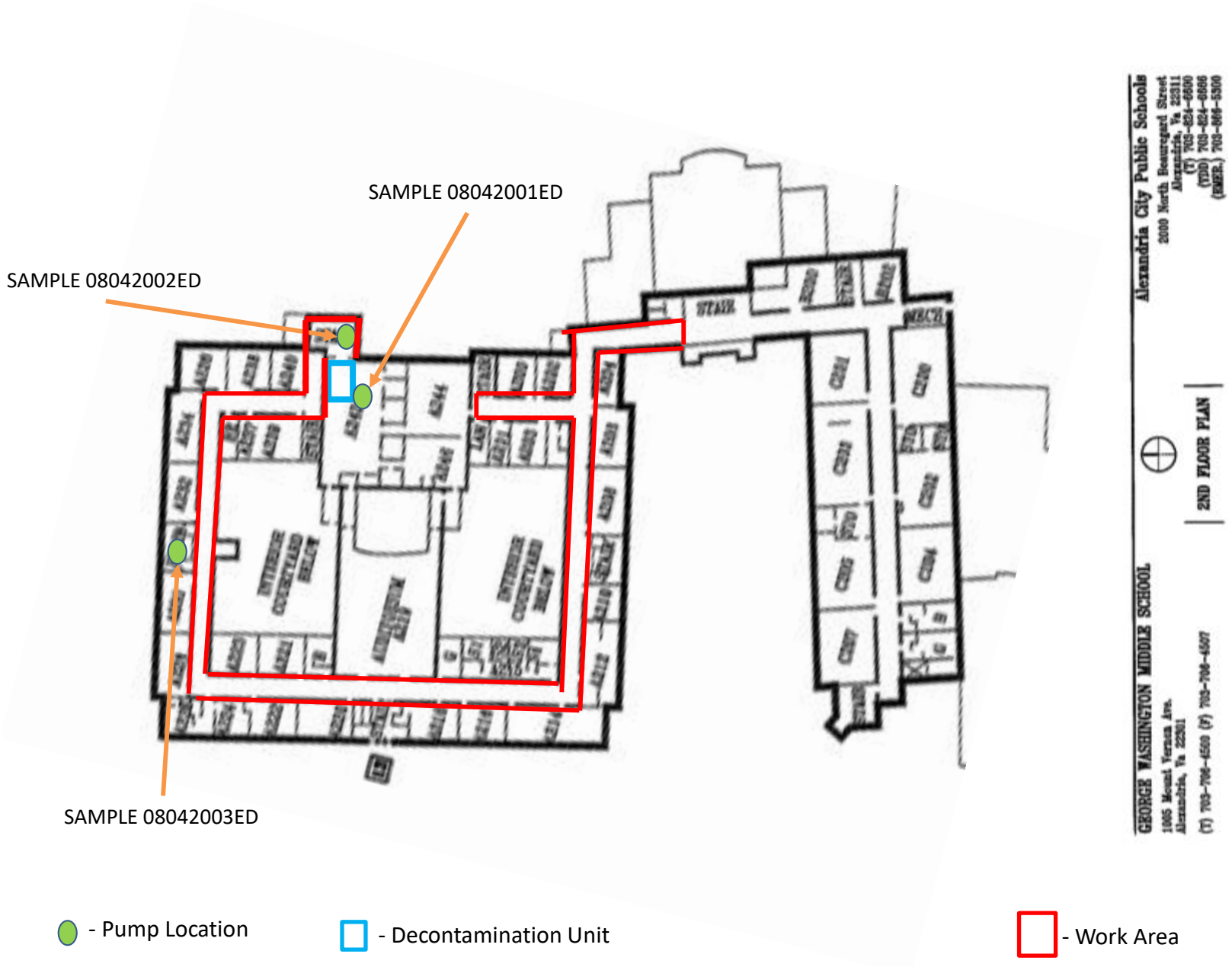
66346

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 a container temporary waste 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 PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



Asbestos Abatement Monitoring
George Washington Middle School
Alexandria, VA

SAMPLE LOCATIONS

Alexandria City Public Schools

SCALE NTS

Project No. 47:1519-CB

Date 8/04/2020

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 8/4/2020
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)
08042001ED	OWA-Next to Decontamination Unit	6:22 AM	1:21 PM	1.5	1.5	1.5	419	628.5	3.5	100	0.003
08042002ED	IWA-Next to Decontamination Unit	6:22 AM	1:21 PM	1.5	1.5	1.5	419	628.5	5.5	100	0.004
08042003ED	OWA-In Stairwell By Room A230	6:17 AM	1:15 PM	1.5	1.5	1.5	418	627.0	2.5	100	0.002
08042004ED-FB	FIELD BLANK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08042005ED-FB	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 US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit, which meets the project requirements.

ECS Technician: Eric Davidoff **Date:** 8/4/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 8/4/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: SECOND FLOOR - A WING - HALLWAYS

	Work Area Location/Description	SECOND FLOOR - A 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: Michael P. Hamill **Date:** 8/4/2020

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 11, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

CC:

ENCL: Field Report # 7 8/5/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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-CB**
Report No.	**7**
Day & Date	**Wednesday 8/5/2020**
Weather	**85 °/ Sunny**
On-Site Time	**8.25**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**8.25**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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 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 the second floor hallway in the A Wing and the third floor stairwell near room A301. A work area sketch and photographs for today's work area are attached to this report.

Prior to starting the removal of the specified materials, 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.

SECOND FLOOR, A WING HALLWAYS WORK AREA

At 6:10 am, a PCM air sample was started outside the work area in a stairwell near Room A230. The sampling pump was calibrated using a rotameter to 1.5 liters per minute.

At 6:24 am, a PCM air samples was started outside the work area next to the decontamination unit. The sampling pump was calibrated using a rotameter to 1.5 liters per minute.

At 1:38 pm, the sampling pump in the stairwell near room A230 was checked using a rotameter. The flow rate was 1.5 liters per minute. The PCM air sample was stopped and gathered for analysis.

At 2:00 pm, the sampling pump next to the decontamination unit was checked using a rotameter. The flow rate was 1.5 liters per minute. The PCM air sample was stopped and gathered for analysis

THIRD FLOOR, A WING STAIRWELL WORK AREA

At 8:51 am, a PCM air sample was started outside the work area. The sampling pump was calibrated using a rotameter to 1.5 liters per minute.

By Eric Davidoff 1825

66356

At 1:35 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

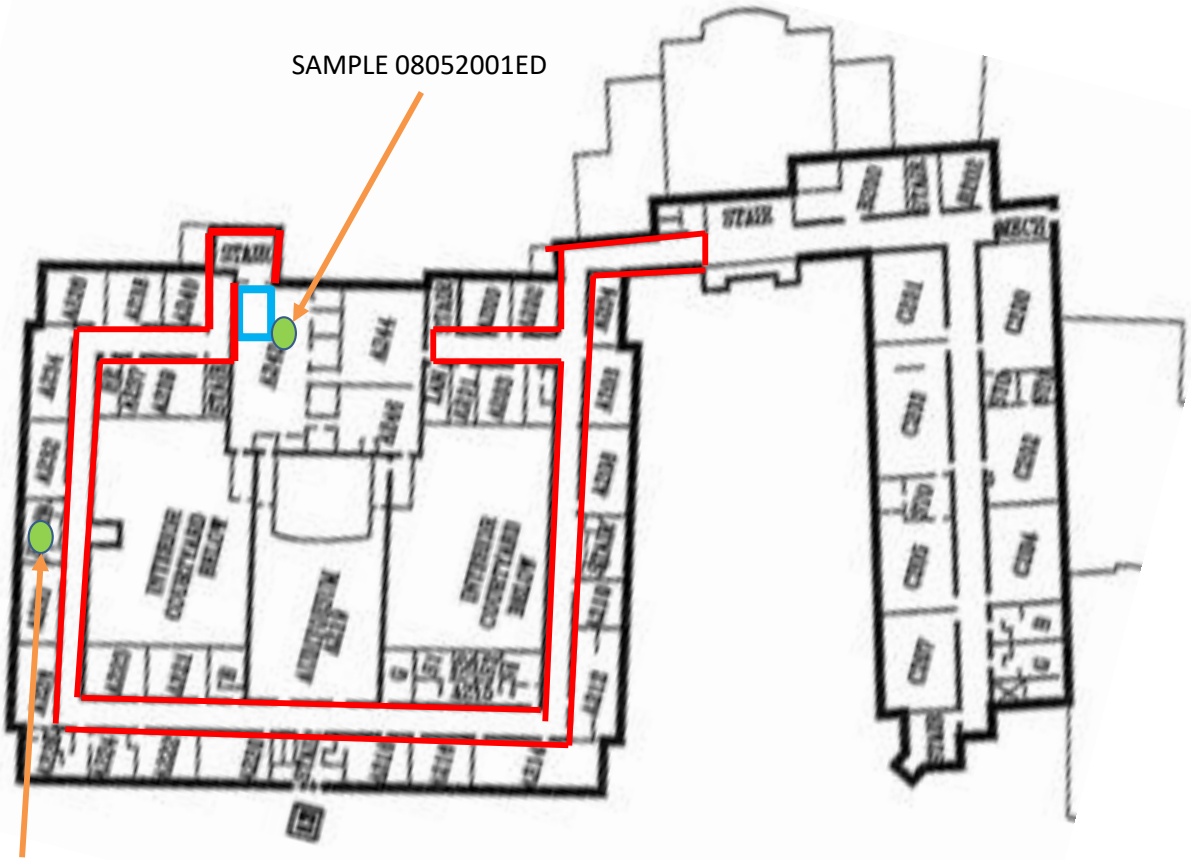
The work area was surveyed to evaluate general compliance with the applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

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 a container temporary waste 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 PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit, which meets the project requirements.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



- Pump Location
- Decontamination Unit
- Work Area

Asbestos Abatement Monitoring
George Washington Middle School
Alexandria, VA

SAMPLE LOCATIONS

Alexandria City Public Schools

SCALE NTS

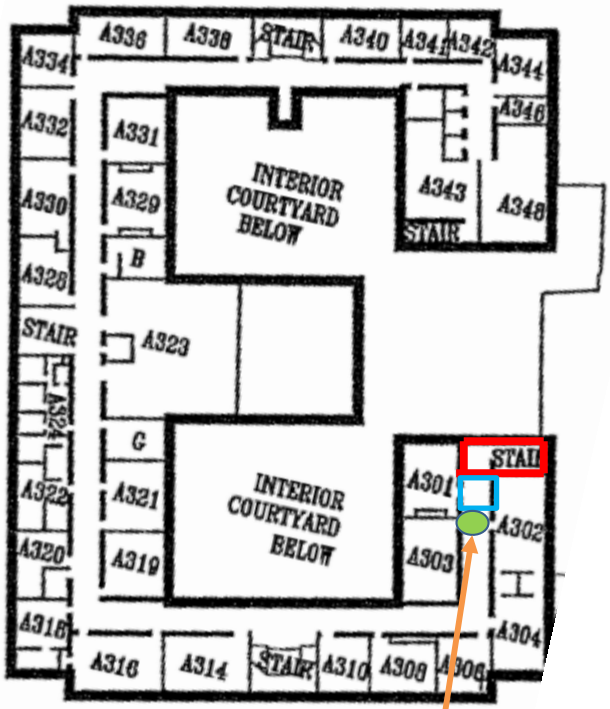
Project No. 47:1519-CB

Date 8/05/2020

- Pump Location

- Decontamination Unit

- Work Area



SAMPLE 08052003ED

Transmittal Page 5/9

GEORGE WASHINGTON MIDDLE SCHOOL
1005 Mount Vernon Ave.
Alexandria, Va 22301
(T) 703-706-4500 (F) 703-706-4507

3RD FLOOR PLAN

Alexandria City Public Schools
2000 North Beauregard Street
Alexandria, Va 22311
(T) 703-824-6600
(TDD) 703-824-6666
(EMER.) 703-666-5300

Date 8/05/2020	Project No. 47:1519-CB	SCALE NTS	**SAMPLE LOCATIONS** Alexandria City Public Schools

Asbestos Abatement Monitoring
George Washington Middle School
Alexandria, VA

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 8/5/2020
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)
08052001ED	OWA-Next to Decontamination Unit	6:24 AM	2:00 PM	1.5	1.5	1.5	456	684.0	4.0	100	0.003
08052002ED	OWA-In Stairwell Near Room A230	6:10 AM	1:38 PM	1.5	1.5	1.5	448	672.0	3.5	100	0.003
08052003ED	OWA-Third Floor Stairwell near Room A301	8:51 AM	1:35 PM	1.5	1.5	1.5	284	426.0	0.5	100	0.001
08052005ED-FB	FIELD BLANK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
0805204ED-FB	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 US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit, which meets the project requirements.

ECS Technician: Eric Davidoff **Date:** 8/5/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 8/5/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: THIRD FLOOR - A WING - STAIRWELL

	Work Area Location/Description	THIRD FLOOR - A 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	1
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Michael P. Hamill **Date:** 8/5/2020

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 1519-CB **Date:** 8/5/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: THIRD FLOOR - A WING - STAIRWELL

	Work Area Location/Description	THIRD FLOOR - A WING -
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	1
	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: Michael P. Hamill **Date:** 8/5/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 8/5/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: SECOND FLOOR - A WING - HALLWAYS

	Work Area Location/Description	SECOND FLOOR - A 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	2
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Michael P. Hamill **Date:** 8/5/2020

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

LETTER OF TRANSMITTAL

August 11, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

CC:

ENCL: Field Report # 8 8/6/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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-CB**
Report No.	**8**
Day & Date	**Thursday 8/6/2020**
Weather	**80 °/ Sunny**
On-Site Time	**8.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**8.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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 onsite, as requested, to perform air monitoring and observe asbestos abatement. The materials specified to be removed today are asbestos-containing floor tiles and associated mastic from the second floor hallways in the A Wing and the third floor stairwell near Room A301. A work area sketch for today's work area is attached to this report.

Prior to starting the removal of the specified materials, 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.

SECOND FLOOR, A WING HALLWAYS WORK AREA

At 6:05 am, a PCM air sample was started outside the work area in a stairwell near Room A230. The sampling pump was calibrated using a rotameter to 1.5 liters per minute.

At 6:17 am, a PCM air sample was started outside the work area next to the decontamination unit. The sampling pump was calibrated using a rotameter to 1.5 liters per minute.

At 1:44 pm, the sampling pump in the stairwell near Room A230 was checked using a rotameter. The flow rate was 1.5 liters per minute. The PCM air sample was stopped and gathered for analysis.

At 2:05 pm, the sampling pump next to the decontamination unit was checked using a rotameter. The flow rate was 1.5 liters per minute. The PCM air sample was stopped and gathered for analysis

THIRD FLOOR, A WING STAIRWELL WORK AREA

At 6:09 am, a PCM air sample was started outside the work area. The sampling pump was calibrated using a rotameter to 1.5 liters per minute.

By Eric Davidoff 1825

66374

At 1:35 pm, the OWA 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

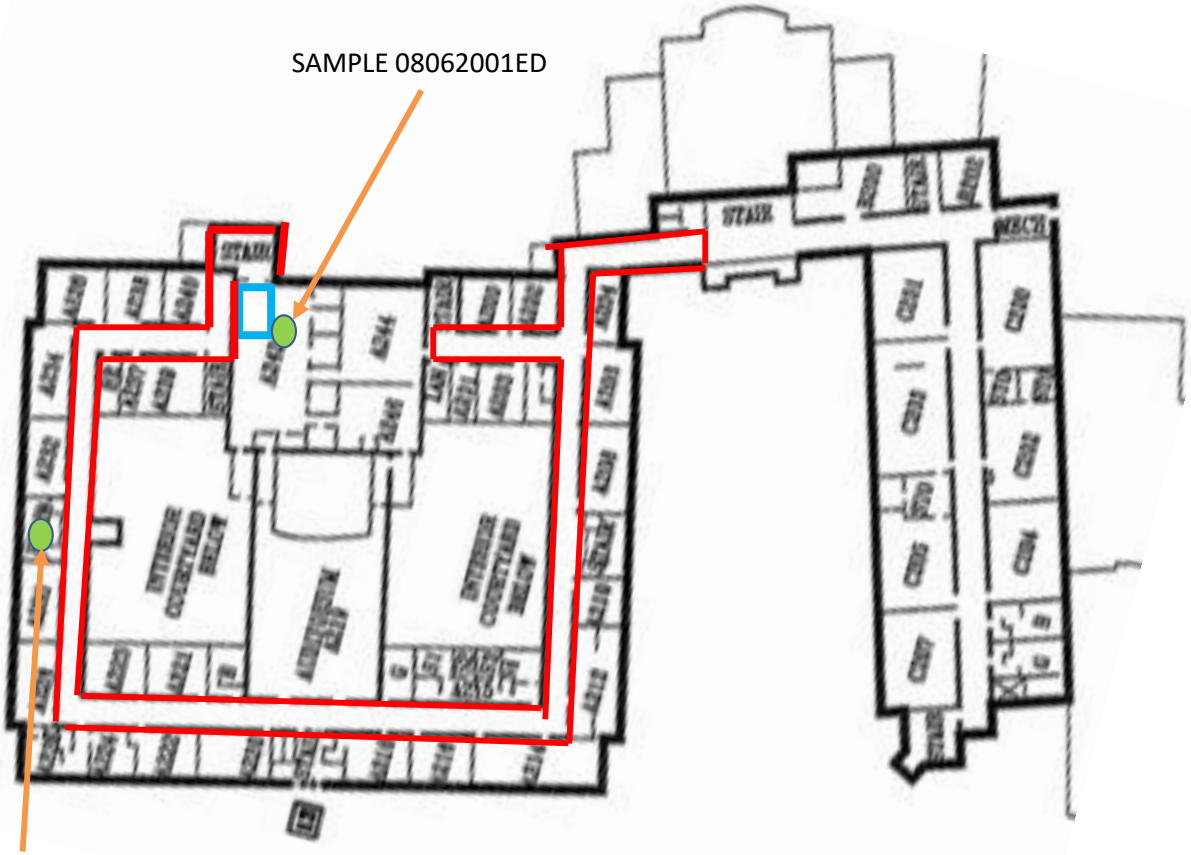
The work area was surveyed to evaluate general compliance with the applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

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 a container temporary waste 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 PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



- Pump Location
- Decontamination Unit
- Work Area

Asbestos Abatement Monitoring
George Washington Middle School
Alexandria, VA

SAMPLE LOCATIONS
Alexandria City Public Schools

SCALE NTS

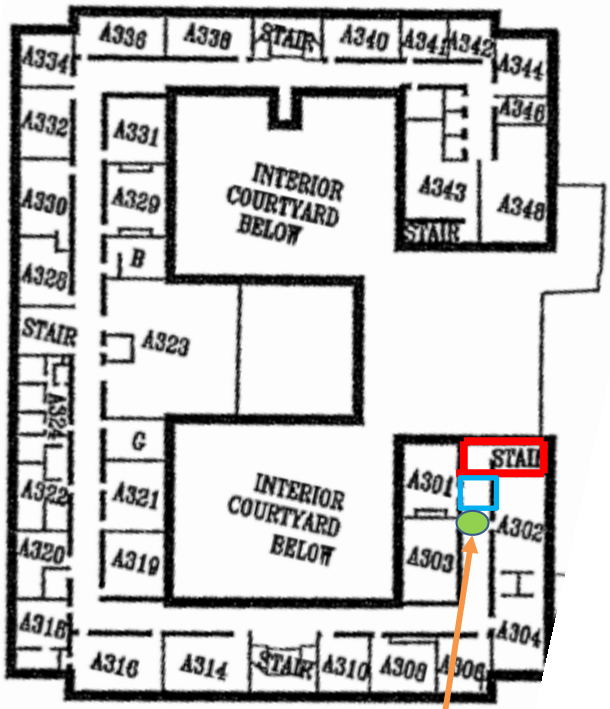
Project No. 47:1519-CB

Date 8/06/2020

- Pump Location

- Decontamination Unit

- Work Area



SAMPLE 08062003ED

Transmittal Page 5/8

GEORGE WASHINGTON MIDDLE SCHOOL
1005 Mount Vernon Ave.
Alexandria, Va 22301
(T) 703-706-4500 (F) 703-706-4507

3RD FLOOR PLAN

Alexandria City Public Schools
2000 North Beauregard Street
Alexandria, Va 22311
(T) 703-824-6600
(TDD) 703-824-6666
(EMER.) 703-666-5300

Date 8/06/2020	Project No. 47:1519-CB	SCALE NTS	**SAMPLE LOCATIONS** Alexandria City Public Schools

Asbestos Abatement Monitoring
George Washington Middle School
Alexandria, VA

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 8/6/2020
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)
08062001ED	OWA-Next to Decontamination Unit	6:17 AM	2:05 PM	1.5	1.5	1.5	468	702.0	9.5	100	0.007
08062002ED	OWA-In Stairwell near room A230	6:05 AM	1:44 PM	1.5	1.5	1.5	459	688.5	6.5	100	0.005
08062003ED	OWA-Next to Decontamination Unit 3rd Floor	6:09 AM	1:40 PM	1.5	1.5	1.5	451	676.5	2.0	100	0.001
08062004ED-FB	FIELD BLANK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08062005ED-FB	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 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 were reported to be less than the re-occupancy limit, which meets the project requirements.

ECS Technician: Eric Davidoff **Date:** 8/6/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 8/6/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: SECOND FLOOR - A WING - HALLWAYS

	Work Area Location/Description	SECOND FLOOR - A 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	2
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Michael P. Hamill **Date:** 8/6/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 8/6/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: THIRD FLOOR - A WING - STAIRWELL

	Work Area Location/Description	THIRD FLOOR - A 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	1
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Michael P. Hamill **Date:** 8/6/2020

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 11, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

CC:

ENCL: Field Report # 9 8/7/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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-CB**
Report No.	**9**
Day & Date	**Friday 8/7/2020**
Weather	**80 °/ Cloudy**
On-Site Time	**8.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**8.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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 onsite, as requested, to perform air monitoring and observe asbestos abatement. The materials specified to be removed today are asbestos-containing floor tiles and associated mastic from the second floor hallways in the A Wing and the third floor stairwell near Room A301. A work area sketch and photographs for today's work area are attached to this report.

Prior to starting the removal of the specified materials, 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.

SECOND FLOOR, A WING HALLWAYS WORK AREA

At 6:09 am, a PCM air sample was started outside the work area in a stairwell near Room A230. The sampling pump was calibrated using a rotameter to 1.5 liters per minute.

At 6:18 am, a PCM air sample was started outside the work area next to the decontamination unit. The sampling pump was calibrated using a rotameter to 1.5 liters per minute.

At 1:53 pm, the sampling pump in the stairwell near Room A230 was checked using a rotameter. The flow rate was 1.5 liters per minute. The PCM air sample was stopped and gathered for analysis.

At 1:59 pm, the sampling pump next to the decontamination unit was checked using a rotameter. The flow rate was 1.5 liters per minute. The PCM air sample was stopped and gathered for analysis.

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. Final clearance air samples are scheduled to be collected on the following business day.

By Eric Davidoff 1825

66387

THIRD FLOOR, A WING STAIRWELL WORK AREA

At 6:13 am, a PCM air sample was started outside the work area. The sampling pump was calibrated using a rotameter to 1.5 liters per minute.

At 1:50 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.

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. Final clearance air samples are scheduled to be collected on the following business day.

GENERAL

Please note that WACO combined the second floor and third floor stairwell work area for final clearance air sampling purposes.

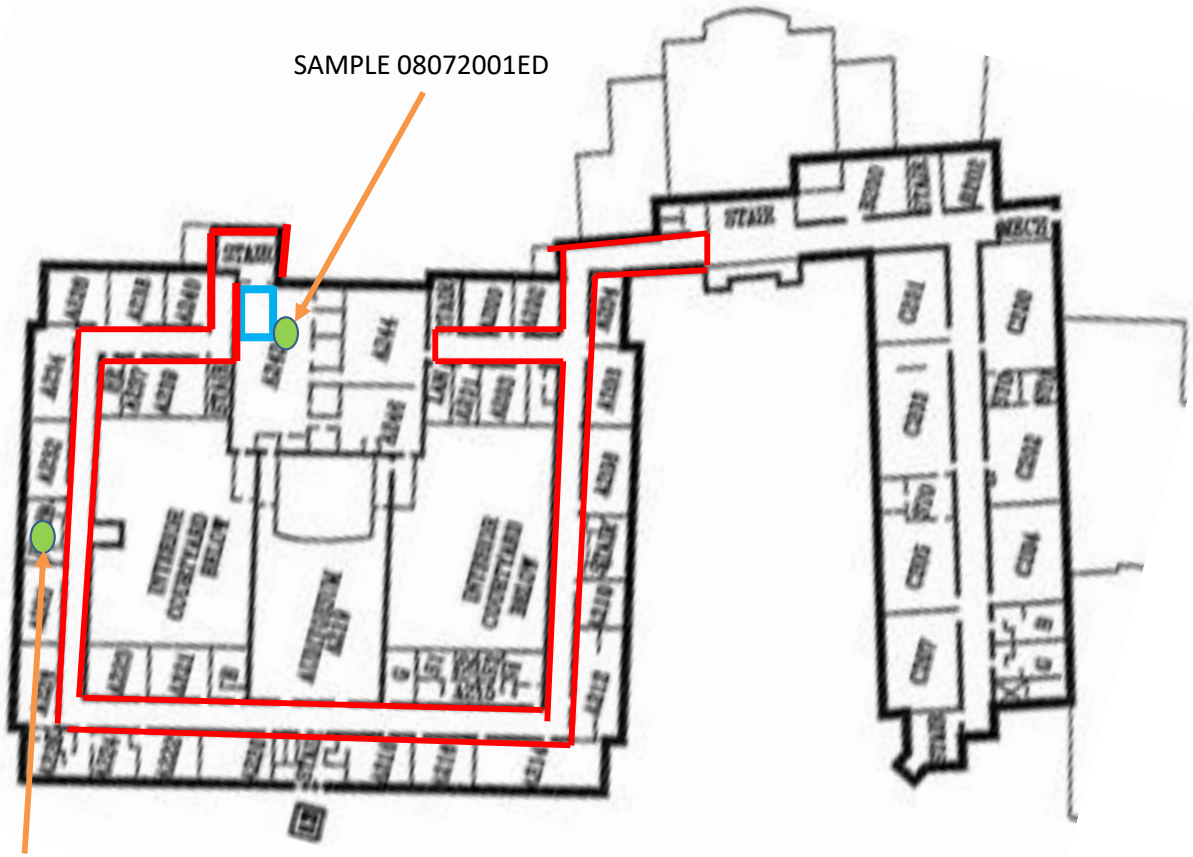
The work area was surveyed to evaluate general compliance with the applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

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 a container temporary waste 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 PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



- Pump Location
- Decontamination Unit
- Work Area

Asbestos Abatement Monitoring
George Washington Middle School
Alexandria, VA

SAMPLE LOCATIONS

Alexandria City Public Schools

SCALE NTS

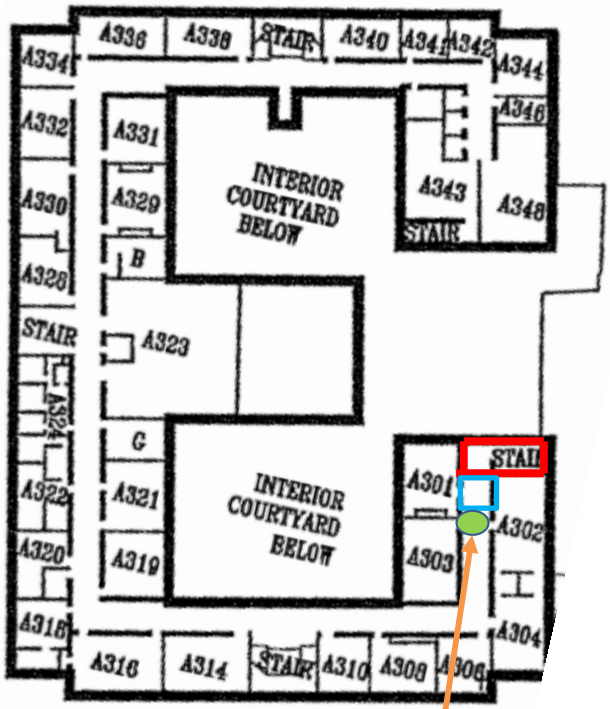
Project No. 47:1519-CB

Date 8/07/2020

- Pump Location

- Decontamination Unit

- Work Area



SAMPLE 08072003ED

Transmittal Page 5/12

GEORGE WASHINGTON MIDDLE SCHOOL
1005 Mount Vernon Ave.
Alexandria, Va 22301
(T) 703-706-4500 (F) 703-706-4507

3RD FLOOR PLAN

Alexandria City Public Schools
2000 North Beauregard Street
Alexandria, Va 22311
(T) 703-824-6600
(TDD) 703-824-6666
(EMER.) 703-666-5300

Date 8/07/2020	Project No. 47:1519-CB	SCALE NTS	**SAMPLE LOCATIONS** Alexandria City Public Schools

Asbestos Abatement Monitoring
George Washington Middle School
Alexandria, VA

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 8/7/2020
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)
08072001ED	OWA-Next to 2nd Floor Decontamination Unit	6:18 AM	1:59 PM	1.5	1.5	1.5	461	691.5	9.5	100	0.007
08072002ED	OWA-In stairwell near room A230	6:09 AM	1:53 PM	1.5	1.5	1.5	464	696.0	1.5	100	0.001
08072003ED	OWA-Next to 3nd Floor Decontamination Unit	6:13 AM	1:50 PM	1.5	1.5	1.5	457	685.5	4.0	100	0.003
08072004ED-FB	FIELD BLANK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08072005ED-FB	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 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 were reported to be less than the re-occupancy limit, which meets the project requirements.

ECS Technician: Eric Davidoff **Date:** 8/7/2020

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 1519-CB **Date:** 8/7/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: SECOND FLOOR - A WING - HALLWAYS

	Work Area Location/Description	SECOND FLOOR - A 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	N/A
	Number of Samples Collected	0
	Sample Volume (liters)	0
	Work Area Acceptable	Yes

Notes: Final clearance air samples are scheduled to be collected on the following business day.

ECS Technician: Michael P. Hamill **Date:** 8/7/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 8/7/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: SECOND FLOOR - A WING - HALLWAYS

	Work Area Location/Description	SECOND FLOOR - A 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	2
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Michael P. Hamill **Date:** 8/7/2020

Attachments



View of the third floor stair landing work area prior to abatement activities..

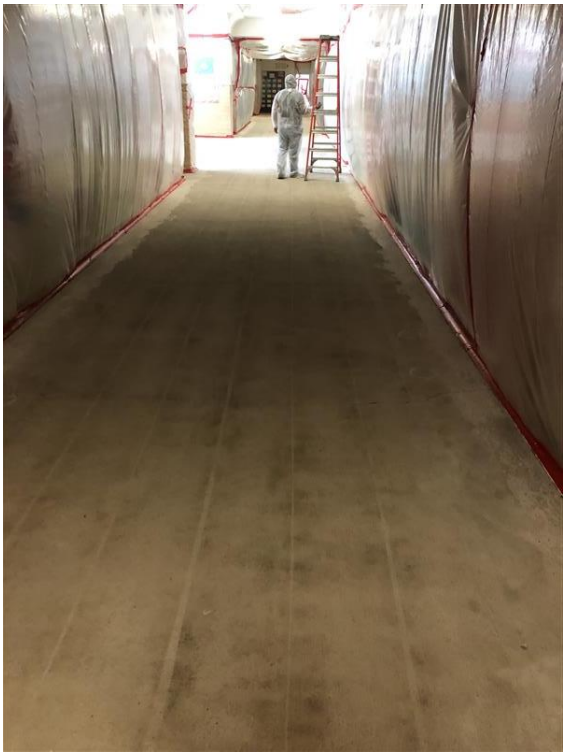
Figure 1



View of the second floor hallway work area prior to abatement activities.

Figure 2

Attachments



View of the second floor hallway work area during the final visual walk through.

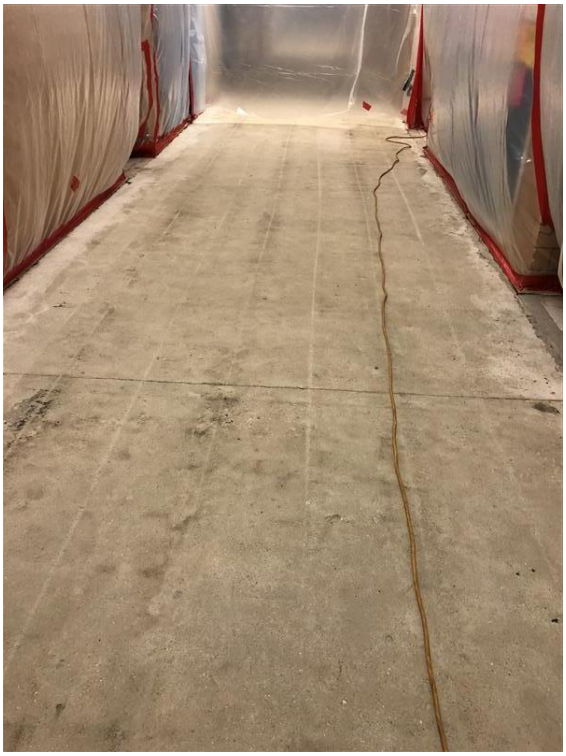
Figure 3



View of the second floor hallway work area during the final visual walk through.

Figure 4

Attachments



View of the second floor hallway work area during the final visual walk through.

Figure 5



View of the second floor hallway work area during the final visual walk through.

Figure 6

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 8/7/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: THIRD FLOOR - A WING - STAIRWELL

	Work Area Location/Description	THIRD FLOOR - A 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	1
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Michael P. Hamill **Date:** 8/7/2020

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

LETTER OF TRANSMITTAL

August 11, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

CC:

ENCL: Field Report # 10 8/10/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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 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-CB**
Report No.	**10**
Day & Date	**Monday 8/10/2020**
Weather	**90 °/ Sunny**
On-Site Time	**5.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**5.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**11:30A**

* 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 final clearance air sampling for the second floor hallway and third floor stairwell work area.

It should be noted that the third floor work area was combined with the second floor work area.

SECOND FLOOR HALLWAYS AND THIRD FLOOR STAIR LANDING, A WING WORK AREA

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 7.5 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.

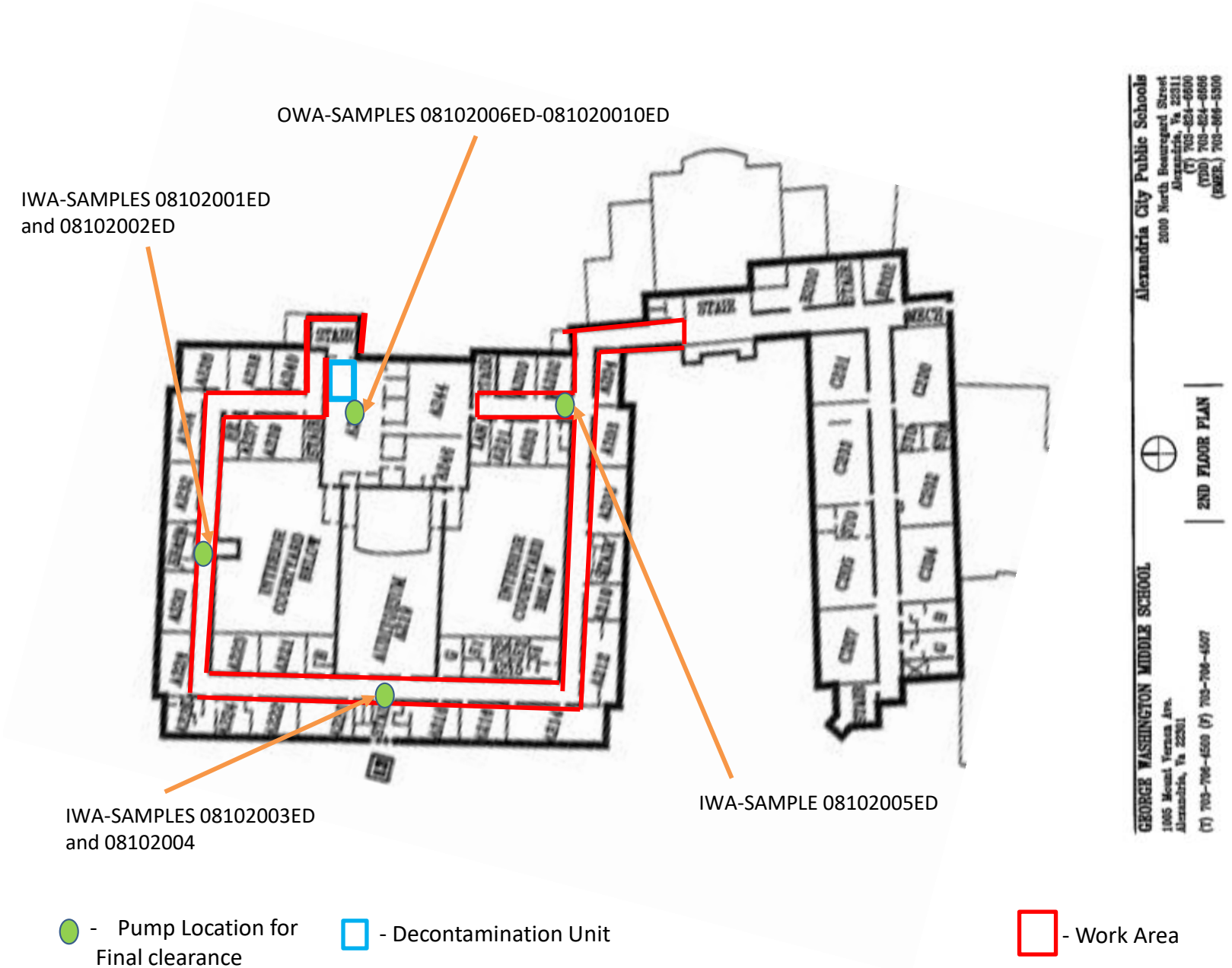
At 10:45 am, the sampling pumps were checked using a rotameter after the air within and outside the regulated work area was sampled using TEM cassettes for 165 minutes at 7.5 liters per minute. The sampling cassettes, including the two field blanks and one sealed blank were labeled with unique identification and transported to EMSL Analytical, Inc. (EMSL) in Beltsville, Maryland 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 informed ECS that the analytical results of the TEM final clearance air samples collected from second floor hallways and third floor stair landing A wing work area found the airborne asbestos fiber concentrations to be less than the maximum allowable concentration. The client and abatement contractor supervisor, WACO Inc, were informed of the results. A copy of the laboratory report is attached.

By Eric Davidoff 1825

66419

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



Asbestos Abatement Monitoring
George Washington Middle School
Alexandria, VA

SAMPLE LOCATIONS

Alexandria City Public Schools

SCALE NTS

Project No. 47:1519-CB

Date 8/10/2020

- Pump Location

- Decontamination Unit

- Work Area



SAMPLE 08072003ED

Transmittal Page 5/11

GEORGE WASHINGTON MIDDLE SCHOOL
1005 Mount Vernon Ave.
Alexandria, Va 22301
(T) 703-706-4500 (F) 703-706-4507

3RD FLOOR PLAN

Alexandria City Public Schools
2000 North Beauregard Street
Alexandria, Va 22311
(T) 703-824-6600
(TDD) 703-824-6666
(EMER.) 703-666-5300

Date 8/10/2020	Project No. 47:1519-CB	SCALE NTS	**SAMPLE LOCATIONS** Alexandria City Public Schools

Asbestos Abatement Monitoring
George Washington Middle School
Alexandria, VA

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: 192007759
Customer ID: ECMA78
Customer PO:
Project ID:

Attention: Michael Hamill
ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151

Project: 471519-CB/GEORGE WASHINGTON/AGGRESSIVE AIR SAMPLING

Phone: (703) 471-8400
Fax: (703) 471-8400
Received Date: 08/10/2020 12:00 PM
Analysis Date: 08/10/2020
Collected Date: 08/10/2020

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)
08102001ED	IWA - SECOND/THIRD FLOOR WA	1238.00	0.0650	0	None Detected	0	0	0.0048	<15.00	<0.0048
192007759-0001										
08102002ED	IWA - SECOND/THIRD FLOOR WA	1238.00	0.0650	0	None Detected	0	0	0.0048	<15.00	<0.0048
192007759-0002										
08102003ED	IWA - SECOND/THIRD FLOOR WA	1238.00	0.0650	0	None Detected	0	0	0.0048	<15.00	<0.0048
192007759-0003										
08102004ED	IWA - SECOND/THIRD FLOOR WA	1238.00	0.0650	0	None Detected	0	0	0.0048	<15.00	<0.0048
192007759-0004										
08102005ED	IWA - SECOND/THIRD FLOOR WA	1238.00	0.0650	0	None Detected	0	0	0.0048	<15.00	<0.0048
192007759-0005										

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. Measurement of uncertainty available upon request.

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

Initial report from: 08/10/2020 18:11 PM

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(lab use only)*: 192007759

Company Name : ECS Mid Atlantic		**EMSL Customer ID:**	
Street: 14026 Thunderbolt Place		**City:**	**State or Province:**
Zip/Postal Code: 20151	**Country:** USA	**Telephone #:**	**Fax #:**
Report To (Name): Eric Davidoff & Michael Hamill		**Please Provide Results via:** ☐ Fax ☐ Email	
email Address: edavidoff@ecslimited com, Mhamill@ecslimited com		**Purchase Order Number:**	
Client Project ID: 47.1519-CB/ George Washington		**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: Eric Davidoff | **Sampler's Signature:**

Sample #	Sample Description/Location	Volume, Area or Homogenous Area	Date/Time Sampled
08102001ED	IWA - Second/Third Floor WA	1238	8/10/20
08102002ED	IWA - Second/Third floor WA	1238	8/10/20
08102003ED	IWA - Second Third Floor WA	1238	8/10/20
08102004ED	IWA - Second Third Floor WA	1238	8/10/20
08102005ED	IWA Second Third Floor WA	1238	8/10/20

Client Sample # (s): 08102001ED - 08102013 ED **Total # of Samples:** 13

Relinquished by (Client): Eric Davidoff **Date:** 8/10/20 **Time:**

Received by (Lab): **Date:** 8/10/20 **Time:** 1200

Comments/Special Instructions:
Agressive air sampling was preformed, only analyze the IWA samples

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: 192007759

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
08102006ED	OWA - Second/Third Floor - WA	1238	8/10/20
08102007ED	OWA - Second/Third Floor - WA	1238	8/10/20
08102008ED	OWA - Second/Third Floor WA	1238	8/10/20
08102009ED	OWA - Second/Third Floor WA	1238	8/10/20
08102010ED	OWA - Second/Third Floor WA	1238	8/10/20
08102011ED	Blank 30 Second OWA	N/A	8/10/20
08102012ED	Blank 30 Second (ambient)	N/A	8/10/20
08102013ED	Blank - Not Opened	N/A	8/10/20

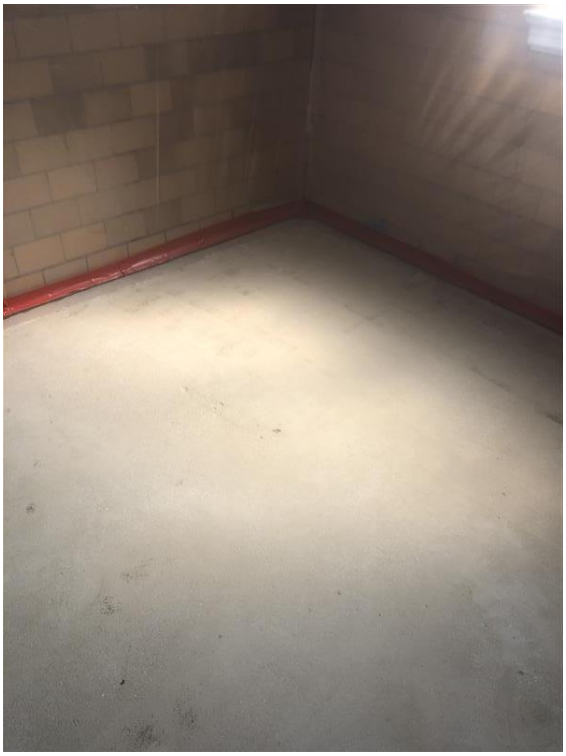
***Comments/Special Instructions:**

Sample Instructions

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

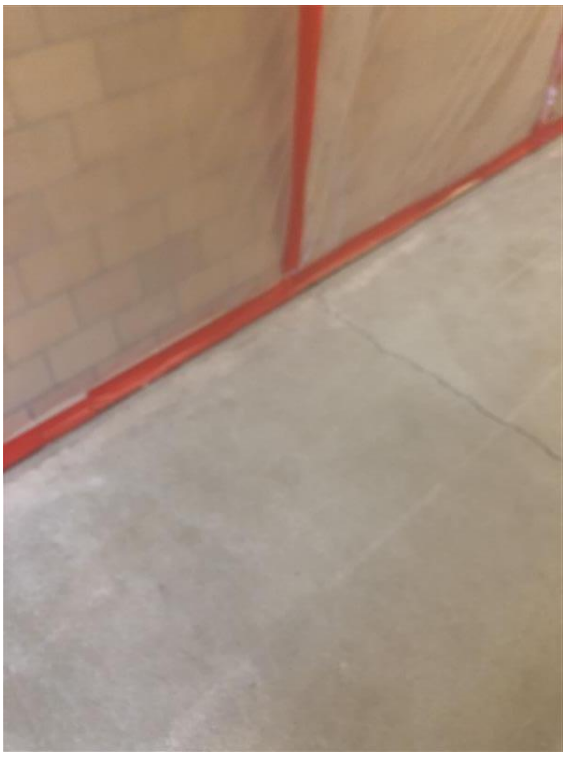
EMSL Analytical, Inc.'s (DBA: LA Testing) Laboratory Terms and Conditions are incorporated into this chain of custody by reference in their entirety. Submission of samples to EMSL Analytical Inc. constitutes acceptance and acknowledgment of all terms and conditions.

Attachments



View of the 3rd floor stair landing during the final visual walk through.

Figure 1



View of the 2nd floor hallway during the final visual walk through.

Figure 2

Attachments



View of the 2nd floor hallway during the final visual walk through.

Figure 3

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 1519-CB **Date:** 8/10/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: SECOND-THIRD FLOOR STAIR LANDING - A WING

	Work Area Location/Description	SECOND-THIRD FLOOR STAIR
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	10
	Sample Volume (liters)	1237.5
	Work Area Acceptable	Yes

Notes:

ECS Technician: Michael P. Hamill **Date:** 8/10/2020

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 17, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

CC:

ENCL: Field Report # 11 8/12/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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.*

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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-CB**
Report No.	**11**
Day & Date	**Wednesday 8/12/2020**
Weather	**85 °/ Rain**
On-Site Time	**8.25**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**8.25**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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 onsite, as requested, to perform air monitoring and observe asbestos abatement. The materials specified to be removed today are asbestos-containing floor tiles and associated mastic from the third floor hallways in the A Wing. A work area sketch for today's work area is attached to this report.

Prior to starting the removal of the specified materials, 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.

THIRD FLOOR A WING, HALLWAYS WORK AREA

At 8:38 am, PCM air samples were started inside and outside the work area next to the decontamination unit. The sampling pumps were calibrated using a rotameter to 1.5 liters per minute.

At 8:51 am, a PCM air sample was started outside the work area in a stairwell near Room A328. The sampling pump was calibrated using a rotameter to 1.5 liters per minute.

At 1:48 pm, the OWA sampling pump in the stairwell near Room A328 was checked using a rotameter. The flow rate was 1.5 liters per minute. The PCM air sample was stopped and gathered for analysis.

At 1:56 pm, the OWA and the IWA sampling pumps next to the decontamination unit were checked using a rotameter. The flow rate were 1.5 liters per minute. The PCM air samples were stopped and gathered for analysis

GENERAL

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

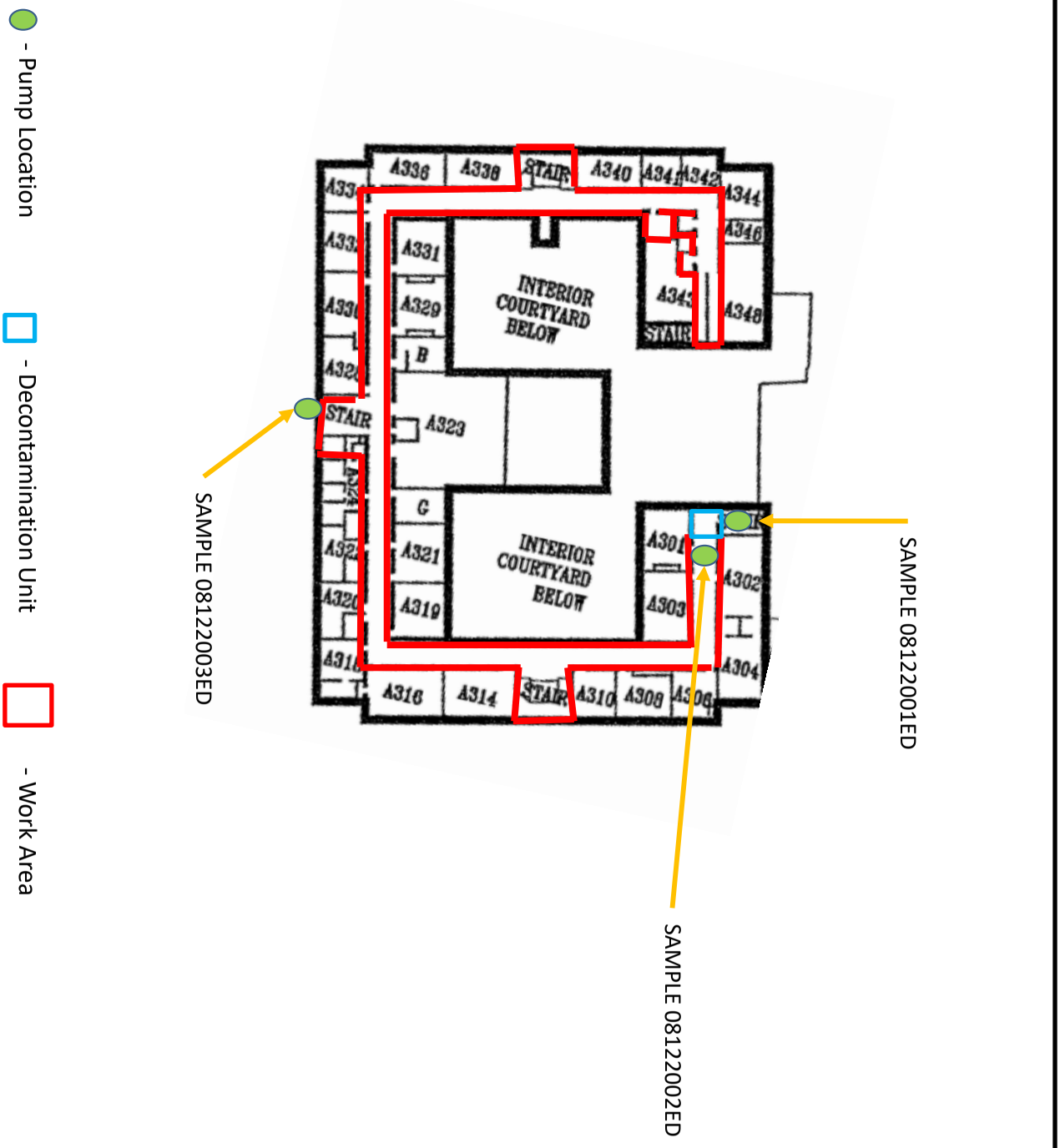
Work Area Survey Checklist was completed and is attached to this report.

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 a container temporary waste 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 PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



GEORGE WASHINGTON MIDDLE SCHOOL
1005 Mount Vernon Ave.
Alexandria, Va 22301
(T) 703-706-4500 (F) 703-706-4507

3RD FLOOR PLAN

Alexandria City Public Schools
2000 North Beauregard Street
Alexandria, Va 22311
(T) 703-824-6600
(TDD) 703-824-6666
(EMER.) 703-666-5300

Transmittal Page 4/7

Date 8/12/2020	Project No. 47:1519-CB	SCALE NTS	**SAMPLE LOCATIONS** Alexandria City Public Schools

Asbestos Abatement Monitoring
George Washington Middle School
Alexandria, VA

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 8/12/2020
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)
08122001ED	OWA-Next to Decontamination Unit	8:38 AM	1:56 PM	1.5	1.5	1.5	318	477.0	1.5	100	0.002
08122002ED	IWA-Next to Decontamination Unit	8:38 AM	1:56 PM	1.5	1.5	1.5	318	477.0	2.5	100	0.003
08122003ED	OWA-In stariwell near room A328	8:51 AM	1:48 PM	1.5	1.5	1.5	297	445.5	1.0	100	0.001
08122004ED-FB	FIELD BLANK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08122005ED-FB	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 US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit.

ECS Technician: Eric Davidoff **Date:** 8/12/2020

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 1519-CB **Date:** 8/12/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: Third Floor-A Wing-Hallways

	Work Area Location/Description	Third Floor-A Wing-Hallways
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	15
	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: Michael P. Hamill **Date:** 8/12/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 8/12/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: Third Floor-A Wing-Hallways

	Work Area Location/Description	Third Floor-A Wing-Hallways
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: Michael P. Hamill **Date:** 8/12/2020

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 17, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

CC:

ENCL: Field Report # 12 8/13/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior Project Manager

Disclaimer

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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 supersequent laboratory testing will be presented in separate reports/documents.

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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-CB**
Report No.	**12**
Day & Date	**Thursday 8/13/2020**
Weather	**80 °/ Rain**
On-Site Time	**8.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**8.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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 onsite, as requested, to perform air monitoring and observe asbestos abatement. The materials specified to be removed today are asbestos-containing floor tiles and associated mastic from the third floor hallways in the A Wing. A work area sketch for today's work area are attached to this report.

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.

THIRD FLOOR A WING, HALLWAYS WORK AREA

At 6:16 am, a PCM air sample was started outside the work area in a stairwell near room A338. The sampling pump was calibrated using a rotameter to 1.5 liters per minute.

At 6:19 am, PCM air samples were started inside and outside the work area next to the decontamination unit. The sampling pumps were calibrated using a rotameter to 1.5 liters per minute.

At 1:56 pm, the OWA sampling pump in the stairwell near room A338 was checked using a rotameter. The flow rate was 1.5 liters per minute. The PCM air sample was stopped and gathered for analysis.

At 2:05 pm, the OWA and the IWA sampling pumps next to the decontamination unit were checked using a rotameter. The flow rates were 1.5 liters per minute. The PCM air samples were stopped and gathered for analysis

GENERAL

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

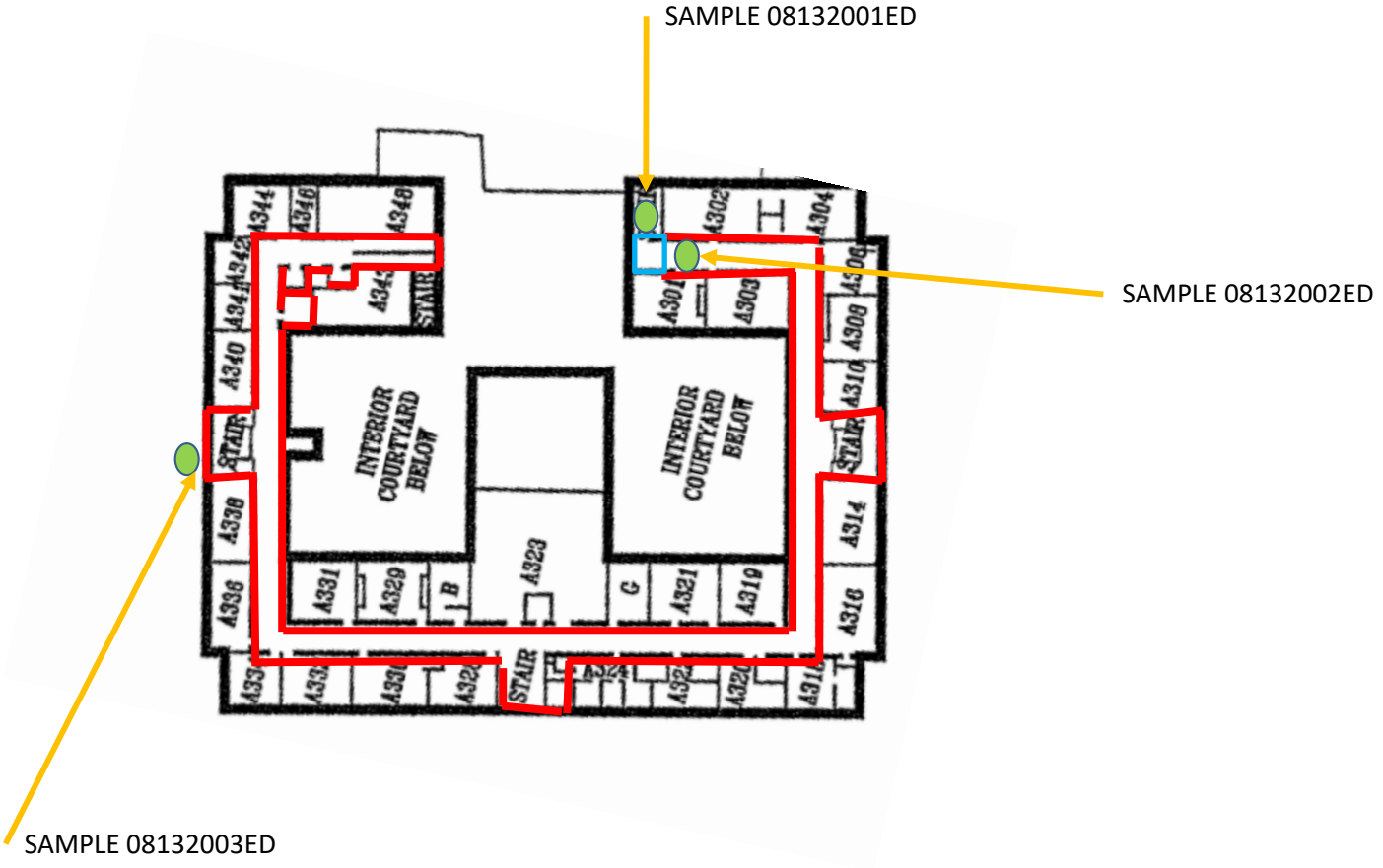
Work Area Survey Checklist was completed and is attached to this report.

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 a container temporary waste 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 PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



- Pump Location
- Decontamination Unit
- Work Area

GEORGE WASHINGTON MIDDLE SCHOOL
1005 Mount Vernon Ave.
Alexandria, Va 22301
(T) 703-706-4500 (F) 703-706-4607

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

3RD FLOOR PLAN

Asbestos Abatement Monitoring
George Washington Middle School
Alexandria, VA

ECS

SAMPLE LOCATIONS
Alexandria City Public Schools

SCALE NTS

Project No. 47:1519-CB

Date 8/13/2020

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 8/13/2020
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)
08132001ED	OWA-Next to the decontamination unit	6:19 AM	2:05 PM	1.5	1.5	1.5	466	699.0	1.0	100	0.001
08132002ED	IWA-Next to the decontamination unit	6:19 AM	2:05 PM	1.5	1.5	1.5	466	699.0	2.5	100	0.002
08132003ED	OWA-Stairwell near room A338	6:16 AM	1:56 PM	1.5	1.5	1.5	460	690.0	0.5	100	0.000
08132004ED-FB	FIELD BLANK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08132005ED-FB	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 US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit, which meets the project requirements.

ECS Technician: Eric Davidoff **Date:** 8/13/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 8/13/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: THIRD FLOOR - A WING - HALLWAYS

	Work Area Location/Description	THIRD FLOOR - A 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: Michael P. Hamill **Date:** 8/13/2020

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

LETTER OF TRANSMITTAL

August 17, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

CC:

ENCL: Field Report # 13 8/14/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior Project Manager

Disclaimer

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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 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-CB**
Report No.	**13**
Day & Date	**Friday 8/14/2020**
Weather	**85 °/ Cloudy**
On-Site Time	**4.25**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**4.25**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
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**	**8:30A**
				10:30A	**11:45A**
				1:30P	**2:00P**

* 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 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 the third floor hallways in the A Wing. A work area sketch and photographs for today's work area are attached to this report.

Prior to starting the removal of the specified materials, 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.

THIRD FLOOR A WING, HALLWAYS WORK AREA

At 6:09 am, a PCM air sample was started outside the work area in a stairwell near Room A324. The sampling pump was calibrated using a rotameter to 1.5 liters per minute.

At 6:10 am, PCM air samples were started inside and outside the work area next to the decontamination unit. The sampling pumps were calibrated using a rotameter to 1.5 liters per minute.

At 1:46 pm, the OWA sampling pump in the stairwell near room A338 was checked using a rotameter. The flow rate was 1.5 liters per minute. The PCM air sample was stopped and gathered for analysis.

At 1:51 pm, the OWA and the IWA sampling pumps next to the decontamination unit was checked using a rotameter. The flow rates were 1.5 liters per minute. The PCM air samples were stopped and gathered for analysis.

GENERAL

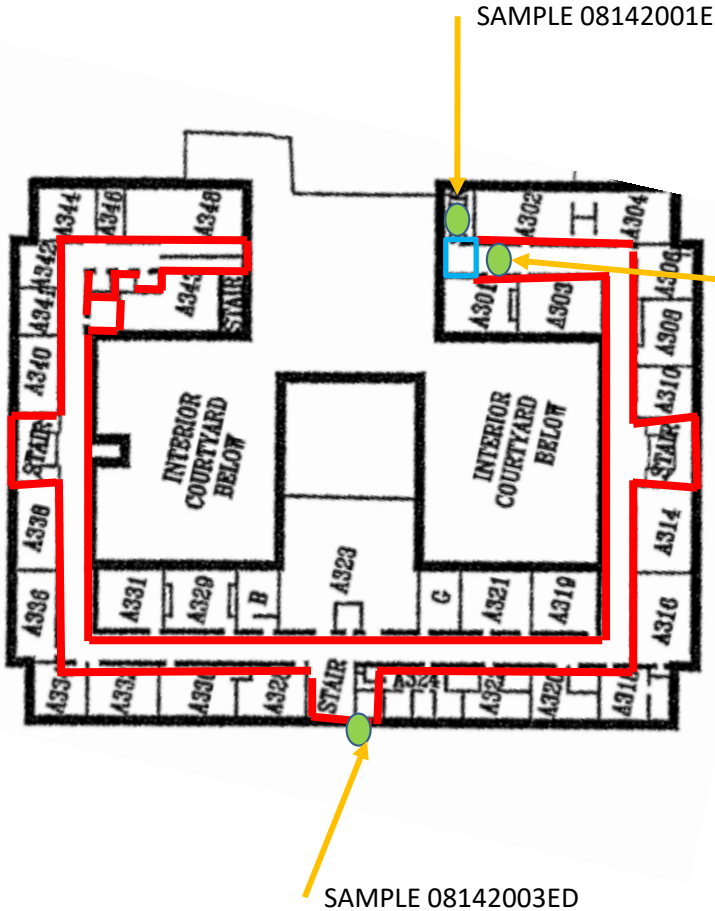
The work area was surveyed to evaluate general compliance with the applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

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 a container temporary waste 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 PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



- Pump Location
- Decontamination Unit
- Work Area

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

GEORGE WASHINGTON MIDDLE SCHOOL
1005 Mount Vernon Ave.
Alexandria, Va 22301
(T) 703-706-4500 (F) 703-706-4607

3RD FLOOR PLAN

Asbestos Abatement Monitoring
George Washington Middle School
Alexandria, VA

SAMPLE LOCATIONS

Alexandria City Public Schools

SCALE NTS

Project No. 47:1519-CB

Date 8/14/2020

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 8/14/2020
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)
08142001ED	OWA-Next to decontamination unit	6:10 AM	1:51 PM	1.5	1.5	1.5	461	691.5	1.5	100	0.001
08142002ED	IWA-Next to decontamination unit	6:10 AM	1:51 PM	1.5	1.5	1.5	461	691.5	4.5	100	0.003
08142003ED	OWA-In stairwell near room A324	6:09 AM	1:46 PM	1.5	1.5	1.5	457	685.5	1.0	100	0.001
08142004ED-FB	FIELD BLANK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08142005ED-FB	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 US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fibers per cubic centimeter. The samples collected today were reported below the re-occupancy limit.

ECS Technician: Eric Davidoff **Date:** 8/14/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 8/14/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: THIRD FLOOR - A WING - HALLWAYS

	Work Area Location/Description	THIRD FLOOR - A 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: Michael P. Hamill **Date:** 8/14/2020

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, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

CC:

ENCL: Field Report # 14 8/17/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior Project Manager

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(703) 471-8400 [Phone]
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FIELD REPORT

Project No.	**1519-CB**
Report No.	**14**
Day & Date	**Monday 8/17/2020**
Weather	**85 °/ Sunny**
On-Site Time	**8.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**8.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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 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 the third floor hallways in the A Wing. A work area sketch for today's shift is attached to this report.

Prior to starting the removal of the specified materials, 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.

THIRD FLOOR A WING, HALLWAYS WORK AREA

Between 6:13 am and 6:18 am, PCM air samples were started outside the work area next to the decontamination unit, in a stairwell near Room A324, and in a stairwell near Room A338. The sampling pumps were calibrated using a rotameter to 1.5 liters per minute.

Between 2:02 pm and 2:04 pm, the sampling pumps were checked using a rotameter. The flow rates were 1.5 liters per minute. The PCM air samples were stopped and gathered for analysis.

GENERAL

The work area was surveyed to evaluate general compliance with the 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 a container temporary waste 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 PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



- Pump Location
- Decontamination Unit
- Work Area

GEORGE WASHINGTON MIDDLE SCHOOL
1005 Mount Vernon Ave,
Alexandria, Va 22301
(T) 703-706-4500 (F) 703-706-4607

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

3RD FLOOR PLAN

Asbestos Abatement Monitoring
George Washington Middle School
Alexandria, VA

SAMPLE LOCATIONS

Alexandria City Public Schools

SCALE NTS

Project No. 47:1519-CB

Date 8/17/2020

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 8/17/2020
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)
08172001ED	OWA-Next to decontamination unit	6:16 AM	2:02 PM	1.5	1.5	1.5	466	699.0	1.0	100	0.001
08172002ED	OWA-Stairwell near room A324	6:17 AM	2:03 PM	1.5	1.5	1.5	466	699.0	0.0	100	0.000
08172003ED	OWA-Stairwell near room A338	6:18 AM	2:04 PM	1.5	1.5	1.5	466	699.0	1.5	100	0.001
08172004ED-FB	FIELD BLANK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08172005ED-FB	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 US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit.
The sample results reflect the conditions where the air samples were collected at the times and dates of collection.

ECS Technician: Eric Davidoff **Date:** 8/17/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 8/17/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: THIRD FLOOR - A WING - HALLWAYS

	Work Area Location/Description	THIRD FLOOR - A 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: Michael P. Hamill **Date:** 8/17/2020

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Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

LETTER OF TRANSMITTAL

August 20, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

CC:

ENCL: Field Report # 15 8/18/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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-CB**
Report No.	**15**
Day & Date	**Tuesday 8/18/2020**
Weather	**85 °/ Sunny**
On-Site Time	**6.00**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**6.00**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
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**	**10:15A**
				11:00A	**12:15P**
				1:45P	**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 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 the third floor hallways in the A Wing. A work area sketch for today's shift is attached to this report.

Prior to starting the removal of the specified materials, 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.

THIRD FLOOR A WING, HALLWAYS WORK AREA

Between 6:10 am and 6:13 am, a PCM air samples were started outside the work area next to the decontamination unit, in a stairwell near room A324, and in a stairwell near room A338. The sampling pumps were calibrated using a rotameter to 1.5 liters per minute.

Between 2:11 pm and 2:13 pm, the sampling pumps, next to the decontamination unit, in a stairwell near room A324 and in a stairwell near Room A338 were checked using a rotameter. The flow rates were 1.5 liters per minute. The PCM air samples were stopped and gathered for analysis.

GENERAL

The work area was surveyed to evaluate general compliance with the 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 a container temporary waste 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 PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



- Pump Location
- Decontamination Unit
- Work Area

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

GEORGE WASHINGTON MIDDLE SCHOOL
1005 Mount Vernon Ave.
Alexandria, Va 22301
(T) 703-706-4500 (F) 703-706-4607

3RD FLOOR PLAN

Asbestos Abatement Monitoring
George Washington Middle School
Alexandria, VA

ECS

SAMPLE LOCATIONS

Alexandria City Public Schools

SCALE NTS

Project No. 47:1519-CB

Date 8/18/2020

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 8/18/2020
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)
08182001ED	OWA-Next to decontamination unit	6:10 AM	2:11 PM	1.5	1.5	1.5	481	721.5	0.5	100	0.000
08182002ED	OWA-In a stairwell near room A324	6:11 AM	2:12 PM	1.5	1.5	1.5	481	721.5	6.0	100	0.004
08182003ED	OWA-In a stairwell near room A3338	6:13 AM	2:13 PM	1.5	1.5	1.5	480	720.0	5.0	100	0.003
08182004ED-FB	FIELD BLANK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08182005ED-FB	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 US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit.
The sample results reflect the conditions where the air samples were collected at the times and dates of collection.

ECS Technician: Eric Davidoff **Date:** 8/18/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 8/18/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: THIRD FLOOR - A WING - HALLWAYS

	Work Area Location/Description	THIRD FLOOR - A 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: Michael P. Hamill **Date:** 8/18/2020

ECS Mid Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151-3232
(703) 471-8400 [Phone]
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LETTER OF TRANSMITTAL

August 21, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

CC:

ENCL: Field Report # 16 8/19/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior Project Manager

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(703) 471-8400 [Phone]
(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**1519-CB**
Report No.	**16**
Day & Date	**Wednesday 8/19/2020**
Weather	**80 °/ Rain**
On-Site Time	**8.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**8.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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.

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Prior to starting the removal of the specified materials, 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.

THIRD FLOOR, A WING - HALLWAYS WORK AREA

Between 6:06 and 6:08 am, PCM air samples were started outside the work area next to the decontamination unit, inside the stairwell near Room A324, and inside the stairwell near Room A338. The sampling pumps were calibrated using a rotameter to 1.5 liters per minute.

Between 2:02 pm and 2:04 pm, the sampling pumps next to the decontamination unit, inside the stairwell near Room A324, and inside the stairwell near room A338 were checked using a rotameter. The flow rates were 1.5 liters per minute. The PCM air samples were stopped and gathered for analysis.

GENERAL

The work area was surveyed to evaluate general compliance with the 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 a container temporary waste storage area.

By Eric Davidoff 1825

66559

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 PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



- Pump Location
- Decontamination Unit
- Work Area

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

GEORGE WASHINGTON MIDDLE SCHOOL
1005 Mount Vernon Ave.
Alexandria, Va 22301
(T) 703-706-4500 (F) 703-706-4607

3RD FLOOR PLAN

Asbestos Abatement Monitoring
George Washington Middle School
Alexandria, VA

ECS

SAMPLE LOCATIONS

Alexandria City Public Schools

SCALE NTS

Project No. 47:1519-CB

Date 8/19/2020

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 8/19/2020
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)
08192001ED	OWA-Next to the decontamination unit	6:06 AM	2:02 PM	1.5	1.5	1.5	476	714.0	4.5	100	0.003
08192002ED	OWA-In a stairwell near room A324	6:07 AM	2:03 PM	1.5	1.5	1.5	476	714.0	1.5	100	0.001
08192003ED	OWA-In a stairwell near roomA338	6:08 AM	2:04 PM	1.5	1.5	1.5	476	714.0	1.5	100	0.001
08192004ED-FB	FIELD BLANK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08192005ED-FB	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 US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit, which meets the project requirements.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.

ECS Technician: Eric Davidoff **Date:** 8/19/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 8/19/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: THIRD FLOOR - A WING - HALLWAYS

	Work Area Location/Description	THIRD FLOOR - A 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: Michael P. Hamill **Date:** 8/19/2020

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 21, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

CC:

ENCL: Field Report # 17 8/20/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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-CB**
Report No.	**17**
Day & Date	**Thursday 8/20/2020**
Weather	**85 °/ Sunny**
On-Site Time	**5.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**5.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
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**	**8:45A**
				10:15A	**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 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 the third floor hallways in the A Wing. A work area sketch is attached to this report.

Prior to starting the removal of the specified materials, 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.

THIRD FLOOR A WING, HALLWAYS WORK AREA

Between 6:08 and 6:10 am, PCM air samples were started outside the work area next to the decontamination unit, in a stairwell near room A324, and in a stairwell near room A338. The sampling pumps were calibrated using a rotameter to 1.5 liters per minute.

Between 12:56 and 12:58 pm, the OWA sampling pumps next to the decontamination unit, in a stairwell near room A324, and in a stairwell near room A338 were checked using a rotameter. The flow rates were 1.5 liters per minute. The PCM air samples were stopped and gathered for analysis.

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.

GENERAL

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

By Eric Davidoff 1825

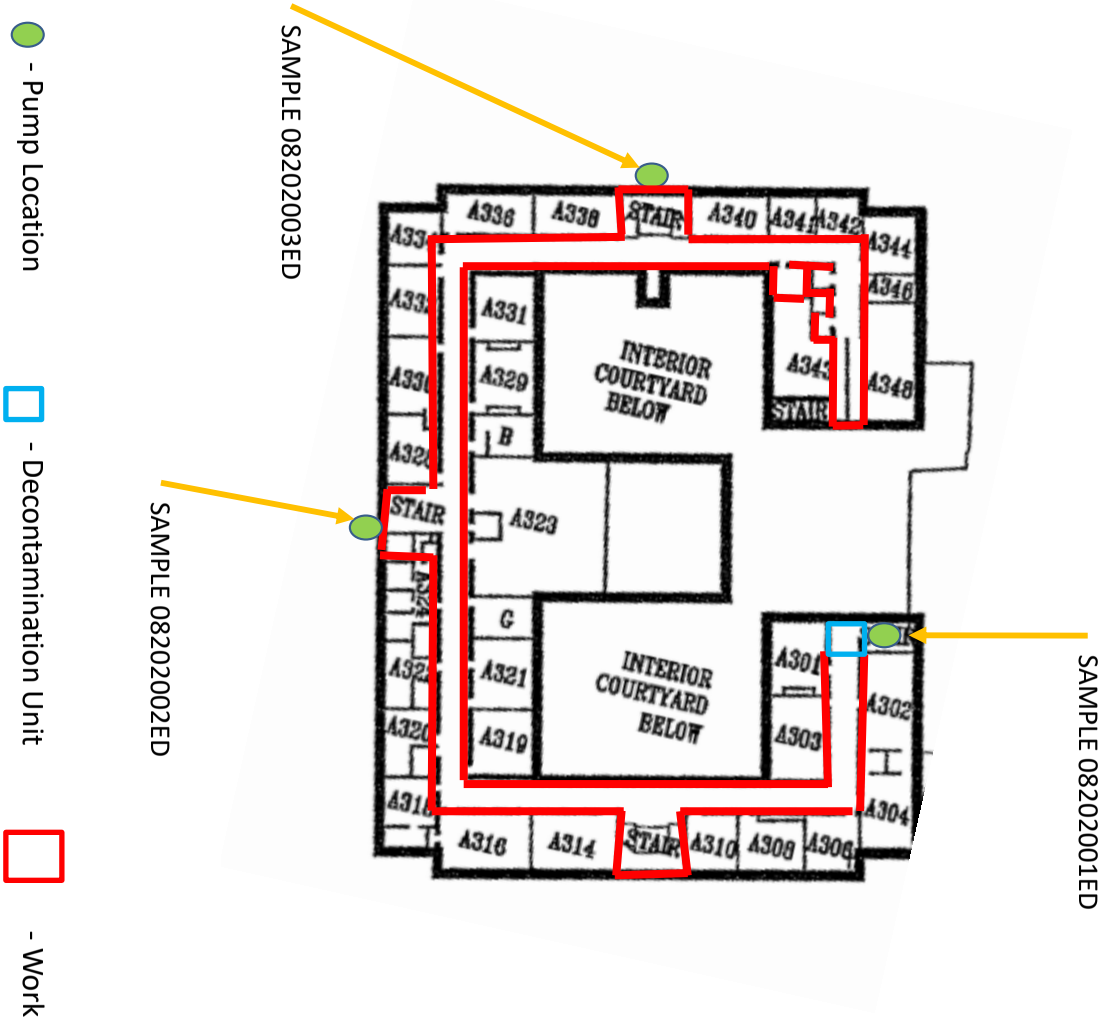
66582

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 a container temporary waste 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 PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



Transmittal Page 4/7

GEORGE WASHINGTON MIDDLE SCHOOL
1005 Mount Vernon Ave.
Alexandria, Va 22301
(T) 703-706-4500 (F) 703-706-4507

3RD FLOOR PLAN

Alexandria City Public Schools
2000 North Beauregard Street
Alexandria, Va 22311
(T) 703-824-6600
(TDD) 703-824-6666
(EMER.) 703-666-5300

Date 8/20/2020	Project No. 47:1519-CB	SCALE NTS	**SAMPLE LOCATIONS** Alexandria City Public Schools

ECS

Asbestos Abatement Monitoring
George Washington Middle School
Alexandria, VA

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 8/20/2020
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)
08202001ED	OWA-Next to the decontamination unit	6:08 AM	12:56 PM	1.5	1.5	1.5	408	612.0	1.5	100	0.001
08202002ED	OWA-In a stairwell near room A324	6:09 AM	12:57 PM	1.5	1.5	1.5	408	612.0	0.5	100	0.000
08202003ED	OWA-In a stairwell near room A338	6:10 AM	12:58 PM	1.5	1.5	1.5	408	612.0	1.0	100	0.001
08202004ED-FB	FIELD BLANK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
08202005ED-FB	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 US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fiber per cubic centimeter. The samples collected today were reported below the re-occupancy limit, which meets the project requirements.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.

ECS Technician: Eric Davidoff **Date:** 8/20/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 8/20/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: THIRD FLOOR - A WING - HALLWAYS

	Work Area Location/Description	THIRD FLOOR - A 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: Michael P. Hamill **Date:** 8/20/2020

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 1519-CB **Date:** 8/20/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: THIRD FLOOR - A WING - HALLWAYS

	Work Area Location/Description	THIRD FLOOR - A 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	N/A
	Number of Samples Collected	0
	Sample Volume (liters)	0
	Work Area Acceptable	Yes

Notes: Final clearance air samples are scheduled to be collected on the following business day.

ECS Technician: Michael P. Hamill **Date:** 8/20/2020

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 24, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

CC:

ENCL: Field Report # 18 8/21/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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 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-CB**
Report No.	**18**
Day & Date	**Friday 8/21/2020**
Weather	**90 °/ Sunny**
On-Site Time	**2.25**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**2.25**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
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	**10:00A**

* 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 onsite, as requested, to perform final clearance sampling for the third floor, A-wing, hallways.

FINAL CLEARANCE THIRD FLOOR A WING, WORK AREA

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. Note that asbestos-containing flooring materials and/or associated black mastic may remain under partition walls, cabinets, lockers, etc.

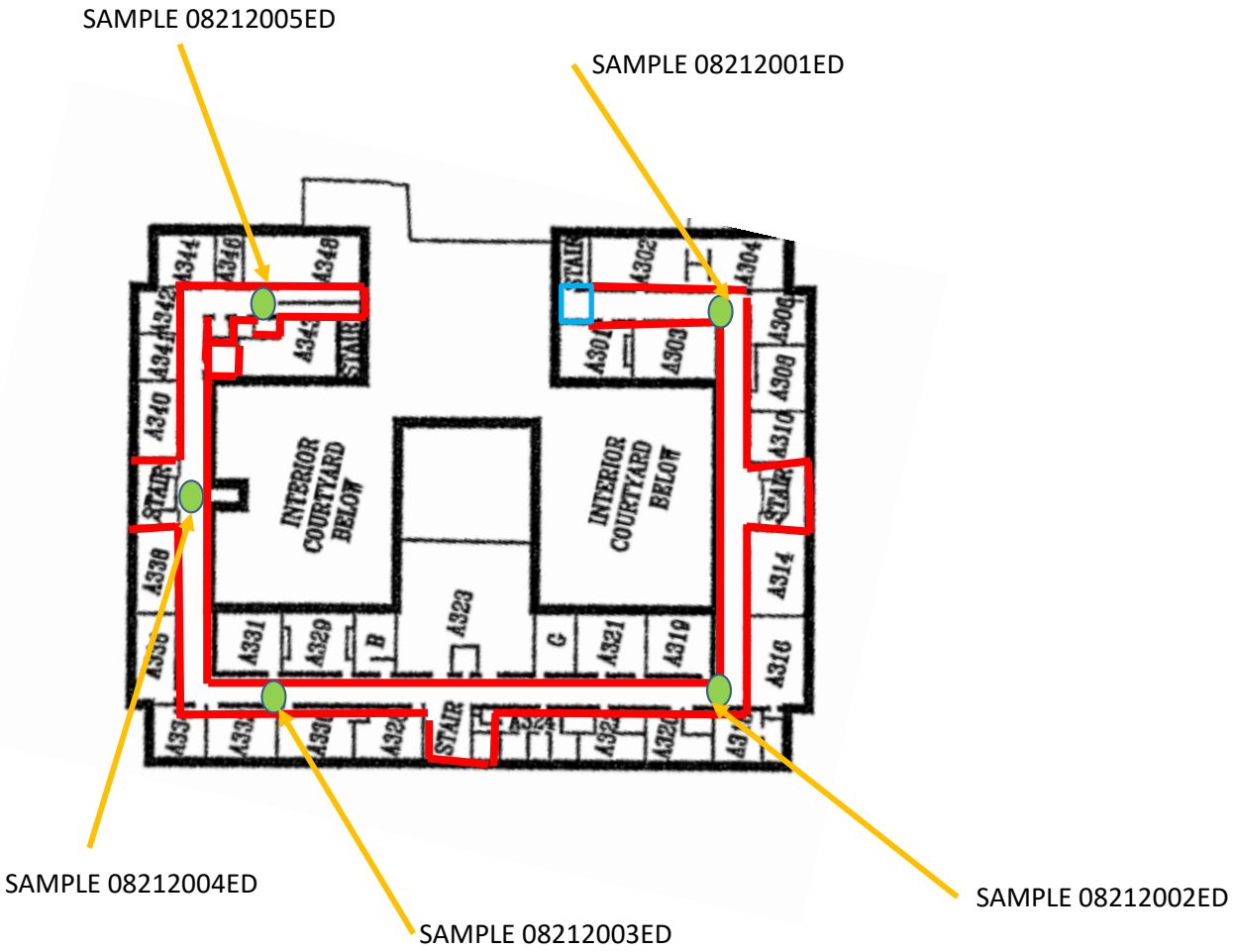
Following the successful completion of the final clearance visual survey, the abatement contractor applied an encapsulant to surfaces within the regulated work area. After waiting till the following morning for the encapsulant to dry, aggressive air sampling was performed. Five (5) TEM air samples were 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 9.0 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 9:21 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 9.0 liters per minute. The sampling cassettes, including the two field blanks and one sealed blank were labeled with unique identification and transported to EMSL Analytical, Inc. (EMSL) 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 informed ECS that the analytical results of the TEM final clearance air samples collected from third floor work area found the airborne asbestos fiber concentrations to be less than the maximum allowable concentration. The client and abatement contractor supervisor, WACO Inc, were informed of the results. A copy of the laboratory report is attached.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



- Pump Location
- Decontamination Unit
- Work Area

GEORGE WASHINGTON MIDDLE SCHOOL
1005 Mount Vernon Ave,
Alexandria, Va 22301
(T) 703-706-4500 (F) 703-706-4607

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

3RD FLOOR PLAN

Asbestos Abatement Monitoring
George Washington Middle School
Alexandria, VA

FINAL Clearence SAMPLE LOCATIONS
Alexandria City Public Schools

SCALE NTS

Project No. 47:1519-CB

Date 8/21/2020

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: 192008271
Customer ID: ECMA78
Customer PO:
Project ID:

Attention: Michael Hamill
ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151

Project: 47:1519 CB GEORGE WASHINGTON

Phone: (703) 471-8400
Fax: (703) 471-8400
Received Date: 08/21/2020 15:50 PM
Analysis Date: 08/22/2020
Collected Date: 08/21/2020

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)
082112001ED	IWA THIRD FLOOR HALLWAYS	1350.00	0.0650	0	None Detected	0	0	0.0044	<15.00	<0.0044
192008271-0001										
082112002ED	IWA THIRD FLOOR HALLWAYS	1350.00	0.0650	0	None Detected	0	0	0.0044	<15.00	<0.0044
192008271-0002										
082112003ED	IWA THIRD FLOOR HALLWAYS	1350.00	0.0650	0	None Detected	0	0	0.0044	<15.00	<0.0044
192008271-0003										
082112004ED	IWA THIRD FLOOR HALLWAYS	1350.00	0.0650	0	None Detected	0	0	0.0044	<15.00	<0.0044
192008271-0004										
082112005ED	IWA THIRD FLOOR HALLWAYS	1350.00	0.0650	0	None Detected	0	0	0.0044	<15.00	<0.0044
192008271-0005										

Analyst(s)

George Malone (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. Measurement of uncertainty available upon request.

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

Initial report from: 08/22/2020 01:22 AM

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(lab use only)*: 192008271

PHONE:
FAX:

Company Name : ECS Mid Atlantic		**EMSL Customer ID:**	
Street: 14026 Thunderbolt Place		**City:**	**State or Province:**
Zip/Postal Code: 20151	**Country:** USA	**Telephone #:**	**Fax #:**
Report To (Name): Eric Davidoff & Michael Hamill		**Please Provide Results via:** ☐ Fax ☐ Email	
email Address: edavidoff@ecslimited.com, Mhamill@ecslimited.com		**Purchase Order Number:**	
Client Project ID: 47:1519-CB/ George Washington		**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: Eric Davidoff **Sampler's Signature:**

Sample #	Sample Description/Location	Volume, Area or Homogenous Area	Date/Time Sampled
08212001ED	IWA -Third floor hallways	1350	08/21/20
08212002ED	IWA -Third floor hallways	1350	08/21/20
08212003ED	IWA -Third floor hallways	1350	08/21/20
08212004ED	IWA -Third floor hallways	1350	08/21/20
08212005ED	IWA -Third floor hallways	1350	08/21/20

Client Sample # (s): 08212001ED - 08212006ED **Total # of Samples:** 13

Relinquished by (Client): Eric Davidoff **Date:** 8/21/20 **Time:**

Received by (Lab): Jaunt **Date:** **Time:**

Comments/Special Instructions:
Agressive air sampling was preformed, only analyze the IWA samples

RECEIVED
EMSL ANALYTICAL, INC.
2020 AUG 21 P 3:50

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.

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
08212006ED	OWA-3RD FLOOR WORK AREA	1350	08/21/20
08212007ED	OWA-3RD FLOOR WORK AREA	1350	08/21/20
08212008ED	OWA-3RD FLOOR WORK AREA	1350	08/21/20
08212009ED	OWA-3RD FLOOR WORK AREA	1350	08/21/20
082120010ED	OWA-3RD FLOOR WORK AREA	1350	08/21/20
082120011ED	BLANK (OPENED 30 SEC. OWA)	N/A	08/21/20
082120012ED	BLANK (AMBIANT OPENED 30)	N/A	08/21/20
082120013ED	FIELD BLANK	N/A	08/21/20

***Comments/Special Instructions:**

Sample Instructions -

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

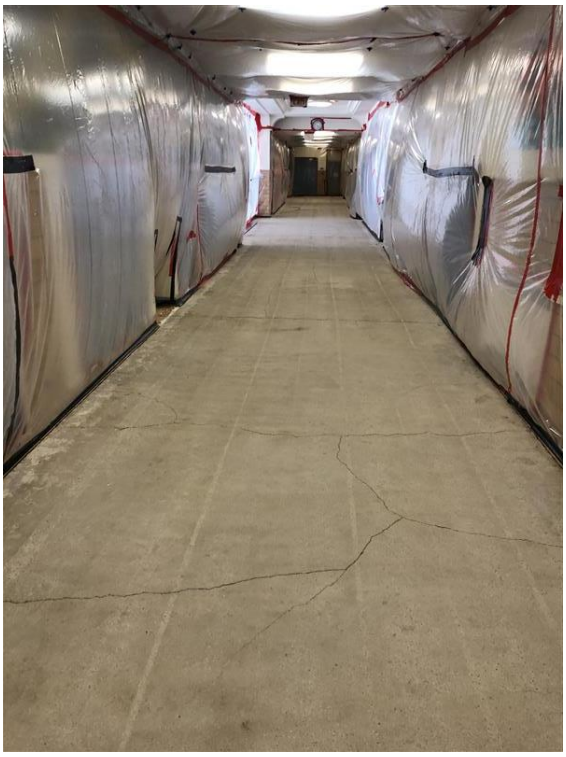
EMSL Analytical, Inc.'s (DBA: LA Testing) Laboratory Terms and Conditions are incorporated into this chain of custody by reference in their entirety. Submission of samples to EMSL Analytical Inc. constitutes acceptance and acknowledgment of all terms and conditions.

Attachments



View of the 3rd floor A wing hallway during final clearance air sampling.

Figure 1



View of the 3rd floor A wing hallway during final clearance air sampling.

Figure 2

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 1519-CB **Date:** 8/21/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: 3rd Floor hallways A-wing

	Work Area Location/Description	3rd Floor hallways A-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	10
	Sample Volume (liters)	1350
	Work Area Acceptable	Yes

Notes: Note that asbestos-containing flooring materials and/or associated black mastic may remain under partition walls, cabinets, lockers, etc.

ECS Technician: Michael P. Hamill **Date:** 8/21/2020

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

LETTER OF TRANSMITTAL

September 17, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

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

CC:

ENCL: Field Report # 19 9/14/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior Project Manager

Disclaimer

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2. *The information in this report relates only to the activities performed on the report date.*
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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 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	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Project No.	**1519-CB**
Report No.	**19**
Day & Date	**Monday 9/14/2020**
Weather	**85 °/ Sunny**
On-Site Time	**4.00**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**4.00**
Re Obs Time	**0.00**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**10:00A**

* 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 perform air monitoring and observed asbestos abatement.

ECS was informed by the abatement contractor that removal of asbestos-containing materials would not occur during today's scheduled shift. The abatement contractor stated that they will continue to prepare the containment.

The undersigned then departed from the subject site.

By Eric Davidoff 1825

66889

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

LETTER OF TRANSMITTAL

September 28, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

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

CC:

ENCL: Field Report # 20 9/21/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior Project Manager

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(703) 834-5527 [Fax]

FIELD REPORT

Project No.	**1519-CB**
Report No.	**20**
Day & Date	**Monday 9/21/2020**
Weather	**75 °/ Sunny**
On-Site Time	**7.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**7.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**7:00A**	**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. Materials to be removed today are multiple layered floor tile and associated mastic from the First Floor A Wing Hallways, and Rooms A100, A101A, A101B, A129 and A131.

First Floor A Wing Hallways

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.

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.

Between 7:30 am and 7:35 am, PCM air samples were started 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 outside the work area. New samples were started in similar locations.

Between 2:15 pm and 2:20 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 outside the work area.

GENERAL

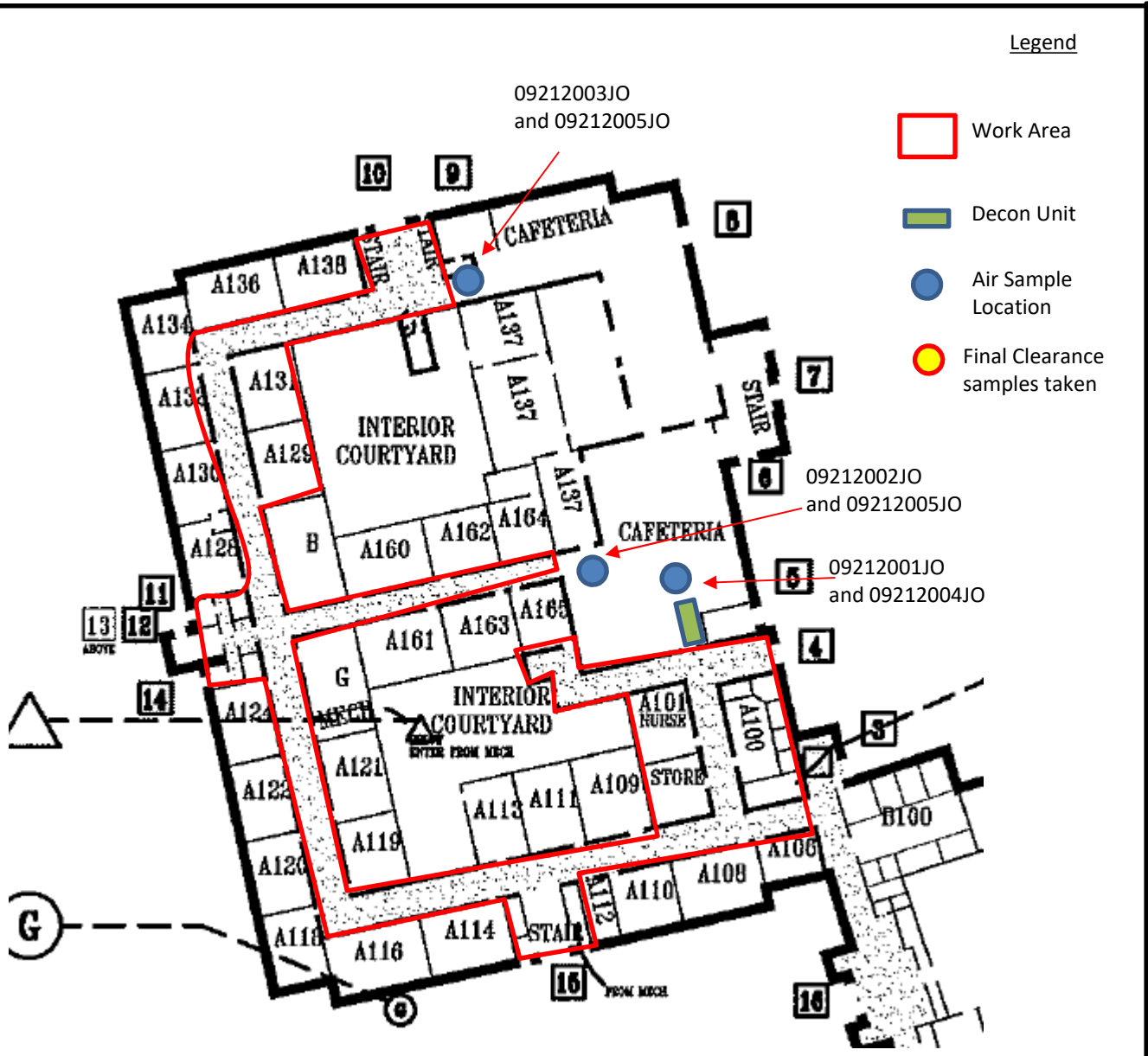
The regulated work area was surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklist was completed and are attached to this report.

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 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 occupancy limit is less than or equal to 0.01 fibers per cubic centimeter of air (f/cc). The analytical results of the PCM air samples collected from outside the work areas were reported to be less than the maximum allowable limits set by applicable regulations.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



George Washington
1005 Mt Vernon Ave.,
Alexandria, VA 22301

ECS

Abatement Activities Plan

SCALE Not Defined

Project No. 47:1519-CB

Date 09/21/2020

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 9/22/2020
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)
09212001JO	First Floor A Wing Work Area - OWA	7:30 AM	10:30 AM	2.5	2.5	2.5	180	450.0	0.0	100	0.000
09212002JO	First Floor A Wing Work Area - OWA	7:30 AM	10:30 AM	2.5	2.5	2.5	180	450.0	0.0	100	0.000
09212003JO	First Floor A Wing Work Area - OWA	7:35 AM	10:35 AM	2.5	2.5	2.5	180	450.0	1.0	100	0.001
09212004JO	First Floor A Wing Work Area - OWA	10:30 AM	2:15 PM	2.5	2.5	2.5	225	562.5	0.0	100	0.000
09212005JO	First Floor A Wing Work Area - OWA	10:30 AM	2:15 PM	2.5	2.5	2.5	225	562.5	0.5	100	0.000
09212006JO	First Floor A Wing Work Area - OWA	10:35 AM	2:20 PM	2.5	2.5	2.5	225	562.5	1.0	100	0.001
09212007JO	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
09212008JO	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 US EPA and VA re-occupancy limit is less than or equal to 0.01 fibers per cubic centimeter of air (f/cc). The analytical results of the PCM air samples collected from outside the work areas were reported to be less than the re-occupancy limit.

ECS Technician: John A O'Neil **Date:** 9/22/2020

ECS Mid-Atlantic, LLC

Pre-Abatement Work Area Checklist

Project Number: 1519-CB **Date:** 9/22/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: A Wing First Floor Hallways - multiple layered floor tiles and associated floor tile mastic

	Work Area Location/Description	A Wing First Floor Hallways -
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	10
	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: Michael P. Hamill **Date:** 9/22/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 9/22/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: A Wing First Floor Hallways - multiple layered floor tiles and associated floor tile mastic

	Work Area Location/Description	A Wing First Floor Hallways -
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: Michael P. Hamill **Date:** 9/22/2020

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

LETTER OF TRANSMITTAL

September 28, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

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

CC:

ENCL: Field Report # 21 9/22/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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-CB**
Report No.	**21**
Day & Date	**Tuesday 9/22/2020**
Weather	**75 °/ Sunny**
On-Site Time	**8.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**8.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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. Materials to be removed today are multiple layered floor tile and associated mastic from the first floor of the A wing Hallways and Rooms A100, A101A, A101B, A129, and A131.

First Floor A Wing Hallways

Prior to starting the removal of the specified materials, 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.

Between 6:05 am and 6:08 am, PCM air samples were started outside the work area. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

Between 10:00 am and 10:02 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 outside the work area. New samples were started in similar locations.

Between 2:15 pm and 2:18 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 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 are attached to this report.

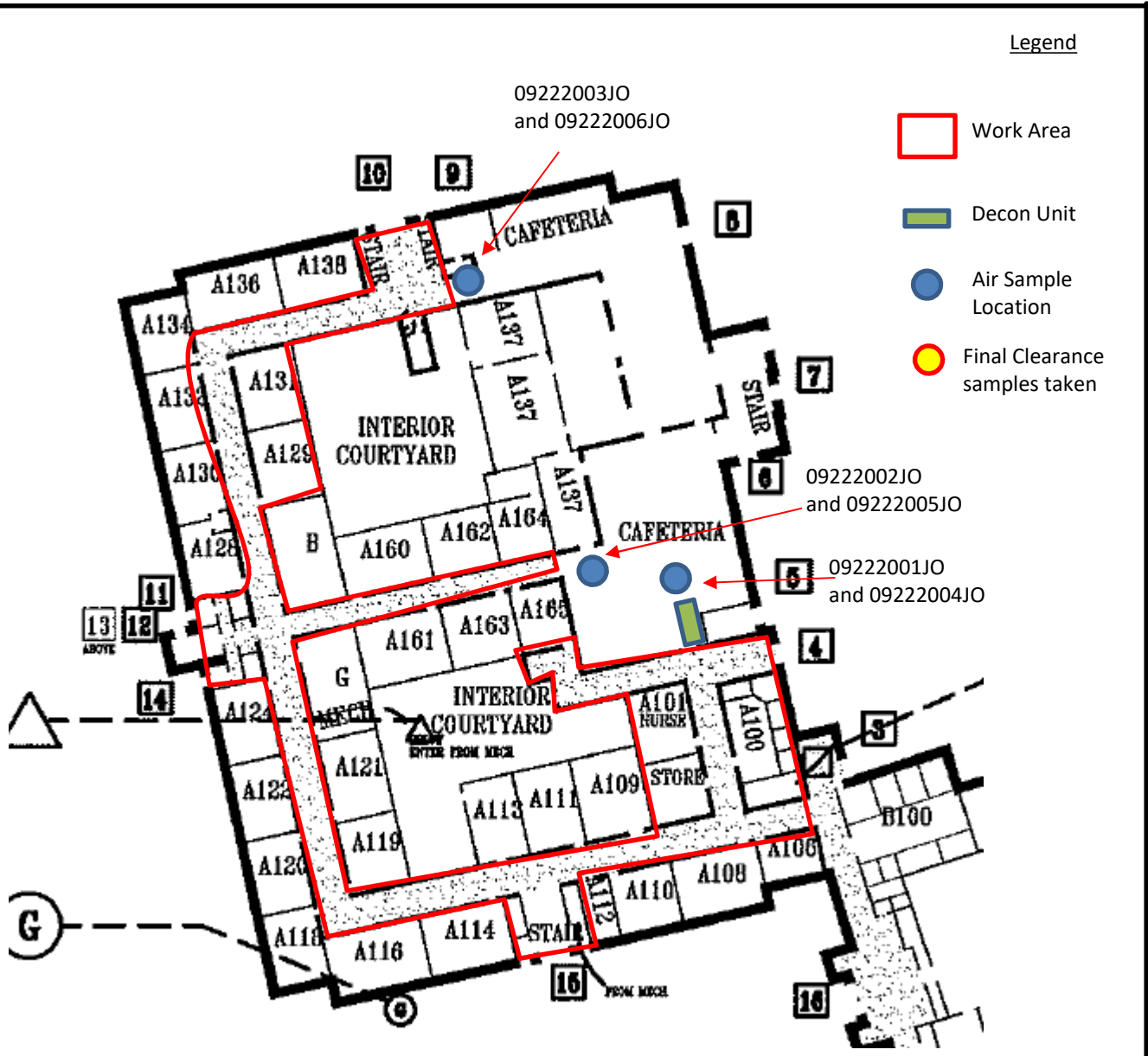
ECS observed the abatement contractor placing the specified asbestos-containing materials in 6-mil polyethylene bags which were double-bagged and sealed in general accordance with the applicable

regulations. Waste bags were labeled and placed in 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 less than or equal to 0.01 fibers per cubic centimeter of air (f/cc). The analytical results of the PCM air samples collected from outside the work areas were reported to be less than the re-occupancy limit.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



George Washington
1005 Mt Vernon Ave.,
Alexandria, VA 22301

Abatement Activities Plan

SCALE Not Defined

Project No. 47:1519-CB

Date 09/22/2020

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 9/24/2020
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)
09222001JO	First Floor A Wing Hallways - OWA	6:05 AM	10:10 AM	2.5	2.5	2.5	245	612.5	0.0	100	0.000
09222002JO	First Floor A Wing Hallways - OWA	6:05 AM	10:00 AM	2.5	2.5	2.5	235	587.5	0.5	100	0.000
09222003JO	First Floor A Wing Hallways - OWA	6:08 AM	10:02 AM	2.5	2.5	2.5	234	585.0	0.0	100	0.000
09222004JO	First Floor A Wing Hallways - OWA	10:00 AM	2:15 PM	2.5	2.5	2.5	255	637.5	0.0	100	0.000
09222005JO	First Floor A Wing Hallways - OWA	10:00 AM	2:15 PM	2.5	2.5	2.5	255	637.5	0.0	100	0.001
09222006JO	First Floor A Wing Hallways - OWA	10:02 AM	2:18 PM	2.5	2.5	2.5	256	640.0	1.0	100	0.001
09222007JO	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
09222008JO	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 US EPA and VA re-occupancy limit is less than or equal to 0.01 fibers per cubic centimeter of air (f/cc). The analytical results of the PCM air samples collected from outside the work areas were reported to be less than the maximum allowable limit set by applicable regulations.

ECS Technician: John A O'Neil **Date:** 9/24/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 9/24/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: First Floor A Wing Hallways - multiple layered floor tiles and associated floor tile mastic

	Work Area Location/Description	First Floor A Wing Hallways -
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: Michael P. Hamill **Date:** 9/24/2020

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

LETTER OF TRANSMITTAL

September 28, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

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

CC:

ENCL: Field Report # 22 9/23/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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-CB**
Report No.	**22**
Day & Date	**Wednesday 9/23/2020**
Weather	**75 °/ Sunny**
On-Site Time	**8.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**8.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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. Materials to be removed today are multiple layered floor tile and associated mastic from the first floor of the A Wing Hallways, and Rooms A100, A101A, A101B, A129, and A131.

First Floor A Wing Hallways

Prior to starting the removal of the specified materials, 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.

Between 6:10 am and 6:12 am, PCM air samples were started outside the work area. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

Between 10:00 am and 10:02 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 outside the work area. New PCM air samples were started in similar locations.

Between 2:15 pm and 2:20 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 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 are 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 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.

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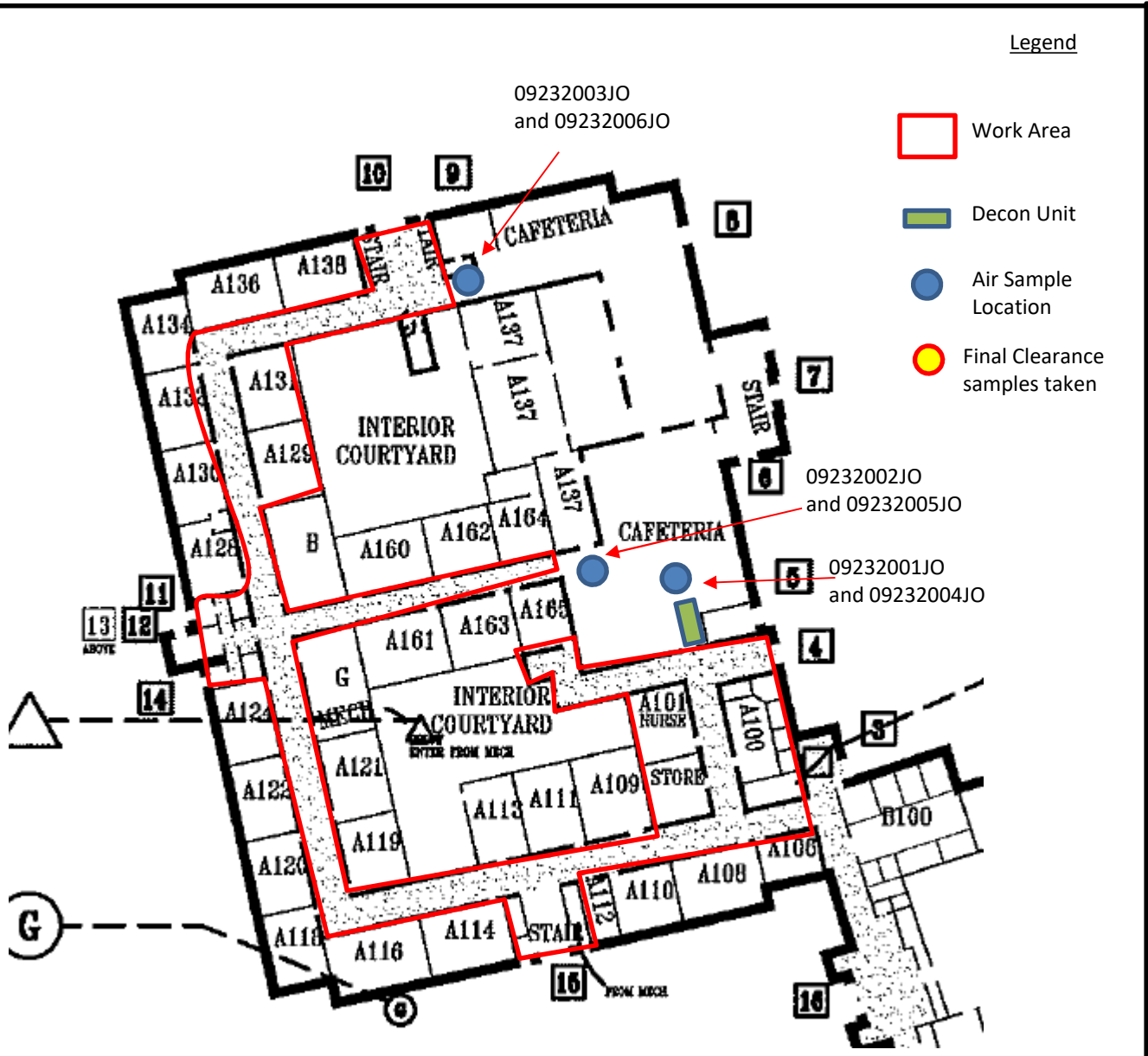
The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



George Washington
1005 Mt Vernon Ave.,
Alexandria, VA 22301

Abatement Activities Plan

SCALE Not Defined

Project No. 47:1519-CB

Date 09/23/2020

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 9/24/2020
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)
09232001JO	First Floor A Wing Hallways - OWA	6:10 AM	10:00 AM	2.5	2.5	2.5	230	575.0	1.0	100	0.001
09232002JO	First Floor A Wing Hallways - OWA	6:10 AM	10:00 AM	2.5	2.5	2.5	230	575.0	0.5	100	0.000
09232003JO	First Floor A Wing Hallways - OWA	6:12 AM	10:02 AM	2.5	2.5	2.5	230	575.0	0.0	100	0.000
09232004JO	First Floor A Wing Hallways - OWA	10:00 AM	2:15 PM	2.5	2.5	2.5	255	637.5	0.0	100	0.000
09232005JO	First Floor A Wing Hallways - OWA	10:00 AM	2:15 PM	2.5	2.5	2.5	255	637.5	0.5	100	0.000
09232006JO	First Floor A Wing Hallways - OWA	10:02 AM	2:20 PM	2.5	2.5	2.5	258	645.0	0.0	100	0.000
09232007JO	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
09232008JO	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 US EPA and VA re-occupancy limit is less than or equal to 0.01 fibers per cubic centimeter of air (f/cc). The analytical results of the PCM air samples collected from outside the work areas were reported to be less than the re-occupancy limit.

ECS Technician: John A O'Neil **Date:** 9/24/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 9/24/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: First Floor A Wing Hallways - multiple layered floor tiles and associated floor tile mastic

	Work Area Location/Description	First Floor A Wing Hallways -
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: Michael P. Hamill **Date:** 9/24/2020

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

LETTER OF TRANSMITTAL

September 28, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

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

CC:

ENCL: Field Report # 23 9/24/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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 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-CB**
Report No.	**23**
Day & Date	**Thursday 9/24/2020**
Weather	**75 °/ Sunny**
On-Site Time	**4.25**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**4.25**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**10:15A**

* 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. Materials to be removed today are multiple layered floor tile and associated floor mastic from the first floor of the A Wing Hallways, and Rooms A100, A101A, A101B, A129 and A131.

First Floor A Wing Hallways

Prior to starting the removal of the specified materials, 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.

Between 6:10 am and 6:12 am, PCM air samples were started outside the work area. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

Between 10:00 am and 10:02 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 outside the work area.

The undersigned left the site at 10:15 am, and Ms. Catey Bourne of ECS took over for the remainder of the work day. Please refer to Daily Report No. 23A for additional information in regards to the activities performed during this work shift.

GENERAL

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

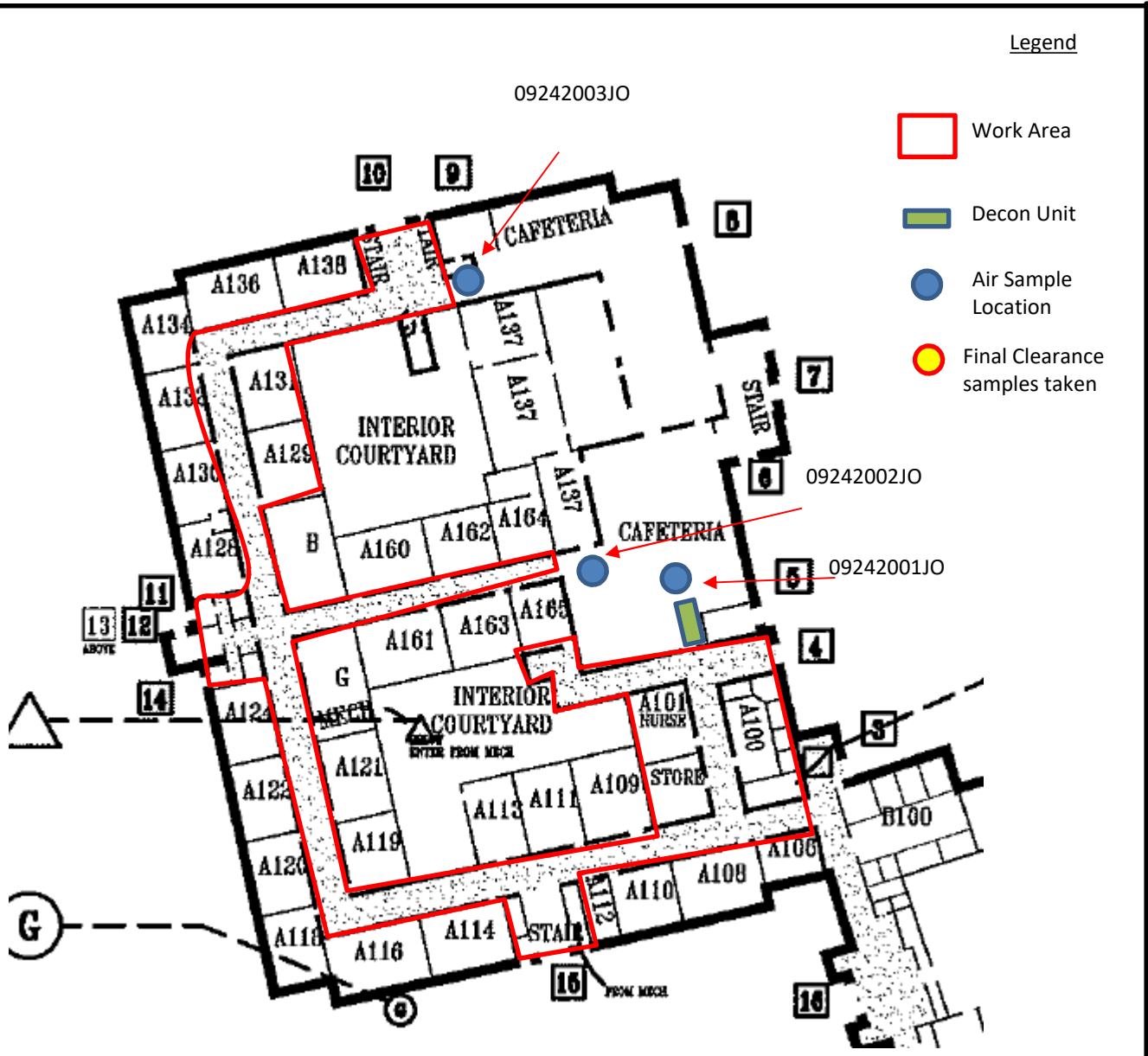
ECS observed the abatement contractor placing the specified asbestos-containing materials in 6-mil polyethylene bags which were double-bagged and sealed in general accordance with the applicable

regulations. Waste bags were labeled and placed in 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 less than or equal to 0.01 fibers per cubic centimeter of air (f/cc). The analytical results of the PCM air samples collected from outside the work areas were reported to be less than the maximum allowable limits set by applicable regulations.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



George Washington
1005 Mt Vernon Ave.,
Alexandria, VA 22301

Abatement Activities Plan

SCALE Not Defined

Project No. 47:1519-CB

Date 09/24/2020

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 9/24/2020
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)
09242001JO	First Floor A Wing Hallways - OWA	6:10 AM	10:00 AM	2.5	2.5	2.5	230	575.0	1.0	100	0.001
09242002JO	First Floor A Wing Hallways - OWA	6:10 AM	10:00 AM	2.5	2.5	2.5	230	575.0	0.0	100	0.000
09242003JO	First Floor A Wing Hallways - OWA	6:13 AM	10:04 AM	2.5	2.5	2.5	231	577.5	0.0	100	0.000
09242004JO	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
09242005JO	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 US EPA and VA re-occupancy limit is less than or equal to 0.01 fibers per cubic centimeter of air (f/cc). The analytical results of the PCM air samples collected from outside the work areas were reported to be less than the maximum allowable limits set by applicable regulations.

ECS Technician: John A O'Neil **Date:** 9/24/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 9/24/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: First Floor A Wing Hallways - Floor Tile and Mastic

	Work Area Location/Description	First Floor A Wing Hallways - 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	3
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes:

ECS Technician: Michael P. Hamill **Date:** 9/24/2020

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

LETTER OF TRANSMITTAL

September 28, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

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

CC:

ENCL: Field Report # 23A 9/24/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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-CB**
Report No.	**23A**
Day & Date	**Thursday 9/24/2020**
Weather	**68 °/ Cloudy**
On-Site Time	**5.00**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**5.00**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**9:30A**	**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 floor tile and mastic from the First Floor A Wing Hallways, Room A101, Room A100, the storage room next to Room A101, the girls bathroom, boys bathroom, a custodial closet, and the storage room by door 27.

A WING FIRST FLOOR WORK AREA

Between 10:05 am and 10:11 am, PCM air samples were started outside the work area. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

The abatement contractor removed approximately 107 waste containers of asbestos-containing waste from the work area today. The abatement contractor was observed abating floor tile from the hallway near Rooms A120 to A137. A subcontractor for the abatement company was observed shot blasting mastic in the hallways near Rooms 101A to A119.

Between 1:49 pm and 1:52 pm, the sampling pumps were checked using a rotameter. The flow rates were 2.5 liters per minute. The PCM air samples were stopped and gathered from outside the work area for analysis.

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 placed in barrels lined and sealed in general accordance with the applicable regulations. Waste containers were placed in a waste hauling trailer.

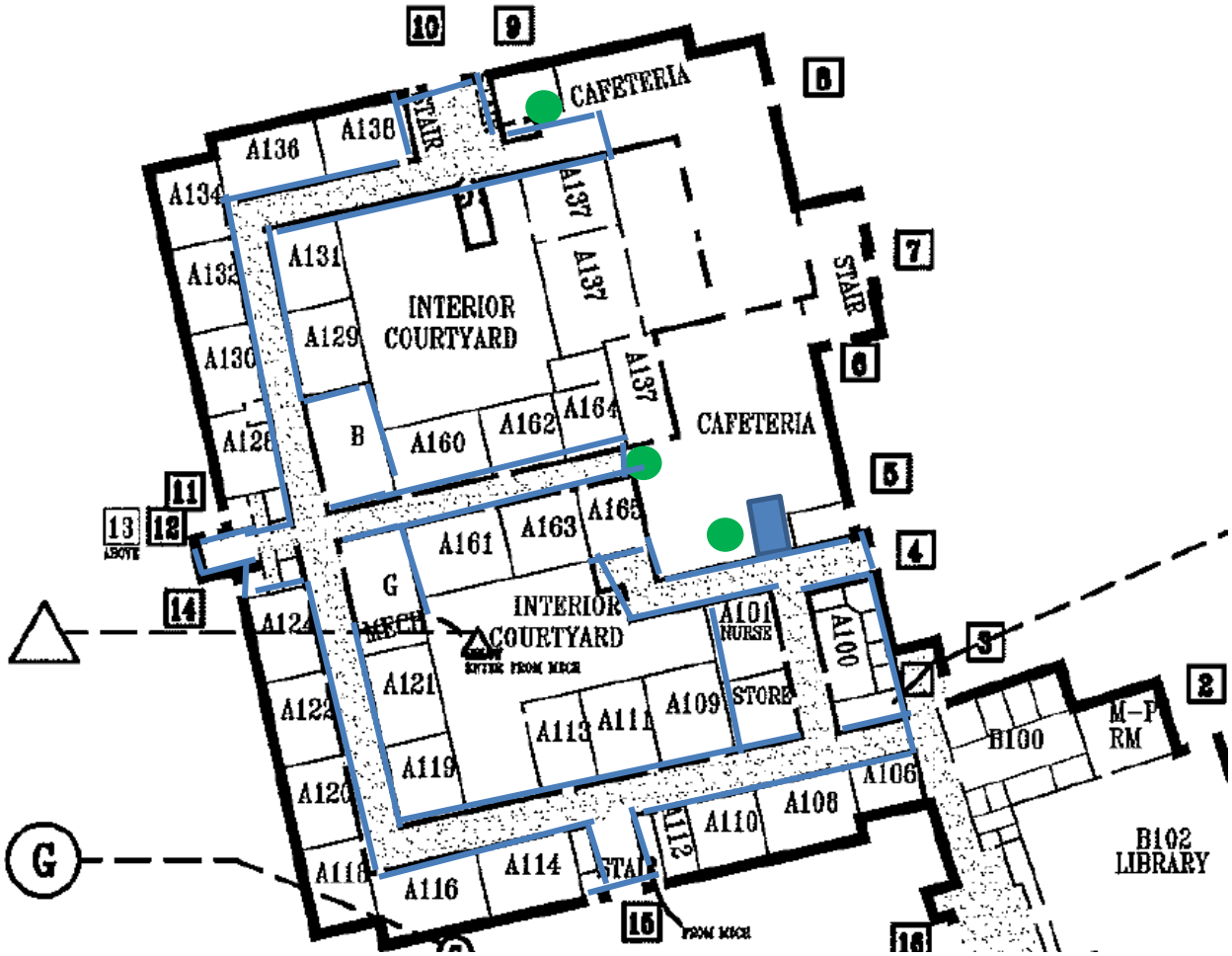
By Catey Bourne 1302

67066

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 than or equal to 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 the re-occupancy limit, which meets the project requirements.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



PCM Air Sample Location

Three Stage Decontamination Unit

Work Area Perimeter

George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA 22301

WORK AREA SKETCH FIRST FLOOR

Scale: NTS

Project No.
47:1519-CB

9/24/20

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 9/24/2020
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)
09242001CB	OWA - Decontamination Unit	10:11 AM	1:49 PM	2.5	2.5	2.5	218	545.0	1.0	100	0.001
09242002CB	OWA - Kitchen Critical Barrier	10:05 AM	1:50 PM	2.5	2.5	2.5	225	562.5	0.0	100	0.000
09242003CB	OWA - North Cafeteria Critical Barrier	10:07 AM	1:52 PM	2.5	2.5	2.5	225	562.5	1.0	100	0.001
09242004CB	Field blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
09242005Cb	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 US EPA and Commonwealth of Virginia re-occupancy limit is less than or equal to 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 the re-occupancy limit, which meets the project requirements.

ECS Technician: Catey Bourne **Date:** 9/24/2020

Attachments



View of the wast containers within the work area.

Figure 1



View of the work area during abatement activities.

Figure 2

Attachments



View of the hallway near Room 120 during abatement activities.

Figure 3



View of the hallway near Room 108 during abatement activities.

Figure 4

Attachments



View of the Principal's office (A100) during abatement activities.

Figure 5

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 9/24/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: First Floor A Wing

	Work Area Location/Description	First Floor A 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: Michael P. Hamill **Date:** 9/24/2020

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

LETTER OF TRANSMITTAL

September 28, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

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

CC:

ENCL: Field Report # 24 9/25/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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-CB**
Report No.	**24**
Day & Date	**Friday 9/25/2020**
Weather	**70 °/ Cloudy**
On-Site Time	**8.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**8.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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 floor tile and mastic from the first floor A Wing Hallways, Room A101, Room A100, the storage room next to Room A101, the girls bathroom, boys bathroom, a custodial closet, and the storage room by Door 27.

A WING FIRST FLOOR WORK AREA

Between 6:30 am and 6:45 am, PCM air samples were started outside the work area. The sampling pumps were calibrated using a rotameter to 2.5 liters per minute.

The abatement contractor removed approximately 150 waste containers of floor tile from the work area today. The abatement contractor was observed shot blasting mastic in the hallways near Rooms A120 to A137. Abatement workers were also observed grinding mastic from the edges of the work area.

Between 1:45 pm and 1:52 pm, the sampling pumps were checked using a rotameter. The flow rates were 2.5 liters per minute. The PCM air samples were stopped and gathered from outside the work area for analysis.

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 placed in barrels sealed in general accordance with the applicable regulations. Waste containers were placed in a waste hauling trailer.

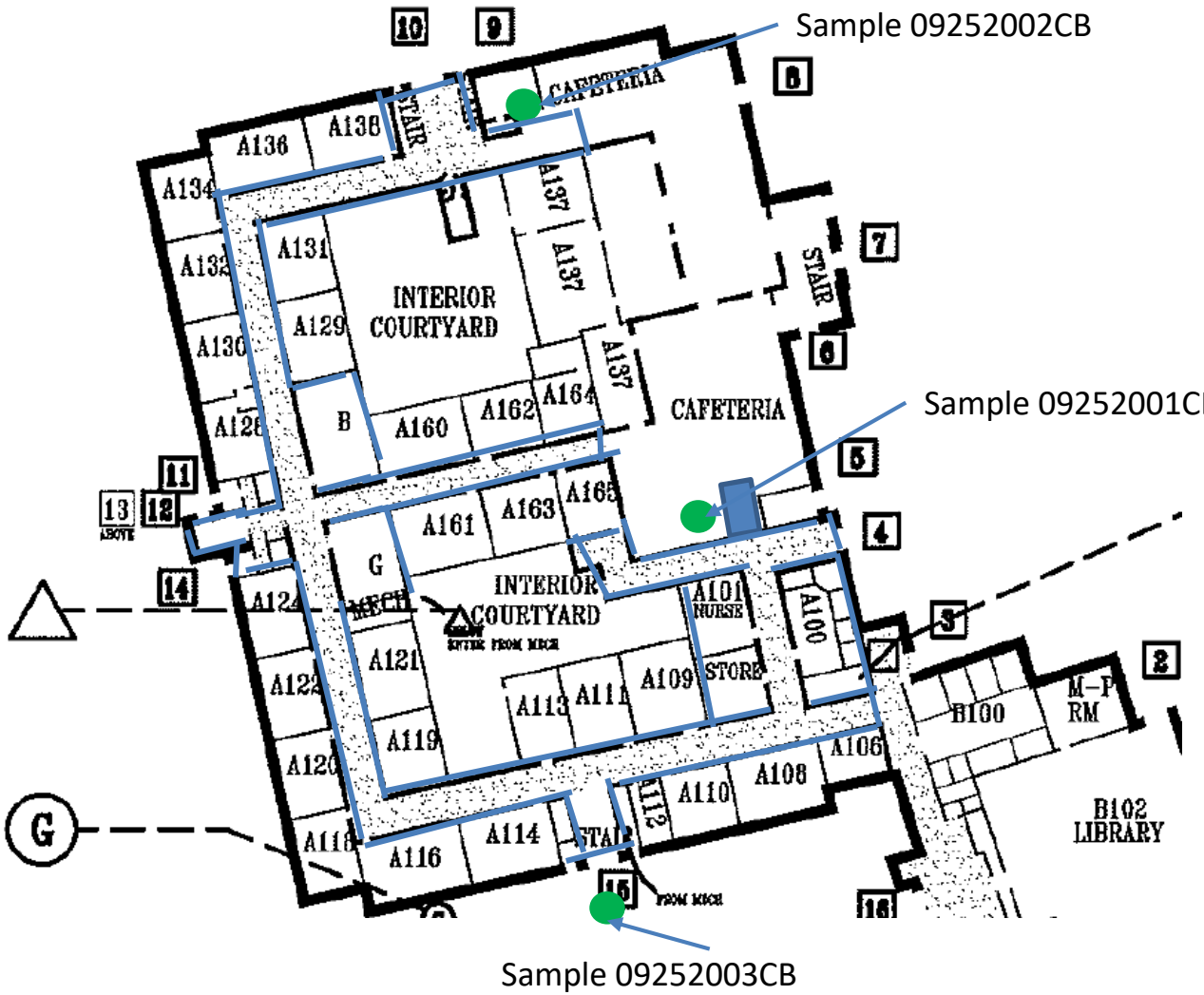
By Catey Bourne 1302

67081

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 less than or equal to 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 the re-occupancy limit, which meets the project requirements.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



PCM Air Sample Location

Three Stage Decontamination Unit

Work Area Perimeter

George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA 22301

WORK AREA SKETCH FIRST FLOOR

Scale: NTS

Project No. 47:1519-CB

9/25/20

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 9/25/2020
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)
09252001CB	OWA - Decontamation Unit	6:40 AM	1:50 PM	2.5	2.5	2.5	430	1075.0	4.0	100	0.002
09252002CB	OWA - North Cafeteria Critical Barrier	6:42 AM	1:52 PM	2.5	2.5	2.5	430	1075.0	5.0	100	0.002
09252003Cb	OWA - South Stairs Critical Barrier	6:35 AM	1:45 PM	2.5	2.5	2.5	430	1075.0	1.0	100	0.000
09252004CB	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
09252005Cb	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 US EPA and Commonwealth of Virginia re-occupancy limit is less than or equal to 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 the re-occupancy limit, which meets the project requirements.

ECS Technician: Catey Bourne **Date:** 9/25/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 9/25/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: First Floor A Wing

	Work Area Location/Description	First Floor A 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: Michael P. Hamill **Date:** 9/25/2020

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

LETTER OF TRANSMITTAL

September 29, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

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

CC:

ENCL: Field Report # 25 9/28/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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-CB**
Report No.	**25**
Day & Date	**Monday 9/28/2020**
Weather	**72 °/ Cloudy**
On-Site Time	**8.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**8.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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 material to be removed today is floor mastic from the Hallway of the First Floor A Wing and Rooms A101B, A100, Custodial Closet and Hallway.

FIRST FLOOR A WING WORK AREA

Between 6:50 am and 6:55 am, three PCM air samples were started outside the work area. One sample was setup at the decontamination unit entry. One sample was setup outside the critical barrier near mechanical room in the cafeteria. The third sample was setup outside the critical barrier in the stairwell. The sampling pumps were calibrated using a rotameter to 2.0 liters per minute. The abatement workers were removing floor mastic using a grinder.

Between 11:00 am and 11:45 am, the abatement workers took a lunch break.

At 12:00 pm, the abatement workers continued with removing mastic from the edges of the work area.

Between 1:30 pm and 1:33 pm, the sampling pumps were checked using a rotameter. The flow rates were 2.0 liters per minute. The PCM air samples were stopped and gathered from outside the work area for analysis.

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.

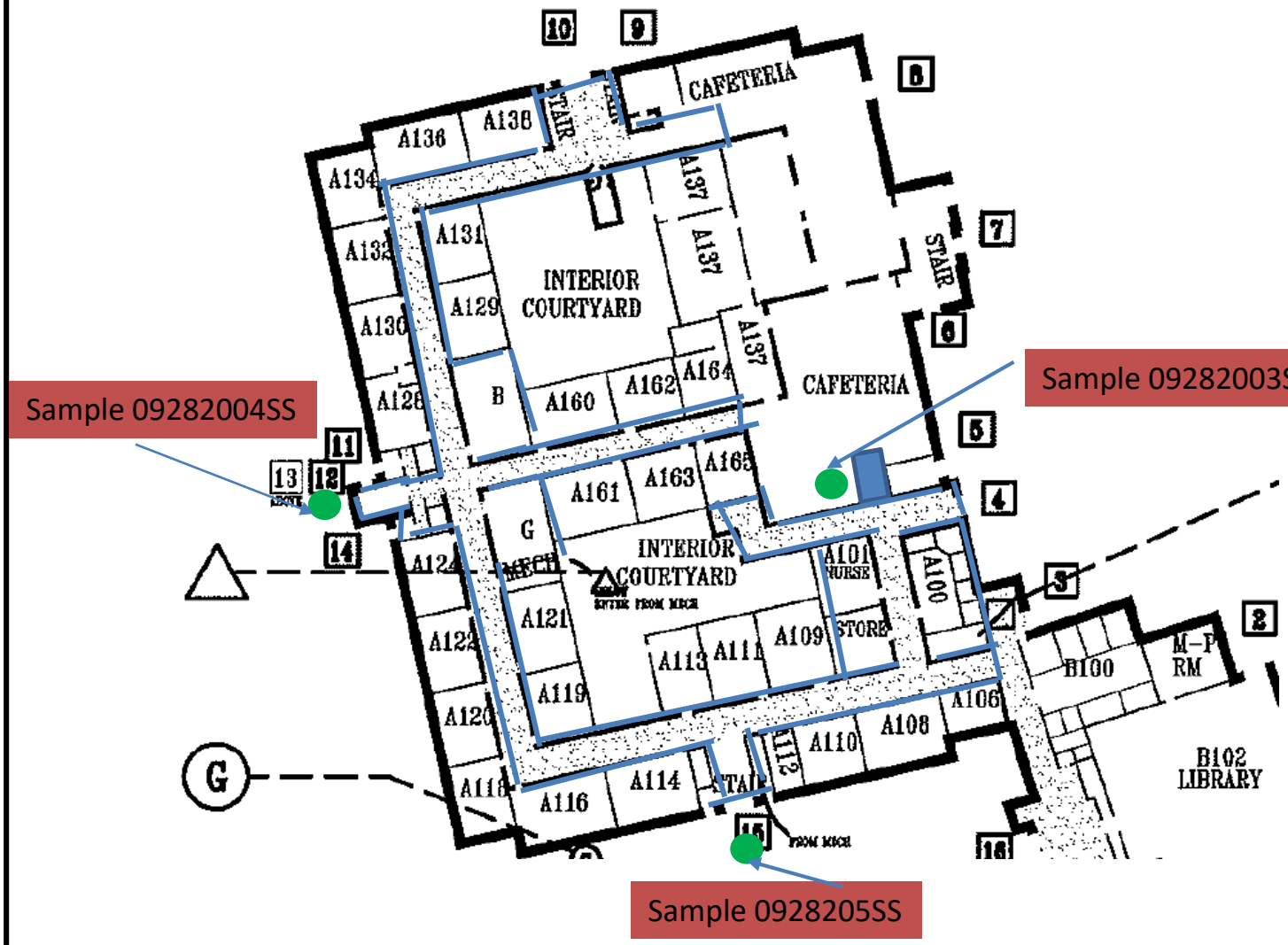
ECS observed the abatement contractor placing the specified asbestos-containing materials in 6-mil polyethylene bags which were double-bagged and placed in barrels sealed in general accordance with the

applicable regulations. Waste containers were placed in a waste hauling trailer.

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 less than or equal to 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 the re-occupancy limit, which meets the project requirements.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



PCM Air Sample Location

Three Stage Decontamination Unit

Work Area Perimeter

George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA 22301

WORK AREA SKETCH FIRST FLOOR

Scale: NTS

Project No. 47:1519-CB

9/28/20

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 9/28/2020
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)
09282001SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
09282002SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
09282003SS	OWA/ 1st Floor Hallway, At Decontamination Unit Entry	6:50 AM	1:30 PM	2.0	2.0	2.0	400	800.0	0.5	100	0.000
09282004SS	OWA/ 1st Floor Hallway, Outside the Critical Barrier Near Mechanical Room in the Cafeteria	6:51 AM	1:31 PM	2.0	2.0	2.0	400	800.0	4.5	100	0.003
09282005SS	OWA/ 1st Floor Hallway, Outside the Critical Barrier in the Stairwell	6:55 AM	1:33 PM	2.0	2.0	2.0	398	796.0	1.0	100	0.001

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

Notes: The US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fibers per cubic centimeter of air (f/cc).
The PCM daily air samples collected from outside the work area were reported to be less than the re-occupancy limit, which meets the project requirements.

ECS Technician: Suhel Shafaat **Date:** 9/28/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 9/28/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: 1st Floor Hallway, Rooms A100, A 101B and Custodian Closet/ Removal of Black Mastic

	Work Area Location/Description	1st Floor Hallway, Rooms A100, A
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	3
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes: Bucket of water was provided by the contractor for washing hands, face and respirator.

ECS Technician: Michael P. Hamill **Date:** 9/28/2020

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

LETTER OF TRANSMITTAL

October 1, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

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

CC:

ENCL: Field Report # 26 9/29/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior Project Manager

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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-CB**
Report No.	**26**
Day & Date	**Tuesday 9/29/2020**
Weather	**56 °/ Cloudy**
On-Site Time	**2.25**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**2.25**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
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**	**7:45A**
				1:15P	**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 air monitoring and observe asbestos abatement. The material to be removed today is floor mastic from the hallway of the First Floor A Wing Work Area. A work area sketch and photographs for today's regulated work area are attached to this report.

FIRST FLOOR A WING WORK AREA

Between 6:40 am and 6:45 am, three PCM air samples were started outside the work area. One sample was setup at the decontamination unit entry. One sample was setup outside the critical barrier near mechanical room in the cafeteria. The third sample was set up outside the critical barrier in the stairwell. The sampling pumps were calibrated using a rotameter to 2.0 liters per minute. The abatement workers were removing floor mastic using grinder attached with HEPA vacuum at the edges.

The abatement contractor was observed shot blasting the mastic in the hallways near stairwell and grinding floor mastic from the edges of the work area.

Between 1:30 and 1:33 pm, the sampling pumps were checked using a rotameter. The flow rates were 2.0 liters per minute. The PCM air samples were stopped and gathered from outside the work area for analysis.

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.

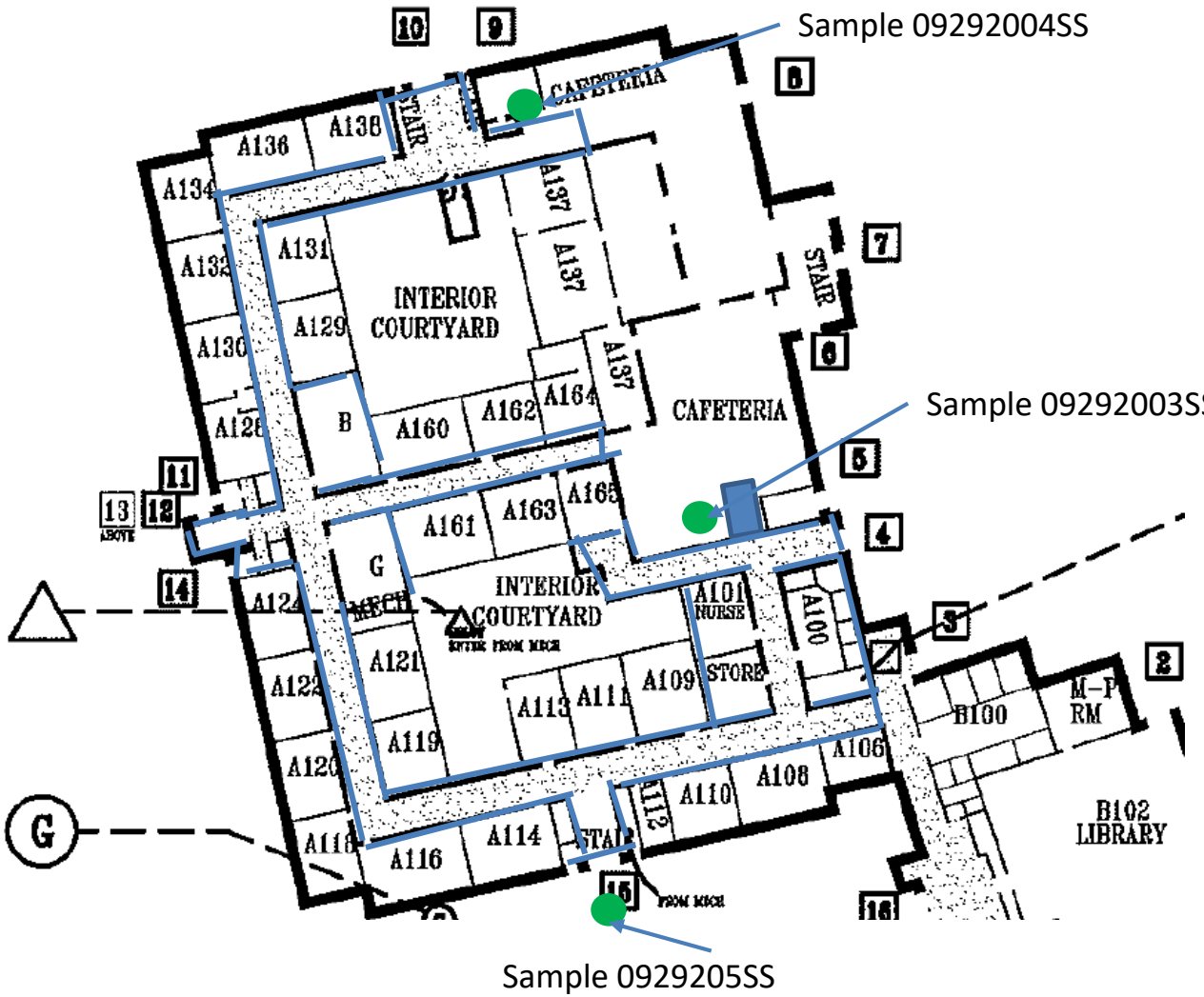
ECS observed the abatement contractor placing the specified asbestos-containing materials in 6-mil

polyethylene bags which were double-bagged and sealed in general accordance with applicable regulations. Waste bags were labeled and placed in a temporary waste 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 less than or equal to 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 the re-occupancy limits, which meets the project requirements.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



PCM Air Sample Location

Three Stage Decontamination Unit

Work Area Perimeter

George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA 22301

WORK AREA SKETCH FIRST FLOOR

Scale: NTS

Project No. 47:1519-CB

9/29/20

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 9/29/2020
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)
09292001SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
09292002SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
09292003SS	OWA/ 1st Floor A Wing Hallway, At Decontamination Unit Entry	6:40 AM	1:30 PM	2.0	2.0	2.0	410	820.0	4.5	100	0.003
09292004SS	OWA/ 1st Floor A Wing Hallway, Outside the Critical Barrier Near Mechanical Room in the Cafeteria	6:41 AM	1:31 PM	2.0	2.0	2.0	410	820.0	0.0	100	0.000
09292005SS	OWA/ 1st Floor A Wing Hallway, Outside the Critical Barrier in the Stairwell	6:44 AM	1:33 PM	2.0	2.0	2.0	409	818.0	2.5	100	0.001

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

Notes: The US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fibers per cubic centimeter of air (f/cc). The PCM daily air samples collected from outside the work area were reported to be less than the re-occupancy limit, which meets the project requirements.

ECS Technician: Suhel Shafaat **Date:** 9/29/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 9/29/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: 1st Floor A Wing Hallway, Rooms A100, A 101B and Custodian Closet/ Removal of Black Mastic

	Work Area Location/Description	1st Floor A Wing Hallway, Rooms
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: Michael P. Hamill **Date:** 9/29/2020

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

LETTER OF TRANSMITTAL

October 6, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

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

CC:

ENCL: Field Report # 27 9/30/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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 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-CB**
Report No.	**27**
Day & Date	**Wednesday 9/30/2020**
Weather	**56 °/ Sunny**
On-Site Time	**8.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**8.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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 abatement contractor workers were cleaning the regulated work area in the A Wing Hallway and Offices. A work area sketch for today's regulated work area is attached to this report.

FIRST FLOOR A WING WORK AREA MONITORING

Between 6:40 and 6:44 am, three PCM air samples were started outside the work area. One sample was setup at the decontamination unit entry. One sample was set up outside the critical barrier near mechanical room in the cafeteria. The third sample was set up outside the critical barrier in the stairwell. The sampling pumps were calibrated using a rotameter to 2.0 liters per minute. The abatement workers started fine cleaning regulated work area.

Between 11:00 and 11:45 am, the abatement workers took a lunch break.

At 12:00 pm, the abatement workers continued with cleaning regulated work area.

Between 1:30 and 1:35 pm, the sampling pumps were checked using a rotameter. The flow rates were 2.0 liters per minute. The PCM air samples were stopped and gathered from outside the work area for analysis.

GENERAL

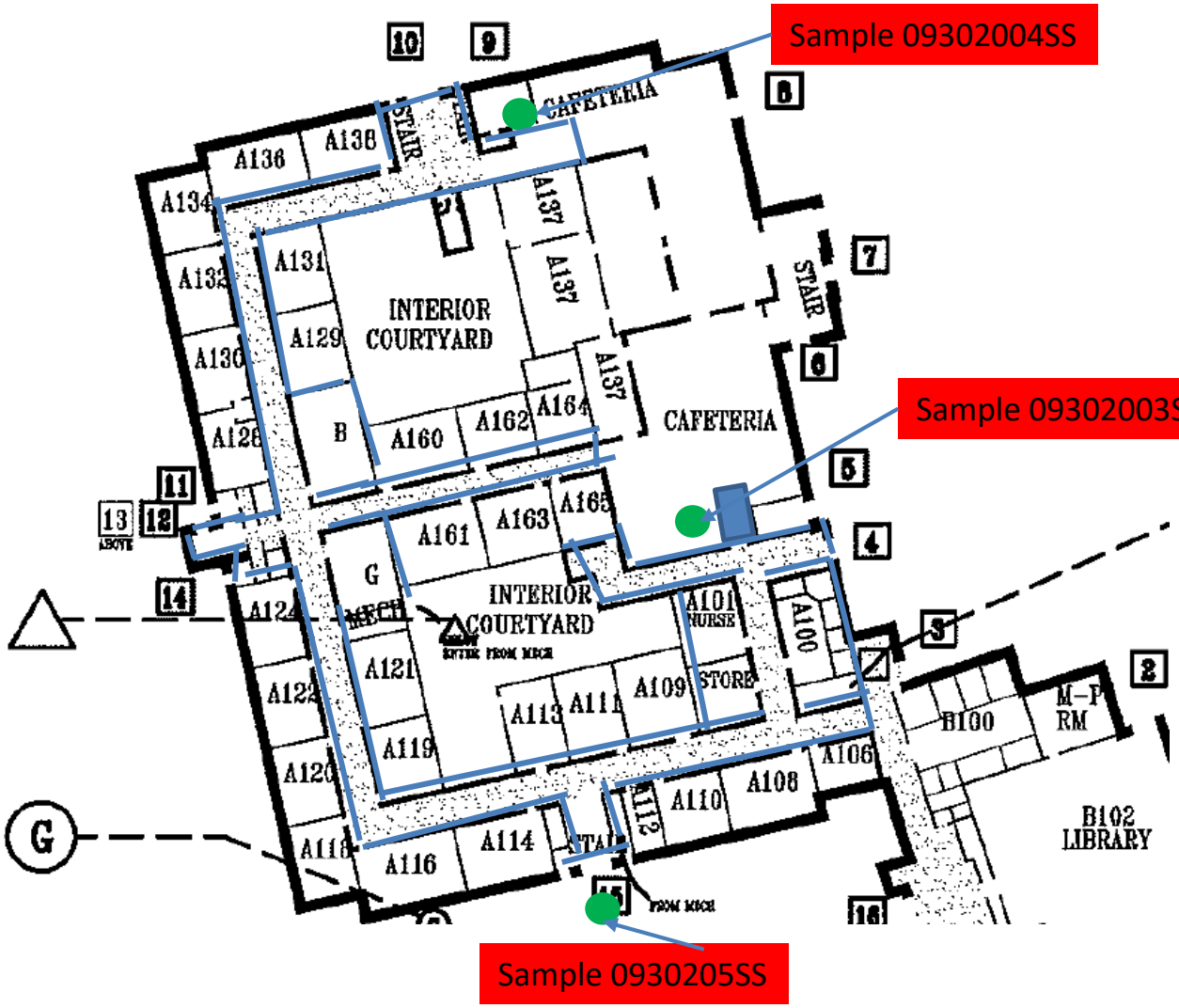
The regulated work area was surveyed to evaluate general compliance with applicable regulations. The Daily Work Area Survey Checklist was completed and is attached to this report.

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 less than or equal to 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 the re-occupancy limit, which meets the project requirements.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA 22301

WORK AREA SKETCH FIRST FLOOR

PCM Air Sample Location

Three Stage Decontamination Unit

Work Area Perimeter

Scale: NTS

Project No. 47:1519-CB

9/30/20

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 9/30/2020
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)
09302001SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
09302002SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
09302003SS	OWA/ 1st Floor A Wing Hallway, At Decontamination Unit Entry	6:40 AM	1:30 PM	2.0	2.0	2.0	410	820.0	0.5	100	0.000
09302004SS	OWA/ 1st Floor A Wing Hallway, Outside the Critical Barrier Near Mechanical Room in the Cafeteria	6:41 AM	1:31 PM	2.0	2.0	2.0	410	820.0	3.5	100	0.002
09302005SS	OWA/ 1st Floor A Wing Hallway, Outside the Critical Barrier in the Stairwell	6:44 AM	1:35 PM	2.0	2.0	2.0	411	822.0	2.5	100	0.001

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

Notes: The US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fibers per cubic centimeter of air (f/cc).
The PCM daily air samples collected from outside the work area were reported to be less than the re-occupancy limit, which meets the project requirements.

ECS Technician: Suhel Shafaat **Date:** 9/30/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 9/30/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: 1st Floor A Wing Hallway and Offices/ Fine Cleaning Regulated Work Area

	Work Area Location/Description	1st Floor A Wing Hallway and
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: Michael P. Hamill **Date:** 9/30/2020

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

LETTER OF TRANSMITTAL

October 6, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

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

CC:

ENCL: Field Report # 28 10/1/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior Project Manager

Disclaimer

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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-CB**
Report No.	**28**
Day & Date	**Thursday 10/1/2020**
Weather	**51 °/ Sunny**
On-Site Time	**8.50**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**8.50**
Re Obs Time	**0.00**

Project	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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. ECS discusses today's work activities with the abatement contractor supervisor Mr. Marcos Cruz of Waco, Inc. The abatement contractor were performing cleaning procedures within the regulated work area on the First Floor A Wing. A work area sketch for today's regulated work area is attached to this report.

FIRST FLOOR A WING WORK AREA

Between 6:50 and 6:54 am, three PCM air samples were started outside the work area. One sample was set up at the decontamination unit entry. One sample was set up outside the critical barrier near mechanical room in the cafeteria. The third sample was set up outside the critical barrier in the stairwell. The sampling pumps were calibrated using a rotameter to 2.0 liters per minute. The abatement workers were fine cleaning work area in the hallway, offices, and restrooms.

Between 11:00 and 11:45 am, the abatement workers took a lunch break.

At 12:00 pm, the abatement workers continued with cleaning regulated work area.

Between 1:30 and 1:34 pm, the sampling pumps were checked using a rotameter. The flow rates were 2.0 liters per minute. The PCM air samples were stopped and gathered from outside the work area for analysis.

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 Suhel Shafaat 1825

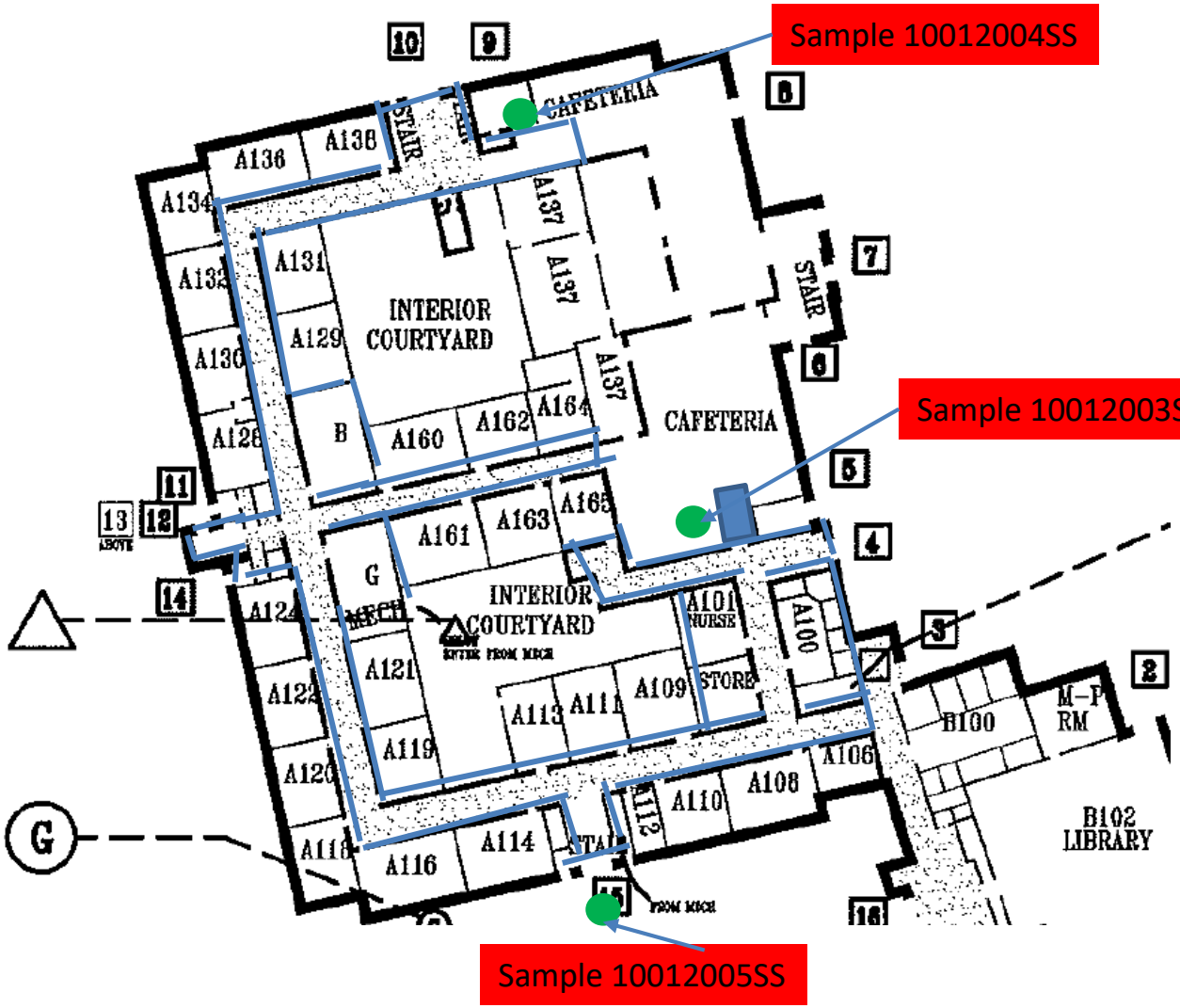
67162

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 placed in a waste hauling trailer.

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 PCM re-occupancy limit is less than or equal to 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 the re-occupancy limit, which meets the project requirements.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.



George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA 22301

WORK AREA SKETCH FIRST FLOOR

PCM Air Sample Location

Three Stage Decontamination Unit

Work Area Perimeter

Scale: NTS

Project No. 47:1519-CB

10/01/20

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 10/1/2020
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)
10012001SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
10012002SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
10012003SS	OWA/ 1st Floor A Wing Hallway, At Decontamination Unit Entry	6:50 AM	1:30 PM	2.0	2.0	2.0	400	800.0	4.5	100	0.003
10012004SS	OWA/ 1st Floor A Wing Hallway, Outside the Critical Barrier Near Mechanical Room in the Cafeteria	6:51 AM	1:31 PM	2.0	2.0	2.0	400	800.0	0.0	100	0.000
10012005SS	OWA/ 1st Floor A Wing Hallway, Outside the Critical Barrier in the Stairwell	6:54 AM	1:34 PM	2.0	2.0	2.0	400	800.0	1.0	100	0.001

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

Notes: The US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fibers per cubic centimeter of air (f/cc). The PCM daily air samples collected from outside the work area were reported to be less than the re-occupancy limit, which meets the project requirements.

ECS Technician: Suhel Shafaat **Date:** 10/1/2020

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 10/1/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: 1st Floor A Wing Hallway and Offices / Fine Cleaning Work Area

	Work Area Location/Description	1st Floor A Wing Hallway and
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: Michael P. Hamill **Date:** 10/1/2020

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

LETTER OF TRANSMITTAL

October 6, 2020

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

ATTN: John Finnigan

RE: **ACPS - George Washington Middle School ACM Monitoring**
ECS Job # **1519-CB**

Permits:
Location: **1005 Mt Vernon Avenue Alexandria, VA 22301**

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

CC:

ENCL: Field Report # 29 10/2/2020

Diana D. Krass
Environmental Senior Project Manager

Michael P. Hamill, CIH
Environmental Senior 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	**ACPS - George Washington Middle School ACM**
Location	**Alexandria, VA**
Client	**Alexandria City Public Schools**
Contractor	**None Listed**

Project No.	**1519-CB**
Report No.	**29**
Day & Date	**Friday 10/2/2020**
Weather	**46 °/ Rain**
On-Site Time	**9.75**
Lab Time	**0.00**
Travel Time*	**0.00**
Total	**9.75**
Re Obs Time	**0.00**

Remarks

Trip Charges*	Tolls/Parking*	Mileage*	Time of	Arrival	Departure
Chargeable Items				**6:00A**	**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. Abatement contractor workers were cleaning the regulated work area on the First Floor A Wing Hallway and Offices. A work area sketch is attached to this report.

FIRST FLOOR A WING WORK AREA MONITORING

Between 6:50 am and 6:55 am, three PCM air samples were started outside the work area. One sample was setup at the decontamination unit entry. One sample was setup outside the critical barrier near the mechanical room in the cafeteria. The third sample was set up outside the critical barrier in the stairwell. The sampling pumps were calibrated using a rotameter to 2.0 liters per minute.

Between 10:10 am and 10:15 am, the sampling pumps were checked using a rotameter. The flow rates were 2.0 liters per minute. The PCM air samples were stopped and gathered from outside the work area for analysis.

During the initial final clearance visual survey, the following items were reported to the abatement contractor as needing correction: Visible black mastic was observed in several areas in the hallway. The areas were re-cleaned.

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. Please note that asbestos-containing mastic and/or floor tile may remain beneath partition walls whose removal was not part of this scope of work.

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.

Between 3:30 pm and 3:35 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 Analytical, Inc. (EMSL) located in Beltsville, Maryland for analysis. A copy of the chain of custody has been attached.

The EPA and District of Columbia 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 First Floor A Wing Hallways and selected offices found the airborne asbestos fiber concentrations to be less than the maximum allowable limits. The client and abatement contractor supervisor 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.

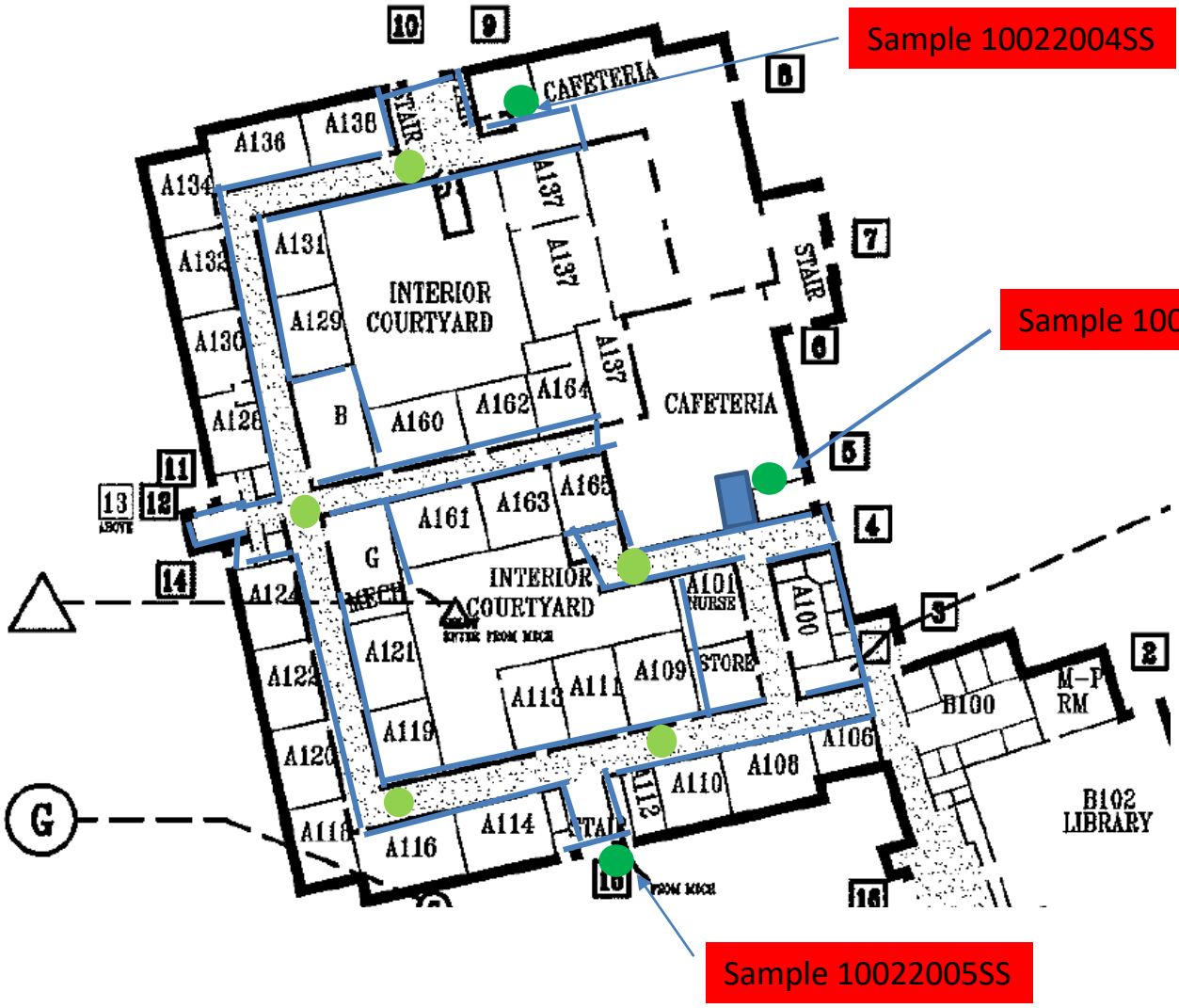
ECS observed the abatement contractor placing the specified asbestos-containing materials in 6-mil polyethylene bags which were double-bagged and sealed in general accordance with the applicable regulations. Waste bags were labeled and placed in a waste hauling trailer.

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 PCM re-occupancy limit is less than or equal to 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 the re-occupancy limits, which meets the project requirements.

The sample results reflect the conditions where the air samples were collected at the times and dates of collection.

Based on ECS's understanding of the project, the abatement of the materials included in the scope of work has been completed.



George Washington Middle School
1005 Mount Vernon Avenue
Alexandria, VA 22301

WORK AREA SKETCH FIRST FLOOR

PCM Daily Air Sample Location

TEM Final Clearance Air Sample Location

Three Stage Decontamination Unit

Work Area Perimeter

Scale: NTS

Project No. 47:1519-CB

10/02/20

ECS Mid-Atlantic, LLC

PCM Air Sample Field Data Sheet

WORK AREA SAMPLES

Project Number: 1519-CB
Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Date: 10/2/2020
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)
10022001SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
10022002SS	Field Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	100	NFD
10022003SS	OWA/ 1st Floor A Wing Hallway, At Decontamination Unit Entry	6:50 AM	10:10 AM	2.0	2.0	2.0	200	400.0	0.5	100	0.001
10022004SS	OWA/ 1st Floor A Wing Hallway, Outside the Critical Barrier Near Mechanical Room in the Cafeteria	6:51 AM	10:11 AM	2.0	2.0	2.0	200	400.0	0.0	100	0.000
10022005SS	OWA/ 1st Floor A Wing Hallway, Outside the Critical Barrier in the Stairwell	6:55 AM	10:15 AM	2.0	2.0	2.0	200	400.0	0.0	100	0.000

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

Notes: The US EPA and Commonwealth of Virginia PCM re-occupancy limit is less than or equal to 0.01 fibers per cubic centimeter of air (f/cc). The PCM daily air samples collected from outside the work area were reported to be less than the re-occupancy limit, which meets the project requirements.

ECS Technician: Suhel Shafaat **Date:** 10/2/2020

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: 192009825
Customer ID: ECMA78
Customer PO:
Project ID:

Attention: Michael Hamill
ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Suite 100
Chantilly, VA 20151

Project: 47:1519 CB/ ACPS GWMS

Phone: (703) 471-8400
Fax: (703) 471-8400
Received Date: 10/02/2020 16:55 PM
Analysis Date: 10/03/2020
Collected Date: 10/02/2020

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)
1002001SS	FINAL CLEARANCE IWA 1ST FLOOR A WING WORK AREA	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
192009825-0001										
1002002SS	FINAL CLEARANCE IWA 1ST FLOOR A WING WORK AREA	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
192009825-0002										
1002003SS	FINAL CLEARANCE IWA 1ST FLOOR A WING WORK AREA	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
192009825-0003										
1002004SS	FINAL CLEARANCE IWA 1ST FLOOR A WING WORK AREA	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
192009825-0004										
1002005SS	FINAL CLEARANCE IWA 1ST FLOOR A WING WORK AREA	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
192009825-0005										

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. Measurement of uncertainty available upon request.

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

Initial report from: 10/03/2020 18:19 PM

OrderID: 192009825

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(lab use only)*: 192009825

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

Company Name: ECS Mid-Atlantic	EMSL Customer ID:
Street: 14026 Thunderbolt Place, Suite 100	City: Chantilly / State or Province: VA
Zip/Postal Code: 20151 / Country: USA	Telephone #: 571-220-9941 / Fax #:
Report To (Name): Michael Hamill	Please Provide Results via: ☐ Fax ☒ Email
email Address: Mhamill@ecslimited.com	Purchase Order Number:
Client Project ID: 47.1519-CB/RCB-GWMS	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: Suhel Shafaat | Sampler's Signature: [signature]

Sample #	Sample Description/Location	Volume, Area or Homogenous Area	Date/Time Sampled
100220 0155	Final Clearance-IWA, 1st Floor A Wing Work Area	1200 Liters	10/2/20
0255			
0355			
0455			
0555			

Client Sample # (s): 100220 0155 - 100220 1355 | Total # of Samples: 13

Relinquished by (Client): [signature] | Date: 10/2/20 | Time:

Received by (Lab): [signature] | Date: | Time:

Comments/Special Instructions:
Please only analyze IWA samples. Aggressive air sampling method.

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: 192009825

Asbestos Chain of Custody

EMSL Order Number (*Lab Use Only*):

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

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
1002006555	Final clearance-OWA, 1st Floor A Wing Work Area	12002	10/2/20
0755	↓	↓	↓
0855	↓	↓	↓
0955	↓	↓	↓
1055	↓	↓	↓
1155	Field Blank-opened 30secs before by entrance	N/A	↓
1255	Field Blank-opened 30secs before in ambient	↓	↓
1355	Sealed Blank (Not opened)	↓	↓

***Comments/Special Instructions:**

Page 2 of 2 pages

ECS Mid-Atlantic, LLC

Daily Work Area Checklist

Project Number: 1519-CB **Date:** 10/2/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: 1st Floor A Wing Hallway and Offices/ Fine Cleaning Work Area

	Work Area Location/Description	1st Floor A Wing Hallway and
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	3
	Number of PCM Blank Samples	2
	Work Area Acceptable	Yes

Notes: Bucket of water was provided by the contractor for washing hands,face and respirator.

ECS Technician: Michael P. Hamill **Date:** 10/2/2020

ECS Mid-Atlantic, LLC

Final Clearance Checklist

Project Number: 1519-CB **Date:** 10/2/2020

Project Address: 1005 Mt Vernon Avenue
Alexandria, VA-22301

Work Area Location/Description: 1st Floor A Wing Hallway and Offices/ Fine Cleaning Work Area

	Work Area Location/Description	1st Floor A Wing Hallway and
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	N/A
	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: Note that ACM mastic and/or floor tile may remain beneath partition walls whose removal was not part of this scope of work.

ECS Technician: Michael P. Hamill **Date:** 10/2/2020