

**ASBESTOS HAZARD EMERGENCY RESPONSE ACT
MANAGEMENT PLAN
FOR**

**Springfield Prep Charter School
2071 Roosevelt Avenue
Springfield, Massachusetts**

Prepared for:

Mr. William Spierer
Founder & Executive Director
Springfield Prep Charter School
2071 Roosevelt Avenue
Springfield, MA 01104

Prepared by:

Smith & Wessel Associates, Inc.
188 Greenville Street
Spencer, Massachusetts 01562

August 19, 2021

Project # 21353



Asbestos Inspector
Cert. # AI 032572



Asbestos Management Planner
Cert. # AP 030053

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INTRODUCTION

Springfield Prep Charter School retained Smith & Wessel Associates, Inc. (SWA) to conduct an initial inspection for asbestos-containing building materials (ACBM) and to prepare this Operations and Maintenance Management Plan for the Springfield Prep Charter School located at 2071 Roosevelt Avenue in Springfield, Massachusetts in accordance with the requirements of the Asbestos Hazard Emergency Response Act (AHERA). The former office building was most recently completely renovated to accommodate the new school. Prior to implementing renovation, SWA conducted a comprehensive asbestos inspection at the site in November of 2019 (see attached inspection report). Based on SWA's findings during the 2019 inspection, an Asbestos Abatement Specification was prepared detailing those ACBM to be remediated prior to renovations. All known or assumed ACBM was remediated with the exception of limited wallboard with associated asbestos joint compound located in the southeast service hall outer wall at electric and plumbing rooms (see attached diagram). None of the newly installed finishes such as wallboard, flooring, ceilings were specified to contain asbestos (See Architects Letter).

AHERA regulations require that all local education agencies conduct inspections of each school building that they lease, own, or otherwise use as a school building in order to identify all locations of friable and non-friable asbestos-containing building materials (ACBM). Any building leased or acquired on or after October 12, 1988 that is to be used as a school building shall be inspected for friable and non-friable ACBM prior to use as a school building.

The regulatory requirements apply to any private or public school system, a church affiliated school, a school dedicated to the education of children with special needs, or a charter school.

In addition to the inspection report, a Management Plan is also required for recordkeeping regarding all future asbestos abatement, asbestos management and communication to parents, outside vendors and building occupants. The records should be maintained in the Local Education Agency (LEA) central administrative office as well as in the school administrative office to ensure that the plans are available for inspection. Springfield Prep Charter School is an LEA within the meaning of the AHERA Regulation.

AHERA requires that the LEA submits its Management Plan to the appropriate state appointed review agency for approval and maintain copies of the plan in the LEA's central administrative office and the school building to which it applies. (The agency no longer receives and reviews Management Plans, but may send agents to review documents on-site).

Each Management Plan must include:

1. A list of the name and address of each school building and whether the school

building contains friable ACBM, non-friable ACBM, and friable and non-friable suspected ACBM assumed to be ACBM.

2. A description of inspections conducted before December 14, 1987 and response actions and preventive measures based on these inspections.
3. For each inspection conducted in accordance with AHERA regulations, the following must be included:
 - a) The date of the inspection (or re-inspection) on which the Management Plan is based and the name, signature, and accreditation information of the inspector.
 - b) A diagram or written description of each school building identifying the location and square or linear footage of:
 - i) Homogeneous areas where material was sampled for asbestos-containing material (ACM) with locations of samples and details of the sample collection.
 - ii) Homogeneous areas where friable suspected ACBM is assumed to be ACM.
 - iii) Homogeneous areas where non-friable ACBM is assumed to be ACM.
 - c) A description of the manner used to determine sampling locations and the name, signature and accreditation information of the inspector who collected the samples.
 - d) A copy of laboratory results and the credentials of the laboratory.
 - e) Assessments classifying all ACBM and suspected ACM according to the EPA seven category classification code, and the credentials of the inspector who made the assessments.
4. The identity of the person designated by the LEA under 40 CFR Part 763.84 (g) (1) to ensure compliance with Section 763.84 and a description of the designated person's training.
5. The recommendations for response actions made by the licensed Management Planner and the Management Planner's accreditation information.
6. A detailed description of preventative measures and response actions to be taken for any friable ACBM including locations of such materials, reasons for selecting these measures and a time frame for implementation.
7. A statement and authorized signature, stating that the LEA has used, and will use, accredited persons for all inspections and response actions.

8. A detailed description by diagram, or in writing, of any ACBM or suspected ACBM assumed to be ACM, which remains in the school once response actions have been performed (to be updated as these are completed).
9. Plans for periodic re-inspections, operations and maintenance activities and periodic surveillance.
10. The recommendations made by the Management Planner, regarding extra cleaning after the initial post-inspection cleaning of areas, where friable ACBM or damaged thermal system insulation has been identified, and the LEA's response to that recommendation.
11. A description of the plan and the steps taken to inform workers, building occupants or their guardians about inspections, planned response actions and periodic re-inspections and surveillance.
12. An evaluation of the resources needed for response actions re-inspections, operations and maintenance, periodic surveillance and training.
13. Additional information on the credentials of each consultant contributing to the Management Plan.

Once the Management Plan has been prepared, the LEA is responsible for compliance with AHERA regulation 40 CFR Part 763. The following responsibilities must be adhered to:

1. The LEA must designate a person to ensure that all of the AHERA requirements are properly implemented. The Designated Person must receive appropriate training to perform his/her duties.
2. The LEA must ensure that management plans are maintained in a central location as well, and such plans and records are available for inspection or review at all times.
3. The LEA must inform all workers, teachers, parents of students, or their legal guardians in writing at least once each school year about asbestos related activities, and the availability of the AHERA management plans for the school buildings.
4. The LEA must ensure proper accreditation for all persons who perform asbestos inspections, asbestos re-inspections, develop/update management plans, develop response actions, and/or perform required response actions including operations and maintenance activities that may disturb asbestos.

5. The LEA must provide training for all custodial and maintenance staff who regularly perform building maintenance where asbestos-containing building materials (ACBM) are present. The training must be provided upon initial hire as well as updated annually.
6. The LEA must provide information to any workers who may perform short term work and come in contact with asbestos in school buildings where ACBM or presumed ACBM are present.
7. The LEA must ensure that known ACBM or presumed ACBM are provided with warning labels in routine maintenance areas.
8. The LEA must ensure that periodic surveillance is performed at least once every six months, after a management plan is in effect, in all school buildings that it leases, owns, or otherwise uses that contains ACBM or presumed ACBM.
9. The LEA must ensure that once every three years a re-inspection is performed in all school buildings that it leases, owns, or otherwise uses that contains ACBM or presumed ACBM.

1.0 ACCREDITATION INFORMATION

The Commonwealth of Massachusetts requires that all contractors and consultants who conduct asbestos-related work be licensed or certified, as applicable. The four consultant categories of state asbestos licensure are: Inspector, Management Planner, Project Designer and Project Monitor.

1.1 Designated Person Information

The Designated Person is the person the Local Education Agency assigns to be responsible for all asbestos-related concerns for the school. This person is the school's representative and directs all asbestos-related activities. The Designated Person also is responsible for making information regarding asbestos-related activities available to all appropriate interested parties. Specific responsibilities for the Designated Person are outlined in the Operations and Maintenance Program. The Designated Person must be informed before any and all activities in which ACBM may be disturbed.

The LEA has designated the following individual under 40 CFR Part 763.84(g.) to ensure its compliance with the AHERA Regulation.

Name: Meghan Wagner
Address: 2071 Roosevelt Ave, Springfield, MA 01104 ___
Title: Chief Operating Officer
Phone: 413-231-2722

Designated Person Qualification Information:

1. Training Facility: ATC
Training Course: AHERA Designated Persons Self Study Guide & Asbestos Hazard Awareness Training
Date: 3/25/2020
Hours of Training: 8

I, Meghan Wagner hereby certify that the Springfield Prep Charter School will use accredited persons for all asbestos related work as approved under section 206(b) of Title II of the AHERA Act. The following information will be required: individual's name and address, social security number, employer, course taken, date, state of accreditation and the accreditation number as well as the name and address of the training entity.

Signed: Meghan Wagner Date: 8/20/2021

Certification by Designated Person:

I, Meghan Wagner, certify as correct and true that the general local education agency responsibilities as stipulated by section 763.84 of 40 CFR Part 763, have all been or will be complied with to the best of my ability.

Signed: Meghan Wagner Date: 8/20/2021

1.2

Asbestos Inspector Information

Name: Lead Sheriff
Title: Asbestos Inspector
Company: Smith & Wessel Associates, Inc.
Address: 188 Greenville Street
Spencer, MA 01562
Phone: 978-994-3643

Training/Qualification Information

Initial Training

Training Facility: Institute for Environmental Education, Inc.
Course Name: Asbestos Inspector
Date: 3/22-24/1993
Hours of Training: 24

Current Refresher Training

Training Facility: Institute for Environmental Education, Inc.
Training Course: Asbestos Inspector Annual Refresher
Review Date: 04/01/2021
Hours of Training: 4

State Certification

Massachusetts Inspector Cert. # AI-032572
Expiration date: 07/29/22

1.3 Management Planner Information

Name: Glenn Nelson
Title: Operations Manager
Company: Smith & Wessel Associates, Inc.

Address: 188 Greenville Street
Spencer, MA 01562

Phone: 978-346-4800

Training/Qualification Information

Initial Training

Training Facility: Institute for Environmental Education
Course Name: Asbestos Management Planner
Date: 09/22/94
Hours of Training: 16

Current Refresher Training

Training Facility: Institute for Environmental Education, Inc.
Training Course: Asbestos Management Planning Annual Refresher
Review Date: 4/19/21
Hours of Training: 8

State Certification:

Massachusetts Mgmt. Planner: AP-030053
Expiration date: 04/19/22_____

1.4 Analytical Laboratory Information

Name: EMSL Analytical, Inc.

Address: 7 Constitution Way, Suite 107
Woburn, MA 01801
Phone #: 781-933-8411

National and State Certifications

- National Institute of Standards and Technology (NIST)
- National Voluntary Laboratory Accreditation Program (NVLAP) Laboratory # 101147-0
- EPA “Interim Asbestos Bulk Sample Analysis Quality Assurance Program”

Microscopy Lab Director: Steve Grise

Laboratory Microscopist: Steve Grise

EMSL Analytical, Inc. (EMSL) is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). NVLAP functions as an unbiased third party for the evaluation and recognition of technical performance. NVLAP accreditation signifies

recognition of a testing laboratory’s competence to perform specific test methods, in this case the analysis of material suspected of containing asbestos by the “Interim Method of the Analysis of Asbestos in Friable Bulk Insulation Samples”, as described in 40 CFR Ch. 1 (7-1-07 edition) Part 763, Appendix E to Subpart E. Accreditation indicates that the laboratory’s quality assurance program, staff qualifications, facilities, equipment, calibration procedures, records and test reports have all been evaluated and found to meet NVLAP criteria. Specific requirements of this program include the reporting of certain analytical data used to arrive at the reported finding of the analysis. EMSL is also accredited by the Massachusetts Department of Labor Standards, Asbestos Abatement Program Certification for Analytical Services, Certification AA000188.

1.5 Inspection History and Schedule

Original AHERA Inspection Management Plan:

Report Date: 8-19-21

Prepared By: Management Engineers

In keeping with AHERA requirements, Springfield Prep Charter School will be re-inspected every three years since following this initial inspection in 2021. In **Table 1** below, SWA has listed due dates for future three-year AHERA re-inspections:

Table 1 • Future Deadlines for Three-year Re-inspections	
Re-inspection Date	Consultant
August 17, 2024	Smith & Wessel Associates, Spencer, MA
August 17, 2027	

2.0 ASBESTOS CONTAINING BUILDING MATERIALS

2.1 Scope of Work

SWA's certified Asbestos Inspector, Ted Sherry (Cert. # AI-032572), performed the mandatory inspection of ACBM and suspect ACBM on August 17, 2021. The former office building was most recently renovated to accommodate the Springfield Prep Charter School. As previously stated, all known or assumed ACBM were remediated and all Project Monitoring and air testing was conducted by certified Project Monitors representing SWA (See attached Project Monitoring Report).

The inspection included the following tasks:

- Review of building documentation related to asbestos issues, including the SWA inspection report, reports on abatement conducted while the building was being renovated into a school;
- A walk through of those areas where ACBM were previously identified;
- A visual re-inspection and assessment of ACBM; and

2.2 Exclusions

SWA evaluated building materials throughout the interior and exterior of the school that were previously identified as ACBM or presumed to be ACBM. Areas of the school where no ACBM had been identified or where all known or assumed ACBM had been abated were not assessed. SWA did not assess new finishes as the Architect letter stated that no asbestos products were specified for use during the build-out.

2.3 Regulatory Guidance

The United States Environmental Protection Agency (EPA), Occupational Health & Safety Administration (OSHA), Massachusetts Department of Labor Standards (MA DLS) and Massachusetts Department of Environmental Protection (MA DEP) are responsible for regulating the release of asbestos into the environment and protecting workers from exposure to airborne asbestos fibers.

OSHA and MA DLS are responsible for the health and safety of workers who may be exposed in connection with their jobs including custodial activities, renovation work, and asbestos abatement. These agencies specify requirements for the work practices and engineering controls that must be utilized during asbestos abatement projects. They also require that ACBM be repaired, removed, or otherwise appropriately abated before maintenance, renovation, or demolition work disturbs them. Thermal system insulation, surfacing materials, and floor tile installed before 1980 must be presumed to be ACBM unless appropriate inspection and sampling analysis prove otherwise.

The EPA and MA DEP are responsible for developing and enforcing regulations necessary to protect the general public from airborne contaminants that are known to be hazardous to human health. They regulate ACBM associated with renovation, demolition, and asbestos abatement projects via the National Emissions Standard for Hazardous Air Pollutants (NESHAP) Title 40 CFR Part 61 regulation and MA DEP asbestos regulation (310 CMR 7.00, 7.09 and 7.15). These regulations require that buildings be inspected for ACBM prior to renovation/demolition projects. They stipulate that all friable ACBM as well as non-friable ACBM that are in poor condition or will be made friable by renovation or demolition activity be removed or otherwise appropriately abated before they are disturbed.

2.4 Building Description

Springfield Prep Charter School is a single-story brick; block and concrete structure located at 2071 Roosevelt Avenue in Springfield, Massachusetts and consists of approximately 50,000 square feet of usable floor space.

3.0 AHERA INSPECTION SUMMARY

3.1 Findings

SWA has listed in **Table 2**, the location and estimated quantity, by square foot (sf), linear foot (lf), or other appropriate unit, of each type of known or assumed ACBM identified at the site.

Table 2 • Known Asbestos-Containing Materials		
Type of Material	Location	Quantity
Joint compound associated with gypsum wallboard	South/east service hall outer wall at electric and plumbing rooms	360 sf

All known ACBM abatement during the 2020 renovation project are summarized in **Table 3** below.

List of ACM Abated			
Type of Material	Location	Quantity	Sample number
White/gray mudded pipe fittings	Observed in vacant area cafeteria, bathrooms, south hall, south custodial closet, N/E training room, Future Health Suite	80 ea.	02A

List of ACM Abated			
Type of Material	Location	Quantity	Sample number
Tan/beige joint compound associated with original gypsum board (See note 1)	Observed in vacant N/E kick out section, adjoining hall (N/E) from bathroom area to exit, S/E corner mechanical room and Future Health Suite	12,000 sf <i>(estimate)</i>	18A, 24A, 31A, 40A
White w/gray streaks 12" x 12" floor tile and associated mastic adhesive	South custodial closet between the bathrooms	30 sf	20A, 21A
Gray ceiling panels <i>(painted white)</i>	Throughout exterior overhang entrances	2,325 sf	23A
Black duct tar coating	Roof <i>(see photo)</i>	40 sf	29A
White 12" x 12" floor tile (<i>2nd layer</i>) and associated mastic adhesive <i>(beneath newer floor tile) (treat both layers as asbestos because they cannot be separated)</i>	Rear hall and adjoining rooms, rear rooms at carpeted open area and cafeteria outside Kindred Company	1,420 sf	32A, 33A
White 12" x 12" floor tile and associated mastic adhesive <i>(beneath carpet)</i>	Assumed to be present in the Future Health Suite	1,500 sf	Assumed
Vermiculite insulation from within wall cavity	Northeast side of building	130 sf	Assumed

The only known ACBM remaining in the school as of August 2021 is non-friable joint compound an associated gypsum wallboard in the southeast utility rooms and corridor. The gypsum board/joint compound has limited damage in a corner of the space that is approximately 2 sf *(see photo and floor Plan)*.

3.2 Hazard Assessment Summary

One of the primary goals of AHERA is to establish criteria by which the current and potential hazards of asbestos-containing building materials could be assessed. In general, these criteria pertain to the accessibility of the material, persons who have the ability to access it, its current condition including the extent of any existing damage, and its potential for damage in the future.

It is important to note, however, that all material assessments are based on the condition of the material at the time of the inspection. Any deterioration in material condition brought about by physical disturbance, water damage, air erosion, etc., will increase the material's potential for fiber release. Response actions necessitated by such deterioration are described in the Operations and Maintenance Program. Material condition and potential for fiber release will, in keeping with AHERA, be reassessed at least once every

six months by the Designated Person or his/her designated representative, and every three years by an accredited Asbestos Inspector/Management Planner.

Hazard Assessment Summary Sheets

The Hazard Assessment Summary Sheets contain information regarding the location and material condition of all visible, accessible suspect asbestos-containing materials at Springfield Prep Charter School. The Response Action Recommendations are provided for all known ACBM and assumed ACBM.

Friability of Material

A material is friable if it can be reduced to powder by hand pressure. Friable materials are more likely to release asbestos fibers into the air than nonfriable materials. The friability of a material is therefore an important index of its potential hazard. It is important to note that all materials, if broken, crushed or disturbed, can become friable.

Homogeneous Area Description

A Homogeneous Area is an area of a specific material application which is uniform in color and texture. A Homogeneous Area can extend throughout the building and can include materials in noncontiguous rooms.

Functional Space Description

A Functional Space is any area of the building dedicated to a single purpose as defined by the Inspector/Management Planner. The activities which occur in a given functional space are an important component in the Management Planner's assessment of potential material hazards.

EPA Assessment Categories

1. Damaged or significantly damaged thermal system insulation ACM.
 2. Damaged friable surfacing ACM.
 3. Significantly damaged friable surfacing ACM.
 4. Damaged or significantly damaged friable miscellaneous ACM.
 5. ACBM with potential for damage.
 6. ACBM with potential for significant damage.
 7. Any remaining friable ACBM or friable suspected ACBM.
- N/A Non-Asbestos containing material, when referring to school buildings, is defined by the EPA as any material or product which contains less than one (1) percent asbestos.

Assessment Criteria

One of the major tasks of the Inspector/Management Planner in the field is to determine not only the current condition of a given material but also to identify those factors which might influence the material's condition, and therefore potential for fiber release, in the future. Among the factors that might result in fiber release are air erosion, maintenance and student activities. Also noted by the Inspector/Management Planner are conditions that might affect potential exposure if fiber release were to occur. These factors include the existence of barriers that would, to a limited extent, minimize fiber release from ACBM behind or above the barrier and other access features which either reduce the likelihood of damage (e.g. height) or would limit the number of people exposed (e.g. an attic area accessed rarely, or only by maintenance personnel).

Damage Factors

Material can be damaged by water (e.g. roof, ceiling or piping leaks) or by physical damage (e.g. repair, vandalism, or deterioration due to age). In this section the Inspector/Management Planner assigns percentage values to each of these types of damage in the homogeneous area and notes the potential sources of this damage.

Recommended Response Actions

Immediate Removal: When a material poses an immediate threat to the health and safety of building occupants the Management Planner recommends Immediate Removal. Materials requiring immediate removal are generally highly damaged and routinely accessible to building occupants. It is often necessary to temporarily isolate the Immediate Removal area in accordance with the provisions of the Operations and Maintenance Program until such time as a licensed, qualified asbestos abatement contractor can perform the removal.

Removal When Practical: When a material is badly damaged, has the potential for damage or is highly accessible, particularly to students, the Management Planner recommends Removal When Practical. Materials recommended for Removal When Practical generally require careful maintenance under the Operations and Maintenance Program until such time as scheduling and budgeting considerations allow for their removal.

Patch and Repair: Materials which are damaged can often be repaired rather than removed. Patch and Repair activities can be undertaken, if less than three square feet of damage is involved, by properly trained in-house maintenance personnel. In some cases, temporary patch and repair of damaged materials is necessary pending removal to reduce their potential for fiber release.

Enclosure: Enclosure, isolation of a material behind a hard, airtight, impermeable barrier, is recommended by the Management Planner only in very rare circumstances in which either the material cannot be removed or it is in a rarely accessed area where there is relative certainty that no renovations are likely to take place for the life of the building. Enclosure is not substantially less expensive than removal and is therefore recommended

infrequently.

Encapsulation: Encapsulation, coating the material with a bonding or sealing agent, is generally recommended by the Management Planner as an interim response pending removal of the material.

Operations and Maintenance Program (O&M): Maintenance of ACBM under the Operations and Maintenance Program is recommended for all ACBM at every building. The O&M Program, which provides guidelines for the day to day management and handling of ACBM at the building, must be implemented and employed whenever asbestos is present. Materials that are scheduled for abatement must be maintained under the O&M Program until such time as they are removed. Likewise, ACBM that is to remain in the building must be maintained under the O&M for the duration.

**Asbestos Inspection
Hazard Assessment Summary Sheet**

Project Number: 21353
School Name: Springfield Prep Charter School
Type of Material: Miscellaneous
Square/Linear Footage: 360 sf
EPA Assessment Category: 5

Area Description

Homogeneous Area: Gypsum wallboard/joint compound
Location: South/east service hall outer wall at electric and plumbing rooms

Assessment Criteria - Current Conditions

Existence of Barriers: None
Abnormal Access Features: None
Air Erosion: Low
Maintenance Activities: Low
Vandalism: Low
Potential for Fiber Release: Low
Comments: The material is in poor condition in corner

Damage Factors

Water: Percentage: < 1%
Physical: Percentage: < 5%
Probable Source of Damage: Wear and tear, contact damage in limited locations

Recommended Response Action (Overall)

Recommended Response Action: Operations and Maintenance Program
Response Action Rationale: The material is in good condition, except for a 2 sf corner section, thus, repair the damaged section and properly maintain the material in-place as part of the O&M Program is appropriate.

4.0 RESPONSE ACTIONS

AHERA regulations require that response actions, other than small scale/short duration repairs, be conducted and designed by persons accredited to design and conduct response actions. MA DLS requires that abatement projects be designed by certified Abatement Project Designers who meet the requirements set forth in 453 CMR 6.07.

The LEA shall incorporate the following information into the Management Plan for each response action completed.

- A. Records of asbestos removal contractors, project designer and abatement monitoring firm, including their accreditation information.
- B. All air monitoring and sample documentation information including the name and signature of each person collecting air samples, location of sample, collection date, name and address of analytical laboratory, date of analysis, analytical method and results including the name and signature that the laboratory meets AHERA and State of Massachusetts requirements.
- C. Waste disposal documentation

Response Action Selection Criteria

The LEA must select and implement in a timely manner the appropriate response actions consistent with the EPA Assessment Codes. The response actions selected shall be sufficient to protect human health and the environment.

The LEA may select the action that is the least burdensome method. In determining which is least burdensome, the LEA may consider local circumstances including occupancy and use patterns within the school building, and its economic concerns, long and short term.

Note: Nothing prohibits the removal of ACBM from a school building at any time, should removal be the preferred response action of the LEA.

The seven (7) category assessment code described in the previous section shall be utilized to determine response actions.

In applying the EPA's Assessment code, it is necessary to understand the following EPA definitions.

Damaged ACBM: That material which has deterioration, delamination, water damage, lacks cohesion, is blistered, crumbling, gouged, marred heavily, abraded, or in any way has lost its structural integrity over more than 1% but less than 10% of the surface area if

the damage is evenly distributed or less than 25% if the damage is localized in one area of the homogeneous area.

Significantly Damaged ACBM: That material which has deterioration, delamination, water damage, lacks cohesion, is blistered, crumbling, gouged, marred heavily, abraded, or in any way has lost its structural integrity over at least 10% of the surface area if the damage is evenly distributed or at least 25% of the damage is localized in one area of the homogeneous area.

Good Condition ACBM: ACBM with no visible damage or deterioration.

ACBM with potential for damage: Pertains to circumstances in which:

- Friable ACBM is in an area regularly used by building occupants, including maintenance workers.
- 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 O&M practices, changes in occupancy or recurrent damage.

ACBM with potential for significant damage: Pertains to circumstances in which:

- Friable ACBM is in an area regularly used by building occupants, including maintenance workers.
- 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 O&M practices, changes in occupancy or recurrent damage.
- 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.

The selection of Response Actions is guided by minimum response requirements imposed by the AHERA Regulation. These include:

1. If damaged or significantly damaged thermal system insulation (TSI) ACM (EPA Code #1) is present in a building, the LEA shall:
 - a) At least repair the damaged area, or remove the damaged material if it is not feasible to repair the damage.
 - b) Maintain all TSI ACM and its covering in an intact state and undamaged condition.

2. If damaged friable surfacing ACM or damaged friable miscellaneous ACM (EPA Code #2 and 4) is present in a building the LEA shall:
 - a) Select encapsulation, enclosure, removal or repair of the damaged material.
3. If significantly damaged friable surfacing ACM or significantly damaged friable miscellaneous ACM (EPA Codes #3 and 4) is present in a building, the LEA shall:
 - a) Immediately isolate and restrict access, unless isolation is not necessary to protect human health and the environment.
 - b) Remove the ACM from the functional space, unless encapsulation or enclosure is sufficient.
4. If any friable surfacing ACM, thermal system insulation ACM, or friable miscellaneous ACM (EPA Code #5) is present in a building, the LEA shall:
 - a) At least institute an O&M Program, as described in 763.91.
5. If any friable surfacing ACM, thermal system insulation ACM, or friable miscellaneous material has potential for significant damage, (EPA Code #6) is present in a building, the LEA shall:
 - a) Implement an O&M Program, as described under 763.91.
 - b) Institute preventive measures appropriate to eliminate the reasonable likelihood that the ACM or its covering will become significantly damaged, deteriorated, or delaminated.
 - c) Remove the material as soon as possible if appropriate preventative measures cannot be effectively implemented, or unless other response actions are determined to protect human health and the environment. Immediately isolate the area and restrict access if necessary to avoid an imminent and substantial endangerment to human health or environment.

Management Planner's Recommended Response Action

The known or assumed ACBM at Springfield Prep Charter School can be managed under the provisions of the Operations and Maintenance Program.

The Hazard Priority Summary list ranks the homogeneous areas which contain asbestos according to their potential for fiber release. Based on material condition as observed during the inspector's inspection, no areas at Springfield Prep Charter School require immediate or emergency abatement.

Factors which may influence decisions as to when areas are to be repaired or abated, apart

from an area's potential for fiber release, might include scheduled renovations, appropriate funding, or the availability of unoccupied areas (such as during vacation periods).

The Hazard Priority Summary

<u>Priority Schedule</u>	<u>Type Of Material</u>	<u>Recommended Response Action</u>
1.	Joint Compound and associated gypsum wallboard	Operations and Maintenance Repair damaged section

Operations and Maintenance Program Cost:

Following implementation of the Operations and Maintenance Program and associated training, the annual cost of the Operations and Maintenance Program can vary widely depending on the amount of asbestos present, and on the extent of damage.

A kit with abatement supplies is advisable for conducting O&M activities. The estimated cost of the purchase of such kits ranges from \$1,800 - \$3,000. Once a kit is purchased, the only costs associated with program upkeep will be the time of the building personnel who perform the work and periodic resupply.

LEA Response Action Schedule

The accredited Management Planner's recommendations for the appropriate response actions at Springfield Prep Charter School were provided above.

The LEA must consider the above recommendations and adopt them or the alternatives shown for the reasons indicated below and include a timeline schedule for implementation. In all cases, the selection must be made only after a determination that all the alternatives under consideration would protect public health and the environment.

The following response action selection/reason codes have been utilized in the text which follows:

<u>Code</u>	<u>Description</u>
1	The selected action is required by applicable law.
2	To avoid the cost and inconvenience of long-term O&M.
3	To avoid the possibility of future damage.
4.	The cost of the selected action compared favorably with the costs of possible alternative actions.
5.	Other reasons: (An explanation is provided by the LEA)

6. Patch and Repair
7. Removal
8. Encapsulation
9. Containment/Enclosure

O&M Operations and Maintenance Program

LEA Response Action Schedule						
Homo. Area ID	Location	Quantity of Material To Be Abated	Response Action Selection	Scheduled Start Date	Scheduled Stop Date	Reason

Designated Person: _____ Date: _____

Summary

As per the AHERA regulation section 763.91, "The LEA shall implement an Operations and Maintenance, and repair (O&M) program under this section whenever any friable ACBM is present or assumed to be present in a building that it leases, owns, or otherwise uses as a school building. Any material identified as nonfriable ACBM or nonfriable assumed ACBM must be treated as friable ACBM for purposes of this section when the material may become friable as a result of activities performed in the school building.

Contractor Selection Information

In those States which have asbestos abatement contractor certification programs, contractors must possess Massachusetts Asbestos Abatement entity license for the performance of asbestos abatement projects. Massachusetts has adopted a contractor accreditation program under Section 206 (b) of Title II of the Act. Both Consultants and Abatement Contractors are required by Massachusetts State Law to be licensed or certified in conjunction with individual worker certification and licensure. Building owners must use properly qualified personnel when asbestos work is to be performed. All certifications can be verified through the MA DLS.

5.0 SURVEILLANCE AND REINSPECTION

Periodic Surveillance

1. Scheduled surveillance will be performed every six months by a qualified person as designated by the APM.
2. All maintenance and custodial staff must attend a 2 hour asbestos awareness training program that includes information pertaining to health and safety when working on or around ACBM, knowing types of ACBM present at the site, how to identify changes in materials conditions, and to report it to the appropriate supervisor.
3. During the scheduled surveillance, a review of training procedures and protocol should be conducted. This will include notice of any changes in the "state of the art" in the asbestos industry.
4. Non-scheduled surveillance is an ongoing event and all maintenance and custodial personnel should be trained in the correct procedures.

Reinspection

A reinspection of conditions of all ACBM and ACM located in this building by an EPA accredited Asbestos Inspector is scheduled to be completed every three years. The next 3 year re-inspection at Springfield Prep Charter School must be performed by **August 2024**.

6.0 NOTIFICATION

AHERA requires that the Management Plan include a description of steps taken to notify workers, building occupants, or their legal guardians about inspections, reinspections, response actions, and post response action activities, including periodic reinspection and surveillance activities that are planned or are in the process of being completed. The following steps have been, or will be, implemented by the LEA:

1. Upon completion of the building inspection report, a written public notification shall be provided to the PTA, all workers and building occupants and student legal guardians.
Dated: __8/19/2021_____.
2. In addition, a notification form is posted in room(s):___Custodial Office_
_____ of the Springfield Prep Charter School.
3. Notification forms are given for all scheduled response actions and reinspections. Copies of these are retained in the records.
4. All other non-scheduled surveillance, response actions and post response activities are

documented within the Management Plan.

Availability of the Management Plan

1. A written notification addressed to parents, legal guardians, teachers, and employee organizations shall be prepared detailing the presence of the Management Plan in the Front Office and that it may be reviewed through scheduled appointments. The written notification may be presented in a local public newspaper or sent home with students or published on the schools web page _on school's web page_____.
2. An optional public awareness seminar discussing the Management Plan and related asbestos concerns may be scheduled:

_____ at _____ in the _____

APPENDIX A
2019 Asbestos Inspection Report

**INSPECTION REPORT FOR
Asbestos-Containing Building Materials, Lead-Based Paint,
Polychlorinated Biphenyls and Mercury Containing Components**

**Commercial Office Building
2071 Roosevelt Street
Springfield, Massachusetts**

Prepared for:

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Project 19416

November 18, 2019

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INTRODUCTION

Springfield Prep Charter School retained Smith & Wessel Associates, Inc. (SWA) to conduct inspections for asbestos-containing building materials (ACBM), lead-based paint (LBP), polychlorinated biphenyls (PCBs) and mercury containing components for the building located at 2071 Roosevelt Street in Springfield, Massachusetts. SWA inspected the building on October 22 and November 4, 2019 for due diligence purposes and for future renovations.

Asbestos

The purposes of the inspection were to evaluate the types, locations, and extent of suspect ACBM and to provide appropriate recommendations for its abatement and or management. SWA's inspection addressed both friable (materials that can be easily crumbled, crushed, or pulverized by hand pressure) and non-friable suspect materials.

SWA identified non-friable ACBM at the building in the form of the following materials:

- Floor tile/mastic
- Joint compound
- Mudded pipe fitting insulation
- Ceiling panels
- Duct tar

If any additional suspect materials are identified at later dates that are not addressed in this report, they must be assumed to be ACBM unless appropriate sampling and analysis demonstrates otherwise.

Lead-Based Paint

The purpose of the lead paint inspection were to evaluate the types, locations, and extent of suspect LBP in the building, to evaluate potential hazards associated with LBP, and to provide appropriate recommendations for its abatement and management.

The lead content of paints surveyed in the building ranged from less than 0.1 mg/cm² to 4.9 mg/cm² as measured with an X-ray Fluorescence Analyzer (XRFA). If LBP are impacted by demolition in a manner that may generate dust or fumes, compliance with Occupational Safety and Health Administration (OSHA) regulations regarding worker exposure to lead may be necessary. Additionally, United States Environmental Protection Agency (US EPA) and Massachusetts Department of Environmental (MA DEP) regulations relative to waste disposal may apply.

PCBs

SWA's investigation for PCBs in light fixture ballasts was visual only. Typically, ballasts installed after 1978 do not contain PCBs and are marked as such. Ballasts that do not

have the "No PCBs" wording on the label are assumed to contain PCBs. SWA inspected the labels on representative ballasts throughout the building. Those representative ballasts inspected did contain the "No PCBs" wording on the affixed labels and therefore are assumed not to contain PCBs in their capacitor oils. However, all ballasts must be checked for the "No PCBs" wording if removed in the future. No transformers were observed.

SWA also collected samples of window caulking, door caulking and expansion seam caulking from the building for laboratory analysis to determine their PCB concentrations. Analytical results indicate that the materials tested contain less than 50 ppm, the level at which the EPA would consider them "not authorized for use" in a building and would need to be removed. However, special handling and disposal requirements may still be necessary for materials containing PCBs less than 50 ppm.

Mercury Filled Fluorescent Light Fixtures

SWA estimates that there are 2,560 (4') and 110 (2') fluorescent bulbs and 2 heat regulating thermostats with associated mercury tubes at the site that would require recycling.

Exclusions

While SWA endeavored to conduct a thorough, comprehensive inspection, some exclusions are warranted. Because our inspection addressed a limited number of areas, it is possible that the locations that we inspected were not fully representative of materials found in other areas. Additional limitations may have impacted our ability to inspect all locations such as poor lighting, height constraints, unusual building features, occupancy, and stored materials that block access to suspect materials. Stored goods, debris, and building materials that were removed and were either stored or loose were not inspected, but if observed were assessed and quantified.

SWA does not guarantee that all suspect roof materials were identified. Typically, roofs were applied in multiple layers and were repaired over the years, therefore, the extent of suspect roof materials will not be known until the entire roof systems are removed. Further, the owner contracted the roofer to patch the roof following the roof sampling cuts.

While SWA followed industry standards during the inspection, we do not warrant that all suspect hazardous building materials were identified in or on the building and shall not be held liable related to future abatement costs related to hazardous materials that are either not discovered or not appropriately characterized. This is due in part to inherent problems with every building inspection, such as, but not limited to:

- Seemingly homogeneous materials that are not in fact homogeneous;
- Seemingly representative locations that are not in fact representative;
- Layered materials that are not uniformly present or are isolated;

- Materials that are present and accessible but were not considered to be hazardous,
- Materials that are present in an isolated and limited quantity; and
- Material that is present in locations that are unsafe or otherwise difficult to access.

Client acknowledges that SWA's inspection is inherently limited and all hazardous materials may only become apparent during the course of future renovation or demolition. During the course of future renovation/demolition work, it is likely that additional hazardous materials or materials suspected of being hazardous will be identified. Such materials should be assumed to be hazardous unless appropriate evaluation or sampling and analysis demonstrate otherwise. Contracts, specifications and plans should advise contractors to conduct controlled demolition work and stop immediately should any hazardous building materials be encountered during the course of their work.

1.0 ASBESTOS CONTAINING BUILDING MATERIALS

1.1 Scope of Work

SWA's Massachusetts certified Asbestos Inspectors, Ted Sherry (Cert. # AI-32572) and Eric Hanson (Cert. # AI-000220) performed the asbestos inspection of readily accessible and observable areas throughout the interior and exterior of the building. SWA was assisted during the roof inspection by professional Roof Contractor, CDA Roofing, of Agawam, Massachusetts. CDA Roofing penetrated the roof systems in several locations enabling SWA to collect samples of any suspect materials identified to be analyzed for asbestos content. CDA then repaired the sample locations against future leaks.

SWA inspected for the following types of suspect ACM:

- Thermal system insulation (TSI), such as insulation on pipes, boilers, tanks and related equipment;
- Surfacing material, acoustical and decorative plasters, fireproofing and other sprayed or trowel applications; and
- Miscellaneous materials, such as window caulking, wallboard, floor tile, adhesives, and other building materials that are not TSI or surfacing materials.

To determine the asbestos content of suspect ACM, SWA collected and analyzed representative bulk samples by extracting a small but representative portion of suspect material from the substrate. The samples, typically measuring one cubic centimeter, were collected using a variety of methods. The extracted samples were then placed into labeled, individual sealed plastic bags for transport to the laboratory.

EMSL Analytical, Inc. (EMSL) of Woburn, Massachusetts, a fully accredited asbestos analytical laboratory, analyzed the bulk samples utilizing Polarized Light Microscopy (PLM) in accordance with the requirements of 40 CFR Part 763, Subpart F, Appendix A (see Appendix A of this report). Because PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials, when a negative result is obtained by PLM (less than one percent asbestos), the laboratory was instructed to analyze the sample by Transmission Electron Microscopy (TEM) to confirm the results.

For each homogeneous sampling group, the laboratory analyzed samples until a positive result was obtained (i.e. greater than one percent asbestos) or until all samples were analyzed. If one sample indicates an asbestos content greater than one percent, the entire homogenous area must be considered to be an ACM even if one or more samples in the group indicates an asbestos content of less than one percent.

1.2 Regulatory Guidance

The US EPA, OSHA, Massachusetts Department of Labor Standards (MA DLS) and MA DEP are responsible for regulating the release of asbestos into the environment and protecting workers from exposure to airborne asbestos fibers.

OSHA and MA DLS are responsible for the health and safety of workers who may be exposed in connection with their jobs including custodial activities, renovation work, and asbestos abatement. These agencies specify requirements for the work practices and engineering controls that must be utilized during asbestos abatement projects. They also require that ACM be repaired, removed, or otherwise appropriately abated before maintenance, renovation, or demolition work disturbs them. Thermal system insulation, surfacing materials, and floor tile installed before 1980 must be presumed to be ACM unless appropriate inspection and sampling analysis prove otherwise.

The EPA and MA DEP are responsible for developing and enforcing regulations necessary to protect the general public from airborne contaminants that are known to be hazardous to human health. They regulate ACM associated with renovation, demolition, and asbestos abatement projects via the National Emissions Standard for Hazardous Air Pollutants (NESHAP) Title 40 CFR Part 61 regulation and MA DEP Chapter 141-E Asbestos Management and Control. These regulations require that buildings be inspected for ACM prior to renovation/demolition projects. They stipulate that all friable ACM as well as non-friable ACM that are in poor condition or will be made friable by renovation or demolition activity be removed or otherwise appropriately abated before they are disturbed.

1.3 Findings

SWA identified the following friable and non-friable *suspect* ACM:

• Joint compound	• Baseboard mastic
• Mudded pipe fittings	• Wall expansion
• Floor tile/mastic	• Ceiling tile
• Carpet mastic	• Window caulking
• Wall glue	• Window glazing compound
• Ceiling panels	• Roofing materials
• Duct tar coating	• Door caulking
• Gypsum board	• Fiberboard
• Vent caulking	• Door insulation
• Plaster	• Skylight sealer

SWA collected a total of 79 representative bulk samples of the above materials to determine asbestos content, of which 76 were analyzed using PLM. Three of the samples did not require analysis as the first sample in the homogeneous sampling group tested positive for asbestos (i.e. contain greater than one percent asbestos). In addition, five of

the samples were further analyzed using the TEM method.

SWA has listed in **Table 1**, the location and estimated quantity, by square foot (sf), linear foot (lf), or other appropriate unit, of each type of ACBM identified at the site.

Table 1 • List of Materials Testing Positive for Asbestos			
Type of Material	Location	Quantity	Sample number
White/gray mudded pipe fittings	Observed in vacant area cafeteria, bathrooms, south hall, south custodial closet, N/E training room, Future Health Suite and Kindred Company	110 ea.	02A
White/gray mudded pipe fittings	Not observed and assumed to be present behind fixed walls and plenum areas	80 ea.	02A
Tan/beige joint compound associated with original gypsum board (See note 1)	Observed in vacant N/E kick out section, adjoining hall (N/E) from bathroom area to exit, Kindred Company, S/E corner mechanical room and Future Health Suite	16,000 sf <i>(estimate)</i>	18A, 24A, 31A, 40A
White w/gray streaks 12" x 12" floor tile and associated mastic adhesive	South custodial closet between the bathrooms	30 sf	20A, 21A
Gray ceiling panels <i>(painted white)</i>	Throughout exterior overhang entrances	2,325 sf	23A
Black duct tar coating	Roof <i>(see photo)</i>	40 sf	29A
White 12" x 12" floor tile and associated mastic adhesive <i>(beneath carpet)</i>	Throughout Kindred Company carpeted areas	3,600 sf	32A, 33A
White 12" x 12" floor tile (2 nd layer) and associated mastic adhesive <i>(beneath newer floor tile) (treat both layers as asbestos because they cannot be separated)</i>	Kindred Company rear hall and adjoining rooms, rear rooms at carpeted open area and cafeteria	1,420 sf	32A, 33A
White 12" x 12" floor tile and associated mastic adhesive <i>(beneath carpet)</i>	Assumed to be present in the Future Health Suite	1,500 sf	Assumed

Note 1 – The original gypsum board with asbestos joint compound appears to be at various locations of the rear south/east vacant kick out section, future health and kindred suites. The older gypsum/JC appears to be primarily associated with the most outer walls and double layer gypsum board was observed at some locations. When the building becomes vacant it would be prudent to have SWA return to the site in order to help mark out the walls that contain asbestos joint compound.

In **Table 2**, SWA has listed all materials that tested negative for asbestos, including the locations where these materials were observed and the corresponding bulk sample reference number(s). The sample #'s marked in *italics* were further analyzed using the TEM method.

Table 2 • List of Materials Testing Negative for Asbestos		
Type of Material	Location	Sample No.
Gray window caulking	Throughout building	<i>01A</i> , 01B
Gray expansion joint	Throughout exterior brick walls	<i>03A</i> , 03B
White/gray 2' x 2' ceiling tile	Throughout vacant areas	04A, 04B
White joint compound	Throughout vacant areas, except for the rear S/E kickout building section	05A, 05B, 05C
Yellow carpet mastic adhesive	Throughout building	06A, 06B
White/gray 2' x 2' rough textured ceiling tile	Vacant section front office and conference room	07A, 07B
Tan/brown 12" x 12" floor tile and associated mastic adhesive	Vacant section cafeteria and hall	08A, 08B, 09A, 09B
Tan/yellow baseboard mastic adhesive	Throughout building	10A, 10B
White 12" x 12" floor tile (<i>newer vintage</i>) and associated black mastic adhesive (<i>beneath carpet</i>)	North end office areas	11A, 11B, <i>12A</i> , 12B
Gray gypsum wallboard	Throughout building	13A, 13B
Beige 12" x 12" floor tile and associated yellow mastic adhesive	Vacant north office mens and womens bathrooms	14A, 14B, 15A, 15B
White w/gray spots 12" x 12" floor tile and associated black mastic adhesive	Vacant section east exit/closet, computer room, S/E storage room	16A, 16B, <i>17A</i> , 17B
Black inner window glazing compound	Vacant section S/E conference room	19A, 19B
Gray door caulking	Throughout exterior	22A, 22B
Brown baseboard mastic adhesive	S/E corner mechanical room	<i>25A</i> , 25B
Brown fiberboard type roofing	Throughout roof (<i>Roof Layers: TPO – 1" ISO – PVC membrane – 2" Styrofoam – Fiberboard on a corrugated deck</i>)	26A, 26B
White/black vent caulking/tar	Roof	27A, 27B
White/black skylight caulking/tar sealer	Skylights	28A, 28B
White/gray 2' x 2' ceiling tile	Throughout Kindred Company	30A, 30B

Table 2 • List of Materials Testing Negative for Asbestos		
Type of Material	Location	Sample No.
Tan/green wall glue streaks associated with rolled fiberglass insulation	Vacant section east outer wall	34A, 34B
Red wall foam glue streaks	Vacant section east and west upper walls	35A, 35B
Pink 12" x 12" floor tile (<i>newer vintage</i>) and associated black mastic adhesive (<i>beneath carpet</i>)	Throughout vacant east training room near exit	36A, 36B, 37A, 37B
Red exhaust (2) seam sealer	Vacant east training room near exit at outer wall in plenum space	38A
Gray upper wall plaster	Plenum space at entrances	39A, 39B, 39C
Tan 12" x 12" floor tile (<i>newer vintage</i>) and associated black/yellow/gray mastic adhesive	Vacant space S/E kick out work room section at exit	41A, 41B, 42A, 42B
White fire door insulation	Vacant section near west lobby	43A, 43B

1.4 Conclusions and Recommendations

On the basis of our findings, SWA offers the following conclusions and recommendations:

1. Friable and non-friable ACBM were identified at the site. ACBM that will be impacted by renovation or demolition work must be removed prior to being disturbed. SWA recommends that this work be conducted in accordance with a project design as prepared by a licensed Asbestos Abatement Project Designer. ***This report is not intended for use as an abatement design.***
2. During the course of renovation or demolition work, it is possible that additional suspect ACBM will be encountered. Contractors should be apprised to conduct any such work in a controlled manner. If suspect materials that have not been sampled are encountered, they should be assumed to contain asbestos, unless appropriate sampling and analysis indicates otherwise.
3. Because portions of the building were occupied during the assessment, SWA was not able to conduct intrusive/destructive investigation to inspect for hidden suspect building materials. Prior to demolition and when building becomes unoccupied, further assessments for suspect hidden materials will be required. This would include but not be limited to better understanding the location of older sheetrock with asbestos joint compound and further assessing flooring conditions relative to carpeted areas.

1.5 Cost Estimates

In **Table 3**, SWA has provided estimates of abatement costs associated with all identified ACBM in the inspected areas. These estimates are based on current industry standards that may fluctuate rapidly based on a variety of factors: the prevailing economic climate, seasonal differences, union labor considerations, scale of the abatement, occupancy of the building, and so on. SWA recommends that qualified abatement contractors be solicited to determine actual pricing involved. In addition to pricing for abatement, SWA has considered anticipated industrial hygiene costs associated with abatement, including air monitoring and oversight of the abatement.

Table 3 • Estimated Costs for Removal of ACBM		
Type of Material	Quantity/Unit cost (\$)	Total Cost (\$)
White/gray mudded pipe fittings	110 ea. @ 30/ea.	3,300.
White/gray mudded pipe fittings (<i>assumed</i>)	80 ea. @ 30/ea.	2,400.
Tan/beige joint compound associated with original gypsum board	16,000 sf @ 5/sf	80,000.
White w/gray streaks 12" x 12" floor tile and associated mastic adhesive	30 sf @ 12/sf	360.
Gray ceiling panels (<i>painted white</i>)	2,325 sf @ 7/sf	16,275
Black duct tar coating	40 sf @ 20/sf	800.
White 12" x 12" floor tile and associated mastic adhesive (<i>beneath carpet</i>)	3,600 sf @ 4/sf	14,400.
White 12" x 12" floor tile (<i>2nd layer</i>) and associated mastic adhesive (<i>beneath newer floor tile</i>) (<i>treat both layers as asbestos because they cannot be separated</i>)	1,420 sf @ 6/sf	8,520.
White 12" x 12" floor tile and associated mastic adhesive (<i>beneath carpet</i>) (<i>assumed</i>)	1,500 sf @ 4/sf	6,000.
Total Contractor Abatement Cost		\$132,055.
Total Industrial Hygiene Fee		20,000.
Total Fee		\$152,055.

2.0 LEAD-BASED PAINTS

2.1 Scope of Work

SWA's accredited lead paint inspector tested representative painted surfaces throughout the building. SWA analyzed paints for lead content using the NITON XLS-303-A, X-ray fluorescence analyzer (XRFA) following the manufacturer's instructions for initial calibration and operation. The XRFA uses a radioactive source to excite the electrons of lead atoms (if present) in paint. As the lead atom electrons return to their normal state, they emit x-rays that are measured by the XRFA, then processed and the results converted to milligrams of lead per square centimeter of sampled surface area. On most substrates, the XRFA is precise to +0.1 mg/cm².

Surfaces tested included, but were not limited to walls, ceilings, doors, casings/jamb, joists and other miscellaneous surfaces.

2.2 Regulatory Guidance

In all areas where LBP is disturbed by renovation work and where components covered by LBP are disposed of, applicable OSHA and EPA regulations apply.

OSHA

Renovation or demolition activities that disturb surfaces that contain lead must be conducted in accordance with the OSHA regulation 29 CFR 1926.62 "Lead Exposure in Construction: Interim Final Rule." This regulation requires that a site-specific health and safety plan be prepared before conducting activities that create airborne lead emissions. Such a plan should include the identification of lead components, an exposure assessment, and, if applicable, the required work procedures and personnel protection to be used.

An exposure assessment in the form of personal air monitoring must be performed if there is the potential for employees to be exposed to lead due to the renovation or demolition activity. If demolition is being conducted that will disturb lead-based paints, the employer must assume that employee exposure is in excess of the Permissible Exposure Limit (PEL) of 50 micrograms per cubic meter of air ($\mu\text{g}/\text{m}^3$) until the exposure assessment is completed. If the PEL is exceeded, employees are required to use half-face mask respirators with HEPA filter cartridges. Furthermore, a written respirator program is required per 29 CFR 1910.134. The lead standard also requires the following protective measures be taken until the exposure assessment is completed:

- Isolation of the work area;
- appropriate personal protective clothing and equipment;
- change areas and hand washing facilities;
- biological monitoring; and
- training

The results of the initial exposure assessment will determine the protective measures that must be followed for the remainder of the project. OSHA may allow air-monitoring data from previous projects conducted under conditions closely resembling the present project to be used for the exposure assessment. If the exposure assessment indicates that exposure levels are below the Action Level of $30 \mu/m^3$, there are no additional requirements under the standard if the conditions remain the same.

EPA

In addition to the worker protection requirements stipulated by OSHA, MA DEP and the EPA regulate the disposal of wastes that are potentially hazardous. Such wastes may include paint chips and residue generated during abatement or repainting work, or whole components, such as wood windows, doors, and trim that are coated with LBP and that are disposed of as the result of renovation or demolition work. Metal components are not regulated if they will be recycled and not disposed of in a landfill.

To determine the required method for disposing of permeable items coated with LBP, the MA DEP and the EPA require representative sampling of the debris to determine the quantity of lead that would be expected to leach into the environment if the debris were disposed of in a landfill. The representative sample(s) must be analyzed by the Toxicity Characteristic Leaching Process (TCLP). If the result of this procedure indicates that the sample leaches a lead concentration below five parts per million (ppm), the debris is not regulated and can be disposed of in a traditional construction landfill. However, the debris must be disposed of as hazardous waste if the TCLP result exceeds 5 ppm. To minimize the total volume of hazardous waste, segregating hazardous from nonhazardous waste is advisable.

HUD

The United States Department of Housing and Urban Development (HUD) has established a standard for lead-based paint, as tested using an XRF analyzer, of 1.0 mg/cm^2 . Although this standard only applies to housing funded by the federal government, it is a useful reference concentration for assessing hazards associated with lead in paint in other settings. Thus, when paint contains greater than 1.0 mg/cm^2 , special care should be taken when conducting activities that impact these paints. When conducting abrasive blasting, torch burning, or similar activities that generate significant dust or fume, hazards can be caused even at concentrations below the HUD standard.

2.3 Findings

Analysis of painted surfaces throughout the site indicate that lead levels range from $<0.1 \text{ mg/cm}^2$ to 4.9 mg/cm^2 . A summary of paints with elevated concentrations of lead (greater than 1.0 mg/cm^2) is presented in **Table 4**, and the results of all testing are presented in Appendix B.

Table 4 • Summary of Surfaces Coated With LBP				
Location	Substrate	Color	Component	Approx. Quantity
Women's room south	Ceramic	Yellow	Wall	240 sf
Men's room	Ceramic	Yellow	Wall	260 sf

2.4 Conclusions and Recommendations

Based on our findings, SWA offers the following conclusions and recommendations:

1. Limited components containing lead were identified at the site, including ceramic wall tiles. The actual lead content is present in the glaze of the tiles. Handling or impacting components that are covered by LBP may require compliance with the OSHA lead standard. To minimize exposure to airborne dust or fumes, torch burning, cutting, grinding, or similar high impact work on components covered by LBP should be avoided. Such work would need to be conducted by properly trained workers using appropriate worker protection and engineering controls.
2. For work activities that may generate airborne lead, the contractor(s) should perform an initial exposure assessment (personal air monitoring) for each individual task (e.g. demolition, abrasive blasting, and painting) that has the potential for causing worker exposure to be at or above the OSHA Action Level. In lieu of monitoring, historical data from similar operations may be used to comply with OSHA requirements.

2.5 Cost Estimates

SWA estimates that costs associated with OSHA and EPA compliance relative to lead paint at approximately **\$2,000** for this site. *If all lead paint coated components were to be de-leaded at the site or if the composite TCLP test failed, the costs would be increased substantially.*

3.0 POLYCHLORINATED BIPHENYLS (PCBs)

3.1 Scope of Work

Typically, the words “No PCBs” are imprinted on affixed labels on the housing of ballasts if it does not contain PCBs. To determine if light ballasts contain PCBs, SWA inspected representative ballasts associated with each type of fluorescent light fixture identified at the site.

SWA inspected for building materials that are typically sampled for PCBs. Six samples were collected of window caulking, door caulking and wall expansion from the building.

3.2 Background/Regulatory Guidance

According to the EPA, PCBs are toxic and persistent chemicals that were used primarily as insulating fluid in heavy-duty electrical equipment. They were also utilized in a wide variety of products including paints, caulks, light fixture ballast, oils, plastics, adhesives, tapes, carbonless copy paper, floor finishes and related products. Because PCBs are suspected carcinogens and may cause other adverse health effects, the EPA banned their manufacture and installation starting in 1979.

Any materials containing PCBs equal to or greater than 50 parts per million (ppm) are regulated under the Toxic Substance Control Act and the PCB regulation found at 40 CFR Part 761. Further, EPA policy, as described in “Current Best Practices for PCBs in Caulk Fact Sheet” updated in September, 2009, is that PCBs at concentrations greater than 50 ppm are not authorized for use and must be removed and properly disposed of.

Additionally, where <50 ppm caulk or PCB remediation waste is present, it may be regulated for removal and/or cleanup unless the <50 ppm PCB caulk meets the definition of an Excluded PCB Product as defined under 40 CFR Part 761.3. Excluded products would include those legally installed before October 1, 1984 and the resulting PCBs concentration is not the result of dilution or leaks or spills from other products. Thus, if a formerly installed PCB caulk containing greater than 50 ppm had been removed and replaced by a non-PCB caulk, the non-PCB caulk could be contaminated from the residue of the former caulk. In this instance, if the non-PCB caulk tested at a concentration above one ppm, it would be regulated as PCB containing.

Further, because PCBs may have leached into surrounding substrates, such as brick, CMU, and cement, or may have degraded and contaminated adjacent soil, assessment of masonry and soils is necessary on instances where PCBs are present in caulk or other building materials. Where analysis indicates contaminant concentrations above one ppm in masonry or soils, remedial actions are required.

3.2 Findings

SWA inspected the labels on representative ballasts throughout the building. Those representative ballasts inspected did contain the "No PCBs" wording on their affixed labels and therefore are assumed not contain PCBs in their capacitor oils. During renovations or demolition, all individual ballasts must be inspected for the "No PCB" wording on affixed labels to determine proper disposal/recycling requirements.

Analytical results indicate that the concentration of PCBs in the window caulking, door caulking and wall expansion at the building were all <50 PPM. This is below the EPA regulated standard for PCBs of 50 ppm or greater. SWA further believes the materials are original application and thereby an excluded product. Below is a summary of the results:

- Window caulking (01) – Throughout exterior, ND
- Wall expansion (02) – Throughout exterior, 0.25 PPM
- Window caulking (03) – Throughout exterior, ND
- Door caulking (04) – Throughout exterior, 0.42 PPM
- Wall expansion (05) – Throughout exterior, ND
- Door caulking (046) – Throughout exterior, ND

3.3 Conclusions and Recommendations

Based on our observations, we conclude the following:

1. Prior to renovation or demolition all ballasts should be inspected for the "No PCB" wording on the label to determine appropriate segregation and recycling requirements. Any ballast that does not contain the "No PCBs" wording on the affixed label is assumed to contain PCB oils and must be segregated for proper disposal/recycling.
2. All sampled building materials, such as caulking and glazing compound contain less than 50 ppm of PCBs. We have no reason to assume that these materials were not original installation prior to 1984 and therefore would be considered to be "excluded products", under EPA regulations pertaining to classifying PCBs. Building materials containing low levels of PCBs may require special handling and must be disposed in a landfill permitted to accept such waste.

3.4 Cost Estimates

SWA estimates that the cost to inspect, remove and dispose of individual ballasts and transformers and to properly dispose of building materials containing low level PCBs are estimated at **\$5,000** at the site.

4.0 MERCURY COMPONENTS

4.1 Scope of Work

SWA's inspectors observed fluorescent light bulbs suspected of containing mercury in the building. Typically when fluorescent light fixtures, thermostats, or switches will be removed and disposed of, SWA makes a conservative assumption that they contain mercury and should be handled as a regulated waste. These materials are classified as "Universal Wastes" and must be appropriately handled and packaged for disposal or recycling.

4.2 Findings

SWA estimates that there are 2,560 (4') and 110 (2') fluorescent bulbs at the site that would require recycling. Two heat regulating thermostats with associated mercury tubes were observed in the building.

4.3 Conclusions and Recommendations

Based on our observations, SWA offers the following conclusions and recommendations.

1. Fluorescent bulbs and thermostats are present at the site that is assumed to contain mercury. Prior to being impacted, all fluorescent light bulbs and thermostat mercury tubes must be collected and properly packaged for disposal or recycling in a facility permitted to accept Universal Wastes.

4.4 Cost Estimates

The cost to collect and dispose/recycle the fluorescent light bulbs and thermostats at this site is not expected to exceed **\$6,000**.

APPENDIX A

Certificates of Asbestos Bulk Sample Analysis (PLM & TEM)



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EMSL Order: 131908189

Customer ID: SMIT50

Customer PO: 19416

Project ID:

Attention: Ted Sherry
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515 Wildlife Glen
Bradenton, FL 34209

Phone: (978) 994-3643

Fax: (978) 346-7265

Received Date: 10/23/2019 4:05 PM

Analysis Date: 10/25/2019

Collected Date: 10/22/2019

Project: 2071 Roosevelt St Springfield MA- 19416

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
01A 131908189-0001	Exterior Front At 2073 - Gray Window Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
01B 131908189-0002	Exterior Rear At 2069 - Gray Window Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
02A 131908189-0003	Mechanical Room 2069 - White Fitting Insulation	Gray Fibrous Homogeneous	20% Min. Wool	65% Non-fibrous (Other)	15% Chrysotile
02B 131908189-0004	Cafeteria 2077 - White Fitting Insulation				Positive Stop (Not Analyzed)
02C 131908189-0005	Bathroom Mens At Cafeteria 2077 - White Fitting Insulation				Positive Stop (Not Analyzed)
03A 131908189-0006	Gray Exterior Rear At 2071 - Gray Expansion Joint Caulking	Gray Non-Fibrous Homogeneous	2% Glass	98% Non-fibrous (Other)	None Detected
03B 131908189-0007	Exterior North At 2095 - Gray Expansion Joint Caulking	Gray Non-Fibrous Homogeneous	2% Glass	98% Non-fibrous (Other)	None Detected
04A 131908189-0008	Lobby 2077 - Gray 2"x2" Ceiling Tile	Gray Fibrous Homogeneous	45% Cellulose 20% Min. Wool	35% Non-fibrous (Other)	None Detected
04B 131908189-0009	Cafeteria 2077 - Gray 2"x2" Ceiling Tile	Gray Fibrous Homogeneous	45% Cellulose 20% Min. Wool	35% Non-fibrous (Other)	None Detected
05A 131908189-0010	Reception 2077 - White Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
05B 131908189-0011	Hallway At Cafeteria 2077 - White Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
05C 131908189-0012	Hallway 2071 - White Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
06A 131908189-0013	Hallway 2077 - Yellow Carpet Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
06B 131908189-0014	Northeast Office 2095 - Yellow Carpet Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07A 131908189-0015	Front Office 2077 - Gray 2"x2" Ceiling Tile Rought Texture	Gray Fibrous Homogeneous	75% Min. Wool	25% Non-fibrous (Other)	None Detected

Initial report from: 10/25/2019 16:31:50



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EMSL Order: 131908189
Customer ID: SMIT50
Customer PO: 19416
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
07B 131908189-0016	Large Conference Room 2077 - Gray 2"x2" Ceiling Tile Rought Texture	Gray Fibrous Homogeneous	75% Min. Wool	25% Non-fibrous (Other)	None Detected
08A 131908189-0017	Cafeteria 2077 - Tan/Brown 12"x12" Floor Tile	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
08B 131908189-0018	Hallway 2077 - Tan/Brown 12"x12" Floor Tile	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
09A 131908189-0019	Cafeteria 2077 - Yellow Mastic On 08	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
09B 131908189-0020	Hallway 2077 - Yellow Mastic On 08	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10A 131908189-0021	Hallway 2077 - Tan Baseboard Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10B 131908189-0022	Hallway 2071 - Tan Baseboard Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11A 131908189-0023	North End Office 2095 - White 12"x12" Floor Tile Under Carpet	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11B 131908189-0024	By Northwest Women's Room 2095 - White 12"x12" Floor Tile Under Carpet	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12A 131908189-0025	North End Office 2095 - Black Mastic On 11	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12B 131908189-0026	By Northwest Women's Room 2095 - Black Mastic On 11	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13A 131908189-0027	North End 2095 - Gray Gypsum Board	Gray/Tan Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
13B 131908189-0028	Cafeteria 2077 - Gray Gypsum Board	Gray/Tan Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
14A 131908189-0029	Bathroom Mens 2095 - Beige 12"x12" Floor Tile	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14B 131908189-0030	Bathroom Womens 2095 - Beige 12"x12" Floor Tile	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
15A 131908189-0031	Bathroom Mens 2095 - Yellow Mastic On 14	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
15B 131908189-0032	Bathroom Womens 2095 - Yellow Mastic On 14	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16A 131908189-0033	East Exist 2095 - White 12"x12" Floor Tile With Gray Spots	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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EMSL Order: 131908189
Customer ID: SMIT50
Customer PO: 19416
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
16B <small>131908189-0034</small>	East Exit 2095 - White 12"x12" Floor Tile With Gray Spots	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
17A <small>131908189-0035</small>	East Exit 2095 - Black Mastic On 16	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
17B <small>131908189-0036</small>	East Exit 2095 - Black Mastic On 16	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
18A <small>131908189-0037</small>	South East On Column 2077 - Beige Compound	Tan Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
19A <small>131908189-0038</small>	Southeast Conference Room 2077 - Black Inner Window Glazing	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19B <small>131908189-0039</small>	Southeast Conference Room 2077 - Black Inner Window Glazing	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
20A <small>131908189-0040</small>	Custodian Closet 2071 - White 12"x12" With Gray Streaks Floor Tile	White Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
21A <small>131908189-0041</small>	Custodian Closet 2071 - Black Mastic On 20	Black Non-Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
22A <small>131908189-0042</small>	Exterior Rear At 2077 - Gray Door Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
22B <small>131908189-0043</small>	Exterior Front At 2095 - Gray Door Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
23A <small>131908189-0044</small>	Exterior Rear Entrance 2077 - Gray Cement Ceiling Panel	Gray Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
24A <small>131908189-0045</small>	Mechanical Room 2069 - Beige Joint Compound	Tan Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
25A <small>131908189-0046</small>	Mechanical Room 2069 - Brown Baseboard Mastic	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
25B <small>131908189-0047</small>	Mechanical Room 2069 - Brown Baseboard Mastic	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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Project ID:

Analyst(s)

Kevin McKenzie (30)

Kevin Pine (15)

Steve Grise, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. 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. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-139, VT AL998919, Maine Bulk Asbestos LB-0039

Initial report from: 10/25/2019 16:31:50



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Customer ID: SMIT50B

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Received Date: 11/08/2019 11:10 AM

Analysis Date: 11/12/2019

Collected Date: 11/07/2019

Project: 19416/ 2071 Roosevelt St; Springfield, MA

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
26A <small>131908649-0001</small>	Roof South - Brown Fiberboard	Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (Other)	None Detected
26B <small>131908649-0002</small>	Roof North - Brown Fiberboard	Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (Other)	None Detected
27A <small>131908649-0003</small>	Roof Northeast on Metal Vent - White/Black Caulking/Tar	White/Black Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
27B <small>131908649-0004</small>	Roof Northeast on Metal Vent - White/Black Caulking/Tar	White/Black Non-Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (Other)	None Detected
28A <small>131908649-0005</small>	Roof Middle - White/Black Skylight Caulking/Tar	White/Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
28B <small>131908649-0006</small>	Roof Northwest - White/Black Skylight Caulking/Tar	White/Black Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
29A <small>131908649-0007</small>	Roof West - Black Duct Tar Coating	Black Non-Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
29B <small>131908649-0008</small>	Roof West - Black Duct Tar Coating				Positive Stop (Not Analyzed)
30A <small>131908649-0009</small>	Kindred at Home - White 2'x2' Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool	20% Non-fibrous (Other)	None Detected
30B <small>131908649-0010</small>	Kindred at Home - White 2'x2' Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool	20% Non-fibrous (Other)	None Detected
31A <small>131908649-0011</small>	Kindred at Home - Lobby - Beige Joint Compound	Tan Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
32A <small>131908649-0012</small>	Kindred at Home - White 12"x12" Floor Tile (U.C.)	White Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
33A <small>131908649-0013</small>	Kindred at Home - Black Mastic	Black Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
34A <small>131908649-0014</small>	East Outer Wall - Tan w/ Green Wall Insulation Glue (Fiberglass)	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
34B <small>131908649-0015</small>	East at Middle Exit - Tan w/ Green Wall Insulation Glue (Fiberglass)	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 11/12/2019 11:55:41



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EMSL Order: 131908649

Customer ID: SMIT50B

Customer PO:

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
35A 131908649-0016	East Outer Wall - Red Wall Insulation Glue (Foam)	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
35B 131908649-0017	East - Red Wall Insulation Glue (Foam)	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36A 131908649-0018	Training Room at East Exit - Pink 12"x12" Floor Tile	Pink Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36B 131908649-0019	Training Room at East Exit - Pink 12"x12" Floor Tile	Pink Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
37A 131908649-0020	Training Room at East Exit - Black Mastic on 36	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
37B 131908649-0021	Training Room at East Exit - Black Mastic on 36	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38A 131908649-0022	Training Room at East Exit - Red Exhaust Seam Glue	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
39A 131908649-0023	East - Gray Cement Plaster	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
39B 131908649-0024	East - Gray Cement Plaster	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
39C 131908649-0025	East - Gray Cement Plaster	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
40A 131908649-0026	Southeast Cubicle Area - Beige Joint Compound	Tan Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
41A 131908649-0027	Southeast Work Room - Tan 12"x12" Floor Tile	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
41B 131908649-0028	Southeast Work Room - Tan 12"x12" Floor Tile	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
42A 131908649-0029	Southeast Work Room - Black/Yellow/Gray Mastic on 41	Gray/Black/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
42B 131908649-0030	Southeast Work Room - Black/Yellow/Gray Mastic on 41	Gray/Black/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
43A 131908649-0031	West - White Fire Door Insulation	White Fibrous Homogeneous	2% Glass	98% Non-fibrous (Other)	None Detected
43B 131908649-0032	West - White Fire Door Insulation	White Non-Fibrous Homogeneous	2% Glass	98% Non-fibrous (Other)	None Detected

Initial report from: 11/12/2019 11:55:41



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Analyst(s)

Elizabeth Stutts (31)

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-139, VT AL998919, Maine Bulk Asbestos LB-0039

Initial report from: 11/12/2019 11:55:41



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Customer ID: SMIT50

Customer PO: 19416

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Fax: (978) 346-7265

Received Date: 10/23/2019 4:05 PM

Analysis Date: 10/29/2019

Collected Date: 10/22/2019

Project: 2071 Roosevelt St Springfield MA- 19416

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
01A 131908189-0001	Exterior Front At 2073 - Gray Window Caulking	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
03A 131908189-0006	Gray Exterior Rear At 2071 - Gray Expansion Joint Caulking	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
12A 131908189-0025	North End Office 2095 - Black Mastic On 11	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
17A 131908189-0035	East Exit 2095 - Black Mastic On 16	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
25A 131908189-0046	Mechanical Room 2069 - Brown Baseboard Mastic	Brown Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Matthew Conley (5)

Steve Grise, Laboratory Manager
or other approved signatory

This laboratory is not responsible for % asbestos in total sample when the residue only is submitted for analysis. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA

Initial report from: 10/29/2019 12:24:35

APPENDIX B

Results of Testing for Lead Based Paint (LBP)

Results of Testing for Lead Based Paint
2071 Roosevelt Street, Springfield, MA

Location	Substrate	Color	Component	Result mg/cm²
Kindred Company				
	Sheetrock	Yellow	Walls	<0.1
	Metal	White	Door frames	<0.1
	Sheetrock	Yellow	Walls	<0.1
Vacant Space				
Throughout	Sheetrock	Yellow	Walls	<0.1
	Metal	Gray	Door frames	<0.1
	Wood	Gray	Door	<0.1
	Wood	Gray	Window sill	<0.1
	Metal	Gray	Corrugated deck	<0.1
	Metal	Red	Joists	<0.1
	Metal	Red	Structural beam	<0.1
	Metal	Black	Joists	<0.1
	Ceramic	White	Bathroom wall (north)	0.2
	Metal	Gray/beige	Bathroom stalls	<0.1
	Metal	Brown	Door frames	<0.1
	Cinderblock	Yellow/white	Wall	<0.1
	Metal	Maroon	Door	<0.1
	Plaster	White	Upper wall	<0.1
Women's room south	Ceramic	Yellow	Wall	3.3
	Cinderblock	White	Wall	<0.1
Men's room	Ceramic	Yellow	Wall	4.9
	Cinderblock	White	Wall	<0.1
	Metal	Brown	Door	<0.1
Future Health				
	Cinderblock	White	Wall	<0.1
	Metal	Red	Structural beam	<0.1
	Sheetrock	Yellow/white/ brown	Walls	<0.1
	Metal	Gray	Door frames	<0.1

Results of Testing for Lead Based Paint 2071 Roosevelt Street, Springfield, MA				
Location	Substrate	Color	Component	Result mg/cm ²
Exterior				
	Transite	White/brown	Ceiling	<0.1
	Wood	Brown	Entrance overhang siding	<0.1
	Metal	Brown	Door frame	<0.1
	Metal	Yellow	Safety pole	<0.1
	Concrete	Gray	Entry walkway	<0.1

Note: All testing was conducted using a NITON XLS-303A. Limit of detection = 0.1 mg/cm².

APPENDIX C

PCB Laboratory Analytical Results



New England Testing Laboratory, Inc.
(401) 353-3420

REPORT OF ANALYTICAL RESULTS

NETLAB Work Order Number: 9J23002
Client Project: 19416 - 2071 Roosevelt St, Springfield, MA

Report Date: 04-November-2019

Prepared for:

Ted Sherry
Smith & Wessel Associates
8808 17th Avenue Circle NW
Bradenton, FL 34209

Richard Warila, Laboratory Director
New England Testing Laboratory, Inc.
59 Greenhill Street
West Warwick, RI 02893
rich.warila@newenglandtesting.com

Samples Submitted :

The samples listed below were submitted to New England Testing Laboratory on 10/23/19. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provided to us by the client which are indicated on the custody record. The case number for this sample submission is 9J23002. Custody records are included in this report.

Lab ID	Sample	Matrix	Date Sampled	Date Received
9J23002-01	01	Solid (Misc)	10/22/2019	10/23/2019
9J23002-02	02	Solid (Misc)	10/22/2019	10/23/2019
9J23002-03	03	Solid (Misc)	10/22/2019	10/23/2019
9J23002-04	04	Solid (Misc)	10/22/2019	10/23/2019
9J23002-05	05	Solid (Misc)	10/22/2019	10/23/2019
9J23002-06	06	Solid (Misc)	10/22/2019	10/23/2019

Request for Analysis

At the client's request, the analyses presented in the following table were performed on the samples submitted.

01 (Lab Number: 9J23002-01)

Analysis

PCBs

Method

EPA 8082A

02 (Lab Number: 9J23002-02)

Analysis

PCBs

Method

EPA 8082A

03 (Lab Number: 9J23002-03)

Analysis

PCBs

Method

EPA 8082A

04 (Lab Number: 9J23002-04)

Analysis

PCBs

Method

EPA 8082A

05 (Lab Number: 9J23002-05)

Analysis

PCBs

Method

EPA 8082A

06 (Lab Number: 9J23002-06)

Analysis

PCBs

Method

EPA 8082A

Method References

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, USEPA

Case Narrative

Sample Receipt:

The samples associated with this work order were received in appropriately cooled and preserved containers. The chain of custody was adequately completed and corresponded to the samples submitted.

Exceptions: None

Analysis:

All samples were prepared and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control requirements and allowances. Samples were extracted via EPA 3540C - Soxhlet.

PCB: The samples 23002-01 "Gray exterior window caulking; Front at 2073 Roosevelt" and 23002-05 "Gray expansion joint caulking; North exterior at 2095 Roosevelt" were reported with surrogates outside method parameters due to matrix interference.

Results: Polychlorinated Biphenyls (PCBs)

Sample: 01

Lab Number: 9J23002-01 (Non-soil solid, as received basis)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Aroclor-1016	ND		163	ug/kg	10/29/19	11/01/19
Aroclor-1221	ND		163	ug/kg	10/29/19	11/01/19
Aroclor-1232	ND		163	ug/kg	10/29/19	11/01/19
Aroclor-1242	ND		163	ug/kg	10/29/19	11/01/19
Aroclor-1248	ND		163	ug/kg	10/29/19	11/01/19
Aroclor-1254	ND		163	ug/kg	10/29/19	11/01/19
Aroclor-1260	ND		163	ug/kg	10/29/19	11/01/19
Aroclor-1262	ND		163	ug/kg	10/29/19	11/01/19
Aroclor-1268	ND		163	ug/kg	10/29/19	11/01/19
PCBs (Total)	ND		163	ug/kg	10/29/19	11/01/19

Surrogate(s)	Recovery%	Limits	Date Prepared	Date Analyzed
<i>2,4,5,6-Tetrachloro-m-xylene (TCMX)</i>	4.78%	30-100	10/29/19	11/01/19
<i>Decachlorobiphenyl (DCBP)</i>	20.3%	30-105	10/29/19	11/01/19

Results: Polychlorinated Biphenyls (PCBs)

Sample: 02

Lab Number: 9J23002-02 (Non-soil solid, as received basis)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Aroclor-1016	ND		165	ug/kg	10/29/19	11/01/19
Aroclor-1221	ND		165	ug/kg	10/29/19	11/01/19
Aroclor-1232	ND		165	ug/kg	10/29/19	11/01/19
Aroclor-1242	ND		165	ug/kg	10/29/19	11/01/19
Aroclor-1248	ND		165	ug/kg	10/29/19	11/01/19
Aroclor-1254	249		165	ug/kg	10/29/19	11/01/19
Aroclor-1260	ND		165	ug/kg	10/29/19	11/01/19
Aroclor-1262	ND		165	ug/kg	10/29/19	11/01/19
Aroclor-1268	ND		165	ug/kg	10/29/19	11/01/19
PCBs (Total)	249		165	ug/kg	10/29/19	11/01/19

Surrogate(s)	Recovery%	Limits	Date Prepared	Date Analyzed
<i>2,4,5,6-Tetrachloro-m-xylene (TCMX)</i>	50.4%	30-100	10/29/19	11/01/19
<i>Decachlorobiphenyl (DCBP)</i>	56.4%	30-105	10/29/19	11/01/19

Results: Polychlorinated Biphenyls (PCBs)**Sample: 03****Lab Number: 9J23002-03 (Non-soil solid, as received basis)**

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Aroclor-1016	ND		187	ug/kg	10/29/19	11/01/19
Aroclor-1221	ND		187	ug/kg	10/29/19	11/01/19
Aroclor-1232	ND		187	ug/kg	10/29/19	11/01/19
Aroclor-1242	ND		187	ug/kg	10/29/19	11/01/19
Aroclor-1248	ND		187	ug/kg	10/29/19	11/01/19
Aroclor-1254	ND		187	ug/kg	10/29/19	11/01/19
Aroclor-1260	ND		187	ug/kg	10/29/19	11/01/19
Aroclor-1262	ND		187	ug/kg	10/29/19	11/01/19
Aroclor-1268	ND		187	ug/kg	10/29/19	11/01/19
PCBs (Total)	ND		187	ug/kg	10/29/19	11/01/19

Surrogate(s)	Recovery%	Limits	Date Prepared	Date Analyzed
<i>2,4,5,6-Tetrachloro-m-xylene (TCMX)</i>	55.8%	30-100	10/29/19	11/01/19
<i>Decachlorobiphenyl (DCBP)</i>	65.1%	30-105	10/29/19	11/01/19

Results: Polychlorinated Biphenyls (PCBs)

Sample: 04

Lab Number: 9J23002-04 (Non-soil solid, as received basis)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Aroclor-1016	ND		172	ug/kg	10/29/19	11/01/19
Aroclor-1221	ND		172	ug/kg	10/29/19	11/01/19
Aroclor-1232	ND		172	ug/kg	10/29/19	11/01/19
Aroclor-1242	ND		172	ug/kg	10/29/19	11/01/19
Aroclor-1248	ND		172	ug/kg	10/29/19	11/01/19
Aroclor-1254	421		172	ug/kg	10/29/19	11/01/19
Aroclor-1260	ND		172	ug/kg	10/29/19	11/01/19
Aroclor-1262	ND		172	ug/kg	10/29/19	11/01/19
Aroclor-1268	ND		172	ug/kg	10/29/19	11/01/19
PCBs (Total)	421		172	ug/kg	10/29/19	11/01/19

Surrogate(s)	Recovery%	Limits	Date Prepared	Date Analyzed
<i>2,4,5,6-Tetrachloro-m-xylene (TCMX)</i>	46.6%	30-100	10/29/19	11/01/19
<i>Decachlorobiphenyl (DCBP)</i>	56.1%	30-105	10/29/19	11/01/19

Results: Polychlorinated Biphenyls (PCBs)**Sample: 05****Lab Number: 9J23002-05 (Non-soil solid, as received basis)**

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Aroclor-1016	ND		175	ug/kg	10/29/19	11/01/19
Aroclor-1221	ND		175	ug/kg	10/29/19	11/01/19
Aroclor-1232	ND		175	ug/kg	10/29/19	11/01/19
Aroclor-1242	ND		175	ug/kg	10/29/19	11/01/19
Aroclor-1248	ND		175	ug/kg	10/29/19	11/01/19
Aroclor-1254	ND		175	ug/kg	10/29/19	11/01/19
Aroclor-1260	ND		175	ug/kg	10/29/19	11/01/19
Aroclor-1262	ND		175	ug/kg	10/29/19	11/01/19
Aroclor-1268	ND		175	ug/kg	10/29/19	11/01/19
PCBs (Total)	ND		175	ug/kg	10/29/19	11/01/19

Surrogate(s)	Recovery%	Limits	Date Prepared	Date Analyzed
<i>2,4,5,6-Tetrachloro-m-xylene (TCMX)</i>	33.7%	30-100	10/29/19	11/01/19
<i>Decachlorobiphenyl (DCBP)</i>	46.2%	30-105	10/29/19	11/01/19

Results: Polychlorinated Biphenyls (PCBs)

Sample: 06

Lab Number: 9J23002-06 (Non-soil solid, as received basis)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Aroclor-1016	ND		179	ug/kg	10/29/19	11/01/19
Aroclor-1221	ND		179	ug/kg	10/29/19	11/01/19
Aroclor-1232	ND		179	ug/kg	10/29/19	11/01/19
Aroclor-1242	ND		179	ug/kg	10/29/19	11/01/19
Aroclor-1248	ND		179	ug/kg	10/29/19	11/01/19
Aroclor-1254	ND		179	ug/kg	10/29/19	11/01/19
Aroclor-1260	ND		179	ug/kg	10/29/19	11/01/19
Aroclor-1262	ND		179	ug/kg	10/29/19	11/01/19
Aroclor-1268	ND		179	ug/kg	10/29/19	11/01/19
PCBs (Total)	ND		179	ug/kg	10/29/19	11/01/19

Surrogate(s)	Recovery%	Limits	Date Prepared	Date Analyzed
<i>2,4,5,6-Tetrachloro-m-xylene (TCMX)</i>	58.9%	30-100	10/29/19	11/01/19
<i>Decachlorobiphenyl (DCBP)</i>	71.4%	30-105	10/29/19	11/01/19

Quality Control

Polychlorinated Biphenyls (PCBs)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B9J1260 - EPA 3540C										
Blank (B9J1260-BLK1)										
					Prepared: 10/29/19 Analyzed: 11/01/19					
Aroclor-1016	ND		200	ug/kg						
Aroclor-1221	ND		200	ug/kg						
Aroclor-1232	ND		200	ug/kg						
Aroclor-1242	ND		200	ug/kg						
Aroclor-1248	ND		200	ug/kg						
Aroclor-1254	ND		200	ug/kg						
Aroclor-1260	ND		200	ug/kg						
Aroclor-1262	ND		200	ug/kg						
Aroclor-1268	ND		200	ug/kg						
PCBs (Total)	ND		200	ug/kg						
<i>Surrogate: 2,4,5,6-Tetrachloro-m-xylene (TCMX)</i>			52.2	ug/kg	80.0		65.3	30-100		
<i>Surrogate: Decachlorobiphenyl (DCBP)</i>			59.0	ug/kg	80.0		73.7	30-105		
LCS (B9J1260-BS1)										
					Prepared: 10/29/19 Analyzed: 11/01/19					
Aroclor-1016	774		200	ug/kg	1000		77.4	64-112		
Aroclor-1260	820		200	ug/kg	1000		82.0	59.4-124		
<i>Surrogate: 2,4,5,6-Tetrachloro-m-xylene (TCMX)</i>			55.1	ug/kg	80.0		68.8	30-100		
<i>Surrogate: Decachlorobiphenyl (DCBP)</i>			63.8	ug/kg	80.0		79.8	30-105		
LCS Dup (B9J1260-BSD1)										
					Prepared: 10/29/19 Analyzed: 11/01/19					
Aroclor-1016	786		200	ug/kg	1000		78.6	64-112	1.58	20
Aroclor-1260	806		200	ug/kg	1000		80.6	59.4-124	1.72	20
<i>Surrogate: 2,4,5,6-Tetrachloro-m-xylene (TCMX)</i>			57.8	ug/kg	80.0		72.2	30-100		
<i>Surrogate: Decachlorobiphenyl (DCBP)</i>			60.4	ug/kg	80.0		75.4	30-105		

Notes and Definitions

Item	Definition
Wet	Sample results reported on a wet weight basis.
ND	Analyte NOT DETECTED at or above the reporting limit.

MassDEP Analytical Protocol Certification Form

Laboratory Name: New England Testing Laboratory, Inc.

Project #: 19416

Project Location: Springfield, MA

RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
9J23002

Matrices: Groundwater/Surface Water Soil/Sediment Drinking Water Air Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A <input type="checkbox"/>	7470/7471 Hg CAM III B <input type="checkbox"/>	MassDEP VPH (GC/PID/FID) CAM IV A <input type="checkbox"/>	8082 PCB CAM V A <input checked="" type="checkbox"/>	9014 Total Cyanide/PAC CAM VI A <input type="checkbox"/>	6860 Perchlorate CAM VIII B <input type="checkbox"/>
8270 SVOC CAM II B <input type="checkbox"/>	7010 Metals CAM III C <input type="checkbox"/>	MassDEP VPH (GC/MS) CAM IV C <input type="checkbox"/>	8081 Pesticides CAM V B <input type="checkbox"/>	7196 Hex Cr CAM VI B <input type="checkbox"/>	MassDEP APH CAM IX A <input type="checkbox"/>
6010 Metals CAM III A <input type="checkbox"/>	6020 Metals CAM III D <input type="checkbox"/>	MassDEP EPH CAM IV B <input type="checkbox"/>	8151 Herbicides CAM V C <input type="checkbox"/>	8330 Explosives CAM VIII A <input type="checkbox"/>	TO-15 VOC CAM IX B <input type="checkbox"/>

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
E	VPH, EPH, APH, and TO-15 only a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
----------	---	--

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹

¹All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.

Signature: 

Position: Laboratory Director

Printed Name: Richard Warila

Date: 11/4/2019

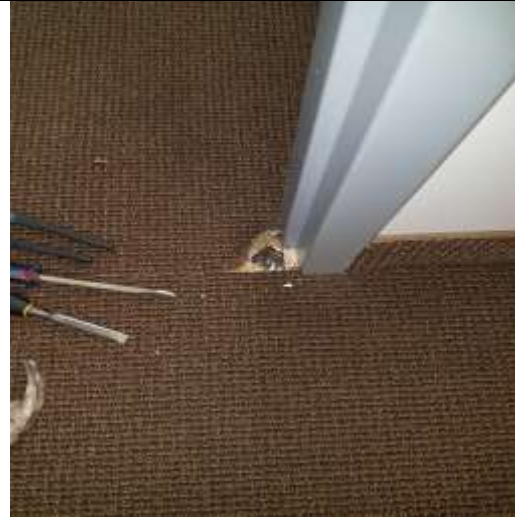
APPENDIX D

Site Photographs

2071 Roosevelt Street – Springfield, MA



Newer floor tile in cafeteria



North office area floor tile beneath carpet



Asbestos pipe fittings in cafeteria plenum



Janitor closet 2071, asbestos floor tile/mastic



Janitor closet 2071, asbestos pipe fittings



Asbestos ceiling panels at rear entrance

2071 Roosevelt Street – Springfield, MA



Wall expansion, not asbestos



Tar mop on duct, asbestos



Skylights



Exhaust seam



View of roof



View of roof

2071 Roosevelt Street – Springfield, MA

	
<p>S/E mechanical room, asbestos fitting</p>	<p>Asbestos fitting in vacant cafeteria plenum</p>
	
<p>Kindred space</p>	<p>Kindred plenum, fittings & JC, asbestos</p>
	
<p>Kindred plenum, tan JC, asbestos</p>	<p>Kindred cafeteria</p>

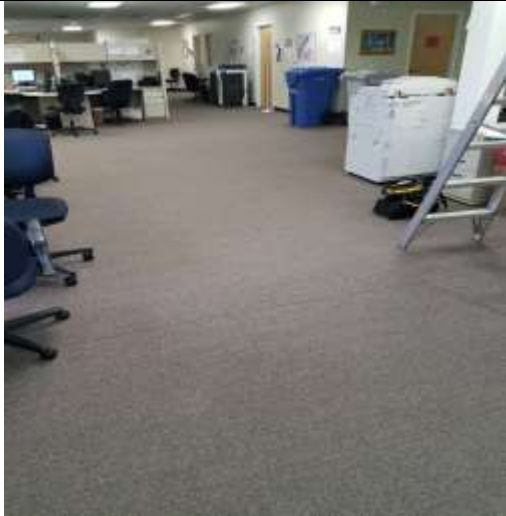
2071 Roosevelt Street – Springfield, MA



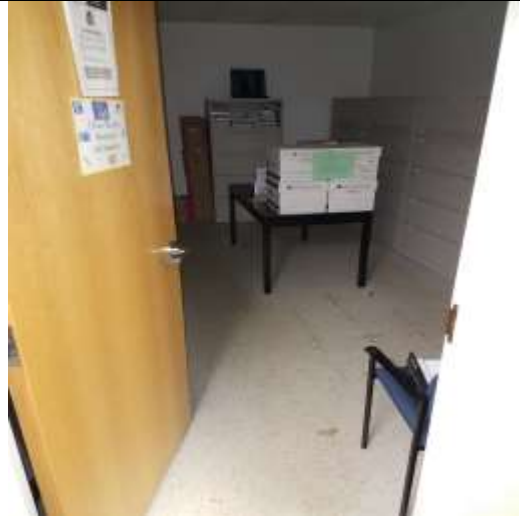
Kindred space, asbestos fitting



Kindred floor tile/mastic under carpet, asbestos



Kindred open carpeted area



Kindred rear room with double layer floor tile



Kindred rear hall with double layer floor tile



Kindred rear room with double layer floor tile

2071 Roosevelt Street – Springfield, MA



Vacant space glue streaks, not asbestos



Vacant space glue streaks, not asbestos



S/E vacant space with asbestos JC



Lead paint glaze in bathroom ceramic wall



Asbestos mud on drain hanger



Newer gypsum and JC in vacant section

2071 Roosevelt Street – Springfield, MA



Red seam on exhaust, not asbestos



Plaster at east overhang area, not asbestos



S/E vacant section outer wall, asbestos JC



S/E vacant section new floor tile



Double layer gypsum/JC in S/E kick out hall



New gypsum double layer

2071 Roosevelt Street – Springfield, MA



Red insulation sealer glue, not asbestos



Vacant space cubical area



New gypsum board in plenum



Old gypsum, tan JC and original wall stud

APPENDIX B
2020 Asbestos Abatement
Project Monitoring Report

**AIR MONITORING AND RELATED SAFETY AND HEALTH
PROCEDURES DURING ASBESTOS ABATEMENT PROJECT**

**Springfield Prep Charter School
2071 Roosevelt Avenue
Springfield, MA**



Prepared for:

Mr. William Spierer
Springfield Prep Charter School
594 Converse Street
Longmeadow, Massachusetts 01106

Prepared by:

Smith & Wessel Associates, Inc.
188 Greenville Street
Spencer, Massachusetts 01562

Project No. 20299

October 13, 2020

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4. HEALTH AND SAFETY PROCEDURES.....	3
5. DISCUSSION	4

- Appendix A: PCM Air Sample Results
- Appendix B: TEM Analytical Results
- Appendix C: Daily Construction Reports

1. SUMMARY

Springfield Prep Charter School retained Smith & Wessel Associates, Inc. (SWA) to monitor an asbestos abatement project at a vacant office building located at 2071 Roosevelt Avenue in Springfield, Massachusetts. This report presents the results of SWA's pre- and post abatement visual inspections, area air sampling during abatement activities and post-abatement visual inspections and air testing conducted between September 4 and September 22, 2020.

SWA's oversight included pre-abatement preparation inspections, area air monitoring during abatement activities, post abatement visual inspections and air testing in the contained work areas. One of SWA's Massachusetts licensed Project Monitors was on-site full-time during the abatement. American Environmental, Inc. (American) of Holyoke, Massachusetts, is the Massachusetts licensed Abatement Contractor who performed the work in accordance with all applicable federal, state, and local regulations.

The analytical results of SWA's post-abatement air monitoring indicate fiber concentrations were below the Massachusetts Department of Labor Standards (MA DLS) post-abatement criteria of 0.010 fibers or less per cubic centimeter of air in the work area. Because multiple rooms were abated within the larger containment located at south side of building, post-abatement air testing was conducted via transmission electron microscopy (TEM). The average of 5 TEM air samples collected and analyzed via a qualified laboratory met the criteria of 70 asbestos structures or less per square millimeter (s/mm^2) in a work area. Therefore all containments were ultimately dismantled and areas made available to other trades.

Copies of all air sampling analytical data and construction reports are included as appendices to this report.

2. ABATEMENT SCOPE OF WORK

The asbestos abatement scope of work at the site included the following:

List of ACM Abated			
Type of Material	Location	Quantity	Sample number
White/gray mudded pipe fittings	Observed in vacant area cafeteria, bathrooms, south hall, south custodial closet, N/E training room, Future Health Suite	80 ea.	02A

List of ACM Abated			
Type of Material	Location	Quantity	Sample number
Tan/beige joint compound associated with original gypsum board (See note 1)	Observed in vacant N/E kick out section, adjoining hall (N/E) from bathroom area to exit, S/E corner mechanical room and Future Health Suite	12,000 sf <i>(estimate)</i>	18A, 24A, 31A, 40A
White w/gray streaks 12" x 12" floor tile and associated mastic adhesive	South custodial closet between the bathrooms	30 sf	20A, 21A
Gray ceiling panels <i>(painted white)</i>	Throughout exterior overhang entrances	2,325 sf	23A
Black duct tar coating	Roof <i>(see photo)</i>	40 sf	29A
White 12" x 12" floor tile (<i>2nd layer</i>) and associated mastic adhesive (<i>beneath newer floor tile</i>) (<i>treat both layers as asbestos because they cannot be separated</i>)	Rear hall and adjoining rooms, rear rooms at carpeted open area and cafeteria outside Kindred Company	1,420 sf	32A, 33A
White 12" x 12" floor tile and associated mastic adhesive (<i>beneath carpet</i>)	Assumed to be present in the Future Health Suite	1,500 sf	Assumed
Vermiculite insulation from within wall cavity	Northeast side of building	130 sf	Assumed

3. SAMPLING AND ANALYTICAL METHODS

SWA's Massachusetts certified Asbestos Project Monitor, Richard Bourassa, was on site full-time throughout the abatement project. He performed quality control inspections and collected air samples during abatement activities. Inspection of work area preparations was performed to determine that appropriate engineering controls were in place and functioning.

Post-abatement air samples for the large work area on south side of building were collected via Transmission Electron Microscopy (TEM) as the large number of rooms in the containment was not conducive to clearing the area via phase contrast microscopy (PCM). TEM analysis requires all five interior samples on average to be 70 asbestos structures per square millimeter or less.

PCM air samples were collected onto mixed cellulose ester filters (0.8-micron pore size) and analyzed on site by SWA. TEM air samples were collected onto (0.45-micron pore size) in three-piece 25-millimeter cassettes aligned open-faced. The cassettes were tilted downward at a 45° angle and placed between three and four feet above the floor. Air was drawn through the cassettes using high-volume sampling pumps. Immediately before and after the sampling periods, the sampling flow rates were calibrated using a precision

rotameter.

Area and post-abatement air samples were analyzed on-site via PCM in accordance with National Institute of Occupational Safety and Health (NIOSH) 7400 Method, A-counting rules. The Project Monitors utilized an Olympus CH-2 optical microscope at 400x magnification for analyzing the samples. The PCM method determines the total concentration of all fibers (not exclusively asbestos) that exhibit a length to width ratio of greater than three and are at least five microns in length. The PCM air sample results were compared to the standard of 0.010 fibers or less per cubic centimeter (f/cc) of air as established by the Massachusetts Department of Labor Standards (MA DLS) following abatement activities. PCM analytical results are included as Appendix A of this report.

Samples requiring TEM analysis were delivered via proper chain-of-custody to EMSL Analytical, Inc. (EMSL) of Woburn, Massachusetts. EMSL, a fully accredited asbestos analytical laboratory, analyzed the samples by TEM in accordance with the method described in Appendix A of 40 CFR Part 763. The five interior TEM air samples must on average be below 70 s/mm² or less, to meet post-abatement requirements following abatement activities. The TEM analytical results are presented as Appendix B.

4. HEALTH AND SAFETY PROCEDURES

American prepared all interior removal work areas by covering all critical barriers, unaffected walls, ceilings and unaffected flooring with a double layer of 6-mil polyethylene sheeting adhered with duct tape. A three-stage decontamination facility was constructed contiguous to the work area(s) and was used as the only means of entrance and egress. Negative pressure was established in the work area(s) relative to adjacent spaces using High Efficiency Particulate Air (HEPA) filter equipped air filtration devices (AFDs). During abatement activities, access to the work areas was limited to authorized personnel only, who entered the containment area utilizing appropriate personal protective equipment (PPE) and, before exiting, followed the required decontamination procedure.

Removal of floor tile and mastic adhesive was performed using wet methods via hand held scrapers, chemical mastic remover and hand-held grinders. Removal of sheetrock with asbestos joint compound was removed using wet methods while carefully removing wall sections as intact as practical; complete cleaning of the abatement area was conducted. This included scrubbing abated surfaces with brushes or abrasive pads, wet washing all substrates and other surfaces, and wet vacuuming accumulated debris and contaminated water. All waste was packaged into properly labeled waste drums lined with 6-mil polyethylene waste disposal bags for transport to an approved landfill.

For the exterior cement panels at entrance overhangs, American fully enclosed the work areas and established negative pressure within the containment as well as constructing three chambered personal decontamination facilities for entrance and egress.

Upon completion of all asbestos removal and fine cleaning in the containment areas, American applied lock-down encapsulant using an airless sprayer. After a sufficient drying period, SWA's Project Monitor then performed a mandatory visual inspection to determine for any remaining suspect debris prior to performing post-abatement air clearance sampling. Dismantling of containment systems was not initiated until the results of successful air sampling were obtained.

5. DISCUSSION

SWA's Project Monitor provided over-sight of the abatement project on a full-time basis to monitor quality control and compliance with applicable state and federal regulations.

All PCM air samples collected were determined to be below the MA DLS clearance criteria of 0.010 fibers/cc following abatement or 70 s/cc or below as analyzed via TEM.

Because successful inspection and air monitoring results were obtained, all work areas were cleared for occupation by all personnel. The project should not be considered complete; however, until American provides all waste shipment records (WSR), documenting the proper disposal of all generated asbestos waste to the owner.

Because the building will become an operating school, it will be necessary to prepare asbestos Management Plans in accordance with the requirements of the US EPA AHERA Title 40 CFR Part 763 regulations.

All daily construction logs are attached as Appendix C.

APPENDIX A

PCM Air Sample Results

Air Monitoring Results for Total Fiber Concentration (PCM)
 2071 Roosevelt Street
 Springfield, Massachusetts

Sample No.	Date	Sampling Period	Volume (liters)	Description/Location	Result (fibers/cc)
1.	9/04/20	8:44 a.m. to 12:00 p.m.	1372	B-northwest portion of proposed containment during prep	0.004
2.	9/04/20	8:55 a.m. to 12:05 p.m.	1330	B-southeast portion of proposed containment during prep	0.01
3.	9/04/20	N/A	N/A	Field Blank	0 fiber/100 fields
4.	9/04/20	N/A	N/A	Field Blank	0 fiber/100 fields
5.	9/04/20	10:11 a.m. to 1:52 p.m.	1547	A-attached to decon during prep and clean demo	Overloaded from clean demo
6.	9/04/20	10:15 a.m. to 1:53 p.m.	1526	A-side corridor from rear side entrance on occupied side near critical barrier during prep and clean demo	0.003
7.	9/04/20	10:20 a.m. to 1:54 p.m.	1498	A-occupied space restroom corridor at critical barrier during prep and clean demo	<0.003
8.	9/04/20	N/A	N/A	Field Blank	0 fiber/100 fields
9.	9/04/20	N/A	N/A	Field Blank	0 fiber/100 fields
10.	9/10/20	6:05 a.m. to 9:30 a.m.	1435	A-attached to decon during abatement and clean demo	Overloaded clean demo debris
11.	9/10/20	6:12 a.m. to 9:32 a.m.	1400	A-side corridor from rear side entrance on occupied side near critical barriers	<0.004
12.	9/10/20	8:12 a.m. to 10:15 a.m.	1230	A-occupied space restroom corridor at critical barrier	0.004
13.	9/10/20	9:30 a.m. to 1:30 a.m.	1680	A-attached to decon during abatement and clean demo	Overloaded clean demo debris
14.	9/10/20	9:32 a.m. to 1:32 p.m.	1680	A-side corridor from rear side entrance on occupied side near critical barriers	<0.003

Air Monitoring Results for Total Fiber Concentration (PCM)
 2071 Roosevelt Street
 Springfield, Massachusetts

Sample No.	Date	Sampling Period	Volume (liters)	Description/Location	Result (fibers/cc)
15.	9/10/20	10:15 a.m. to 1:33 p.m.	1584	A-occupied space restroom corridor at critical barrier	<0.003
16.	9/10/20	N/A	N/A	Field Blank	0 fiber/100 fields
17.	9/10/20	N/A	N/A	Field Blank	0 fiber/100 fields
18.	9/11/20	6:08 a.m. to 9:45 a.m.	1519	A-attached to decon	0.004
19.	9/11/20	8:11 a.m. to 10:42 a.m.	1208	A-occupied space restroom corridor at critical barrier	0.004
20.	9/11/20	8:12 a.m. to 10:43 a.m.	1208	A-side corridor from rear side entrance near critical barrier	<0.004
21.	9/11/20	9:45 a.m. to 1:23 p.m.	1526	A-attached to decon	0.006
22.	9/11/20	10:42 a.m. to 1:25 p.m.	1304	A-occupied space restroom corridor at critical barrier	0.004
23.	9/11/20	10:43 a.m. to 1:26 p.m.	1304	A-side corridor from rear side entrance near critical barrier	<0.004
24.	9/11/20	N/A	N/A	Field Blank	0 fiber/100 fields
25.	9/11/20	N/A	N/A	Field Blank	0 fiber/100 fields
26.	9/14/20	6:08 a.m. to 9:45 a.m.	1519	A-attached to decon	Overloaded clean demo nearby
27.	9/14/20	8:17 a.m. to 10:52 a.m.	1240	A-occupied space restroom corridor at critical barrier	<0.004
28.	9/14/20	8:18 a.m. to 10:53 a.m.	1240	A-side corridor from rear side entrance near critical barrier	<0.004

Air Monitoring Results for Total Fiber Concentration (PCM)
 2071 Roosevelt Street
 Springfield, Massachusetts

Sample No.	Date	Sampling Period	Volume (liters)	Description/Location	Result (fibers/cc)
29.	9/14/20	9:45 a.m. to 1:20 p.m.	1505	A-attached to decon	0.004
30.	9/14/20	10:52 a.m. to 1:23 p.m.	1208	A-occupied space restroom corridor at critical barrier	Overloaded from gasoline engine
31.	9/14/20	10:53 a.m. to 1:24 p.m.	1208	A-side corridor from rear side entrance near critical barrier	<0.004
32.	9/14/20	N/A	N/A	Field Blank	0 fiber/100 fields
33.	9/14/20	N/A	N/A	Field Blank	0 fiber/100 fields
34.	9/15/20	6:06 a.m. to 9:41 a.m.	1505	A-attached to decon	0.004
35.	9/15/20	8:21 a.m. to 10:51 a.m.	1200	A-occupied space restroom corridor at critical barrier	<0.004
36.	9/15/20	8:22 a.m. to 10:52 a.m.	1200	A-side corridor from rear side entrance near critical barrier	0.006
37.	9/15/20	9:41 a.m. to 1:22 p.m.	1547	A-attached to demo	Overloaded clean demo nearby gas engine exhaust indoors
38.	9/15/20	10:51 a.m. to 1:27 p.m.	1248	A-occupied space restroom corridor at critical barrier	0.005
39.	9/15/20	10:52 a.m. to 1:28 p.m.	1248	A-side corridor from rear side entrance near critical barrier	0.004
40.	9/15/20	N/A	N/A	Field Blank	0 fiber/100 fields
41.	9/15/20	N/A	N/A	Field Blank	0 fiber/100 fields

Air Monitoring Results for Total Fiber Concentration (PCM)
 2071 Roosevelt Street
 Springfield, Massachusetts

Sample No.	Date	Sampling Period	Volume (liters)	Description/Location	Result (fibers/cc)
42.	9/16/20	6:16 a.m. to 9:44 a.m.	1456	A-attached to decon	Overloaded with clean demo and internal combustion engine emissions
43.	9/16/20	8:14 a.m. to 10:48 a.m.	1232	A-occupied space restroom corridor at critical barrier	<0.004
44.	9/16/20	8:15 a.m. to 10:49 a.m.	1232	A-side corridor from rear side entrance near critical barrier	<0.004
45.	9/16/20	9:44 a.m. to 1:22 p.m.	1526	A-attached to decon	Overloaded with clean demo and internal combustion engine emissions
46.	9/16/20	10:48 a.m. to 1:25 p.m.	1256	A-occupied space restroom corridor at critical barrier	0.004
47.	9/16/20	10:49 a.m. to 1:26 p.m.	1256	A-occupied space restroom corridor at critical barrier	0.005
48.	9/16/20	N/A	N/A	Field Blank	0 fiber/100 fields
49.	9/16/20	N/A	N/A	Field Blank	0 fiber/100 fields
50.	9/17/20	6:10 a.m. to 9:40 a.m.	1470	A-attached to decon-large south containment	Overloaded clean demo engine exhaust welding
51.	9/17/20	8:09 a.m. to 10:44 a.m.	1240	A-occupied space restroom corridor at critical barrier	<0.004
52.	9/17/20	8:10 a.m. to 10:45 a.m.	1240	A-side corridor from rear side entrance near critical barrier	0.005

Air Monitoring Results for Total Fiber Concentration (PCM)
 2071 Roosevelt Street
 Springfield, Massachusetts

Sample No.	Date	Sampling Period	Volume (liters)	Description/Location	Result (fibers/cc)
53.	9/17/20	9:40 a.m. to 1:17 p.m.	1519	A-attached to decon-large south containment	Overloaded clean demo engine exhaust welding
54.	9/17/20	10:44 a.m. to 1:19 p.m.	1240	A-occupied space restroom corridor at critical barrier during final clean	<0.004
55.	9/17/20	10:45 a.m. to 1:20 p.m.	1240	A-side corridor from rear side entrance near critical barrier during final clean	<0.004
56.	9/17/20	N/A	N/A	Field Blank	0 fiber/100 fields
57.	9/17/20	N/A	N/A	Field Blank	0 fiber/100 fields
58.	9/17/20	11:52 a.m. to 1:37 p.m.	1470	Area/air clearance glove bags north end of building	0.004
59.	9/17/20	11:52 a.m. to 1:37 p.m.	1470	Area/air clearance glove bags north end of building	0.004
60.	9/18/20	6:04 a.m. to 10:00 a.m.	1652	A-attached to decon south containment during final clean	Overloaded clean demo engine emissions
61.	9/18/20	6:17 a.m. to 7:47 a.m.	1260	FC-northeast section of building vermiculite containment inside work area	0.005
62.	9/18/20	6:17 a.m. to 7:47 a.m.	1260	FC-northeast section of building vermiculite containment inside work area	0.006
63.	9/18/20	8:15 a.m. to 10:36 a.m.	1128	A-occupied space restroom corridor at critical barrier	0.004
64.	9/18/20	8:16 a.m. to 10:38 a.m.	1128	A-side corridor from rear side entrance near critical barrier	<0.004
65.	9/18/20	12:04 p.m. to 1:26 p.m.	1230	FC-northwest entrance grey ceiling panel containment inside work area	<0.004

Air Monitoring Results for Total Fiber Concentration (PCM)

2071 Roosevelt Street

Springfield, Massachusetts

Sample No.	Date	Sampling Period	Volume (liters)	Description/Location	Result (fibers/cc)
66.	9/18/20	12:04 p.m. to 1:26 p.m.	1230	FC-northwest entrance grey ceiling panel containment inside work area	<0.004
67.	9/18/20	N/A	N/A	Field Blank	0 fiber/100 fields
68.	9/18/20	N/A	N/A	Field Blank	0 fiber/100 fields
69.	9/21/20	6:57 a.m. to 10:39 a.m.	1554	A-west entrance inside at critical barrier during prep-removal and cleaning	0.005
70.	9/21/20	6:59 a.m. to 10:55 a.m.	1652	A-east entrance inside at critical barrier during prep-removal and cleaning	0.004
71.	9/21/20	10:35 a.m. to 11:57 a.m.	1230	FC-west side of building west entrance inside work area, ceiling panels	<0.004
72.	9/21/20	10:35 a.m. to 11:57 a.m.	1230	FC-west entrance inside work area, grey ceiling panels	<0.004
73.	9/21/20	12:15 p.m. to 1:37 p.m.	1230	FC-east entrance inside work area, grey ceiling panels	<0.004
74.	9/21/20	12:15 p.m. to 1:37 p.m.	1230	FC-east entrance inside work area, grey ceiling panels	<0.004
75.	9/21/20	N/A	N/A	Field Blank	0 fiber/100 fields
76.	9/21/20	N/A	N/A	Field Blank	0 fiber/100 fields
77.	9/22/20	9:00 a.m. to 12:13 p.m.	1351	A-inside kindred conference room during prep removal of exterior ceiling panels	<0.004
78.	9/22/20	12:50 p.m. to 2:12 p.m.	1230	FC-southwest entrance grey ceiling tile inside work area	<0.004
79.	9/22/20	12:50 p.m. to 2:12 p.m.	1230	FC-southwest entrance grey ceiling tile inside work area	<0.004
80.	9/22/20	N/A	N/A	Field Blank	0 fiber/100 fields

Air Monitoring Results for Total Fiber Concentration (PCM) 2071 Roosevelt Street Springfield, Massachusetts					
Sample No.	Date	Sampling Period	Volume (liters)	Description/Location	Result (fibers/cc)
81.	9/22/20	N/A	N/A	Field Blank	0 fiber/100 fields

Note: All samples were analyzed according to NIOSH 7400 Method. MA Lab ID: AA000161. Analyst: Richard Bourassa.

APPENDIX B

Transmission Electron Microscopy (TEM) Analytical Results



EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com> / bostonlab@emsl.com

EMSL Order: 132006597
Customer ID: SMIT50B
Customer PO:
Project ID:

Attention: Richard Bourassa Smith & Wessel Associates, Inc. 188 Greenville Street Spencer, MA 01562 Project: 20299/ 2071 Roosevelt Street; Springfield, MA	Phone: (978) 346-4800 Fax: (978) 346-7265 Received Date: 09/22/2020 10:05 AM Analysis Date: 09/22/2020 Collected Date: 09/21/2020
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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		Analytical Sensitivity (S/cc)	Asbestos Concentration	
						≥0.5μ < 5μ	≥5μ		(S/mm ²)	(S/cc)
92120-01	FC - South End of Building; NE Corner	1216.00	0.0640	0	None Detected	0	0	0.0049	<16.00	<0.0049
<i>132006597-0001</i>										
92120-02	FC - South End of Building; SE Corner	1216.00	0.0640	0	None Detected	0	0	0.0049	<16.00	<0.0049
<i>132006597-0002</i>										
92120-03	FC - South End of Building; Center	1216.00	0.0640	0	None Detected	0	0	0.0049	<16.00	<0.0049
<i>132006597-0003</i>										
92120-04	FC - South End of Building; NW Corner	1216.00	0.0640	0	None Detected	0	0	0.0049	<16.00	<0.0049
<i>132006597-0004</i>										
92120-05	FC - South End of Building; SW Corner	1216.00	0.0640	0	None Detected	0	0	0.0049	<16.00	<0.0049
<i>132006597-0005</i>										
92120-06	Blank	0.00			Not Analyzed					N/A
<i>132006597-0006</i>										
92120-07	Blank	0.00			Not Analyzed					N/A
<i>132006597-0007</i>										

Analyst(s)

Matthew Conley (5)

Steve Grise, 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. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-139 and VT AL998919

Initial report from: 09/22/2020 12:49 PM

APPENDIX C

Daily Construction Reports

SMITH & WESSEL ASSOCIATES, INC.

DAILY CONSTRUCTION REPORT

Project Desc. 2071 ROOSEVELT STREET Project No. 20299 Proj. Monitor RICHARD BOURASSA
 Client: QPD, LLC Contact: PATRICIA TEMPLE Date: 9/4/2020
 Contractor: AMERICAN ENVIRONMENTAL Supervisor Jamie Cardona # Workers: 6

TIME	CONSTRUCTION NOTES
7:00a	SWA and AEI on site (AEI on site at 6) Supervisor and SWA walks site
7:30a	SWA reviews Worker documentation No AEI will not be ready today to remove Asbestos - Supervisor says Tuesday (Monday is Labor Day)
8:00a	Tech notified Glenn Nelson - said having tech stay to run a couple backgrounds within the containment area
8:44a	Tech starts Background air samples
9:00a	AEI takes break
9:20a	AEI returns to clean Demo and prepping containment
11:15a	All pre abatement work continues SWA checks Background pumps - running AEI receives Blastac machine
12:00p	AEI takes lunch Break SWA collects samples will analyze on site
1:00p	AEI air samples SWA off site AEI will continue with prep and clean Demo until 2:30 NO Asbestos was impacted today

Summary of abatement work accomplished, including type and quantity of ACM abated in each work area:

SMITH & WESSEL ASSOCIATES, INC.

DAILY CONSTRUCTION REPORT

Project Desc. 2071 ROOSEVELT STREET Project No. 20299 Proj. Monitor RICHARD BOURASSA
 Client: QPD, LLC Contact: PATRICIA TEMPLE Date: 9/10/2020
 Contractor: AMERICAN ENVIRONMENTAL Supervisor: Jamie Cardona # Workers: 12

TIME	CONSTRUCTION NOTES
6:00a	SWA and AEI on site Scope - Abatement to continue on south end of building
6:05	Crew enters containment to continue abatement of walls JC + Gypsum * Area air samples started - except sample inside occupied space. They will be in at 8:00 SWA had asked GC (Fontaine) if we would have access at 6:00am and SWA was told yes we would.
6:27:00	SWA enters containment All are wearing proper PPE - water is in use but not enough considerable amount of visible emissions SWA notified communicated to foreman inside containment and the supervisor that they need to use more water - They are working on the west side taking down walls (JC + Gypsum)
8:12	Area air sample started inside occupied area Abatement continues
9:00	Break - Abatement crew continues working
9:20a	AEI returns to assigned areas
10:30a	SWA enters containment - All in proper PPE - Water is in use visible emissions have improved - removal of walls with machine and hand tools continues
12:00p	Lunch

Summary of abatement work accomplished, including type and quantity of ACM abated in each work area:

* Note - During Area Air sampling clean demo on the North side of building is in progress along with abatement inside containment on South side of building - Visible emissions are present from clean demo

SMITH & WESSEL ASSOCIATES, INC.

DAILY CONSTRUCTION REPORT

Project Desc. 2071 ROOSEVELT STREET Project No. 20299 Proj. Monitor RICHARD BOURASSA
 Client: QPD, LLC Contact: PATRICIA TEMPLE Date: 9/11/2020
 Contractor: AMERICAN ENVIRONMENTAL Supervisor Jamie Cardona # Workers: 9

TIME	CONSTRUCTION NOTES
6:00a	SWA and A/EI on site Scope - Loadout Gaylords and metal All will be washed and wiped - Gaylords will be loaded into an enclosed trailer for transport to an approved landfill for ACM - Metal will be loaded as clean metal for Scrapyard Beadblasting possible later today
6:05	Crew enters containment in proper PPE
6:08	Area air sample started at Dcor - The two samples inside the occupied space will be started after 8:00 am - Fontaine has not gotten access as promised
6:45a	Loading out Gaylords of ACM Some wall demo
8:11a	Area air samples started inside the occupied area Load out and abatement continues
9:15a	SWA enters containment - All in PPP - water in use - Yesterday Tech was misinformed or mis understood that all walls are not down Majority of them are - notified supervisor two HEPA machines were sounding an alarm and needs attention
9:30a	MADEP - Joann on site for inspection
10:00	MADEP off site - Findings 2 HEPA Hepa units
Summary of abatement work accomplished, including type and quantity of ACM abated in each work area: 38 - Gaylords of ACM loaded onto trailer	

SMITH & WESSEL ASSOCIATES, INC.

DAILY CONSTRUCTION REPORT

Project Desc. 2071 ROOSEVELT STREET Project No. 20299 Proj. Monitor RICHARD BOURASSA
 Client: QPD, LLC Contact: PATRICIA TEMPLE Date: 9/14/2020
 Contractor: AMERICAN ENVIRONMENTAL Supervisor Jamie Cardona # Workers: 8

TIME	CONSTRUCTION NOTES
6:00a	SWA and AEI on site Scope continue abatement demo - load out steel (wash and dispose as clean) - may start floors with blastac
6:08	Crew enters containment in proper PPE Area air sample running at DEON - Other 2 samples will be started at approx 8:00 when occupants arrive for for work
7:30a	AEI continues removing scrap metal from containment
8:17a	Area air samples started inside occup occupied space
8:45	Scrap metal Trailer filled and off site
9:00	Break
9:20a	AEI Return to assigned areas
9:35a	Empty trailer for Scrap metal on site
10:05	SWA entered containment All workers were in proper PPE - water is in use - Activity loading remainder of IC and associated gypsum into gaylords and loading out scrap metal after washing
10:20a	Swapping out ACM waste trailers
11:15a	Finished loading out metal - Switching to loading out Gaylords of ACM into lined trailer
12:00p	Lunch

Summary of abatement work accomplished, including type and quantity of ACM abated in each work area:

SMITH & WESSEL ASSOCIATES, INC.

DAILY CONSTRUCTION REPORT

Project Desc. 2071 ROOSEVELT STREET Project No. 20299 Proj. Monitor RICHARD BOURASSA
 Client: QPD, LLC Contact: PATRICIA TEMPLE Date: 9/15/2020
 Contractor: AMERICAN ENVIRONMENTAL Supervisor Jamie Cardona # Workers: 8

TIME	CONSTRUCTION NOTES
6:00a	SWA and A&E on site Scope - continue loading out Gaylords of ACM and begin bead blasting the floor & floor tile & mastic removal
6:06a	Area air sample running at DCAN A&E moving blastrac equipment into containment Then set up to remove load out gaylords
7:00a	Load out of Gaylords paused trailer is full A&E will concentrate on floor tile and mastic
8:21a	Area air samples started inside occupied space Work continues inside and outside Containment
8:45a	SWA entered containment - All in proper PPE A&E stripping cond conduit and electrical from ceiling and scraping residual carpet from floor and prepping Blastrac for use
9:00a	Break
9:20a	A&E crew returns to assigned areas
10:30a	A&E running Blastrac
12:00p	Lunch
1:40p	A&E crew return to assigned areas
1:00p	SWA entered containment - All in proper PPE Water was not in use will advise supervisor Continuing to scrape residual carpet and Blastrac in use for mastic removal less than 25% complete

Summary of abatement work accomplished, including type and quantity of ACM abated in each work area:
 40 - Gaylords of ACM

SMITH & WESSEL ASSOCIATES, INC.

DAILY CONSTRUCTION REPORT

Project Desc. 2071 ROOSEVELT STREET Project No. 20299 Proj. Monitor RICHARD BOURASSA
 Client: QPD, LLC Contact: PATRICIA TEMPLE Date: 9/16/2020
 Contractor: AMERICAN ENVIRONMENTAL Supervisor: Jamie Cardona # Workers: 5

TIME	CONSTRUCTION NOTES
6:00a	SWA and AEL on site
6:05	Scope - Mastic removal with Blustrac and hand-held power grinders connected to HEPA vac
6:16a	Crew enters containment to start mastic removal
6:50	Area air sample started at DCOW
8:14a	AEL uncovered a wall with Vermiculite on the Clean Demo North west east end of building - discussing full containment and how much of the wall the owner wants to lose (The disturbed wall was supposed to be left in place)
9:00a	Area air samples running inside occupied space. Mastic removal continues inside containment
10:00a	Work continues - Erecting containment for Vermiculite abatement
11:05	ACM waste trailer picked up. Quantified the wall containing Vermiculite to be approx 130 SF
	SWA entered containment - all in proper PPE. Considerable visible emissions believed to be coming from the Clean demolition side and not abatement - Negative pressure is sufficient enough to be drawing in the visible emissions from the Clean demolition where water is being used but does not control internal combustion engine emissions

Summary of abatement work accomplished, including type and quantity of ACM abated in each work area:

SMITH & WESSEL ASSOCIATES, INC.

DAILY CONSTRUCTION REPORT

Project Desc. 2071 ROOSEVELT STREET Project No. 20299 Proj. Monitor RICHARD BOURASSA
 Client: QPD, LLC Contact: PATRICIA TEMPLE Date: 9/17/2020
 Contractor: AMERICAN ENVIRONMENTAL Supervisor Jamie Cardona # Workers: 8

5-Workers inside large 2 inside Vermiculite

TIME	CONSTRUCTION NOTES
6:00a	SWA and AEL on site Scope - Mastic removal and cleaning inside South end containment - Containment in Northeast part of building with vermiculite abatement to start with demo of wall containing vermiculite and 2 & Mudded Dr Roof drain fittings - Planning on Mudded Pipe fitting abatement with glove bags on North end of building where clean demo has been is nearly complete
6:10a	AEL has entered south containment to continue mastic removal Area air sample has been started at deep AEL is completing prep for vermiculite containment
6:40a	Pre abatement inspection for the vermiculite containment is good - ready to go - Due to heavy emissions from clean demo and internal combustion engines SWA will not be running an area air sample for this containment Area air samples for the larger South containment have been consistently overloaded
7:00a	SWA entered large containment all in proper PPE Crew continues with Blastrac and hand grinding mastic - No problems to report

Summary of abatement work accomplished, including type and quantity of ACM abated in each work area:

SMITH & WESSEL ASSOCIATES, INC.

DAILY CONSTRUCTION REPORT

Project Desc. 2071 ROOSEVELT STREET Project No. 20299 Proj. Monitor RICHARD BOURASSA
 Client: QPD, LLC Contact: PATRICIA TEMPLE Date: 9/17/2020
 Contractor: AMERICAN ENVIRONMENTAL Supervisor Jamie Cardona # Workers: 8

TIME	CONSTRUCTION NOTES
8:09a	Area air samples started inside occupied space
	Work continues no problems to report
9:00a	Break
9:15	AEI return to assigned areas
9:40	Loading out Gaylords of ACM
10:30a	AEI cleaning South (large) containment
11:30a	Post abatement visual inside the Vermiculite Containment - Vermiculite cleanup looks good - Having AEI clean pipe better some fiberglass found stuck to it
	AEI prepping glovebags North end of building
11:52	Area air clearance running for glovebag work
12:00p	Lunch
12:45	AEI returns to cleaning large South containment and Glovebag Mudded - fitting abatement
2:05p	Visually cleared 27 mudded 27 mudded abated fittings
2:20p	AEI packing up for the day
2:30p	SWA and AEI off site

Summary of abatement work accomplished, including type and quantity of ACM abated in each work area:

9 - Gaylords
 20 - Bags
 6 - Bundles
 1 - Fiber Drum
 of ACM

SMITH & WESSEL ASSOCIATES, INC.

DAILY CONSTRUCTION REPORT

Project Desc. 2071 ROOSEVELT STREET Project No. 20299 Proj. Monitor RICHARD BOURASSA
 Client: QPD, LLC Contact: PATRICIA TEMPLE Date: 9/18/2020
 Contractor: AMERICAN ENVIRONMENTAL Supervisor Jamie Cardona # Workers: 6

TIME	CONSTRUCTION NOTES
6:00a	SWA and A&E on site Scope - Final Clean South Containment (with Gypsum + JC) and possible Clearance Clearance in Vermiculite containment
6:05	Crew enters large containment to do final cleaning - Area air sample running
6:17a	Post Abatement air samples running inside Vermiculite containment North east section of building
8:10a	Post abatement air sample results were below 0.01 f/cc Notified Supervisor
8:15a	Area air samples started inside Occupied Space
8:20a	Cleaning has completed - SWA entering for Post abatement visual inspection
8:40a	Post Abatement visual inspection looked good - No visible debris A&E will now encapsulate containment surfaces Once complete SWA will set up air stations inside for Post Abatement air test on Monday
9:00	8:45a Break
9:00a	Continue encapsulating prepping for exterior Grey ceiling Panel abatement west side of building
9:30	SWA sets up four air stations inside South containment - Encapsulating complete
Summary of abatement work accomplished, including type and quantity of ACM abated in each work area:	

SMITH & WESSEL ASSOCIATES, INC.

DAILY CONSTRUCTION REPORT

Project Desc. 2071 ROOSEVELT STREET Project No. 20299 Proj. Monitor RICHARD BOURASSA
 Client: QPD, LLC Contact: PATRICIA TEMPLE Date: 9/21/2020
 Contractor: AMERICAN ENVIRONMENTAL Supervisor Jamie Cardona # Workers: 9

TIME	CONSTRUCTION NOTES
5:30a	SWA and some AEI on site Scope - SWA to do TEM clearance in the south containment (large area) AEI to continue abating ceiling panels at entrances
6:00	AEI on site - SWA enters containment to start TEM air samples Visual was Good on Friday
6:10a	Post abatement TEM air samples started AEI prepping exterior entrances for ceiling panel abatement
6:57a	Area air samples started inside of criticals for exterior entrances
7:50	Pre abatement inspection looks good for the west entrance - crew suits up and starts abatement Prep continues on east entrance
8:19a	SWA collects TEM air samples for EMSC to be FedEx'd to EMSL overnight with a 6 hour turnaround time
9:50	AEI is cleaning west entrance containment Pre Abatement check for the east entrance looked good - AEI starts abating ceiling panels
10:35	Post abatement air samples running inside west entrance containment after Grey ceiling panel
Summary of abatement work accomplished, including type and quantity of ACM abated in each work area:	

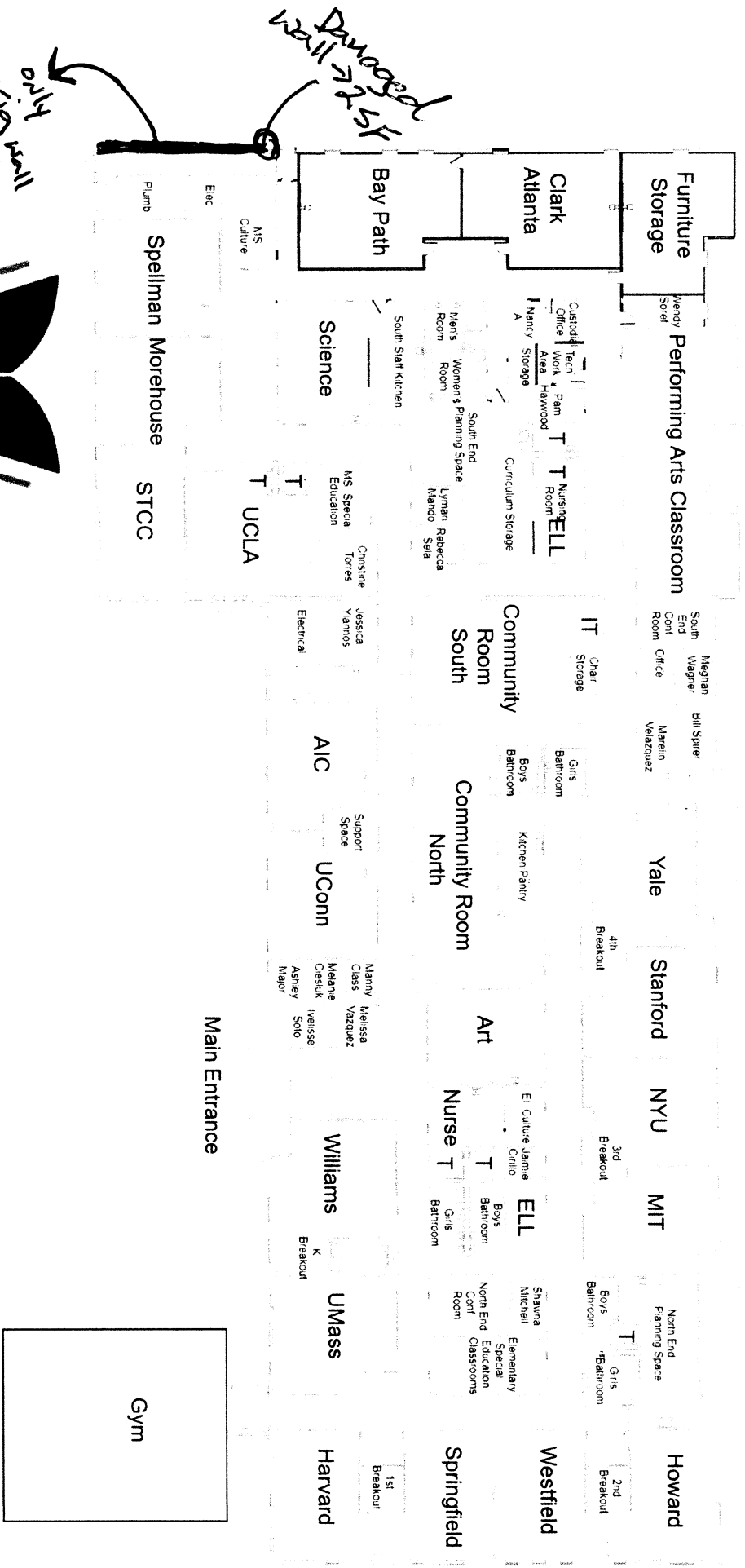
SMITH & WESSEL ASSOCIATES, INC.

DAILY CONSTRUCTION REPORT

Project Desc. 2071 ROOSEVELT STREET Project No. 20299 Proj. Monitor RICHARD BOURASSA
 Client: QPD, LLC Contact: PATRICIA TEMPLE Date: 9/22/2020
 Contractor: AMERICAN ENVIRONMENTAL Supervisor Jamie Cardona # Workers: 6

TIME	CONSTRUCTION NOTES
7:00a	SWA on site - AEI on site at 6:00 clean dem and prep for the SW entrance gray ceiling panels
7:10a	Supervisor says they will start prep around 8:00 when the occupants have come to work
8:00a	AEI begins prep at the SW entrances labeled 206, 9 - 2071 - 2073
9:00a	Area air sample running inside Kindred conference room
11:15a	Pre abatement visual inspection for the SW entrance Good ready to go AEI suits up, and starts abatement
12:10p	Cleaning containment
12:50p	Postabatement air samples running inside SW Entrance containment - Good visual
	AEI takes lunch
1:00p	SWA receives TEM clearance results Notifies Supervisor South containment TEM air test passed - Supervisor instructs workers to dismantle containment
2:00p	Postabatement air sample results for SW entrance were below
2:30p	0.01 FCC - Notified Supervisor
3:00p	SWA and AEI off site - Containment cleaned up
Summary of abatement work accomplished, including type and quantity of ACM abated in each work area:	
6 - Baylord 15 Bags 8 Bundles } of ACM	

APPENDIX C
Floor Diagram Detailing Remaining Known ACBM



Springfield Prep

CHARTER SCHOOL

2071 Roosevelt Ave.
Springfield, MA 01104
(413) 231-2722

APPENDIX D

Photographic Documentation

Springfield Prep Charter School – 2071 Roosevelt Ave



East hall, new floors, walls, ceiling tile



N/W planning space with carpet



N/W small break room at Howard room



West main hall



New fiberglass insulated pipes in plenum



West entrance overhang is gypsum panels

Springfield Prep Charter School – 2071 Roosevelt Ave



South hall



Storage/Admin room with carpet



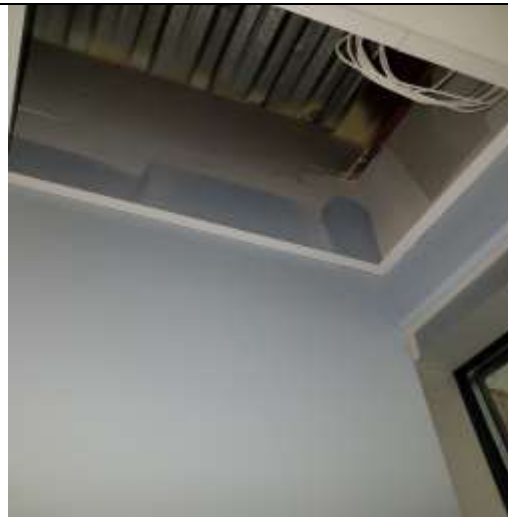
Main east hall looking north



Outer south wall, not removed, asbestos JC



South Bay Path classroom



New gypsum wall extending to deck

Springfield Prep Charter School – 2071 Roosevelt Ave



Renovated bathroom



South wall with damage, asbestos



General exterior front view



Main entrance gypsum overhang

APPENDIX E
Limited Lead Based Paint Test Report
Conducted 2021 Following Renovations

SMITH & WESSEL ASSOCIATES, INC.

HAZARDOUS BUILDING MATERIALS AND AIR QUALITY SPECIALISTS

August 17, 2021

Mr. William Spirer
Founder & Executive Director
Springfield Prep Charter School
2071 Roosevelt Avenue
Springfield, MA 01104



Re: Limited Lead-Based Paint Testing, Springfield Charter Prep School, 2071
Roosevelt Avenue, Springfield, MA

Dear Mr. Spirer:

On August 17, 2021, Ted Sherry a Massachusetts licensed Lead Paint Inspector (Cert. # 2753) representing Smith & Wessel Associates, Inc. (SWA) was on-site at the Springfield Prep Charter School located at 2071 Roosevelt Avenue in Springfield, Massachusetts. The purpose of the site-visit was to conduct a screening of representative painted components throughout the interior and exterior of the school for the presence of lead based paint (LBP).

Recently, the vast majority of building was fully renovated and most finishes were removed and replaced. Of those components tested, results indicate levels are all less than 0.1 milligrams per centimeter square (mg/cm^2) or nondetect for lead.

SWA analyzed these components for lead content using the NITON XLS-303A X-ray Fluorescence Analyzer (XRFA) following the manufacturer's instructions for initial calibration and operation. The XRFA uses a radioactive source to excite the electrons of lead atoms (if present) in paint. As the lead atom electrons return to their normal state, they emit x-rays that are measured by the XRFA and then processed and the results converted to mg/cm^2 of sampled surface area. On most substrates, the XRFA is precise to $\pm 0.1 \text{ mg}/\text{cm}^2$.

The United States Department of Housing and Urban Development (HUD) has established a standard for lead-based paint, as tested using an XRFA analyzer, of $1.0 \text{ mg}/\text{cm}^2$. Although this standard only applies to housing funded by the federal government, it is a useful reference concentration for assessing hazards associated with lead in paint in other settings. Thus, when paint contains greater than $1.0 \text{ mg}/\text{cm}^2$, special care should be taken when conducting activities that impact these paints. However, when conducting abrasive blasting, sanding, or similar activities that generate significant dust or fumes, even components coated with paint containing negligible levels of lead may create a hazard to human health.

Regulatory Guidance

In all areas where LBP is disturbed by renovation or demolition work and where components covered by LBP are disposed of, applicable OSHA and EPA regulations apply.

OSHA

Renovation or demolition activities that disturb surfaces that contain lead must be conducted in accordance with the OSHA regulation 29 CFR 1926.62 “Lead Exposure in Construction: Interim Final Rule.” This regulation requires that a site-specific health and safety plan be prepared before conducting activities that create airborne lead emissions. Such a plan should include the identification of lead components, an exposure assessment, and (if applicable) the required work procedures and personnel protection to be used.

An exposure assessment in the form of personal air monitoring must be performed if there is the potential for employees to be exposed to lead due to the renovation or demolition activity. If demolition is being conducted that will disturb lead-based paints, the employer must assume that employee exposure is in excess of the Permissible Exposure Limit (PEL) of 50 micrograms per cubic meter of air ($\mu\text{g}/\text{m}^3$) until the exposure assessment is completed. If the PEL is exceeded, employees are required to use half-face mask respirators with HEPA filter cartridges. Furthermore, a written respirator program is required per 29 CFR 1910.134. The lead standard also requires the following protective measures be taken until the exposure assessment is completed:

- isolation of the work area
- appropriate personnel protective clothing and equipment
- change areas and hand washing facilities
- biological monitoring
- training

The results of the initial exposure assessment will determine the protective measures that must be followed for the remainder of the project. OSHA may allow air-monitoring data from previous projects conducted under conditions closely resembling the present project to be used for the exposure assessment. If the exposure assessment indicates that exposure levels are below the Action Level of $30 \mu/\text{m}^3$, there are no additional requirements under the standard if the conditions remain the same.

EPA

In addition to the worker protection requirements stipulated by OSHA, Massachusetts Department of Environmental Protection (MA DEP) and EPA regulate the disposal of wastes that are potentially hazardous. Such wastes may include paint chips and residue generated during abatement or repainting work, or whole components, such as wood windows, doors, walls and trim that are coated with LBP and that are disposed as the

result of renovation or demolition work. Metal components are not regulated if they will be recycled and not disposed in a landfill.

To determine the required method for disposing of nonmetal items that are coated with LBP, the DEP and the EPA require representative sampling of the debris to determine the quantity of lead that would be expected to leach into the environment if the debris were disposed in a landfill. The representative sample(s) must be analyzed by TCLP. If the result of this procedure indicates that the sample leaches a lead concentration below five parts per million (ppm), the debris is not regulated and can be disposed of in a traditional construction landfill. However, the debris must be disposed of as hazardous waste if the TCLP result exceeds five ppm. To minimize the total volume of hazardous waste, segregating hazardous from nonhazardous waste is advisable.

Findings

The following Table summarizes the LBP test results as conducted by SWA:

Location	Substrate	Color	Component	Result (mg/cm²)
Throughout interior				
	Sheetrock	Yellow	Walls	<0.1
	Sheetrock	Blue	Walls	<0.1
	Sheetrock	White	Walls	<0.1
	Sheetrock	Green	Walls	<0.1
	Sheetrock	Tan	Walls	<0.1
	Sheetrock	Beige	Walls	<0.1
	Metal	Gray	Door frames	<0.1
	Metal	Gray	Inner wall window frames	<0.1
	Metal	Red	Structural beams/joists	<0.1
Throughout exterior				
	Metal	Beige	Doors	<0.1
	Metal	Brown	Gutters	<0.1
	Sheetrock	White	Entrance overhangs	<0.1
	Metal	Yellow	Gas pipe	<0.1

Conclusions and Recommendations

Based on our findings, SWA offers the following conclusions and recommendations:

1. No elevated levels of lead were identified throughout the interior and exterior of the building. SWA walked the entire school and conducted multiple representative XRF readings throughout. If any painted components are identified at later dates that are not addressed in this report, they must be assumed to be LBP until further testing indicates otherwise.

Should you have any questions or concerns, please do not hesitate to contact me.

Respectfully submitted,
Smith & Wessel Associates Inc.

A handwritten signature in black ink, appearing to read "Ted Sherry". The signature is stylized and cursive.

Ted Sherry
Project Manager

APPENDIX F
Architects Materials Disclosure Letter

August 18, 2021

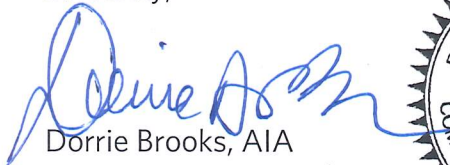
Bill Spirer
Executive Director
Springfield Prep Charter School
2071 Roosevelt Avenue
Springfield, MA 01104

Mr. Spirer,

To the best of my knowledge, information, and belief as design architect of the renovation and new construction at 2071 Roosevelt Avenue, no asbestos containing materials was specified for use in the construction of the project either in areas of renovation or new construction.

If you have any questions, please do not hesitate to call or email.

Sincerely,



Dorrie Brooks, AIA
Mass. Registration number 50961



Cc: Evan Warner, STV; Glenn Nelson, S&W