VERTEX PROJECT NO: 96632

Hatherly Elemetary School

72 Ann Vinal Road
Scituate, Massachusetts 02066

3-Year AHERA Reinspection
May 2024

PREPARED FOR:
Scituate Public Schools
606 Chief Justice Cushing Highway
Scituate, Massachusetts 02066

PREPARED BY:
The VERTEX Companies, LLC
400 Libbey Parkway
Weymouth, Massachusetts 02189

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Introduction

The Vertex Companies, LLC (VERTEX) conducted a 3-Year Re-inspection on May 30, 2024, as required by the 40 CFR 763 Asbestos Hazard Emergency Response Act (AHERA) at the Hatherly Elementary School located at 72 Ann Vinal Road in Scituate, Massachusetts. The AHERA regulation requires that each Local Education Agency (LEA) retain a certified/accredited Asbestos Inspector to conduct an initial inspection of all friable and non-friable known or assumed asbestos-containing materials (ACMs) in each school building that they lease, own, or otherwise uses as a school building. The AHERA re-inspection is to be performed by an accredited inspector at least once every three years from the time of implementation of the original management plan. In addition, the LEA is responsible for conducting Six-Month Periodic Surveillance Inspections as required to effectively manage the identified ACMs in place at the school.

The Scituate Public School District may utilize the information obtained from the AHERA inspection to effectively manage the ACMs identified at the Hatherly Elementary School.

SECTION 1

INSPECTION REPORT

Section 1
Inspection Report

Inspection Protocol

Massachusetts Department of Labor Standards (DLS) Certified Asbestos Inspector, Jason Mohre (AI#000262) performed the AHERA inspection. The Management Plan was updated by Massachusetts DLS Certified Asbestos Management Planner, Jason Mohre (AP#000080). The purpose of the inspection was to identify friable and non-friable ACMs and perform a hazard assessment. As required by the AHERA regulation, the inspection survey procedures must include a visual inspection and assessment of the condition of all known locations of friable and non-friable ACMs. It should be noted that under the AHERA regulations only ACMs are inspected within the school building, other asbestos containing materials (ACMs) may be associated with the school that do not fall under AHERA ACM definition. Examples of materials which have been found to contain asbestos include but are not limited to exterior window caulking, window glazing, and roofing material. Prior to school renovations any suspect materials not sampled or listed within the school's AMP, must be tested prior to disturbance. Furthermore, VERTEX recommends an Asbestos Containing Materials (ACMs) Survey be conducted prior to any renovation activities to comply with the Environmental Protection Agency (EPA) Title 40 CFR Part 61, National Emissions Standards for Hazardous Air Pollutants (NESHAPs) and the Massachusetts Department of Environmental Protection Regulations. Documentation for subsequent surveys not related to AHERA should be included in the overall Management Plan.

Assessment of potential asbestos hazards are subject to each individual inspector's judgment, and as a result, hazard assessments may vary.

Furthermore, the LEA Designated Person should assume that potential asbestos-containing pipe and fitting insulation or other ACMs may be located behind walls and ceilings not accessible. Any renovation/demolition work that may penetrate these areas should be inspected prior to disturbance.

All available documentation of asbestos abatement projects, which have occurred since the initial AHERA inspection should be included with the Management Plan for the school.

VERTEX was provided and reviewed the following documents for the Hatherly Elementary School facility:

- AHERA Inspection and Management Plan for Hatherly Elementary School facility prepared by Covino, dated November 2013.
- AHERA Inspection and Management Plan for Cushing Elementary School facility prepared by TRC, dated October 2017.

Appendix D contains Certification Page for the Inspector and Management Planner involved with the inspection of the school.

Locations of the identified ACMs with quantities observed, conditions assessed, homogeneous hazard assessment are presented in Appendix A of this report.

Section 1
Inspection Report (continued)
Bulk Sampling Methodology

Bulk samples were not collected during the current reinspection. VERTEX had collected and analyzed the following bulk samples of suspect homogeneous materials within school during past inspection in April 2021. In addition, Covino Environmental (Covino) collected bulk samples during their August 2013 inspection activities. Please refer to Table 1A and 1B below for a summary of the bulk samples collected and analyzed.

Hatherly Elementary School
April 2021 Sample Locations and Results
Table IA

Sample Number	Sample Description	Sample Location	Asbestos Content
B-420-01A	**1' x 1' Ceiling Tile (Pinhole)**	**Kitchen**	**2% Chrysotile**
B-420-01B	**1' x 1' Ceiling Tile (Pinhole)**	**Kitchen**	**Positive Stop**
B-420-02A	2' x 4' Ceiling Tile (Fissure/Dot) New	Room 22	None Detected
B-420-02B	2' x 4' Ceiling Tile (Fissure/Dot) New	Room 22	None Detected
B-420-03A	2' x 4' Ceiling Tile (Speckled/Dot)	Room 21	None Detected
B-420-03B	2' x 4' Ceiling Tile (Speckled/Dot)	Hall to Rooms 21 and 22	None Detected

Hatherly Elementary School
August 2013 Sample Locations and Results
Table IB

Sample Number	Sample Description	Sample Location	Asbestos Content
1A	Canvas Covering on Boiler Breeching	Boiler Room	None Detected
1B	Canvas Covering on Boiler Breeching	Boiler Room	None Detected
1C	Canvas Covering on Boiler Breeching	Boiler Room	None Detected
2A	Canvas Covering on Fiberglass Pipe	Crawl Space	None Detected
2B	Canvas Covering on Fiberglass Pipe	Crawl Space	None Detected
2C	Canvas Covering on Fiberglass Pipe	Crawl Space	None Detected
3A	**1" Pipe Fitting Insulation**	**Crawl Space**	**20 % Chrysotile 15% Amosite**
3B	**1" Pipe Fitting Insulation**	**Crawl Space**	**Positive Stop**
3C	**1" Pipe Fitting Insulation**	**Kitchen**	**Positive Stop**
3D	**1" Pipe Fitting Insulation**	**Attic**	**Positive Stop**
3E	**1" Pipe Fitting Insulation**	**Attic**	**Positive Stop**
3F	**1" Pipe Fitting Insulation**	**Attic**	**Positive Stop**
3G	**1" Pipe Fitting Insulation**	**Office Closet**	**Positive Stop**
3H	**1" Pipe Fitting Insulation**	**Room 10 Storage**	**Positive Stop**
3I	**1" Pipe Fitting Insulation**	**Phys. Ed Office**	**Positive Stop**
4A	**6" Pipe Fitting Insulation**	**Crawl Space**	**8 % Chrysotile 25% Amosite 7% Crocidolite**
4B	6" Pipe Fitting Insulation	Crawl Space	Positive Stop
4C	6" Pipe Fitting Insulation	Crawl Space	Positive Stop
4D	6" Pipe Fitting Insulation	Attic	Positive Stop
4E	6" Pipe Fitting Insulation	Attic	Positive Stop
5A	Vibration Dampener Cloth	Boiler Room	None Detected
5B	Vibration Dampener Cloth	Boiler Room	None Detected
5C	Vibration Dampener Cloth	Music Room	None Detected
6A	**Duct Stick Pin Mastic**	**Boiler Room**	**30 % Chrysotile**
6B	**Duct Stick Pin Mastic**	**Boiler Room**	**Positive Stop**
6C	**Duct Stick Pin Mastic**	**Boiler Room**	**Positive Stop**
7A	Plaster Base Coat	Boiler Room	None Detected
7B	Plaster Base Coat	Boiler Room	None Detected
7C	Plaster Base Coat	Boiler Room	None Detected
7D	Plaster Base Coat	Incinerator Room	None Detected

Hatherly Elementary School
August 2013 Sample Locations and Results
Table IB (Continued)

Sample Number	Sample Description	Sample Location	Asbestos Content
7E	Plaster Base Coat	Incinerator Room	None Detected
8A	Plaster Skim Coat	Boiler Room	None Detected
8B	Plaster Skim Coat	Boiler Room	None Detected
8C	Plaster Skim Coat	Boiler Room	None Detected
8D	Plaster Skim Coat	Incinerator Room	None Detected
8E	Plaster Skim Coat	Incinerator Room	None Detected
9A	**Interior Window Glazing**	**Janitor**	**3 % Chrysotile**
9B	**Interior Window Glazing**	**Room M-1**	**Positive Stop**
10A	**Abandoned Generator Pipe Insulation**	**Hall by Generator Room**	**60 % Chrysotile**
10B	**Abandoned Generator Pipe Insulation**	**Hall by Generator Room**	**Positive Stop**
10C	**Abandoned Generator Pipe Insulation**	**Kitchen Storage**	**Positive Stop**
11A	Cementitious Window Sill	Janitor Office Bath	None Detected
11B	Cementitious Window Sill	Electric Room	None Detected
12A	Walk-in Cooler Ceiling Insulation	Kitchen	None Detected
12B	Walk-in Cooler Ceiling Insulation	Kitchen	None Detected
13A	**Walk-in Cooler Cementitious Wall**	**Kitchen**	**5 % Chrysotile**
13B	**Walk-in Cooler Cementitious Wall**	**Kitchen**	**Positive Stop**
14A	1' x 1' Fissured Ceiling Tile	Kitchen Bath	None Detected
14B	1' x 1' Fissured Ceiling Tile	Kitchen Bath	None Detected
14C	1' x 1' Fissured Ceiling Tile	Speech Room	None Detected
15A	**1' x 1' Pin-Hole Ceiling Tile**	**Kitchen Hallway**	**6 % Amosite**
15B	**1' x 1' Pin-Hole Ceiling Tile**	**Kitchen**	**Positive Stop**
15C	**1' x 1' Pin-Hole Ceiling Tile**	**Kitchen**	**Positive Stop**
16A	**9" Brown Floor Tile**	**Kitchen Office**	**10 % Chrysotile**
16B	**9" Brown Floor Tile**	**Room 10 Closet**	**Positive Stop**
16C	**9" Brown Floor Tile**	**Room 10 Closet**	**Positive Stop**
17A	**9" Brown Floor Tile Mastic**	**Kitchen Office**	**10 % Chrysotile**
17B	**9" Brown Floor Tile Mastic**	**Room 10 Closet**	**Positive Stop**
17C	**9" Brown Floor Tile Mastic**	**Room 10 Closet**	**Positive Stop**
18A	4" Black Covebase	Kitchen Office	None Detected
18B	4" Black Covebase	Room 21B	None Detected
18C	4" Black Covebase	Room 15	None Detected
19A	4" Black Covebase Adhesive	Kitchen Office	None Detected
19B	4" Black Covebase Adhesive	Room 21B	None Detected
19C	4" Black Covebase Adhesive	Room 15	None Detected
20A	12" Green Floor Tile	Cafeteria	None Detected
20B	12" Green Floor Tile	Cafeteria	None Detected
20C	12" Green Floor Tile	Cafeteria	None Detected

Hatherly Elementary School
August 2013 Sample Locations and Results
Table IB (Continued)

Sample Number	Sample Description	Sample Location	Asbestos Content
21A	12" Green Floor Tile Mastic	Cafeteria	None Detected
21B	12" Green Floor Tile Mastic	Cafeteria	None Detected
21C	12" Green Floor Tile Mastic	Cafeteria	None Detected
22A	**2' x 4' Fissured Ceiling Tile**	**Cafeteria**	**3 % Chrysotile**
22B	**2' x 4' Fissured Ceiling Tile**	**Cafeteria**	**Positive Stop**
22C	**2' x 4' Fissured Ceiling Tile**	**Cafeteria**	**Positive Stop**
23A	Plaster Base Coat	Cafeteria	None Detected
23B	Plaster Base Coat	Cafeteria	None Detected
23C	Plaster Base Coat	Cafeteria	None Detected
24A	Plaster Skim Coat	Cafeteria	None Detected
24B	Plaster Skim Coat	Cafeteria	None Detected
24C	Plaster Skim Coat	Cafeteria	None Detected
25A	**Canvas Covering on Duct**	**Music Room**	**30 % Chrysotile 15% Amosite**
25B	**Canvas Covering on Duct**	**Music Room**	**Positive Stop**
25C	**Canvas Covering on Duct**	**Music Room**	**Positive Stop**
26A	4' x 8' Tectum Ceiling Tiles	Room 1	None Detected
26B	4' x 8' Tectum Ceiling Tiles	Room 4	None Detected
26C	4' x 8' Tectum Ceiling Tiles	Office	None Detected
27A	**9" Black Floor Tile**	**Room 1**	**13 % Chrysotile**
27B	**9" Black Floor Tile**	**Room 4**	**Positive Stop**
27C	**9" Black Floor Tile**	**Office**	**Positive Stop**
28A	**9" Black Floor Tile Mastic**	**Room 1**	**10 % Chrysotile**
28B	**9" Black Floor Tile Mastic**	**Room 4**	**Positive Stop**
28C	**9" Black Floor Tile Mastic**	**Office**	**Positive Stop**
29A	**9" Tan Floor Tile**	**Room 1**	**12 % Chrysotile**
29B	**9" Tan Floor Tile**	**Room 4**	**Positive Stop**
29C	**9" Tan Floor Tile**	**Office**	**Positive Stop**
30A	**9" Tan Floor Tile Mastic**	**Room 1**	**12 % Chrysotile**
30B	**9" Tan Floor Tile Mastic**	**Room 4**	**Positive Stop**
30C	**9" Tan Floor Tile Mastic**	**Office**	**Positive Stop**
31A	Pink Sink Undercoating	Room 1	None Detected
31B	Pink Sink Undercoating	Room 4	None Detected
31C	Pink Sink Undercoating	Room 21B	None Detected
32A	Mounted Cork Board	Room 1	None Detected
32B	Mounted Cork Board	Room 4	None Detected
32C	Mounted Cork Board	Room 21B	None Detected
33A	Gold Carpet Adhesive	Speech Room	None Detected
33B	Gold Carpet Adhesive	Library	None Detected
33C	Gold Carpet Adhesive	Library	None Detected

Hatherly Elementary School
August 2013 Sample Locations and Results
Table IB (Continued)

Sample Number	Sample Description	Sample Location	Asbestos Content
34A	**9" Green Floor Tile**	**Hall by Room 6**	**10 % Chrysotile**
34B	**9" Green Floor Tile**	**Hall by Room 18**	**Positive Stop**
34C	**9" Green Floor Tile**	**Hall by Room 18**	**Positive Stop**
35A	**9" Green Floor Tile Mastic**	**Hall by Room 6**	**12 % Chrysotile**
35B	**9" Green Floor Tile Mastic**	**Hall by Room 18**	**Positive Stop**
35C	**9" Green Floor Tile Mastic**	**Hall by Room 18**	**Positive Stop**
36A	Plaster Base Coat	Boys Room	None Detected
36B	Plaster Base Coat	Girls Room	None Detected
36C	Plaster Base Coat	Office	None Detected
37A	Plaster Skim Coat	Boys Room	None Detected
37B	Plaster Skim Coat	Girls Room	None Detected
37C	Plaster Skim Coat	Office	None Detected
38A	4' x 8' Wall Panel Adhesive	Office	None Detected
38B	4' x 8' Wall Panel Adhesive	Office	None Detected
38C	4' x 8' Wall Panel Adhesive	Office	None Detected
39A	Perimeter Interior Window Glazing	Office	None Detected
39B	Perimeter Interior Window Glazing	Room 11	None Detected
39C	Perimeter Interior Window Glazing	Room 14	None Detected
40A	**Cementitious Wall Panel Under Window**	**Office**	**40 % Chrysotile**
40B	**Cementitious Wall Panel Under Window**	**Room 21B**	**Positive Stop**
40C	**Cementitious Wall Panel Under Window**	**Room 11**	**Positive Stop**
41A	Transite Tabletop		None Detected
41B	Transite Tabletop		None Detected
42A	Interior Window Glazing	Hall by Room 11	None Detected
42B	Interior Window Glazing	Hall by Room 11	None Detected
42C	Interior Window Glazing	Teachers Room	None Detected
43A	Gypsum Wall Board	Room 21	None Detected
43B	Gypsum Wall Board	Room 22	None Detected
43C	Gypsum Wall Board	Math	None Detected
44A	12" White/ Blue Floor Tile	Trailer Hallway	None Detected
44B	12" White/ Blue Floor Tile	Trailer Hallway	None Detected
44C	12" White/ Blue Floor Tile	Trailer Hallway	None Detected
45A	12" White/ Blue Floor Tile Mastic	Trailer Hallway	None Detected
45B	12" White/ Blue Floor Tile Mastic	Trailer Hallway	None Detected
45C	12" White/ Blue Floor Tile Mastic	Trailer Hallway	None Detected
46A	12" Tan Floor Tile	Room 17	None Detected
46B	12" Tan Floor Tile	Room 17	None Detected
46C	12" Tan Floor Tile	Room 17	None Detected

Hatherly Elementary School
August 2013 Sample Locations and Results
Table IB (Continued)

Sample Number	Sample Description	Sample Location	Asbestos Content
47A	**12" Tan Floor Tile Mastic**	**Room 17**	**4 % Chrysotile**
47B	**12" Tan Floor Tile Mastic**	**Room 17**	**Positive Stop**
47C	**12" Tan Floor Tile Mastic**	**Room 17**	**Positive Stop**
48A	Glazing Compound	Room 19	None Detected
48B	Glazing Compound	Room 19	None Detected
48C	Glazing Compound	Room 19	None Detected

Bold indicates bulk sample analyzed positive for Asbestos (>1% asbestos containing)
Positive Stop indicates representative bulk sample analyzed positive for Asbestos.

Section 1
Inspection Report (continued)

The following is a list of materials that were determined or assumed to be asbestos-containing:

9” Tan Floor Tile
9” Gray Floor Tile
9” Green Floor Tile
9” Black Floor Tile
9” Brown Floor Tile
Black Residual Mastic
1’ x 1’Pinhole Ceiling Tile
Pipe Fitting Insulation
Cementitious Wall Panel on Cooler
9” Tan Floor Tile Mastic (Black)
9” Gray Floor Tile Mastic (Black)
9” Green Floor Tile Mastic (Black)
9” Black Floor Tile Mastic (Black)
9” Brown Floor Tile Mastic (Black)
Cementitious Panel Under Window
2’ x 4’ Fissured Ceiling Tile
Canvas Covering on Duct
Interior Window Glazing #2

Based on the review of the TRC 2017 Re-Inspection report the following materials had been removed from the Management Plan:

Abandoned Generator Pipe Insulation
Duct Stick Pin Mastic

The following is a list of materials that were found and determined to be non-asbestos:

12" Green Floor Tile
12" White/ Blue Floor Tile
Gold Carpet Adhesive
4" Black Covebase
Canvas Covering on Boiler Breeching
Vibration Dampener Cloth
Plaster Base Coat
Cementitious Window Sill
Walk-in Cooler Ceiling Insulation
Pink Sink Undercoating
4' x 8' Wall Panel Adhesive
Transite Tabletop
Glazing Compound
12" Green Floor Tile Mastic
12" White/ Blue Floor Tile Mastic
12" Tan Floor Tile
4" Black Covebase Adhesive
Canvas Covering on Fiberglass Pipe
Gypsum Wall Board
Plaster Skim Coat
1' x 1' Fissured Ceiling Tile
4' x 8' Tectum Ceiling Tiles
Mounted Cork Board
Perimeter Interior Window Glazing
Interior Window Glazing #1

VERTEX recommends an ACMs Survey be conducted prior to any renovation activities to comply with the EPA Title 40 CFR Part 61, NESHAPs and the Massachusetts Department of Environmental Protection Regulations.

Section 1
Inspection Report (continued)
Hazard Assessment

Each ACM homogeneous area is assessed to determine the asbestos hazard. Factors considered when assessing homogeneous area hazard include: the friability of the material, the condition of material including type, severity, and extent of damage, the material's potential for disturbance (including accessibility and air flow) and the material's potential for damage. From this classification, a decision tree is used to determine the appropriate response action sufficient to protect human health and environment.

The location, estimated quantities, condition and Homogenous Area Hazard Assessment Category for the identified ACMs are presented in Appendix A. The following is homogenous area assessment for each ACM identified.

Homogeneous Area Assessment

Homogeneous Area #1-Pipe Fitting Insulation

Classification: Friable Thermal System Insulation

Asbestos-containing Pipe Fitting Insulation is located in the Kitchen Storage, Kitchen Office, Janitor Office, A/V Room, Attic above Janitor Closet, Motor Room, Room 10 Storage, Pys. Ed Office and Crawl Space. In addition, the Designated Person should assume that potential asbestos-containing pipe fitting insulation may be located behind walls and ceilings not accessible. Please refer to Appendix A which includes the locations, conditions, and estimated quantities. The pipe fitting insulation where accessible was observed in generally good condition, friable and presents a potential for damage except for displayed damage observed within the Room 10 Storage and Crawl Space.

Homogeneous Area #2-Canvas Covering on Duct

Classification: Friable Thermal System Insulation

Asbestos-containing Canvas Covering on Duct is located in the Motor Room, Attic above Janitor Closet, and the Teachers Room Closet at the school. The Canvas Covering on Duct was observed in generally good condition, friable and presents a potential for damage.

Homogeneous Area #3-1' x 1' Pinhole Ceiling Tile

Classification: Friable Miscellaneous ACM

Asbestos-containing 1' x 1' Pinhole Ceiling Tile is located in the Kitchen and Kitchen Office at the school. The 1' x 1' Pinhole Ceiling Tile was observed in generally good condition, friable and presents a potential for damage.

Section 1
Inspection Report (continued)
Hazard Assessment

Homogeneous Area #4-2' x 4' Fissured Ceiling Tile

Classification: Friable Miscellaneous ACM

Asbestos-containing 2' x 4' Fissured Ceiling Tile is located in Cafeteria at the school. The 1' x 1' Pinhole Ceiling Tile was observed in generally good condition, friable and presents a potential for damage.

Homogeneous Area #5- 9"x 9" Gray Floor Tile

Classification: Non-Friable Miscellaneous ACM

Asbestos-containing 9" x 9" Gray Floor Tile is generally located within classrooms at the school. Please refer to Appendix A for the locations and estimated quantities. The 9" Gray Floor Tile generally displays minor damage, non-friable and presents a potential for damage.

Homogeneous Area #6- 9"x 9" Tan Floor Tile

Classification: Non-Friable Miscellaneous ACM

Asbestos-containing 9" x 9" Tan Floor Tile is generally located within the Main Hallway and Gym at the school. Please refer to Appendix A for the locations and estimated quantities. The 9" Tan Floor Tile generally displays minor damage, non-friable and presents a potential for damage.

Homogeneous Area #7- 9"x 9" Green Floor Tile

Classification: Non-Friable Miscellaneous ACM

Asbestos-containing 9" x 9" Green Floor Tile is located within the Hallway between Room 6 and 7 and Lobby at the school. The 9" Green Floor Tile displayed minor damage, non-friable and presents a potential for damage.

Homogeneous Area #8- 9"x 9" Black Floor Tile

Classification: Non-Friable Miscellaneous ACM

Asbestos-containing 9" x 9" Black Floor Tile is located on the border area of the classrooms at the school. The 9" Black Floor Tile is in generally good condition, non-friable and presents a potential for damage.

Section 1
Inspection Report (continued)
Hazard Assessment

Homogeneous Area #9- 9"x 9" Brown Floor Tile

Classification: Non-Friable Miscellaneous ACM

Asbestos-containing 9" x 9" Brown Floor Tile is located within the Kitchen Office and Room 10 Storage at the school. The 9" Brown Floor Tile is in generally good condition, non-friable and presents a potential for damage.

Homogeneous Area #10- Black Floor Tile Mastic

Classification: Non-Friable Miscellaneous ACM

Asbestos-containing Black Floor Tile Mastic is associated with the gray, tan, brown and green colored 9" Floor Tile, non-friable and presents a potential for damage. Please refer to Appendix A for the locations and estimated quantities.

Homogeneous Area #11- Black Residual Floor Tile Mastic

Classification: Non-Friable Miscellaneous ACM

Asbestos-containing Black Residual Floor Tile Mastic is located within the Cafeteria and Rooms 17 and 19 under 12" Non-Asbestos Containing Floor Tile. The Black Residual Mastic is covered, non-friable and presents a potential for damage.

Homogeneous Area #12- Cementitious Panels Under Windows

Classification: Non-Friable Miscellaneous ACM

Asbestos-containing Cementitious Panels Under the Windows are generally located within the Principal Office, Teachers Room, Art Room and Rooms 10 and 11 at the school. The Cementitious Panels Under the Windows were observed in generally good condition, non-friable and presents a potential for damage.

Homogeneous Area #13- Cementitious Panel on Cooler

Classification: Non-Friable Miscellaneous ACM

Asbestos-containing Cementitious Panels are located on the Cooler within the Kitchen at the school.. The Cementitious Panels were observed in generally good condition, non-friable and presents a potential for damage.

Section 1
Inspection Report (continued)
Hazard Assessment

Homogeneous Area #14- Interior Window Glazing

Classification: Non-Friable Miscellaneous ACM

Asbestos-containing Interior Window Glazing is located on the window units of the Janitor Office Bathroom, Storage Room M-1 and Electrical Room at the school. The Interior Window Glazing was observed in generally good condition, non-friable and presents a potential for damage.

SECTION 2

RESPONSE ACTION DETERMINATION

Section 2
Response Action Determination

The following is based on the Decision Tree for Thermal System Insulation Type ACM. The recommended response actions are determined utilizing the "decision tree" approach for Response Action Determination as outlined in EPA's "Asbestos Hazard Emergency Response Act," (AHERA) 40 CFR 763. Because of defined friability factors associated with surfacing and miscellaneous materials versus thermal system insulation, separate decision trees are utilized for each group of materials.

Decision Trees are used to estimate the risk associated with exposure to asbestos in a given homogeneous area, and to recommend certain response actions, which are consistent with regulatory requirements. Eight response actions are recommended for both thermal system insulation and for surfacing/miscellaneous insulation. The response section number given to each homogeneous area indicates a priority for action, the lower the number, the more serious the hazard. Most response actions call for an operations and maintenance program, assuming that this is the least burdensome method which still protects human health and environment. This does not prohibit the building owner from removal of ACM at any time, if that is the preferred response action.

Recommended response actions are based upon the material condition, disturbance, air-flow and the potential for damage. Potential response actions include the following:

1. Significantly Damaged Thermal System Insulation: **Response Action 1.** Isolate the area and restrict access to the area. ACM should be removed as soon as possible.
2. Damaged Thermal System Insulation with High Disturbance: **Response Action 2.** Continue O&M program and remove the ACM as soon as possible or reduce the potential for disturbance.
3. Damaged Thermal System Insulation with Moderate Disturbance and in the Presence of an Air Stream: **Response Action 2.** Continue with O&M Program and remove the ACM as soon as possible or reduce the potential for disturbance.
4. Damaged Thermal System Insulation with Moderate Disturbance: **Response Action 3.** Repair ACM, continue with O&M Program.
5. Damaged Thermal System Insulation with Low Disturbance and in the Presence of an Air Stream: **Response Action 4.** Repair ACM, continue with O&M Program.
6. Damaged Thermal System Insulation with Low Disturbance: **Response Action 5.** Repair ACM, continue with O&M Program.
7. Undamaged Thermal System Insulation with High Disturbance: **Response Action 6.** Continue with O&M Program and take preventative measures to reduce disturbance.
8. Undamaged Thermal System Insulation with Moderate Disturbance: **Response Action 7.** Continue with O&M Program and take preventative measure to reduce disturbance.
9. Undamaged Thermal System Insulation with Low Disturbance: **Response Action 7.** Continue with O&M Program and take preventative measure to reduce disturbance.

Section 2
Response Action Determination

The following is based on the Decision Tree for Surfacing and Miscellaneous ACM. Recommended response actions are based upon friability, material condition, disturbance, air flow and the potential for damage. Potential response actions include the following:

1. Friable Surfacing or Miscellaneous ACM with Significant Damage: **Response Action 1:** Isolate the area and restrict access to the area. Remove the ACM as soon as possible.
2. Friable Surfacing or Miscellaneous ACM with Damage and a High Disturbance: **Response Action 2:** Continue with O&M Program and remove ACM as soon as possible or reduce the potential for disturbance.
3. Friable Surfacing or Miscellaneous ACM with Damage, Moderate Disturbance and in the Presence of an Air Stream: **Response Action 2:** Continue with O&M Program and remove ACM as soon as possible or reduce the potential for disturbance.
4. Friable Surfacing or Miscellaneous ACM with Damage and Moderate Disturbance: **Response Action 3:** Continue with O&M Program and schedule removal when practical and cost-effective
5. Friable Surfacing or Miscellaneous ACM with Damage, Low Disturbance and in the Presence of an Air Stream: **Response Action 4:** Continue with O&M Program and schedule removal when practical and cost-effective
6. Friable Surfacing or Miscellaneous ACM with Damage and Low Disturbance: **Response Action 5.** Continue with O&M Program and schedule removal when practical and cost-effective
7. Friable Surfacing or Miscellaneous ACM with No Damage and High Disturbance: **Response Action 6.** Take preventative measures to reduce the disturbance.
8. Friable Surfacing or Miscellaneous ACM with No Damage and Moderate Disturbance: **Response Action 7.** Take preventative measure to reduce the disturbance.
9. Friable Surfacing or Miscellaneous ACM with No Damage and Low Disturbance: **Response Action 8.** Take preventative measure to reduce the disturbance.
10. Non-Friable Surfacing or Miscellaneous ACM: **Response Action 8:** Continue with O&M until major renovation or demolition requires removal under the EPA NESHAPS, or until hazard assessment factors change.

Section 2
Response Action Determination (continued)

Advantages and Disadvantage to Abatement Alternatives

The decision trees outlined in AHERA 40 CFR 763 are used to provide the "best" alternative for the specific conditions in each homogeneous area.

Below is a discussion of the alternative approaches to asbestos management in a building.

Long Term Operation & Maintenance Program

Advantages:

*Low initial cost for implementation
*Good interim plan
*An O&M program may be implemented and carried out by in house trained personnel.

Disadvantages:

*Asbestos remains in the building
*Condition of the asbestos must be monitored
*Cost of training and special work procedures may be significant
*Effectiveness may be limited where control of the building occupants is difficult

Encapsulation

Advantages:

*Reduces the risk of release of asbestos fibers
*Initial cost is lower than the cost of asbestos removal
*Asbestos-containing material may still serve its initial purpose
*Quick temporary means of repair

Disadvantages:

*Asbestos remains in the building and encapsulant makes removal more difficult
*Improper encapsulation may cause the material to delaminate or pull away from substrate
*Asbestos-containing material must have an O&M program
*Similar preparation for asbestos removal is required for encapsulation
*Long term cost may be greater than asbestos removal is periodic reapplication of the encapsulant is required

Section 2
Response Action Determination (continued)

Enclosure

Advantages:

*Enclosure reduces immediate exposure
*Initial cost of enclosure is lower that the cost of asbestos removal
*Asbestos-containing material may still serve its initial purpose
*Quick temporary means of repair

Disadvantages:

*Asbestos remains in place and later removal is more difficult
*If maintenance is required of the systems insulated with asbestos, the asbestos will be exposed
*An O&M program will have to be implemented for the asbestos-containing material
*Similar preparation for asbestos removal is required for enclosure

Removal

Advantages

*Asbestos-containing material is eliminated from the building
*There is no need for an O&M plan
*Initial cost is great, but the future costs are eliminated

Disadvantages:

*Re-insulating, re-fireproofing, or replacement of materials may be required
*Improper removal may raise levels of airborne fibers higher than background levels
*The initial cost of removal is very high
*Areas of the building involved in asbestos removal may not be occupied during removal

SECTION 3

UPDATED RECOMMENDED RESPONSE ACTIONS

Section 3
Recommended Response Actions

The recommended response actions are for all the homogenous areas found within the school. The response actions are determined utilizing the decision tree approach for Response Action Determination as described in Section 2.

Homogeneous Area #1-Pipe Fitting Insulation

Response Action 3: The pipe fitting insulation identified within the Room 10 Storage and Crawl Space displayed minor damage. Retain an Asbestos Project Designer to prepare a Work Plan for the repair or remove the damaged pipe fitting insulation and retain a Massachusetts certified Abatement Contractor to complete the response action following the Work Plan. Recommended completion date of the work activities: August 2024.

Response Action 7: The remaining pipe fitting insulation located at the school is in generally good condition. Limit the potential for disturbance and continue the Operations and Maintenance (O&M) Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. It should be noted that asbestos-containing pipe fitting insulation may be located above hard ceilings and/or behind walls. As such, a thorough exploratory inspection should be conducted prior to any renovations that may impact wall or ceiling areas.

Homogeneous Area #2-Canvas Covering on Duct

Response Action 7: The Canvas Covering on Duct located in the Motor Room, Attic above Janitor Closet, and the Teachers Room Closet at the school is in generally good condition. Limit the potential for disturbance and continue the O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change

Homogeneous Area #3-1' x 1' Pinhole Ceiling Tile

Response Action 7: The 1' x 1' Pinhole Ceiling Tile located in the Kitchen and Kitchen Office at the school is in generally good condition. Limit the potential for disturbance and continue the O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change

Homogeneous Area #4-2' x 4' Fissured Ceiling Tile

Response Action 7: The 2' x 4' Fissured Ceiling Tile located in the Cafeteria at the school is in generally good condition. Limit the potential for disturbance and continue the O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change

Section 3
Recommended Response Actions (Continued)

Homogeneous Area #5- 9"x 9" Gray Floor Tile

Response Action 8: The 9" x 9" Gray Floor Tile identified within Rooms 1, 2, 3, 4, 7, 9, 13, 14, 15, and 20 as well as the Nurse Area displayed minor damage. Retain an Asbestos Project Designer to prepare a Work Plan for the removal and replacement of the damaged floor tile and retain a Massachusetts certified Abatement Contractor to complete the response action following the Work Plan. Recommended completion date of the work activities: August 2024.

Response Action 8: The remaining 9" x 9" Gray Floor Tile located at the school is in generally good condition. Please refer to Appendix A which includes the locations and estimated quantities of the 9" x 9" Gray Floor Tile. Continue the O& M Program and manage the material in place until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change.

Homogeneous Area #6- 9"x 9" Tan Floor Tile

Response Action 8: The 9" x 9" Tan Floor Tile identified within the Rooms 12 and 16 as well as the Gymnasium displayed minor damage. Retain an Asbestos Project Designer to prepare a Work Plan for the removal and replacement of the damaged floor tile and retain a Massachusetts certified Abatement Contractor to complete the response action following the Work Plan. Recommended completion date of the work activities: August 2024.

Response Action 8: The remaining 9" x 9" Tan Floor Tile located at the school is in generally good condition. Please refer to Appendix A which includes the locations and estimated quantities of the 9" x 9" Tan Floor Tile. Continue the O& M Program and manage the material in place until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change.

Homogeneous Area #7- 9"x 9" Green Floor Tile

The 9" x 9" Green Floor Tile identified within the Hallway between Rooms 6 and 7 as well as the Lobby displayed minor damage. Retain an Asbestos Project Designer to prepare a Work Plan for the removal and replacement of the damaged floor tile and retain a Massachusetts certified Abatement Contractor to complete the response action following the Work Plan. Recommended completion date of the work activities: August 2024.

Section 1
Inspection Report (continued)
Hazard Assessment

Homogeneous Area #8- 9"x 9" Black Floor Tile

Response Action 8: The 9" x 9" Black Floor Tile located throughout the borders of classrooms is in generally good condition. Continue the O& M Program and manage the material in place until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change.

Homogeneous Area #9- 9"x 9" Brown Floor Tile

Response Action 8: The 9" x 9" Brown Floor Tile identified within the Room 10 Storage displayed minor damage. Retain an Asbestos Project Designer to prepare a Work Plan for the removal and replacement of the damaged floor tile and retain a Massachusetts certified Abatement Contractor to complete the response action following the Work Plan. Recommended completion date of the work activities: August 2024.

Response Action 8: The 9" x 9" Brown Floor Tile located within the Kitchen Office is in generally good condition. Continue the O& M Program and manage the material in place until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change.

Homogeneous Area #10- Black Floor Tile Mastic

Response Action 8: The Black Floor Tile Mastic is associated and covered with the gray, tan, brown and green colored 9" Floor Tile. Continue the O & M Program and manage the material in place until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change.

Homogeneous Area #11- Black Residual Floor Tile Mastic

Response Action 8: The Black Residual Floor Tile Mastic is located within the Cafeteria and Rooms 17 and 19 under 12" Non-Asbestos Containing Floor Tile. Continue the O & M Program and manage the material in place until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change.

Homogeneous Area #12- Cementitious Panels Under Windows

Response Action 8: The Cementitious Panels Under the Windows are located within the Principal Office, Teachers Room, Art Room and Rooms 10 and 11 are in generally good condition. Continue the O& M Program and manage the material in place until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change.

Section 1
Inspection Report (continued)
Hazard Assessment

Homogeneous Area #13- Cementitious Panel on Cooler

Response Action 8: The Cementitious Panels on the Cooler within the Kitchen are in generally good condition. Continue the O& M Program and manage the material in place until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change.

Homogeneous Area #14- Interior Window Glazing

Response Action 8: The Interior Window Glazing is located on the window units of the Janitor Office Bathroom, Storage Room M-1 and Electrical Room is in generally good condition. Continue the O& M Program and manage the material in place until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change.

SECTION 4

RECORDKEEPING REQUIREMENTS AND RECOMMENDATIONS

Section 4
Recordkeeping Requirements and Recommendations

The AHERA regulations have very specific requirement for the maintenance of records associated with the management of the identified ACMs in the school. The following is a list of some of the key items that the LEA Designated Person must maintain as part of the package:

- Initial AHERA inspection report and Asbestos Management Plan
- Subsequent 3-year reinspection reports.
- 6-month surveillance reports.
- Documentation for minor and major fiber release episodes. This includes abatement work performed by outside contractors as well as work performed by 16 hour trained maintenance personnel no matter how small.
- Documentation for completion of response actions (i.e. clearance testing, waste shipment records, etc.). This should always include applicable training and certification documentation for the parties involved performing the work activities.
- Labeling of ACM (friable)
- Yearly notice to parents, teachers and staff.
- Training and medical exams for 16-hour trained personnel. Although training does not require renewal. Medicals are to be performed every year. In addition, 16-hour personnel should be fit tested every six months.
- Two-hour awareness training for staff. Any new workers are required to receive this training at start of employment. Training should include specific review of ACMs in the building their working in.

The above items are some of the key items, which need to be incorporated into the plan. The following are some recommendations are how best to maintain for easy access and review by outside parties:

- Maintain an update the three- ring binder for the school. Have a duplicated copy, one for administration office and one for the facilities office.
- Create tab sections in the binder. Each section should contain the information above. This will allow for easy review and update.
- Ensure that for every major and minor fiber release episode, that all documentation is received.
- As you updated your file, ensure the school's is updated.

Section 4

Recordkeeping Requirements and Recommendations (continued)

Also, it is also required that if outside contractors enter building perform work that they review areas where asbestos may be present that will be near their work. Have a log at the school for them to sign that they have read and understand. This will protect the school from liability and ensure outside contactors will not disturb asbestos. Finally, periodically review program internally and with your 16-hour persons to ensure compliance.

The pipe fitting insulation identified within the Room 10 Storage and Crawl Space displayed minor damage. Retain an Asbestos Project Designer to prepare a Work Plan for the repair or remove the damaged pipe fitting insulation and retain a Massachusetts certified Abatement Contractor to complete the response action following the Work Plan. Recommended completion date of the work activities: August 2024.

The 9" x 9" Gray Floor Tile identified within Rooms 1, 2, 3, 4, 7, 9, 13, 14, 15, and 20 as well as the Nurse Area displayed minor damage. Retain an Asbestos Project Designer to prepare a Work Plan for the removal and replacement of the damaged floor tile and retain a Massachusetts certified Abatement Contractor to complete the response action following the Work Plan. Recommended completion date of the work activities: August 2024.

The 9" x 9" Tan Floor Tile identified within the Rooms 12 and 16 as well as the Gymnasium displayed minor damage. Retain an Asbestos Project Designer to prepare a Work Plan for the removal and replacement of the damaged floor tile and retain a Massachusetts certified Abatement Contractor to complete the response action following the Work Plan. Recommended completion date of the work activities: August 2024.

The 9" x 9" Brown Floor Tile identified within the Room 10 Storage and Lobby displayed minor damage. Retain an Asbestos Project Designer to prepare a Work Plan for the removal and replacement of the damaged floor tile and retain a Massachusetts certified Abatement Contractor to complete the response action following the Work Plan. Recommended completion date of the work activities: August 2024.

VERTEX recommends continuing the periodic cleaning schedule with properly trained staff (i.e. 2-Hour Asbestos Awareness) utilizing HEPA-vacuums and wet mopping.

A required six-month periodic surveillance inspection should be scheduled for November 2024.

VERTEX recommends an ACMs Survey be conducted prior to any renovation activities to comply with the EPA Title 40 CFR Part 61, NESHAPs and the Massachusetts Department of Environmental Protection Regulations as well as Transmission Electron Microscopy (TEM) confirmatory analysis for Non-Friable Organically Bound (NOB) Materials identified non-detected (i.e. mastics, adhesives, etc.) prior to disturbance.

SECTION 5

ESTIMATED RESOURCES REQUIRED TO COMPLETE THE RESPONSE ACTIONS

Section 5
Estimated Resources Required to Complete the Response Actions

This section contains the estimated resources required to complete the abatement activities of the identified damaged ACMs. These estimates will vary according to competitive bidding, accessibility, location, and condition of ACMs, phasing of work, etc. The cost estimate below does not include abatement contactor mobilization, abatement design and/or project monitoring services.

Estimated Cost to complete the Response Actions at the Hatherly Elementary School in Scituate, Massachusetts:

$1,000.00*

Cost Estimate Worksheet can be found in Appendix B.

* The estimated cost provided above is developed from current Abatement Contractor Unit pricing. These estimates will vary according to competitive bidding, accessibility, location, and condition of ACMs, phasing of work, etc. In addition, the costs above do not include mobilization of the Abatement Contractor, Abatement Work Plan/Design, Project Monitoring and/or Clearance Testing Services for the completion of the response actions. Please refer for below unit pricing regarding costs for the Contractor Mobilization and Clearance Testing Services:

Abatement Work Plan/Design Specification = $500-$2,500.00
Abatement Contactor Mobilization = $1,500.00-$2,500.00
Project Monitoring/Clearance Testing = $520.00-$760.00/per shift
Transmission Electron Microcopy (TEM) Analysis = $75.00-$100.00/sample
Phase Contrast Microscopy (PCM) Analysis = No Charge -$15.00/sample
Clearance Report Preparation = $350.00-$800.00

**The estimated cost provided above does not include costs that may be associated with two-hour asbestos awareness training, OSHA 16-hr Operations and Maintenance Training, and/or the labor to conduct the required six-month surveillance re-inspections. Please refer below for estimated costs that may be associated with the mentioned above:

2-Hour Asbestos Awareness Training = $75/person
OSHA 16-hr Operations and Maintenance Training = $300/person
Six-Month Periodic Surveillance Inspection = $400/inspection

SECTION 6

ESTIMATED RESOURCES REQUIRED FOR THE ABATEMENT OF THE IDENTIFIED ACBMs

Section 6
Estimated Resources Required For Abatement of the Identified ACMs

This section contains the estimated resources required to perform the removal of identified ACMS, however EPA recommends the ACMs to be managed in place if they are not damaged. Alternative abatement costs are estimated using current Abatement Contractor Estimates. These estimates will vary per competitive bidding, accessibility, location, and condition of ACMs, phasing of work, etc. The cost estimate below is a worst-case scenario if all identified ACMs were to be removed. The cost estimate below does not include abatement contactor mobilization, abatement design and/or project monitoring services.

Estimated Cost for the Removal of ACMs from the Hatherly Elementary School in Scituate, Massachusetts:

$350,000.00*

Cost Estimate Worksheet can be found in Appendix C.

*The estimated cost above does not include removal of potentially concealed ACMs within the interior of the school. In addition, the estimated cost provided above does not include abatement of potential ACMs on the exterior of the site building and/or beyond the AHERA inspection.

** The estimated cost provided above is developed from current Abatement Contractor Unit pricing. These estimates will vary according to competitive bidding, accessibility, location, and condition of ACMs, phasing of work, etc. In addition, the costs above do not include mobilization of the Abatement Contractor, Abatement Work Plan/Design, Project Monitoring and/or Clearance Testing Services for the completion of the response actions. Please refer for below unit pricing regarding costs for the Contractor Mobilization and Clearance Testing Services:

Abatement Work Plan/Design Specification = $500-$2,500.00
Abatement Contactor Mobilization = $1,500.00-$2,500.00
Project Monitoring/Clearance Testing = $520.00-$760.00/per shift
Transmission Electron Microcopy (TEM) Analysis = $75.00-$100.00/sample
Phase Contrast Microscopy (PCM) Analysis = No Charge -$15.00/sample
Clearance Report Preparation = $350.00-$800.00

SECTION 7

OPERATIONS AND MAINTENANCE

Section 7
Operations and Maintenance Program

INTRODUCTION

The Scituate Public School District has established an overall asbestos control program that is designed to minimize exposure of all occupants of the school to asbestos fibers located at the Hatherly Elementary School. This Operations and Maintenance (O&M) Plan is an integral part of the overall program. It sets guidelines for the proper in-place management of all assumed and identified ACMs located in the building.

This O&M plan contains the following sections:

A. A description of the **duties of the LEA Designated Person (DP).**

B. A procedure for **notifying** workers, tenants, and other visitors where ACM are located, and stressing the importance of avoiding disturbing the ACM in any way.

C. The detailed description of **O&M Activities,** including:

   1. **Emergency procedures** for both major and minor episodes of fiber release;

   2. **Periodic surveillance** of ACM, so that any changes in the condition of ACM can be noted, assessed, and documented; and

   3. Detailed descriptions of **work procedures** for both general maintenance and Asbestos Associated Project Workers, which must be used so that workers can avoid or minimize fiber release when performing activities that may disturb ACM.

D. A list of **records** that must be kept to document O&M and abatement activities.

E. **Training requirements** for the DP, and custodial and maintenance staff.

In general, asbestos represents a health hazard **only** if fibers are breathed into the lungs or, in rare cases, are swallowed. Asbestos-containing materials that are non-friable (i.e. cannot be easily broken of crumbled by hand pressure) are not hazardous as long as they are intact and in good condition. Because friable materials can be easily crumbled or crushed, they are more susceptible to airborne fiber release than are non-friable materials.

It is a policy of the Scituate Public School District that untrained employees and outside contractors **DO NOT** handle, touch or otherwise disturb any material that is asbestos or suspected of containing asbestos. A properly qualified and trained individual must handle any material that is, or may contain asbestos. Non-asbestos materials have been and may be identified by the asbestos coordinator using one or more of the following criteria: (1) lab analysis, (2) results of previous lab analysis, (3) product composition labels, (4) receipts, and so forth. At no time will any employee, student, or outside contractor assume a material to be asbestos-free. An inventory of ACMs identified from the inspection are presented in Appendix A.

Section 7
Operations and Maintenance Program (Continued)

1. DUTIES OF THE ASBESTOS MANAGEMENT PLAN DESIGNATED PERSON

The DP oversees the implementation and management of the O&M plan. Duties of the DP include (1) notifying building staff, workers, and outside contractors where ACM is located in the building, (2) assigning workers to tasks involving work that may disturb ACM, (3) ensuring that abatement and O&M activities are conducted by trained qualified personnel, and (4) keeping records of all asbestos-related activities at the property.

The DP must receive training related to asbestos issues (see "Training Requirements" of this plan).

2. NOTIFICATION

The DP shall ensure that building workers, outside contractors, and tenants are notified of the location, quantity, and physical condition of identified and assumed ACM that they might disturb. Such notification shall be accomplished by written notice, by personal communication, by posting signs at entrances to mechanical areas, and/or by labeling ACM. By informing occupants of potential hazards in their vicinity, the notification reduces the possibility that occupants will accidentally disturb ACM. The notification must stress that persons who disturb ACM may accidentally release asbestos fibers into the air, and that therefore everyone must avoid disturbing ACM. This notification will assure compliance with Occupational Health and Safety Administration (OSHA) Regulation 29 CFR Part 1926.1101, which regulates asbestos exposure as it relates to construction work (including building maintenance) and with 29 CFR 1910.1001, which regulates asbestos exposure in general industry (including normal housekeeping).

If asbestos-related construction, abatement, of O&M activities is conducted, the DP shall also notify the following persons about the presence, location, and quantity of ACM:

A. Employees of the building, such as maintenance and custodial personnel who will work in or adjacent to areas containing ACM:

B. Staff who will occupy areas containing ACM.

C. Prospective employers applying for or bidding for work if their employees will be expected to work in or adjacent to areas containing ACM.

D. Multiple employers occupying a work-site in the building, any of whose employees will be performing work within or adjacent to areas containing ACM.

Section 7
Operations and Maintenance Program (Continued)

Before conducting any work in the building that has the potential to impact ACM, contractors will be required to sign the Contractor's Asbestos Notification and Acknowledgment Form. In addition, all contractors and contractor's employees who work on the site will be required to notify the DP of the presence, location, and quantity of newly discovered ACM within 24 hours (or sooner if ACM is disturbed) of the discovery. If any building materials are discovered, the asbestos content of which is unknown, the material shall be presumed to contain asbestos, until the results of sampling and analysis prove otherwise. Appropriate sampling of the material shall be conducted by a Massachusetts Department of Labor and Work Force Development Division of Labor Standards accredited asbestos inspector and analyzed at an appropriately licensed asbestos analytical laboratory.

The DP shall ensure that all required warning signs are posted during abatement and O&M activities during which the release of asbestos fibers into the air is possible. Warning signs shall demarcate all regulated areas and shall bear the following information:

DANGER
ASBESTOS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE
CLOTHING ARE REQUIRED IN THIS AREA

Contractors and in-house personnel who remove ACM within the site shall label all waste containers that contain ACM waste in accordance with OSHA and EPA guidelines.

The Massachusetts Department of Environmental Protection (DEP) and the Massachusetts Division of Labor Standards (DLS) will be notified anytime work will impact any quantity of ACM at the school.

The DP shall ensure that all previously installed ACM that have been identified in the facility are labeled or identified by signs, as feasible. All ACM that are friable and accessible, such as TSI located in mechanical areas or below suspended ceilings, will be labeled. Labels shall be attached to or posted in areas where employees, residents, and outside contractors who are likely to be exposed will clearly notice (such as at the entrance to mechanical rooms).

The labels shall bear the following information:

DANGER
CONTAINS ASBESTOS FIBERS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
DO NOT BREATHE DUST
AVOID CREATING DUST

Posted signs may be used in lieu of labels to indicate the type and location of each ACM.

Section 7

Operations and Maintenance Program (Continued)

3. OPERATIONS AND MAINTENANCE ACTIVITIES

Operations and maintenance activities include:

- Emergency procedures to be followed in the event of a major or minor episode of fiber release;
- Periodic surveillance of ACM within at the school building;
- Work procedures associated with planned maintenance activities that may disturb ACM. Only properly trained personnel under the control and direction of the DP shall conduct operations and maintenance activities.
- Periodic Cleaning Activities

A. Emergency Procedures for Fiber Release Episodes

Fiber release episodes are categorized as *major* (the falling or dislodging of more than 3 square feet or 3 linear feet of friable ACM), or minor (the falling or dislodging of fewer than 3 square feet or 3 linear feet of friable ACM)

PROCEDURE FOR MAJOR EPISODE

1. Restrict entry into the area.

2. Immediately contact the DP

3. Post sign to prevent anyone from entering the area except persons necessary to perform the response action.

4. Shut off or temporarily modify the air-handling system to prevent the fibers from being distributed to other areas in the building.

5. The DP shall contact an accredited designer of abatement to prepare an abatement plan that specifies the appropriate response actions.

6. The DP shall ensure that only a Massachusetts Certified Asbestos Abatement Contractor conducts the response actions.

Section 7
Operations and Maintenance Program (Continued)

PROCEDURE FOR MINOR EPISODE

1. Thoroughly saturate the debris using all wetting methods necessary.

2. Clean the area using wet wiping techniques followed by vacuuming with a specially equipped High Efficiency Particulate Air (HEPA) vacuum.

3. Place all debris and all contaminated cleaning supplies (mop heads, rags, etc.) into a leak tight container, such as a 6-mil thick polyethylene waste bag, and seal the container. Place the sealed container into a second 6-mil thick polyethylene bag. If labeled waste bags are not used, apply warning label to outside of each bag used.

4. Repair the area of damaged ACM, as follows:

    a. Use materials such as asbestos-free spackling, plaster, cement, or insulation; or

    b. Seal the area with latex paint or an encapsulate; or

    c. Immediately implement other appropriate response action.

B. Periodic Surveillance

Periodic surveillance of all known and assumed ACM shall be conducted once every six months. The purpose of the regularly scheduled surveillance is to ensure that any ACM that are damaged or that have deteriorated are detected in a timely manner. The DP shall use the information from the periodic surveillance in conjunction with ongoing reports from the periodic surveillance in conjunction with ongoing reports from service workers of changes in the condition of the ACM to take corrective action.

The periodic surveillance consists of a visual inspection of all known and assumed ACM. Periodic surveillance shall also include a visual and physical evaluation of ACM in order to determine the degree of damage and to assess the likelihood of future fiber release. The area in the immediate vicinity shall also be examined for potential loose ACM debris. The DP shall record the cause of the damage.

Only persons who have received at least the minimum asbestos-awareness training (see “Training Requirements”, of this plan) shall conduct the periodic surveillance. The results of the surveillance shall be recorded on the periodic surveillance inspection form.

Section 7
Operations and Maintenance Program (Continued)

C. Work Procedures for General Maintenance Personnel

The following work practices shall be prohibited in all circumstances:

- Drilling holes in ACM;
- Damaging ACM while moving furniture or other objects;
- Sweeping of dusting floors, ceilings, moldings, or other surfaces in asbestos-contaminated environments;
- Using an ordinary vacuum to clean up asbestos-containing or asbestos contaminated debris (only vacuums equipped with a HEPA filter should be used);
- Removing potentially contaminated ventilation system filters without thoroughly wetting them; and
- Shaking potentially contaminated ventilation system filters.

D. Periodic Cleaning

The following is a general outline to be utilized for the properly trained personnel to conduct the periodic cleaning activities:

- Utilization of disposable rags to wet wipe of all non-porous horizontal surfaces followed by the use of a HEPA-equipped vacuum. Dry sweeping and/or dusting is not permitted to be used to clean the surfaces.
- The collected debris within the lined HEPA-equipped vacuum and disposal rags should be properly disposed of in a labeled asbestos-waste bag accompanied by a Waste Shipment Record for future disposal at a permitted facility that accepts asbestos waste.
- Document the Name of the individual conducting the work activities, location date and time of cleaning for proper recordkeeping. These records should be included within the AMP for the school.

Floor Tile Maintenance

Pursuant to the Occupational Safety and Health Administration (OSHA) Asbestos Standard 29 CFR 1910.1001, properly trained staff (i.e. 2-Hour Asbestos Awareness) should adhere to the OSHA's guidance for care of asbestos-containing flooring materials outlined below:

- Do not sand asbestos-containing flooring material;
- Use only low-abrasion buffing pads;
- Operate buffers only at speeds lower the 300 rpm;
- Use wet methods;
- Document the Name of the individual conducting the work activities, location date and time of cleaning for proper recordkeeping. These records should be included within the AMP for the school.

Section 7
Operations and Maintenance Program (Continued)

4. RECORDKEEPING REQUIREMENTS

The building owner shall maintain the following documentation pertaining to ACM in the facility:

- All data that are relied upon to demonstrate that suspect ACM do not in fact contain asbestos.
- All data communicated and received that identify the locations and quantities of ACM.
- All records associated with abatement projects and O&M activities.These documents shall be maintained during the term of ownership. They shall then be transferred to successive owners, in accordance with OSHA Regulation 1926.1101 (n).
- If the owner's employees conduct activities that may potentially cause them to be exposed to asbestos fibers, the owner shall keep the following additional records:
- All employee exposure-monitoring records pursuant to OSHA Regulation 1926.1101(f).
- All information relative to medical surveillance of employees pursuant to OSHA Regulation 1926.1101(m). Medical surveillance shall be required only if:

    1. Employees are required to conduct tasks that would result in their exposure to airborne concentrations of asbestos above the OSHA permissible exposure limit (PEL); or
    2. If employees conduct asbestos abatement tasks for more than 30 days per year.

- The owner shall maintain all employee-training records for one year beyond the employee's last date of employee's last date of employment.

5. TRAINING REQUIREMENTS

The extent of asbestos training for facility employees depends on the type of asbestos-related activities they will conduct. For most employees who will require training, a two-hour awareness course will be sufficient but necessary. For employees who are involved in activities where exposure to airborne asbestos fibers is likely, a more comprehensive 16-hour training course is necessary.

Section 7
Operations and Maintenance Program (Continued)

AWARENESS TRAINING

The curriculum shall include instruction in the following:

- The location, quantity, and physical condition of all ACM located in the facility.
- Recognition of damage, deterioration, and delaminating of ACM.
- The health effects associated with asbestos exposure, including the relationship between smoking and asbestos in producing lung cancer.
- Procedures to be implemented in the event of a minor or major episode of fiber release.
- The requirements for posting signs and affixing labels, and the meaning of the required legends for such signs and labels.

COMPREHENSIVE WORKER TRAINING

The curriculum shall include instruction in the following:

- All awareness training information described above.
- The nature of operations that could result in exposure to asbestos, and the importance of necessary protective controls and of procedures for minimizing exposure, including:
  - engineering controls
  - work practices,
  - respirators,
  - housekeeping procedures,
  - hygiene facilities,
  - protective clothing,
  - decontamination procedures,
  - emergency procedures,
  - waste disposal procedures and any necessary instruction in the use of these controls and procedures.

Section 7

Operations and Maintenance Program (Continued)

- The purpose, proper use, fitting instructions, and limitations of respirators.
- Medical surveillance program requirements
- The contents of the OSHA standard (1926.1101) regarding asbestos in construction.
- Hands-on-training in the use of respiratory protection, other personal protection measures, and work practices.

Detailed procedures for conducting small-scale, short duration abatement activities, as defined in Appendix A to Subpart E to EPA Regulation 40 CFR Part 763.

APPENDIX A

LOCATIONS OF THE ASBESTOS CONTAINING MATERIALS AND UPDATED CONDITONS

Appendix A
AHERA Inspection May 2024
Locations of the Identified Asbestos-Containing Building Materials
Hatherly Elementary School-72 Ann Vinal Road

Location	ACM Description	Estimated Quantity	VERTEX 2021 Cond.	VERTEX 2024 Updated Cond.	Fri.	HA #
		First Floor				
A/V Room	Pipe Fitting Insulation	3 Units	G	G	Y	5
Storage M-1	Pipe Fitting Insulation	4 Units	G	G	Y	5
Hallway by Boiler Room	Pipe Fitting Insulation	4 Units	G	G	Y	5
Janitor Office	Pipe Fitting Insulation	3 Units	G	G	Y	5
Kitchen Storage	Pipe Fitting Insulation	19 Units	G	G	Y	5
Kitchen	Ceramic Floor Tile Adhesive	2,100 ft^2	C	C	N	5
	Pipe Fitting Insulation	5 Units	G	G	Y	5
	1' x 1' Ceiling Tile (Pinhole)	2,100 ft^2	G	6-Missing Tiles	Y	5
Kitchen Office	9" x 9 " Brown Floor Tile	77 ft^2	G	G	N	5
	Black Floor Tile Mastic	77 ft^2	C	C	N	5
	1' x 1' Ceiling Tile (Pinhole)	77 ft^2	G	G	Y	5
Motor Room	Pipe Fitting Insulation	9 Units	G	G	Y	5
	Canvas Covering on Duct Insulation	260 ft^2	G	G	N	5
Cafeteria	9" x 9 " Tan Floor Tile (Under 12” Teal Floor Tile)	3,000 ft^2	G	C	N	6
	Black Floor Tile Mastic	3,000 ft^2	C	C	N	5
	2' x 4' Ceiling Tile (Fissure Pattern)	3,000 ft^2	G	G	Y	5
Room 1	9" x 9 " Gray Floor Tile	900 ft^2	MD (6 ft^2)	MD (6 ft^2)	N	6
	Black Floor Tile Mastic	900 ft^2	C	C	N	5
Room 2	9" x 9 " Gray Floor Tile	900 ft^2	MD (3 ft^2)	MD (3 ft^2)	N	6
	Black Floor Tile Mastic	900 ft^2	C	C	N	5
Room 3	9" x 9 " Gray Floor Tile	900 ft^2	MD (2 ft^2)	MD (2 ft^2)	N	6
	Black Floor Tile Mastic	900 ft^2	C	C	N	5
Room 4	9" x 9 " Gray Floor Tile	900 ft^2	MD (4 ft^2)	MD (4 ft^2)	N	6
	Black Floor Tile Mastic	900 ft^2	C	C	N	5

Appendix A
AHERA Inspection May 2024
Locations of the Identified Asbestos-Containing Materials
Hatherly Elementary School-72 Ann Vinal Road

Location	ACM Description	Estimated Quantity	VERTEX 2021 Cond.	VERTEX 2024 Updated Cond.	Fri.	HA #
	First Floor					
Room 4.5	9" x 9 " Gray Floor Tile (Under Carpet)	168 ft^2	C	C	N	5
	Black Floor Tile Mastic	168 ft^2	C	C	N	5
Room 5	9" x 9 " Gray Floor Tile	900 ft^2	G	G	N	5
	Black Floor Tile Mastic	900 ft^2	C	C	N	5
Room 6	9" x 9 " Gray Floor Tile	900 ft^2	G	G	N	5
	Black Floor Tile Mastic	900 ft^2	C	C	N	5
Hallway by Room 6	9" x 9 " Green Floor Tile	256 ft^2	MD (4 ft^2)	MD (4 ft^2)	N	6
	Black Floor Tile Mastic	256 ft^2	C	C	N	5
Room 7	9" x 9 " Gray Floor Tile	900 ft^2	MD (8 ft^2)	MD (8 ft^2)	N	6
	Black Floor Tile Mastic	900 ft^2	C	C	N	5
Room 8	9" x 9 " Gray Floor Tile	900 ft^2	G	G	N	6
	Black Floor Tile Mastic	900 ft^2	C	C	N	5
Room 9	9" x 9 " Gray Floor Tile	900 ft^2	MD (2 ft^2)	MD (4 ft^2)	N	6
	Black Floor Tile Mastic	900 ft^2	C	C	N	5
Attic in Janitor Closet	Pipe Fitting Insulation	7 Units	G	G	Y	5
	Canvas Covering on Duct Insulation	160 ft^2	G	G	N	5
Lobby	9" x 9 " Green Floor Tile	780 ft^2	MD (20 ft^2)	MD (20 ft^2)	N	6
	Black Floor Tile Mastic	780 ft^2	C	C	N	5
Main Office	9" x 9 " Gray Floor Tile	300 ft^2	G	G	N	5
	Black Floor Tile Mastic	300 ft^2	C	C	N	5
Nurse Office	9" x 9 " Gray Floor Tile	272 ft^2	MD (4 ft^2)	MD (4 ft^2)	N	6
	Black Floor Tile Mastic	272 ft^2	C	C	N	5
Principal Office	9" x 9 " Gray Floor Tile	120 ft^2	G	G	N	5
	Black Floor Tile Mastic	120 ft^2	C	C	N	5
	Cementitous Panel under Windows	27 ft^2	G	G	N	5

Appendix A
AHERA Inspection May 2024
Locations of the Identified Asbestos-Containing Materials
Hatherly Elementary School-72 Ann Vinal Road

Location	ACM Description	Estimated Quantity	VERTEX 2021 Cond.	VERTEX 2024 Updated Cond.	Fri.	HA #
		First Floor				
Rainbow Room (21A)	9" x 9 " Gray Floor Tile	240 ft^2	MD (2 ft^2)	MD (2 ft^2)	N	6
	Black Floor Tile Mastic	240 ft^2	C	C	N	5
Main Hallway	9" x 9 " Tan Floor Tile	1472 ft^2	G	G	N	5
	Black Floor Tile Mastic	1472 ft^2	C	C	N	5
Room 10	9" x 9 " Gray Floor Tile	1026 ft^2	G	G	N	5
	Black Floor Tile Mastic	1026 ft^2	G	G	N	5
	Cementitious Panel under Windows	90 ft^2	G	G	N	5
Room 10 Storage	9" x 9 " Brown Floor Tile	112 ft^2	G	G	N	5
	Black Floor Tile Mastic	112 ft^2	G	G	N	5
	Pipe Fitting Insulation	25 Units	MD (2)	MD (2)	N	1
Room 10 Boys and Girls Rooms	Pipe Fitting Insulation	4 Units	G	G	Y	5
Room 11	9" x 9 " Gray Floor Tile	1026 ft^2	G	MD (2 ft^2)	N	5
	Black Floor Tile Mastic	1026 ft^2	G	G	N	5
	Cementitious Panel under Windows	90 ft^2	G	G	N	5
Hallway by Room 11	9" x 9 " Tan Floor Tile	900 ft^2	G	G	N	5
	Black Floor Tile Mastic	900 ft^2	C	C	N	5
Art Room	9" x 9 "Gray Floor Tile	900 ft^2	G	G	N	5
	Black Floor Tile Mastic	900 ft^2	C	C	N	5
	Cementitious Panel under Windows	102 ft^2	G	G	N	5
Teachers Room	12" x 12" Teal Floor Tile	450 ft^2	G	G	N	5
	9" x 9 " Color Floor Tile (Assumed Under 12")	450 ft^2	C	C	N	5
	Black Floor Tile Mastic	450 ft^2	C	C	N	5
	Cementitious Panel under Windows	36 ft^2	G	G	N	5
Teachers Room Closet	Pipe Fitting Insulation	6 Units	G	G	Y	5
	Canvas Covering on Duct Insulation	32 ft^2	G	G	N	5

Appendix A
AHERA Inspection May 2024
Locations of the Identified Asbestos-Containing Materials
Hatherly Elementary School-72 Ann Vinal Road

Location	ACM Description	Estimated Quantity	VERTEX 2021 Cond.	VERTEX 2024 Updated Cond.	Fri.	HA #
First Floor						
Room 12	9" x 9 " Tan Floor Tile	1,064 ft^2	MD (20 ft^2)	MD (20 ft^2)	N	6
	Black Floor Tile Mastic	1,064 ft^2	C	C	N	5
Janitor Closet by Gym	Pipe Fitting Insulation	2 Units	G	G	Y	5
Room 13	9" x 9 " Gray Floor Tile	900 ft^2	MD (2 ft^2)	MD (2 ft^2)	N	6
	Black Floor Tile Mastic	900 ft^2	C	C	N	5
Room 14	9" x 9 " Gray Floor Tile	900 ft^2	MD (2 ft^2)	MD (2 ft^2)	N	6
	Black Floor Tile Mastic	900 ft^2	C	C	N	5
Room 15	9" x 9 " Gray Floor Tile	900 ft^2	MD (2 ft^2)	MD (2 ft^2)	N	6
	Black Floor Tile Mastic	900 ft^2	C	C	N	5
Room 16	9" x 9 " Tan Floor Tile	900 ft^2	MD (2 ft^2)	MD (2 ft^2)	N	6
	Black Floor Tile Mastic	900 ft^2	C	C	N	5
Room 17	Black Floor Tile Mastic (Under 12" Tile)	900 ft^2	C	C	N	5
Room 18	9" x 9 " Gray Floor Tile (Under Faux Wood)	900 ft^2	MD (32 ft^2)	C	N	6
	Black Floor Tile Mastic	900 ft^2	C	C	N	5
Room 19	Black Floor Tile Mastic (Under 12" Tile)	900 ft^2	C	C	N	5
Room 20	9" x 9 " Gray Floor Tile	900 ft^2	MD (2 ft^2)	MD (2 ft^2)	N	6
	Black Floor Tile Mastic	900 ft^2	C	C	N	5
Gymnasium	9" x 9 " Tan Floor Tile	3,000 ft^2	G	MD (2 ft^2)	N	5
	Black Floor Tile Mastic	3,000 ft^2	C	C	N	5
P.E. Office	Pipe Fitting Insulation	16 Units	G	G	Y	5
Pipe Tunnels/Crawl Space	Pipe Fitting Insulation	400 Units	NA	MD (2 Units)	Y	1

Notes:

ft^2 = Square Foot	Cond. = Condition	U = Unknown	NA = Not Accessible
lf = Linear Foot	G = Good	C = Covered	
Unit = Each	MD = Minor Damage	M = Miscellaneous	
Y= Yes	D = Damaged	S= Surfacing	
N = No	Fri. = Friable	TSI = Thermal System Insulation	

HA # = Homogenous Area Hazard Assessment Category

1 = Damaged/Significantly Damaged Thermal System Insulation
2 = Damaged Friable Surfacing ACBM
3 = Significantly Damaged Friable Surfacing ACBM
4 = Damaged or Significantly Damaged Friable Miscellaneous ACBM
5 = ACBM with Potential for Damage
6 = ACBM with Potential for Significant Damage
7 = Any Remaining Friable ACBM or Friable Suspected ACBM
NA = Not Applicable

APPENDIX B

ESTIMATED RESOURCES REQUIRED TO COMPLETE THE RESPONSE ACTIONS

Appendix B
AHERA Inspection May 2024
Estimated Resources to Complete Response Actions
Hatherly Elementary School-72 Ann Vinal Road

Location	ACM Description	Estimated Quantity	Recommended Response Action	Estimated Cost	Recommended Completion Date of Response Action	Date of Completed Response Action
		First Floor				
Room 1	9" x 9 " Gray Floor Tile	6 ft^2	Repair	$54.00	August 2024	
Room 2	9" x 9 " Gray Floor Tile	3 ft^2	Repair	$27.00	August 2024	
Room 3	9" x 9 " Gray Floor Tile	2 ft^2	Repair	$18.00	August 2024	
Room 4	9" x 9 " Gray Floor Tile	4 ft^2	Repair	$36.00	August 2024	
Hallway by Room 6	9" x 9 " Green Floor Tile	4 ft^2	Repair	$36.00	August 2024	
Room 7	9" x 9 " Gray Floor Tile	8 ft^2	Repair	$72.00	August 2024	
Room 9	9" x 9 " Gray Floor Tile	2 ft^2	Repair	$18.00	August 2024	
Lobby	9" x 9 " Green Floor Tile	20 ft^2	Repair	$180.00	August 2024	
Nurse Office	9" x 9 " Gray Floor Tile	4 ft^2	Repair	$36.00	August 2024	
Rainbow Room (21A)	9" x 9 " Gray Floor Tile	2 ft^2	Repair	$18.00	August 2024	
Room 10 Storage	Pipe Fitting Insulation	2 Units	Repair	$100.00	August 2024	
Room 11	9" x 9 " Gray Floor Tile	2 ft^2	Repair	$18.00	August 2024	
Room 12	9" x 9 " Tan Floor Tile	20 ft^2	Repair	$180.00	August 2024	
Room 13	9" x 9 " Gray Floor Tile	2 ft^2	Repair	$18.00	August 2024	
Room 14	9" x 9 " Gray Floor Tile	2 ft^2	Repair	$18.00	August 2024	
Room 15	9" x 9 " Gray Floor Tile	2 ft^2	Repair	$18.00	August 2024	
Room 16	9" x 9 " Tan Floor Tile	2 ft^2	Repair	$18.00	August 2024	
Room 20	9" x 9 " Gray Floor Tile	2 ft^2	Repair	$18.00	August 2024	
Gymnasium	9" x 9 " Tan Floor Tile	2 ft^2	Repair	$18.00	August 2024	
Crawl Space	Pipe Fitting Insulation	2 Units	Repair	$100.00	August 2024	

Notes:
ft^2 = Square Foot
Unit = Each

* The estimated cost provided above is developed from current Abatement Contractor Unit pricing. These estimates will vary according to competitive bidding, accessibility, location, and condition of ACMs, phasing of work, etc. In addition, the costs above do not include mobilization of the Abatement Contractor, Abatement Work Plan/Design, Project Monitoring and/or Clearance Testing Services for the completion of the response actions. Please refer for below unit pricing regarding costs for the Contractor Mobilization and Clearance Testing Services:

Abatement Work Plan/Design Specification = $500-$2,500.00
Abatement Contactor Mobilization = $1,500.00-$2,500.00
Project Monitoring/Clearance Testing = $520.00-$760.00/per shift
Transmission Electron Microcopy (TEM) Analysis = $75.00-$100.00/sample
Phase Contrast Microscopy (PCM) Analysis = No Charge -$15.00/sample
Clearance Report Preparation = $350.00-$800.00

**The estimated cost provided above does not include costs that may be associated with two-hour asbestos awareness training, OSHA 16-hr Operations and Maintenance Training, and/or the labor to conduct the required six-month surveillance re-inspections. Please refer below for estimated costs that may be associated with the mentioned above:

2-Hour Asbestos Awareness Training = $75/person
OSHA 16-hr Operations and Maintenance Training = $300/person
Six-Month Periodic Surveillance Inspection = $400/inspection

APPENDIX C

ESTIMATED RESOURCES REQUIRED FOR THE ABATEMENT OF THE IDENTIFIED ACMs

Appendix C
AHERA Inspection May 2024
Estimated Costs for the Removal of the Identified Asbestos-Containing Materials
Hatherly Elementary School-72 Ann Vinal Road

Location	ACM Description	Estimated Quantity	Estimated Cost
	First Floor		
A/V Room	Pipe Fitting Insulation	3 Units	$75.00
Storage M-1	Pipe Fitting Insulation	4 Units	$100.00
Hallway by Boiler Room	Pipe Fitting Insulation	4 Units	$100.00
Janitor Office	Pipe Fitting Insulation	3 Units	$75.00
Kitchen Storage	Pipe Fitting Insulation	19 Units	$475.00
Kitchen	Ceramic Floor Tile Adhesive	2,100 ft^2	$21,000.00
	Pipe Fitting Insulation	5 Units	$125.00
	1' x 1' Ceiling Tile (Pinhole)	2,100 ft^2	$12,600.00
Kitchen Office	9" x 9 " Brown Floor Tile	77 ft^2	$693.00
	Black Floor Tile Mastic	77 ft^2	
	1' x 1' Ceiling Tile (Pinhole)	77 ft^2	$462.00
Motor Room	Pipe Fitting Insulation	9 Units	$225.00
	Canvas Covering on Duct Insulation	260 ft^2	$1,560.00
Cafeteria	9" x 9 " Tan Floor Tile	3,000 ft^2	$27,000.00
	Black Floor Tile Mastic	3,000 ft^2	
	2' x 4' Ceiling Tile (Fissure Pattern)	3,000 ft^2	$18,000.00
Room 1	9" x 9 " Gray Floor Tile	900 ft^2	$8,100.00
	Black Floor Tile Mastic	900 ft^2	
Room 2	9" x 9 " Gray Floor Tile	900 ft^2	$8,100.00
	Black Floor Tile Mastic	900 ft^2	
Room 3	9" x 9 " Gray Floor Tile	900 ft^2	$8,100.00
	Black Floor Tile Mastic	900 ft^2	
Room 4	9" x 9 " Gray Floor Tile	900 ft^2	$8,100.00
	Black Floor Tile Mastic	900 ft^2	

Appendix C
AHERA Inspection May 2024
Estimated Costs for the Removal of the Identified Asbestos-Containing Materials
Hatherly Elementary School-72 Ann Vinal Road

Location	ACM Description	Estimated Quantity	Estimated Cost
First Floor			
Room 4.5	9" x 9 " Gray Floor Tile (Under Carpet)	168 ft^2	$1,512.00
	Black Floor Tile Mastic	168 ft^2	
Room 5	9" x 9 " Gray Floor Tile	900 ft^2	$8,100.00
	Black Floor Tile Mastic	900 ft^2	
Room 6	9" x 9 " Gray Floor Tile	900 ft^2	$8,100.00
	Black Floor Tile Mastic	900 ft^2	
Hallway by Room 6	9" x 9 " Green Floor Tile	256 ft^2	$2,304.00
	Black Floor Tile Mastic	256 ft^2	
Room 7	9" x 9 " Gray Floor Tile	900 ft^2	$8,100.00
	Black Floor Tile Mastic	900 ft^2	
Room 8	9" x 9 " Gray Floor Tile	900 ft^2	$8,100.00
	Black Floor Tile Mastic	900 ft^2	
Room 9	9" x 9 " Gray Floor Tile	900 ft^2	$8,100.00
	Black Floor Tile Mastic	900 ft^2	
Attic in Janitor Closet	Pipe Fitting Insulation	7 Units	$175.00
	Canvas Covering on Duct Insulation	160 ft^2	$960.00
Lobby	9" x 9 " Tan Floor Tile	780 ft^2	$7,020.00
	Black Floor Tile Mastic	780 ft^2	
Main Office	9" x 9 " Gray Floor Tile	300 ft^2	$2,700.00
	Black Floor Tile Mastic	300 ft^2	
Nurse Office	9" x 9 " Gray Floor Tile	272 ft^2	$2,448.00
	Black Floor Tile Mastic	272 ft^2	
Principal Office	9" x 9 " Gray Floor Tile	120 ft^2	$1,080.00
	Black Floor Tile Mastic	120 ft^2	
	Cementitious Panel under Windows	27 ft^2	$270.00

Appendix C
AHERA Inspection May 2024
Estimated Costs for the Removal of the Identified Asbestos-Containing Materials
Hatherly Elementary School-72 Ann Vinal Road

Location	ACM Description	Estimated Quantity	Estimated Cost
	First Floor		
Rainbow Room (21A)	9" x 9 " Gray Floor Tile	240 ft^2	$2,160.00
	Black Floor Tile Mastic	240 ft^2	
Main Hallway	9" x 9 " Tan Floor Tile	1472 ft^2	$13,248.00
	Black Floor Tile Mastic	1472 ft^2	
Room 10	9" x 9 " Gray Floor Tile	1026 ft^2	$9,234.00
	Black Floor Tile Mastic	1026 ft^2	
	Cementitious Panel under Windows	90 ft^2	$900.00
Room 10 Storage	9" x 9 " Brown Floor Tile	112 ft^2	$1,008.00
	Black Floor Tile Mastic	112 ft^2	
	Pipe Fitting Insulation	25 Units	$625.00
Room 10 Boys and Girls Rooms	Pipe Fitting Insulation	4 Units	$100.00
Room 11	9" x 9 " Gray Floor Tile	1026 ft^2	$9,234.00
	Black Floor Tile Mastic	1026 ft^2	
	Cementitious Panel under Windows	90 ft^2	$900.00
Hallway by Room 11	9" x 9 " Tan Floor Tile	900 ft^2	$8,100.00
	Black Floor Tile Mastic	900 ft^2	
Art Room	9" x 9 "Gray Floor Tile	900 ft^2	$8,100.00
	Black Floor Tile Mastic	900 ft^2	
	Cementitious Panel under Windows	102 ft^2	$1,020.00
Teachers Room	12" x 12" Teal Floor Tile	450 ft^2	$5,400.00
	9" x 9 " Color Floor Tile (Assumed Under 12")	450 ft^2	
	Black Floor Tile Mastic	450 ft^2	
	Cementitious Panel under Windows	36 ft^2	$360.00
Teachers Room Closet	Pipe Fitting Insulation	6 Units	$150.00
	Canvas Covering on Duct Insulation	32 ft^2	$192.00

Appendix C
AHERA Inspection May 2024
Estimated Costs for the Removal of the Identified Asbestos-Containing Materials
Hatherly Elementary School-72 Ann Vinal Road

Location	ACM Description	Estimated Quantity	Estimated Cost
First Floor			
Room 12	9" x 9 " Tan Floor Tile	1,064 ft^2	$9,576.00
	Black Floor Tile Mastic	1,064 ft^2	
Janitor Closet by Gym	Pipe Fitting Insulation	2 Units	$0.00
Room 13	9" x 9 " Gray Floor Tile	900 ft^2	$8,100.00
	Black Floor Tile Mastic	900 ft^2	
Room 14	9" x 9 " Gray Floor Tile	900 ft^2	$8,100.00
	Black Floor Tile Mastic	900 ft^2	
Room 15	9" x 9 " Gray Floor Tile	900 ft^2	$8,100.00
	Black Floor Tile Mastic	900 ft^2	
Room 16	9" x 9 " Tan Floor Tile	900 ft^2	$8,100.00
	Black Floor Tile Mastic	900 ft^2	
Room 17	Black Floor Tile Mastic (Under 12" Tile)	900 ft^2	$8,100.00
Room 18	9" x 9 " Gray Floor Tile	900 ft^2	$8,100.00
	Black Floor Tile Mastic	900 ft^2	
Room 19	Black Floor Tile Mastic (Under 12" Tile)	900 ft^2	$8,100.00
Room 20	9" x 9 " Gray Floor Tile	900 ft^2	$8,100.00
	Black Floor Tile Mastic	900 ft^2	
Gymnasium	9" x 9 " Tan Floor Tile	3,000 ft^2	$27,000.00
	Black Floor Tile Mastic	3,000 ft^2	
P.E. Office	Pipe Fitting Insulation	16 Units	$400.00
Pipe Tunnels/Crawl Space	Pipe Fitting Insulation	400 Units	$10,000.00

Notes:
ft^2 = Square Foot
lf = Linear Foot
Unit = Each

* The estimated cost provided above is developed from current Abatement Contractor Unit pricing. These estimates will vary according to competitive bidding, accessibility, location, and condition of ACMs, phasing of work, etc. The estimated cost for floor tile mastic removal is included within the total cost for the removal of the associated floor tile. In addition, the costs above do not include mobilization of the Abatement Contractor, Abatement Work Plan/Design, Project Monitoring and/or Clearance Testing Services for the completion of the response actions. Please refer for below unit pricing regarding costs for the Contractor Mobilization and Clearance Testing Services:

Abatement Work Plan/Design Specification = $500-$2,500.00
Abatement Contactor Mobilization = $1,500.00-$2,500.00
Project Monitoring/Clearance Testing = $520.00-$600.00/per shift
Transmission Electron Microcopy (TEM) Analysis = $75.00-$100.00/sample
Phase Contrast Microscopy (PCM) Analysis = No Charge -$15.00/sample
Clearance Report Preparation = $350.00-$800.00

APPENDIX D

PERSONNEL CERTIFICATIONS

THE VERTEX COMPANIES, LLC

ACCREDITATION PAGE

Accredited Inspector

Name: Jason Mohre

Accreditation Number: AI000262

Signature: _____

Date: 6/14/2024

Accredited Management Planner

Name: Jason Mohre

Accreditation Number: AP000080

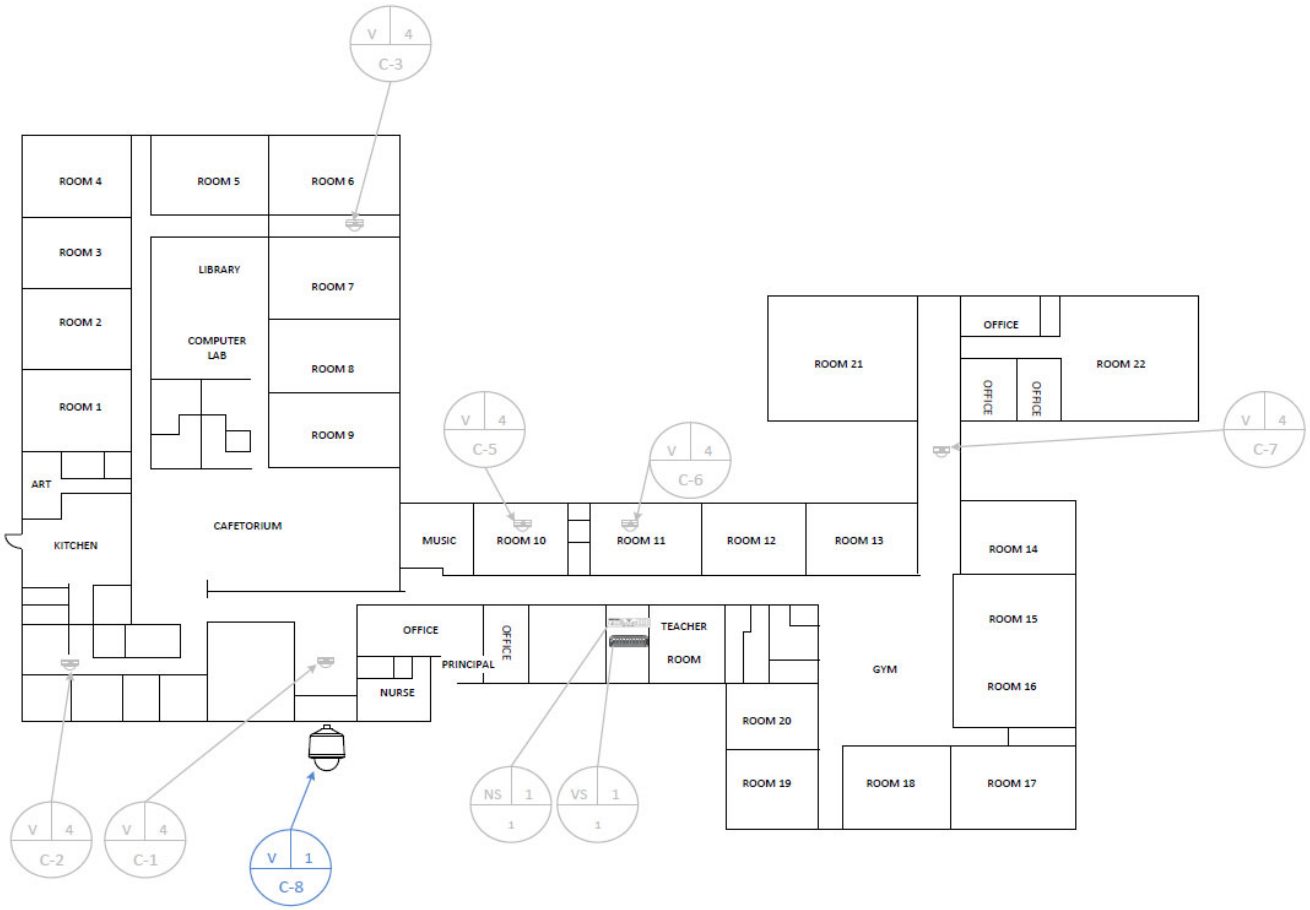
Signature:_____

Date: 6/14/2024

APPENDIX E

SCHEMATIC

Hatherly Elementary School
72 Ann Vinal Road
Scituate, MA



APPENDIX F

SIX-MONTH SURVELLIANCE FORMS

AHERA Six-Month Surveillance Inspection Date:_____

(Print Name):_____

Signature:_____

Hatherly Elementary School-72 Ann Vinal Road

Location	ACM Description	Estimated Quantity	May 2024 Cond.	Nov. 2024 Cond.	May 2025 Cond.	Nov. 2025 Cond.	May 2026 Cond.	Nov. 2026 Cond.
First Floor								
A/V Room	Pipe Fitting Insulation	3 Units	G					
Storage M-1	Pipe Fitting Insulation	4 Units	G					
Hallway by Boiler Room	Pipe Fitting Insulation	4 Units	G					
Janitor Office	Pipe Fitting Insulation	3 Units	G					
Kitchen Storage	Pipe Fitting Insulation	19 Units	G					
Kitchen	Ceramic Floor Tile Adhesive	2,100 ft^2	C					
	Pipe Fitting Insulation	5 Units	G					
	1' x 1' Ceiling Tile (Pinhole)	2,100 ft^2	G					
Kitchen Office	9" x 9 " Brown Floor Tile	77 ft^2	G					
	Black Floor Tile Mastic	77 ft^2	C					
	1' x 1' Ceiling Tile (Pinhole)	77 ft^2	G					
Motor Room	Pipe Fitting Insulation	9 Units	G					
	Canvas Covering on Duct Insulation	260 ft^2	G					
Cafeteria	9" x 9 " Tan Floor Tile (Under 12” Teal FT)	3,000 ft^2	G					
	Black Floor Tile Mastic	3,000 ft^2	C					
	2' x 4' Ceiling Tile (Fissure Pattern)	3,000 ft^2	G					
Room 1	9" x 9 " Gray Floor Tile	900 ft^2	MD (6 ft^2)					
	Black Floor Tile Mastic	900 ft^2	C					
Room 2	9" x 9 " Gray Floor Tile	900 ft^2	MD (3 ft^2)					
	Black Floor Tile Mastic	900 ft^2	C					
Room 3	9" x 9 " Gray Floor Tile	900 ft^2	MD (2 ft^2)					
	Black Floor Tile Mastic	900 ft^2	C					
Room 4	9" x 9 " Gray Floor Tile	900 ft^2	MD (4 ft^2)					
	Black Floor Tile Mastic	900 ft^2	C					

AHERA Six-Month Surveillance Inspection Date:_____

(Print Name):_____

Signature:_____

Hatherly Elementary School-72 Ann Vinal Road

Location	ACM Description	Estimated Quantity	May 2024 Cond.	Nov. 2024 Cond.	May 2025 Cond.	Nov. 2025 Cond.	May 2026 Cond.	Nov. 2026 Cond.
First Floor								
Room 4.5	9" x 9 " Gray Floor Tile (Under Carpet)	168 ft^2	C					
	Black Floor Tile Mastic	168 ft^2	C					
Room 5	9" x 9 " Gray Floor Tile	900 ft^2	G					
	Black Floor Tile Mastic	900 ft^2	C					
Room 6	9" x 9 " Gray Floor Tile	900 ft^2	G					
	Black Floor Tile Mastic	900 ft^2	C					
Hallway by Room 6	9" x 9 " Green Floor Tile	256 ft^2	MD (4 ft^2)					
	Black Floor Tile Mastic	256 ft^2	C					
Room 7	9" x 9 " Gray Floor Tile	900 ft^2	MD (8 ft^2)					
	Black Floor Tile Mastic	900 ft^2	C					
Room 8	9" x 9 " Gray Floor Tile	900 ft^2	G					
	Black Floor Tile Mastic	900 ft^2	C					
Room 9	9" x 9 " Gray Floor Tile	900 ft^2	MD (2 ft^2)					
	Black Floor Tile Mastic	900 ft^2	C					
Attic in Janitor Closet	Pipe Fitting Insulation	7 Units	G					
	Canvas Covering on Duct Insulation	160 ft^2	G					
Lobby	9" x 9 " Green Floor Tile	780 ft^2	MD (20 ft^2)					
	Black Floor Tile Mastic	780 ft^2	C					
Main Office	9" x 9 " Gray Floor Tile	300 ft^2	G					
	Black Floor Tile Mastic	300 ft^2	C					
Nurse Office	9" x 9 " Gray Floor Tile	272 ft^2	MD (4 ft^2)					
	Black Floor Tile Mastic	272 ft^2	C					
Principal Office	9" x 9 " Gray Floor Tile	120 ft^2	G					
	Black Floor Tile Mastic	120 ft^2	C					
	Cementitious Panel under Windows	27 ft^2	G					

AHERA Six-Month Surveillance Inspection Date:_____

(Print Name):_____

Signature:_____

Hatherly Elementary School-72 Ann Vinal Road

Location	ACM Description	Estimated Quantity	May 2024 Cond.	Nov. 2024 Cond.	May 2025 Cond.	Nov. 2025 Cond.	May 2026 Cond.	Nov. 2026 Cond.
First Floor								
Rainbow Room (21A)	9" x 9 " Gray Floor Tile	240 ft^2	MD (2 ft^2)					
	Black Floor Tile Mastic	240 ft^2	C					
Main Hallway	9" x 9 " Tan Floor Tile	1472 ft^2	G					
	Black Floor Tile Mastic	1472 ft^2	C					
Room 10	9" x 9 " Gray Floor Tile	1026 ft^2	G					
	Black Floor Tile Mastic	1026 ft^2	G					
	Cementitious Panel under Windows	90 ft^2	G					
Room 10 Storage	9" x 9 " Brown Floor Tile	112 ft^2	G					
	Black Floor Tile Mastic	112 ft^2	G					
	Pipe Fitting Insulation	25 Units	MD (2)					
Room 10 Boys and Girls Rooms	Pipe Fitting Insulation	4 Units	G					
Room 11	9" x 9 " Gray Floor Tile	1026 ft^2	MD (2 ft^2)					
	Black Floor Tile Mastic	1026 ft^2	G					
	Cementitious Panel under Windows	90 ft^2	G					
Hallway by Room 11	9" x 9 " Tan Floor Tile	900 ft^2	G					
	Black Floor Tile Mastic	900 ft^2	C					
Art Room	9" x 9 "Gray Floor Tile	900 ft^2	G					
	Black Floor Tile Mastic	900 ft^2	C					
	Cementitious Panel under Windows	102 ft^2	G					
Teachers Room	12" x 12" Teal Floor Tile	450 ft^2	G					
	9" x 9 " Color Floor Tile (Assumed Under 12")	450 ft^2	C					
	Black Floor Tile Mastic	450 ft^2	C					
	Cementitious Panel under Windows	36 ft^2	G					
Teachers Room Closet	Pipe Fitting Insulation	6 Units	G					
	Canvas Covering on Duct Insulation	32 ft^2	G					

AHERA Six-Month Surveillance Inspection Date:_____

(Print Name):_____

Signature:_____

Hatherly Elementary School-72 Ann Vinal Road

Location	ACM Description	Estimated Quantity	May 2024 Cond.	Nov. 2024 Cond.	May 2025 Cond.	Nov. 2025 Cond.	May 2026 Cond.	Nov. 2026 Cond.
First Floor								
Room 12	9" x 9 " Tan Floor Tile	1,064 ft^2	MD (20 ft^2)					
	Black Floor Tile Mastic	1,064 ft^2	C					
Janitor Closet by Gym	Pipe Fitting Insulation	2 Units	G					
Room 13	9" x 9 " Gray Floor Tile	900 ft^2	MD (2 ft^2)					
	Black Floor Tile Mastic	900 ft^2	C					
Room 14	9" x 9 " Gray Floor Tile	900 ft^2	MD (2 ft^2)					
	Black Floor Tile Mastic	900 ft^2	C					
Room 15	9" x 9 " Gray Floor Tile	900 ft^2	MD (2 ft^2)					
	Black Floor Tile Mastic	900 ft^2	C					
Room 16	9" x 9 " Tan Floor Tile	900 ft^2	MD (2 ft^2)					
	Black Floor Tile Mastic	900 ft^2	C					
Room 17	Black Floor Tile Mastic (Under 12" Tile)	900 ft^2	C					
Room 18	9" x 9 " Gray Floor Tile (Under Faux Wood)	900 ft^2	C					
	Black Floor Tile Mastic	900 ft^2	C					
Room 19	Black Floor Tile Mastic (Under 12" Tile)	900 ft^2	C					
Room 20	9" x 9 " Gray Floor Tile	900 ft^2	MD (2 ft^2)					
	Black Floor Tile Mastic	900 ft^2	C					
Gymnasium	9" x 9 " Tan Floor Tile	3,000 ft^2	MD (2 ft^2)					
	Black Floor Tile Mastic	3,000 ft^2	C					
P.E. Office	Pipe Fitting Insulation	16 Units	G					
Pipe Tunnels/Crawl Space	Pipe Fitting Insulation	400 Units	MD (2 Units)					

Notes:

ft^2 = Square Foot	Cond. = Condition	U = Unknown	NA = Not Accessible
lf = Linear Foot	G = Good	C = Covered	
Unit = Each	MD = Minor Damage	M = Miscellaneous	
Y= Yes	D = Damaged	S= Surfacing	
N = No	Fri. = Friable	TSI = Thermal System Insulation	

APPENDIX G

DESIGNATED PERSON ASSURANCES

DESIGNATED PERSON ASSURANCES

In accordance with 40 CFR ' 763.93(i) of the Environmental Protection Agency Asbestos-Containing Material in Schools regulation, the undersigned Local Education Agency (LEA) Designated Person (DP) hereby certifies that the following general responsibilities of the LEA under 40 CFR ' 763.84 have been or will be met:

1.Ensure that the activities of any persons who perform inspections, reinspections, and periodic surveillance, develop and update management plans, and develop and implement response actions, including operations and maintenance, are carried out in accordance with Part 763, Subpart E.

2. Ensure that all custodial and maintenance employees are properly trained as required by Part 763, Subpart E and other applicable Federal and/or State regulations (e.g., the Occupational Safety and Health Administration asbestos standard for construction, the EPA worker protection rule, or applicable State regulations).

3. Ensure that workers and building occupants, or their legal guardians, are informed at least once each school year about inspections, response actions, and post-response action activities, including periodic reinspection and surveillance activities that are planned or in progress.

4. Ensure that short-term workers (e.g., telephone repair workers, utility workers, or exterminators) who may come in contact with asbestos in a school are provided information regarding the locations for Asbestos-Containing Building Materials (ACBM) and suspected ACBM assumed to be Asbestos-Containing Materials (ACM).

5. Ensure that warning labels are posted in accordance with ' 40 CFR 763.95.

6. Ensure that management plans are available for inspection and notification of such availability has been provided as specified in the management plan under ' 40 CFR 763.93(g).

7. Designate a person to ensure that requirements under ' 763.84 are properly implemented and ensure that the designated person receives adequate training to perform duties assigned under ' 763.84. Such training shall provide, as necessary, basic knowledge of: health effects of asbestos; detection, identification, and assessment of ACM; options for controlling ACBM; asbestos management programs; relevant Federal and State regulations concerning asbestos, including those in Part 763, Subpart E and those of the Occupational Safety and Health Administration, U.S. Department of Transportation and the U.S. Environmental Protection Agency.

8. Consider whether any conflict of interest may arise from the inter-relationship among accredited personnel and whether that should influence the selection of accredited personnel to perform activities under Part 763, Subpart E.

Name of Designated Person: Christopher Cataldo

Designated Person's Signature: 

Date: 8-01-2024