



HUB TESTING LABORATORY, INC.

Environmental Testing Service

95 Beaver Street – Waltham, MA 02453
(781) 893-8330 (781) 893-4414 (fax)

Report for: Haverhill Public Schools
4 Summer St.
Haverhill, MA 01830-5877

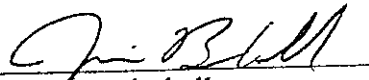
Attention: Mr. Ed Dufresne
Designated Person

Project: St. James Elementary School
Haverhill, MA


Subject: AHERA Three Year Re-inspection

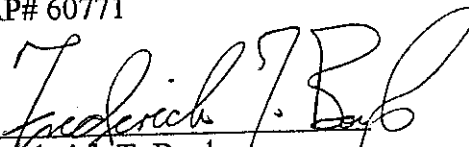
Date: 24 March 2000

Asbestos Inspectors:


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Subject: AHERA Three Year Re-inspection

Date: 24 March 2000

As required by the US Environmental Protection Agency's AHERA regulations, Hub Testing Laboratory has completed a survey and reassessment of asbestos containing materials in the St. James Elementary School. This report summarizes the locations and conditions of materials remaining in the schools and reviews the ongoing responsibilities of the Local Education Agency (LEA).

This latest survey report should be incorporated into the files that the LEA maintains, pertaining to response actions, operations & maintenance activities, six month re-inspection, training, air sampling and major asbestos activities.

SUMMARY OF RE-INSPECTION

During the re-inspection of St. James Elementary School, homogeneous areas of suspect materials were identified as follows:

HOMOGENEOUS AREAS OF SUSPECT MATERIAL

MATERIAL	ASBESTOS		SAMPLE #s	LOCATION
	YES/ P/ P ₁ / P ₂ / NO			
Boiler Jacket	Yes		STJ 32, 33	Boiler room ≈ 250 SF This boiler is no longer in service.
Rod in Univents (5" x 1" Diameter White)	Yes		STJ 13	Rms. 1A, B, 2A, B, C, 3, 4A, 6A, 6B, 8A, 9C ≈ 55 inches
9" x 9" VAT/Tan	Yes		STJ 11, 21	Rms. 2A, C, 3A, B, 4A, B, 5B, 6A, B, 7A, B, 8A, B, 9C, 11A, B, C, 17, 18, ≈ 17,350 SF
9" x 9" VAT/Brown	Yes		STJ 12	Corridors C1, C2, Rms. 10C, 12, 12C ≈ 4620 SF
9" x 9" VAT/Blue	Yes		STJ 15	Corridors C1, C2 ≈ 50 SF
9" x 9" VAT/Red	P ₂		N/A	Corridors C1, C2 ≈ 50 SF
9" x 9" associated Mastic	P ₂		N/A	≈ 22,000 SF
Tank Jacket	Yes		STJN 16	Boiler Room ≈ 100 SF
Breeching	Yes		STJ 31	Boiler Room ≈ 44 SF
Brick Above Ceiling	P ₁		STJ 08	Rm. 11E (Supply Rm.) ≈ 20 SF

HOMOGENEOUS AREAS OF SUSPECT MATERIAL cont.

MATERIAL	<u>ASBESTOS</u>		LOCATION
	YES/ P/ P ₁ / P ₂ / NO	SAMPLE #s	
Ceiling Tile (2' x 4')	P ₁	STJ 09	Room 9B ≈ 1836 SF
Ceiling Tile (1' x 1')	P ₁	STJ 06, 10	Rms. 1A, B, 2C, 3A, B, 4A, B, 5B, 6A, B, 7A, B, 8A, B, 9C, 10A, B, D, 11A, B, D, 12A, 13A, 14A, B, C, D, 17, 18, 20, SA, SB, CB, C1, C2 ≈ 1836 SF
Vinyl Floor Tile (Off-white 1' x 1')	P ₁	STJ 13	Rms. Partial 9A, 9B ≈ 1900 SF
Associated Mastic	P ₂	N/A	Rms. Partial 9A, 9B ≈ 1900 SF
Hard Fittings	No	STJ 02, 23, 17, 25, 01, 07	Rms. 12, 12B, 13A, B, 14C, 15, 16, and Auditorium Stage, S. W. Corner ≈ 429 SF
Painted Ceiling Plaster	P ₁	STJ 20	Room 9D ≈ 100 SF
Vibration Isolator	P ₁	STJ 24	Rms. 12, 12B and Kitchen Storage ≈ 14 SF
Wall Board	No	STJ 03, 04, 05, 19	Rms. 9A, N. E. wall, S. W. wall – Auditorium (12) ≈ 1900 SF
Fire Brick	P ₂	N/A	Kiln in Custodian Storage (6) ≈ 24 SF
Ceiling Panels (White, 4' x 12')	P ₂	N/A	Eave – Front Entrance ≈ 336 SF
Tar Roofing	P ₂	N/A	Roof of Front Breezeway ≈ 1200 SF

HOMOGENEOUS AREAS OF SUSPECT MATERIAL cont.

MATERIAL	ASBESTOS		SAMPLE #s	LOCATION
	YES/ P/ P ₁ / P ₂ / NO			
Wall Plaster	P ₂	N/A		Under Stairs/Stairwell Walls Throughout ≈ 1000 SF
Window Panels (Blue, 2' x 4')	P ₂	N/A		Lower Portion of Exterior Windows – Throughout ≈ 792 SF
Black 4" Cove	P ₂	N/A		N. and S. Room 12 ≈ 200 LF
Brown 4" Cove	P ₂	N/A		E. and W. Room 12, All Classrooms and Corridors - Throughout ≈ 7160 LF
Brown Cove Mastic	P ₂	N/A		Throughout ≈ 2750 SF
Canvas Duct Cover	P ₂	N/A		Room 12B ≈ 100 SF
Red Ceramic FT Grout	P ₂	N/A		Kitchen ≈ 20 SF
Ceramic Wall Tile Grout	P ₂	N/A		Kitchen, Bathroom Walls ≈ 200 SF
Ceiling Tile, 1' x 1' (Small Holes)	P ₂	N/A		Kitchen (13) ≈ 620 SF
Black Table Tops	P ₂	N/A		Room 2C ≈ 243 SF
Various Chalk Boards	P ₂	N/A		Throughout Classrooms and S. E. 9A ≈ 1725 SF
Pink Sink Insul. Under Side	P ₂	N/A		Room 9B (3 sinks) ≈ 15 SF

HOMOGENEOUS AREAS OF SUSPECT MATERIAL cont.

MATERIAL	ASBESTOS		SAMPLE #s	LOCATION
	YES/	P/ P ₁ / P ₂ / NO		
5" Brown Cove	P ₂		N/A	Room 9B ≈ 140 SF
Associated Mastic	P ₂		N/A	Room 9B ≈ 140 SF

(Key: **YES** – Proven to Contain Asbestos, **P** – Presumed Asbestos Containing Material (PACM),
P₁ – Inadequate AHERA Sampling – Must be Assumed to be Asbestos Containing Material,
P₂ – Homogeneous Areas NOT Previously Identified, Must be Assumed to be Asbestos Containing
Material (ACM), **NO** – Proven by AHERA Sampling to be Asbestos Free).

CONDITION OF HOMOGENEOUS AREA SUSPECT MATERIAL

HOMOGENEOUS MATERIAL

Boiler Jacket. Thermal Systems Insulation, (TSI).

Condition: Damaged – The boiler jacket is delaminating and debris is falling onto the brick boiler base support. As of this inspection, this boiler is no longer in service.

Rods in Univents (visible through grid from top of univent). TSI.

Condition: Damaged – There is damage to the edges of the 1" diameter white insulating material covering approximately 5" of the thermostatic rod. The grid panel above this insulating material in room 2B is missing allowing access to students.

Tan 9" x 9" Vinyl Asbestos Tile (VAT). Miscellaneous Material.

Condition: Damaged – There is damage to the VAT in the bathroom, 11D. There are missing floor tiles in rooms 18 and 19. The Black Floor Mastic is exposed to staff and students.

Brown 9" x 9" VAT. Miscellaneous Material.

Condition: Damaged – There is damage to the floor tile around the Gymnasium perimeter. There are missing floor tiles in the north end of corridor 2 (C2) and at the exits of the remaining corridors.

Blue 9" x 9" VAT. Miscellaneous Material.

Condition: Not Damaged.

Red 9" x 9" VAT. Miscellaneous Material.

Condition: Not Damaged.

Tank Jacket. TSI.

Condition: Damaged – The insulation jacket around the water tank in the boiler room has water damage and damage from physical contact. There is debris on the surrounding areas.

Breeching. TSI.

Condition: Damaged – There is damage to the breeching material from binder disintegration.

CONDITION OF HOMOGENEOUS AREA SUSPECT MATERIAL cont.

HOMOGENEOUS MATERIAL

Brick above the ceiling in room 11E, supply room. Miscellaneous Material.

Condition: Not Damaged.

Ceiling Tile, 2' x 4' White. Miscellaneous Material.

Condition: Damaged – There is damage in room 9B to ceiling tiles from water leaks and abuse.

Ceiling Tile, 1' x 1' White. Miscellaneous Material.

Condition: Damaged – There is damage to ceiling tile due to water, abuse and maintenance throughout.

Vinyl Floor Tile, off white 12" x 12". Miscellaneous Material.

Condition: Not Damaged.

Painted Ceiling Plaster. Miscellaneous Material.

Condition: Not Damaged.

Vibration Isolators. Miscellaneous Material.

Condition: Not Damaged.

Fire Brick. In Kiln in Custodians Storage Room. Miscellaneous Material.

Condition: Not Damaged.

White 4' x 12' Panels. Entrance Eaves. Miscellaneous Material.

Condition: Not Damaged.

Tar/Rock Roofing. Entrance Roof. Miscellaneous Material.

Condition: Not Damaged.

CONDITION OF HOMOGENEOUS AREA SUSPECT MATERIAL cont.

HOMOGENEOUS MATERIAL

Wall Plaster. In the stair areas. Miscellaneous Material.

Condition: Not Damaged.

Window Panels, 2' x 4' Blue. Under Exterior Windows. Miscellaneous Material.

Condition: Not Damaged.

Black 4" Cove. Miscellaneous Material.

Condition: Significant Damage. The cove is broken or cracking throughout the Gym area.

Brown 4" Cove. Miscellaneous Material.

Condition: Damaged. The cove is broken or cracking throughout the school.

Brown Cove Mastic. Miscellaneous Material.

Condition: Damaged. The mastic holding the cove to the wall is disintegrating from age and abuse.

Canvas Duct Cover. Miscellaneous Material.

Condition: Not Damaged.

Red Ceramic Floor Tile Grout. Miscellaneous Material.

Condition: Not Damaged.

Ceramic Wall Tile Grout. Miscellaneous Material.

Condition: Not Damaged.

Ceiling Tile, 1' x 1' small holes. Miscellaneous Material.

Condition: Not Damaged.

Black Table Tops. Miscellaneous Material.

Condition: Damaged. The table tops have been cut and abraded by abuse.

CONDITION OF HOMOGENEOUS AREA SUSPECT MATERIAL cont.

HOMOGENEOUS MATERIAL

Various Chalk Boards. Miscellaneous Material.

Condition: Not Damaged.

Pink Sink Insulation. Miscellaneous Material.

Condition: Not Damaged.

ST. JAMES ELEMENTARY SCHOOL

RESPONSE ACTIONS FOR

HOMOGENEOUS AREAS OF SUSPECT MATERIAL

<u>MATERIAL</u>	<u>ASBESTOS</u>	<u>RESPONSE</u>	<u>LOCATION</u>
	YES/ P/ P ₁ / P ₂ REFER TO KEY	ACTION	
Boiler Jacket	Yes	5	Boiler room ≈ 250 SF This boiler is no longer in service.
Rod in Univents (5" x 1" Diameter White)	Yes	3	Rms. 1A, B, 2A, B, C, 3, 4A, 6A, 6B, 8A, 9C ≈ 55 inches
9" x 9" VAT/Tan	Yes	5	Rms. 2A, C, 3A, B, 4A, B, 5B, 6A, B, 7A, B, 8A, B, 9C, 11A, B, C, 17, 18, ≈ 17,350 SF
9" x 9" VAT/Brown	Yes	5	Corridors C1, C2, Rms. 10C, 12, 12C ≈ 4620 SF
9" x 9" VAT/Blue	Yes	6	Corridors C1, C2 ≈ 50 SF
9" x 9" FT/Red	P ₂	6	Corridors C1, C2 ≈ 50 SF
9" x 9" Floor Tile Associated Mastic	P ₂	5	≈ 22,000 SF
Tank Jacket	Yes	3	Boiler Room ≈ 100 SF
Breeching	Yes	4	Boiler Room ≈ 44 SF
Brick Above Ceiling	P ₁	8	Rm. 11E (Supply Rm.) ≈ 20 SF
Ceiling Tile (2' x 4')	P ₁	4	Room 9B ≈ 1836 SF

ST. JAMES ELEMENTARY SCHOOL

RESPONSE ACTIONS FOR

HOMOGENEOUS AREAS OF SUSPECT MATERIAL cont.

<u>MATERIAL</u>	<u>ASBESTOS</u>	<u>RESPONSE</u>	<u>LOCATION</u>
	YES/ P/ P ₁ / P ₂ REFER TO KEY	ACTION	
Ceiling Tile (1' x 1')	P ₁	4	Rms. 1A, B, 2C, 3A, B, 4A, B, 5B, 6A, B, 7A, B, 8A, B, 9C, 10A, B, D, 11A, B, D, 12A, 13A, 14A, B, C, D, 17, 18, 20, SA, SB, CB, C1, C2 ≈ 1836 SF
Vinyl Floor Tile (Off-white 1' x 1')	P ₁	8	Rms. Partial 9A, 9B ≈ 1900 SF
Associated Mastic	P ₂	8	Rms. Partial 9A, 9B ≈ 1900 SF
Painted Ceiling Plaster	P ₁	8	Room 9D ≈ 100 SF
Vibration Isolator	P ₁	6	Rms. 12, 12B and Kitchen Storage ≈ 14 SF
Wall Plaster	P ₂	6	Under Stairs/Stairwell Walls Throughout ≈ 1000 SF
Window Panels (Blue, 2' x 4')	P ₂	8	Lower Portion of Exterior Windows – Throughout ≈ 792 SF
Black 4" Cove	P ₂	2	N. and S. Room 12 ≈ 200 LF
Brown 4" Cove	P ₂	4	E. and W. Room 12, All Classrooms and Corridors - Throughout ≈ 7160 LF
Brown Cove Mastic	P ₂	4	Throughout ≈ 2750 SF

ST. JAMES ELEMENTARY SCHOOL

RESPONSE ACTIONS FOR

HOMOGENEOUS AREAS OF SUSPECT MATERIAL cont.

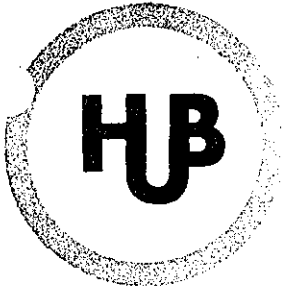
<u>MATERIAL</u>	<u>ASBESTOS</u> <u>YES/ P/ P₁/ P₂</u> <u>REFER TO KEY</u>	<u>RESPONSE</u> <u>ACTION</u>	<u>LOCATION</u>
Canvas Duct Cover	P ₂	7	Room 12B ≈ 100 SF
Red Ceramic FT Grout	P ₂	8	Kitchen ≈ 20 SF
Ceramic Wall Tile Grout	P ₂	8	Kitchen, Bathroom Walls ≈ 200 SF
Ceiling Tile, 1' x 1' (Small Holes)	P ₂	7	Kitchen (13) ≈ 620 SF
Pink Sink Insul. Under Side	P ₂	8	Room 9B (3 sinks) ≈ 15 SF
5" Brown Cove	P ₂	8	Room 9B ≈ 140 SF
Associated Mastic	P ₂	8	Room 9B ≈ 140 SF

ASBESTOS KEY.

(Key: **YES** – Proven to Contain Asbestos, **P** – Presumed Asbestos Containing Material (PACM),
P₁ – Inadequate AHERA Sampling – Must be Assumed to be Asbestos Containing Material,
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RE: St. James Elementary School

Recommendations to LEA

- A. All Custodial and Maintenance Staff should be provided with a 2 Hr. Awareness Training Program in which asbestos uses and forms, information pertaining to health effects of asbestos, the location of asbestos in the schools, recognition of damage and the AHERA regulations is discussed.
- B. The Designated Person should be provided with additional training to update their knowledge regarding health effect of asbestos exposure, detection, identification and assessment of ACM, options for controlling ACM, asbestos management programs and relevant federal and state regulations.
- C. Warning labels should be attached immediately adjacent to friable ACM in routine maintenance spaces.
- D. All documentation pertaining to response actions, training, surveillance, notification etc., as required by AHERA should be maintained in the Management Plan.
- E. A program of periodic surveillance should be instituted where all known ACM is checked at least every 6 months.
- F. All known friable asbestos containing material should be maintained in an intact condition until such time as the material is removed. This will require:
 - 1. The insulator rods in the univents should be encapsulated until they can be removed. The insulator rods are in the control access panels and easily accessible.
 - 2. The Thermal System Insulation (TSI) on the breeching in the boiler room should be spot repaired with re-wettable glass cloth and lag coat.
 - 3. The Water Tank should also be repaired with re-wettable glass cloth and lag coat with particular attention to delamination. All debris should be cleaned up.

4. The 9" x 9" Vinyl Asbestos Floor Tile (VAT) should be kept well waxed. This will help to keep a seal coat on the material and minimize breakage.
5. The 4" cove base and associated mastic should be sampled and positively identified as either asbestos containing or non-asbestos containing. If the material is asbestos containing then an abatement project should be designed by a licensed and certified Asbestos Abatement Designer and the material removed or covered with 6" cove base and mastic at approximately \$1.00 per linear foot.
6. The 2' x 4' and 1' x 1' Acoustic Ceiling Tile should be sampled and positively identified as either asbestos containing or non-asbestos containing. If the material is asbestos containing then the damaged tile should be maintained in an undamaged condition.
7. The boiler in the St. James Elementary School is no longer being used. There are presently "Multitemp" Furnaces being used. If there are no future plans for the boiler the system should be removed.

Costs associated with item F is as follows:

Abatement costs for the removal of TSI rods within the univents would be approximately \$1,500.00. The abatement project in the boiler room would be approximately \$10 – 15,000.00 dependent on the extent of the removal. However, this cost could vary dependent upon the total amount of material and time required to perform the abatement activities for the entire school system.

Bulk sample analysis cost is \$25.00 per sample however there would be a cost for the inspector to collect samples. Again, this cost would be dependent upon the total number of samples required to be collected in the entire school system.

St. James Elementary

Homogeneous Areas Left to be Sampled and Number of Samples Required for Compliance

MATERIAL	DESCRIPTION	# OF SAMPLES PER AREA	
9"x9" Red FT	Corridors C1, C2	≈ 50 sf	3
Assoc. Mastic to all FT	Throughout	≈ 22,000 sf	3
Brick Above Ceiling	Rm. 11E Supply Room	≈ 20 sf	2
2' x 4' CT	Rm. 9B	≈ 1836 sf	2
1' x 1' CT	Rms. 1A, B, 2C, 3A, 4A	≈ 1836 sf	1
	4B, 5B, 6A, B, 7A, B, 8A,		
	8B, 9C, 10A, B, D, 11A, B, D		
	12A, 13A, 14A, B, C, D, 17,		
	18, 20, SA, SB, CB, C1, C2		
1' x 1' Off White Vinyl FT	Rms. Partial 9A, 9B	≈ 1900 sf	2
Assoc. Mastic for above	Rms. Partial 9A, 9B	≈ 1900 sf	3
Painted Ceiling Plaster	Rm. 9D	≈ 100 sf	2
Vibration Isolators	Rms. 12, 12B, Kitchen Stor.	≈ 14 sf	2
Fire Brick	Kiln in Cust. Stor. Rm. 6	≈ 24 sf	3
4' x 12' White Ceiling Panels	Eaves – Front Entrance	≈ 336 sf	3
Tar Roofing Material	Roof in Front Breezeway	≈ 1200 sf	5
Wall Plaster	Under Stairs/Stair Well Wall	≈ 1000 sf	5
	Throughout		
Blue Window Panels	Lower Portion of Ext.	≈ 792 sf	3
	Windows Throughout		
4" Black Cove	N. & S. rm. 12	≈ 200 lf	3
4" Brown Cove	E. & W. rm. 12, All Class-	≈ 7160 lf	3
	rooms & Corridors		
Cove Mastic	Throughout	≈ 2750 sf	3