



HUB TESTING LABORATORY, INC.

Environmental Testing Service

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January 2, 2001

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

Attention: Mr. Ed Dufresne
Designated Person

Project: Constantino Middle School
Haverhill, MA

Scope: Hub Testing Laboratory investigated the possible contamination of the Constantino School during the installation of wiring in the building. There was concern that the electrical contractors had disrupted ACM on nearby structures. Hub collected and analyzed air, wipe, and bulk samples to investigate this concern and confirm the presence or absence of surface and ambient contamination as well as the composition of material on structural elements on the first and second floors.

Methodology: Analysis for the presence of asbestos in the bulk and wipe samples was performed using Polarized Light Microscopy (PLM) EPA/600/R-93/116, July 1993. Transmission electron microscopy (TEM) analysis was performed on the air samples by NIOSH Method 7402.

Results: **BULK SAMPLES**

<u>Sample I.D.</u>	<u>Material/Location</u>	<u>Composition</u>	<u>%</u>
13202-1	Exposed I beam running over door frame outside stairwell Color: brown	Chrysotile Mineral Chip Vermiculite	10 30 60
13202-2	Spray on walls outside Rm 36	Mineral Chip	100
13202-3	Thick overspray outside Rm 36	Chrysotile Mineral Chip Vermiculite	trace 40 60

<u>Sample I.D.</u>	<u>Material/Location</u>	<u>Composition</u>	<u>%</u>
13202-4	Thinner overspray outside Rm 36	Mineral Chip	100
13202-5	Debris on top of CT outside Rm 36	Chrysotile Mineral Chip Vermiculite	10 40 50
13202-6	Plaster & chicken wire outside Rm 34	Mineral Chip	100
13202-7	Spray-on beam outside RM 34	Chrysotile Mineral Chip Vermiculite	15 35 50
13202-8	Spray-on on casing around beam outside Rm 37	Mineral Chip	100
13202-9	Spray-on on I beam outside Rm 37	Chrysotile Mineral Chip Vermiculite	10 30 60
13202-26	Exposed I beam near office Color: Gray	Chrysotile Mineral Chip Vermiculite	15 35 60
13202-27	Wall mortar outside Rm 260	Mineral Chip	100
13202-28	Beam outside Rm 162	Mineral Chip Vermiculite	20 80

WIPE SAMPLES

<u>Sample I.D.</u>	<u>Material/Location</u>	<u>Composition</u>
13202-10	Room 34 Color: Gray	Cellulose Fiber Glass Mineral Chip Vermiculite
13202-11	Outside Rm 36 Color: Gray	Cellulose Fiber Glass Synthetic Mineral Chip Opaques

<u>Sample I.D.</u>	<u>Material/Location</u>	<u>Composition</u>
13202-12	Outside Rm 37 Color: Gray	Cellulose Fiber Glass Synthetic Mineral Chip Opagues
13202-13	Outside Teachers Room Color: Gray	Cellulose Fiber Glass Synthetic Mineral Chip Vermiculite Opagues
13202-14	Outside Rm 39 Color: Gray	Cellulose Fiber Glass Synthetic Mineral Chip Opagues
13202-15	Outside Rm 42 Color: Gray	Cellulose Fiber Glass Synthetic Mineral chip Opagues
13202-16	Room 35 Color: Gray	Cellulose Fiber Glass Synthetic Mineral Chip Opagues
13202-17	Outside Rm 16 Color: Gray	Cellulose Fiber Glass Synthetic Mineral Chip Opagues
13202-18	Outside Rm 12 Color: Gray	Cellulose Fiber Glass Synthetic Mineral Chip Vermiculite Opagues

<u>Sample I.D.</u>	<u>Material/Location</u>	<u>Composition</u>
13202-19	Outside Rm 218 Color: Gray	Cellulose Fiber Glass Synthetic Mineral Chip Vermiculite Opagues
13202-20	Outside Rm 2 Color: Gray	Cellulose Fiber Glass Synthetic Mineral Chip Opagues
13202-21	Junction of halls 270 & 273 Color: Gray	Cellulose Fiber Glass Synthetic Mineral Chip Opagues
13202-22	Outside Court Color: Gray	Cellulose Fiber Glass Synthetic Mineral Chip Opagues
13202-23	Outside Greenhouse Color: Gray	Cellulose Fiber Glass Synthetic Mineral Chip Opagues
13202-24	Outside Rm 8 Color: Gray	Cellulose Fiber Glass Synthetic Mineral Chip Opagues
13202-25	Rm 274/Library	Cellulose Fiberglass Synthetic Mineral Chip Opagues

AIR SAMPLES

<u>Sample I.D.</u>	<u>Material/Location</u>	<u>Composition</u>
13202-29	Corridor 235, SE Rm 17, 1 st Fl	NSD
13202-30	Corridor 235, S Library, 1 st Fl	NSD
13202-31	Corridor 321, S Room 40, 2 nd Fl	NSD
13202-32	Corridor 321, S Room 36, 2 nd Fl	NSD
13202-33	Junction, Corridor 200/131, 1 st Fl	NSD

NSD - No Structures Detected

NVLAP Code: 102079-0

Comments: The air samples showed no detectable amount of asbestos in the areas around where the wiring was being installed. None of the wipe samples from surfaces near the work areas contained asbestos.

Upon further observation of materials located above the ceiling tiles it was observed that there were two spray-applied materials. Bulk samples were taken from these two main types of material in the school. One was a fireproofing material and the other a cementitious mortar. "I" beams are covered with sprayed-on fireproofing that contains asbestos. Above the ceiling tiles inside classrooms or along hallways, the "I" beams are either exposed or encased by a chicken wire mesh covered with non-asbestos containing cementitious mortar. This mortar is an extension of the block walls for firestop purposes. For this reason the beams may or may not be exposed above the ceilings dependent upon where the beams lay in relation to the walls below.

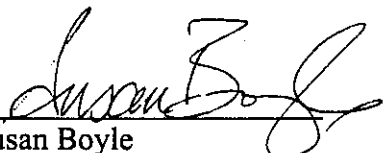
For example, the E-W "I" beam below the deck of second floor, north-facing classrooms (Rooms 36-42) is encased with mortar, but the N-S beam along the hall outside Room 34 is exposed above the ceiling. Encased beams have a small space between the beam and casing. "I" beams exposed in hallways, such as in the second floor stairwell (west) and near the office, are not encased.

On the first and second floors above the ceiling tiles in the corridors the majority of the "I" beams near the ceiling tiles which had

been removed are located behind this cementitious mortar, which does not contain asbestos.

All wipe samples collected indicated the absence of asbestos in the dust. Samples were collected from areas other than the floors since by the time the samples were collected and Hub had been called in the hallways had been swept, washed and waxed by the custodial and maintenance staff. Sample locations were are such as the topside of fire pull boxes, the top edge of lockers, door frames etc. beneath missing tiles.

As a cautionary measure, ceiling tile debris located in waste baskets recovered from the wiring installation process and dry mop heads for both the first and second floor were placed in plastic bags and taken from the school.


Susan Boyle
Vice President