

Hygienetics Environmental Services, Inc.

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Re: Bulk Sampling Report

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Re: Collect bulk samples of specific, suspect asbestos-containing materials that may be affected by planned renovation activities (as described in the construction plans provided by personnel). The bulk sampling was performed September 23 through September 30,

an Environmental Protection Agency AHERA Certified Asbestos Building Inspector, and New York State Licensed Asbestos Inspector

Collected a total of one hundred and eighty-five (185) bulk samples of suspect asbestos-containing materials (ACMs) from the following locations:

- Basement Boiler Room and Elevator Lobbies on floors 1 through 6
- Various locations around the perimeter of floors 1 through 6

Prior to collection of the bulk samples, the inspector separated suspect ACMs into homogeneous groups to determine the number of samples to be collected. Homogeneous materials are defined by the USEPA AHERA Regulation, (40 CFR Part 763) as being uniform in texture, appearance, appeared to be installed at one time, and are unlikely to consist of more than one type of material.

Samples were submitted to in Boston, Massachusetts, for analysis by the United States Environmental Protection Agency (USEPA) recommended Polarized Light Microscopy with Dispersion Staining (PLM/DS) analytical method to determine their asbestos content. is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) and the New York State Environmental Laboratory Accreditation Program (ELAP) for the "Interim Method for the Determination of Asbestos in Bulk Insulation Samples", EPA Method-600/M4-82-020.

The following materials were found to be asbestos containing (<1.0% asbestos content) by PLM/DS analysis:

- Thermal System Insulation on boilers, boiler breeching, and steam header
- Thermal system Insulation on Pipelines and associated fittings
- 9-inch by 9-inch floor tiles
- 12-inch by 12-inch floor tiles
- Mastic associated with floor tiles
- Window caulk
- Window glazing

Please be aware that New York State requires non-friable organically bound materials such as floor tile and adhesive mastics that are negative by PLM/DS analysis to be further analyzed by Transmission Electron Microscopy (TEM). TEM analysis is a more advanced method of analysis and will accurately determine if these materials contain asbestos. Twenty-seven (27) bulk samples (mainly floor tile and mastic associated with floor tile) were further analyzed by the TEM method as required by New York State regulations.

Twenty-six (26) of the samples further analyzed by the TEM method were reported as non-asbestos containing by the laboratory, confirming the PLM results. The remaining sample was found to contain asbestos, as indicated below.

Locations and approximate quantities of confirmed ACMs are as follows:

Confirmed Asbestos containing materials Material Location Approximate Quantity* Thermal System Insulation on Boiler Room 520 Square Feet Boilers Thermal System Insulation on Boiler Room 200 Square Feet Breeching Plenum Box Thermal System Insulation on Boiler Room 60 Linear Feet Steam Header Pipes Thermal System Insulation on Boiler Room 300 Linear Feet **Pipelines** Window Glazing 1st Floor-Exterior Windows, South 9 Windows Side Window Frame Caulk 1st Floor-Exterior Windows, South 9 Windows Side 9-inchx 9-inch Gray Floor Tiles 2nd Floor Entrance Lobby 200 Square Feet Mastic Associated with 9-inch by 9-2nd Floor Entrance Lobby 200 Square Feet inch Gray Floor Tiles

^{*}This is an estimate of the amount of material that may be impacted by renovation, not the total amount present on the floor

Confirmed Asbestos containing materials-continued

Material	Location	Approximate Quantity*
Thermal System Insulation on Pipe Fittings	2 nd Floor, Production Area, South Side	3 Fittings
Thermal System Insulation on Pipelines	2 nd Floor, East Side, Outside Bathrooms	80 Linear Feet ,
Thermal System Insulation on Valve	2 nd Floor, Production Area, North Side	1 (Large) Valve
9-inch by 9-inch Gray Floor Tiles	2 nd Floor, Press Area Across From Freight Elevator	200 Square Feet
9-inch by 9-inch Red/Brown Floor Tiles	2 nd Floor, South West Side Storage Room & Adjacent Lobby	300 Square Feet
Thermal System Insulation on Pipelines	3 rd Floor Elevator Lobby & Adjacent Areas	80 Linear Feet
Thermal System Insulation on Pipelines	3 rd Floor, Office Adjacent to Library Entrance	12 Linear Feet
Mastic under Green Floor Tiles (Under Rug)	3 rd Floor, Library, Southeast Side, At Entrance	150 Square Feet
Window Frame Caulk (From Previous Survey)	3 rd Floor, Perimeter Windows	3 Windows
Thermal System Insulation on Pipelines	3 rd Floor East Side, Outside Library Bathrooms	70 Linear Feet
9-inch by 9-inch Beige Floor Tiles	4 th Floor Passenger Elevator Lobby	500 Square Feet
Mastic Under 9-inch by 9-inch Beige Floor Tiles	4 th Floor, Passenger Elevator Lobby	500 Square Feet
Window Glazing	4th Floor, Window At Stair A	2 Windows
Window Caulk	4th Floor, Window At Stair A	,2 Windows
9-inch by 9-inch Brown Floor Tiles	4 th Floor, East Side	800 Square Feet
9-inch by 9-inch Green Floor Tiles (From Previous Survey)	5 th Floor Passenger Elevator Lobby	500 Square Feet

^{*}This is an estimate of the amount of material that may be impacted by renovation, not the total amount present on the floor

Confirmed Asbestos containing materials-continued

Material	Location	Approximate Quantity*
Mastic Under 9-inch by 9-inch Floor Tiles (From Previous Survey)	5 th Floor, Passenger Elevator Lobby	500 Square Feet
Thermal System Insulation on Pipelines (From Previous Survey)	5 th Floor, Passenger Elevator Lobby	25 Linear Feet
Thermal System Insulation on Pipelines (From Previous Survey)	5 th Floor, Inside & Outside Women's Bathroom	144 Linear Feet
Thermal System Insulation on Pipelines (From Previous Survey)	5 th Floor, Men's Bathroom	15 Linear Feet
Thermal System Insulation on Pipelines (From Previous Survey)	5 th Floor, East Side, Chemical Room	55 Linear Feet
Thermal System Insulation on Pipelines (From Previous Survey)	5 th Floor, West & South (Former Tumble & Lunch Rooms)	85 Linear Feet
Window Frame Caulk (From Previous Survey)	5 th Floor Perimeter Windows	64 Windows
Thermal System Insulation on Pipelines	6 th Floor, Rest Room Across From Stair A	10 Linear Feet
Thermal System Insulation on Pipelines	6 th Floor Elevator Lobby & Adjacent Areas	60 Linear Feet
12-inch by 12-inch Green F. Tiles	6 th Floor Elevator Lobby	. 500 Square Feet
9-inch by 9-inch Green Floor Tiles	6 th Floor, Corridor to Stairway A & Areas Adjacent to Passenger Elevator Lobby	1200 Square Feet
9-inch x 9-inch Gray Floor Tiles	6th Floor, Reception Office	130 Square Feet
Thermal System Insulation on Pipelines	6 th Floor, North East Side Bathrooms	200 Linear Feet
Thermal System Insulation on Pipelines	6 th Floor, North West Side, Production Area	20 Linear Feet

^{*}This is an estimate of the amount of material that may be impacted by renovation, not the total amount present on the floor

Confirmed Asbestos containing materials-continued

Material	Location	Approximate Quantity*
Thermal System Insulation on Pipelines	6 th Floor, West Side, Freight Elevator Area	85 Linear Feet
9-inch by 9-inch Red/Gray Floor Tiles	6 th Floor, Storage Area Adjacent to Freight Elevator	500 Square Feet
Thermal System Insulation on Pipelines	6 th Floor, Storage Room Adjacent to Freight Elevator	70 Linear Feet

^{*}This is an estimate of the amount of material that may be impacted by renovation, not the total amount present on the floor

Results of PLM/DS and TEM analyses are attached in Table I (Appendix A) and Table II (Appendix B), respectively.

The following materials were found to be non-asbestos containing (≤1.0% asbestos content) by PLM/DS and/or TEM analyses:

- Brick Wall Around Oil Tank (Boiler Room)
- Brick Wall Mortar Around Oil Tank (Boiler Room)
- Paper Covering Around Oil Tank (Boiler Room)
- Ceiling Plaster (Throughout Building)
- Wall Plaster (Throughout Building)
- 12-inch by 12-inch Floor Tile (Passenger Elevator & Various Other Locations)
- Mastic Associated With Floor Tiles (Passenger Elevator & Various Other Locations)
- 2-Foot by 4-Foot & 2-foot by 2-foot Ceiling Tiles (3rd and 5th Floor)
- Exterior Window Glazing (5th Floor)
- Cove Base Mastic
- Cement Leveling Material Around Floor Drain (5th Floor)
- Sprayed-on Fire Proofing (5th Floor)
- 12-inch by 12-inch Blue & Gray Floor Tiles & Associated Mastic (5th Floor Bathrooms)
- 1-Foot by 1-Foot Ceiling Tile (6th Floor)
- Flooring Material (6th Floor, West Side, Freight Elevator Area)

Note

Several areas of the building remain to be inspected. Notable among these are the roof of the building, several offices on the 6th floor, three rooms on the west side of the 2nd floor, four rooms at the entrance lobby of the 2nd floor, and the <u>museum space</u>. The samples collected and analyzed have generated sufficient data to proceed with the planned renovations while complying with all applicable asbestos regulations.

Recommendations

If the confirmed ACMs will be impacted by renovation or maintenance activities, a New York State Licensed Asbestos Abatement Contractor should be retained to safely remove the ACMs prior to these activities or any other activity that may disturb these materials. Abatement in certain areas (e.g., the boiler room) will impact an amount of asbestos containing insulation that makes it necessary to notify the proper authorities.

Should you require further information regarding this survey or our findings do not hesitate to contact our office at

Sincerely,