

HAZARDOUS MATERIALS Sylvester Elementary School

ATC Associates Inc. (ATC) was retained by Dore and Whittier, Inc., to perform a Hazardous Materials Assessment regarding remediation of environmental hazards at the following building located in Hanover, Massachusetts:

?? Sylvester School

ATC's representatives performed a site review to determine the locations of hazardous materials that may be affected by the forthcoming proposed renovation work at the school.

Note: ATC's Hazardous Materials Assessment did not include any sampling and analysis of materials as part of this study.

ATC's Scope of Work for this project included a cursory review of the following hazardous materials typically found in school buildings:

1. Lead Paint
2. Asbestos
3. Underground Storage Tanks (UST)
4. Miscellaneous Hazardous Materials (i.e. PCB light ballast's, disposal drums, chemical storage, etc.)

Outlined below is a summary of ATC's findings:

I. Lead Paint Materials

The building was originally constructed in the 1927. The building construction date would indicate a higher potential for lead-containing paint to present within the building than if it were built in early 1970's just prior to the Consumer Product Safety Commission (CPSC) banning the sale of commercial paint that contained greater than 0.006% lead. This is based upon the fact that the Consumer Product Safety Commission (CPSC) did not ban the sale of commercial paint that contained greater than 0.006% lead until 1976. In fact, ATC observed several original architectural features on the building that most likely were painted with lead-based paint when the building was first constructed.

The Occupational Safety and Health Administration (OSHA) under their 29 CFR 1926.62 Regulation, consider elemental lead (i.e. >0.0) to be considered lead containing and subject to their worker protection regulations. Therefore, ATC recommends that appropriate lead testing be performed within the building and all results disclosed to the Contractor as part of the Bid Documents.

In addition, any building components that are found to contain any detectable lead will also be subject to federal Resource Conservation and Recovery Act (RCRA) regulations with regards to disposal. Appropriate Toxicity Characteristic Leaching Procedure (TCLP) sampling shall be required of the waste streams to determine if the material is considered hazardous waste for lead. ATC does recommend that representative TCLP samples be collected of the building components subject to disposal and the results be provided to the Contractor as part of the Bid Documents.

II. Asbestos Materials

ATC performed a cursory review for suspect asbestos-containing materials (ACM) located in accessible areas of the building as well as the Asbestos Hazard Emergency Response Act (AHERA) plan. The AHERA Plan, which was developed for the building in 1988 as required by federal law, included procedures for in-place management of identified asbestos containing materials. However, at the time of the AHERA plan development, the known list of suspect asbestos-containing materials required to be identified were far less than what is required by today standards. In addition, the amount of samples required to be collected and analyzed for each suspect material by the original AHERA regulations was completed to minimal standards as well.

The results of that plan indicated the following asbestos-containing materials to be present within the building:

- ?? 9" x 9" Floor Tile and Mastic
- ?? 12" x 12" Floor Tile and Mastic
- ?? Linoleum Flooring
- ?? Wall Plaster
- ?? Pipe and Fitting Insulation
- ?? Boiler Jacket Insulation
- ?? Flue Insulation

The majority of these materials were observed to be present and in fair to good condition. There was damaged pipe insulation present in the Boiler Room and Fan Room. The school maintenance staff presently monitors the condition of the material on a 6- month basis in accordance with the AHERA Management Plan.

ATC would like to also point out that at the time of the AHERA plan development (1988), the known list of suspect asbestos-containing materials required to be identified were far less than what is required by today standards. In addition, the amount of samples collected and analyzed for each suspect material by the original AHERA plan was completed to minimal standards as well.

Therefore, the following additional suspect ACM was observed by ATC and will require sampling to confirm asbestos content:

- ?? Covebase and Mastic
- ?? Carpet Mastic
- ?? Glue Daubs Behind 12" x 12" Ceiling Tiles
- ?? Fire Doors
- ?? Stair Tread Mastic
- ?? Ceiling Plaster
- ?? Boiler Unit (Interior)
- ?? Window Caulking
- ?? Window Glazing
- ?? Door Caulking (Exterior)
- ?? Sink Coating
- ?? Linoleum Countertops

In accordance with federal Environmental Protection Agency (EPA) National Emission Standards for Hazardous Air Pollutants (NESHAP) Regulations, all materials found to be asbestos-containing in the building must be abated prior to renovation/demolition activities. Therefore, ATC recommends that a comprehensive survey be performed in the school which will (1) identify all suspect ACM subject to potential impact by forthcoming renovation activities which will comply with NESHAP Regulations; and (2) update the overall current AHERA plan for the school.

III. Underground Storage Tanks (UST's), Oil & Hazardous Materials

ATC performed an assessment as to the presence and locations of UST's and oil and other hazardous materials (OHM) at the site. ATC's review included a preliminary site investigation as well as discussions with school personnel and custodial staff on past practices and handling of OHM at the site.

The following is a summary of ATC's findings:

1. Original heating by wood, followed by coal, No. 6 oil (1950s), No. 4 oil, No. 2 oil, and currently natural gas (since early 1990s). 10,000-gallon, single-walled, steel, No. 2 fuel oil UST reported to be removed in early 1990s. No records of conditions present at UST removal. Patch in asphalt visible in former UST location. Some settling has occurred. No fill port or vent pipe visible outside the building. Recommend obtaining tank removal records and reviewing. If insufficient documentation can be obtained to support clean removal, recommend subsurface investigation.

2. Feed/return lines are present within the boiler room. Significant staining was noted at point where lines enter the boiler room. Valves were observed to be in closed position. Oil may be present within the lines. Recommend removal and proper disposal of out-of-service oil lines.
3. Sump with pump is present. Custodian reports rain enters boiler room and collects beneath one of the boilers and in sump. In addition, cleaning buckets are emptied to the sump. Discharge of the sump was not determined. Recommend determining discharge of sump (to sewer versus drywell). If discharge is not to sewer, recommend testing of sump water and sediment.
4. Building was used as the High School from 1927 to 1958. Science sinks are present and traps may require disposal as hazardous material. Any existing septic systems (in use or abandoned) may contain hazardous materials from disposal of chemicals down science sinks and sinks in maintenance areas. Separate septic tank or drywell may be present; however, no specific evidence of this was found during initial inspection. Recommend determining history and location(s) of active and out-of-service septic system(s), settling tanks, and drywells. Recommend testing sediment in settling tanks and/or drywells for hazardous materials.
5. Mercury switch reported to be present associated with the boiler. At least one mercury thermostat reported to be present. Recommend proper disposal of any mercury-containing materials.
6. Chimney stack ash and/or bricks may require disposal as hazardous materials. Recommend testing ash and bricks if disposal is required.
7. Bricked-in circle in concrete foundation is visible in exterior (below grade) wall of boiler room. Was not able to determine what this was for. Shape of opening suggests a tank of some sort. Recommend determining what was in this area, and if an AST was present.
8. Two grease traps reported to be present in cafeteria. Proper disposal is recommended if traps are to be removed.
9. Kiln present in basement but not in use. Vented to outside. No recommendations.
10. Minor chemical storage in closets and in former Fan Room in basement. No odors or staining noted. If necessary, proper disposal of chemicals is recommended.

The aforementioned information represents ATC's preliminary site investigation work relating to the feasibility study. As noted, additional sampling and investigation may be required in some instances to further determine the extent of the remediation activities required.

If you have any questions regarding this information, please feel free to call me directly at (413) 525-1198.

Sincerely,

ATC Associates Inc.

Derrick Wissman
Senior Project Manager