

HAZARDOUS MATERIALS Salmond 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:

?? Salmond 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 1931. 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 and Ceiling Plaster
- ?? Flue Insulation
- ?? Pipe and Fitting Insulation

The majority of these materials were observed to be present and in fair to good condition. 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:

- ?? Carpet Mastic
- ?? Sheetrock
- ?? Joint Compound
- ?? Glue Daubs Behind Chalkboards
- ?? Fire Doors
- ?? Stair Tread Mastic
- ?? Chimney Patch
- ?? Boiler Unit (Interior)
- ?? Window Caulking
- ?? Window Glazing
- ?? Door Caulking (Exterior)

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. Heating of current building was formerly by No. 4 oil, followed by No. 2 oil, and is currently by natural gas. One, 5,000-gallon, single-walled, steel "UST/AST" was reported to be removed in the early 1990s from enclosed room in basement. No records of conditions present at time of removal. No staining observed on concrete floor of cellar where tank was formerly located. No indication if concrete floor was installed after removal. Recommend obtaining tank removal records. Recommend subsurface exploration and testing to determine soil and groundwater quality in vicinity of boiler room and former UST/AST location.

2. Flush mount fill port and vertical vent pipe remain in place, are not blocked or labeled, and are not capped at entry through basement wall. Recommend that fill and vent pipe be removed or permanently sealed, *as soon as possible*, to prevent accidental fill to basement floor.
3. Feed lines from former UST/AST appear to be present and are capped. No staining noted around caps or lines. Recommend removal and proper disposal of former feed lines.
4. Some mercury switches reported to be associated with the boiler. At least one mercury thermostat is reported to be present in a hallway. Classroom thermostats are reported to be non-mercury-containing. Recommend proper disposal of any mercury-containing materials.
5. Light fixtures and ballasts have been replaced recently throughout the building according to School Maintenance. Therefore, no PCB ballasts are present.
6. Chimney stack ash and/or bricks may require disposal as hazardous materials. Recommend testing ash and bricks if disposal is required.
7. Sewer manway covers are present at side of building. In addition, PVC vent pipe, apparently for septic system is present in field at rear of building. Site was the previous location of a private high school (1852-1900) but former building was used as a grammar/elementary school until removal of the former building and construction of current building. No recommendations with respect to any out of service or in use septic system(s).

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