

HAZARDOUS MATERIALS

Introduction:

Universal Environmental Consultants (UEC) has been providing comprehensive asbestos services since 2001 and has completed projects throughout New England. We have completed projects for a variety of clients including commercial, industrial, municipal, and public and private schools. We maintain appropriate asbestos licenses and staff with a minimum of fifteen years of experience.

UEC was contracted by Dore & Whittier Architects to conduct a hazardous materials identification study at the Mitchell and Hillside Schools, Needham, MA.

Information included in this report was based on the AHERA Management Plans prepared by UEC and received from school officials. No testing was performed as part of this study. It is recommended that once a detailed scope of work is identified for a renovation or a demolition project, a comprehensive NESHAP inspection including asbestos testing for all suspect materials and testing for other hazardous materials including, Polychlorinated Biphenyls (PCB's) and Lead Based Paint (LBP) should be performed, which would provide a more accurate hazardous materials abatement costs and scope.

Observations and Cost Estimates:

Observations:

The condition of ACM is very important. ACM in good condition does not present a health issue unless it is disturbed. Therefore, it is not necessary to remediate ACM in good condition unless it will be disturbed through renovation, demolition or other activity.

All materials in both schools were found to be in good condition.

Mitchell School:

1. Vinyl floor tile and mastic were found to contain asbestos. The ACM was found at various locations.
2. Pipe and hard joint insulation was found to contain asbestos. The ACM was found at various locations including above ceilings. The ACM was also found in the crawl spaces.
3. Hard joint insulation off fiberglass insulated pipes was found to contain asbestos. The ACM was found at various locations. The ACM was also found in the crawl spaces.
4. Exterior window framing and glazing caulking was assumed to contain asbestos and assumed to contain PCB's.
5. Interior window glazing caulking was assumed to contain asbestos and assumed to contain PCB's.

6. Door framing caulking was assumed to contain asbestos and assumed to contain PCB's.
7. Unit vent grille caulking was assumed to contain asbestos and assumed to contain PCB's.
8. Glue on blackboards was assumed to contain asbestos.
9. Underground sewer pipes were assumed to contain asbestos.
10. Dampproofing on foundation walls was assumed to contain asbestos.
11. Thru-wall flashing was assumed to contain asbestos.
12. Roofing material was assumed to contain asbestos. However, roofing abatement is not required prior to renovation or demolition. The general contractor must comply with OSHA and DEP regulations. All remaining suspect materials were found not to contain asbestos.
13. All remaining suspect materials were found not to contain asbestos including acoustical ceiling tile, ceiling plaster and wall plaster, newer vinyl floor tiles and mastic.
14. Ballasts in light fixtures are new and were assumed not to contain PCB's.
15. Tubes in light fixtures were assumed to contain mercury.
16. Exit signs, switches, thermostats were assumed to contain mercury.
17. Painted surfaces were assumed to contain lead based paint. However, lead abatement is not required prior to renovation or demolition. The general contractor must comply with OSHA and DEP regulations.
18. One original underground (1950) oil tank (10,000-gallons) exists. No records were found for review. Per the schools official, the tank has not been tight tested. The tank is being used for consumptive use.

Hillside School:

1. Vinyl floor tile and mastic were found to contain asbestos. The ACM was found at various locations.
2. Hard joint insulation off fiberglass insulated pipes was found to contain asbestos. The ACM was found at various locations. The ACM was also found in the tunnels.
3. Interior caulking in wall seams was assumed to contain asbestos and assumed to contain PCB's. The ACM was found at various locations.
4. Exterior window framing and glazing caulking was assumed to contain asbestos and assumed to contain PCB's.
5. Interior window glazing caulking was assumed to contain asbestos and assumed to contain PCB's.

6. Door framing caulking was assumed to contain asbestos and assumed to contain PCB's.
7. Unit vent grille caulking was assumed to contain asbestos and assumed to contain PCB's.
8. Glue on blackboards was assumed to contain asbestos.
9. Underground sewer pipes were assumed to contain asbestos.
10. Damproofing on foundation walls was assumed to contain asbestos.
11. Thru-wall flashing was assumed to contain asbestos.
12. Roofing material was assumed to contain asbestos. However, roofing abatement is not required prior to renovation or demolition. The general contractor must comply with OSHA and DEP regulations.
13. All remaining suspect materials were found not to contain asbestos including acoustical ceiling tile, newer vinyl floor tile and mastic.
14. Ballasts in light fixtures are new and were assumed not to contain PCB's.
15. Tubes in light fixtures were assumed to contain mercury.
16. Exit signs, switches, thermostats were assumed to contain mercury.
17. Painted surfaces were assumed to contain lead based paint. However, lead abatement is not required prior to renovation or demolition. The general contractor must comply with OSHA and DEP regulations.
18. One original (1960) underground oil tank (6,500-gallons) exists. No records were found for review. Per the schools official, the tank has not been tight tested. The tank is being used for consumptive use.

Cost Estimates:

The cost includes removal and disposal of all accessible ACM, other hazardous material and an allowance for removal of inaccessible or hidden ACM that may be found during renovation or demolition projects.

Location	Material	Approximate Quantity	Cost Estimate (\$)
Mitchell School:			
Various Locations	Vinyl Floor Tile and Mastic	3,000 SF	12,000.00
	Pipe and Hard Joint Insulation	8,500 LF	170,000.00
	Hard Joint Insulation	1,000 LF	20,000.00
	Hidden Pipe and Hard Joint Insulation	Unknown	5,000.00
	Miscellaneous and Hidden ACM	Unknown	15,000.00
	Tubes in Light Fixtures	Unknown	5,000.00
	Interior Windows	50 Total*	2,500.00
	Blackboards	70 Total*	7,000.00
Exterior	Windows	170 Total*	17,000.00
	Doors	25 Total*	2,500.00
	Unit Vent Grille Caulking	20 Total*	1,000.00
	Underground Oil Tank	1 Total	15,000.00
	Transite Sewer Pipes	Unknown	15,000.00
	Thru-Wall Flashing	Unknown	15,000.00
	Damproofing on Foundation Walls	Unknown	50,000.00
Estimated costs for Inspection and Testing Services			5,500.00
Estimated costs for Design, Construction Monitoring and Air Sampling Services			45,000.00
Total:			402,500.00

Location	Material	Approximate Quantity	Cost Estimate (\$)
Hillside School:			
Various Locations	Vinyl Floor Tile and Mastic	6,000 SF	24,000.00
	Hard Joint Insulation	1,000 LF	20,000.00
	Hidden Hard Joint Insulation	Unknown	5,000.00
	Interior Caulking	500 LF	2,500.00
	Interior Windows	50 Total*	2,500.00
	Miscellaneous and Hidden ACM	Unknown	15,000.00
	Tubes in Light Fixtures	Unknown	5,000.00
	Blackboards	60 Total*	6,000.00
Exterior	Windows	150 Total*	15,000.00
	Doors	25 Total*	2,500.00
	Unit Vent Grille Caulking	20 Total*	1,000.00
	Underground Oil Tank	1 Total	10,000.00
	Transite Sewer Pipes	Unknown	15,000.00
	Thru-Wall Flashing	Unknown	15,000.00
	Damproofing on Foundation Walls	Unknown	50,000.00
Location	Material	Approximate Quantity	Cost Estimate (\$)
Estimated costs for Inspection and Testing Services			4,000.00
Estimated costs for Design, Construction Monitoring and Air Sampling Services			25,000.00
Total:			217,500.00
GRAND TOTAL (Mitchell & Hillside Schools):			\$ 620,000.00

*: Quantities were estimated.

Limitations and Conditions:

This report has been completed based on visual and physical observations made and information available at the time of the site visits, as well as an interview with the Owner's representatives. This report is intended to be used as a summary of available information on existing conditions with conclusions based on a reasonable and knowledgeable review of evidence found in accordance with normally accepted industry standards, state and federal protocols, and within the scope and budget established by the client. Any additional data obtained by further review must be reviewed by UEC and the conclusions presented herein may be modified accordingly.

This report and attachments, prepared for the exclusive use of Owner for use in an environmental evaluation of the subject site, are an integral part of the inspections and opinions should not be formulated without reading the report in its entirety. No part of this report may be altered, used, copied or relied upon without prior written permission from UEC, except that this report may be conveyed in its entirety to parties associated with Owner for this subject study.