ASBESTOS SURVEY,
Harbourview School
25 Alfred Street
Dartmouth, N.S., B3A 4E8

Prepared by:

Maritime Testing (1985) Limited
116-900 Windmill Rd
Dartmouth, N.S.

Prepared for:

Halifax Regional School Board
90 Alderney Dr., 3rd floor
Dartmouth, N.S.
B2Y 4S8

June 15, 1999

NEO-1256.87

INTRODUCTION

The Halifax Regional School Board has undertaken a mandate to conduct asbestos inventories in each of the schools in the School Board region. Maritime Testing (1985) Limited (MTL) was retained by the Board to conduct these inventories and prepare the asbestos survey reports. This report on Harbourview School represents one of the schools surveyed as part of this comprehensive inventory.

METHODS

Each school was inspected for building materials that might be composed of asbestos containing minerals (ACMs). Types of materials examined and sampled as needed could include but not necessarily be limited to:

mechanical systems:	insulation on pipes, fittings, boilers, air conveyance systems, structural materials
flooring:	sheet flooring, vinyl tiles
ceilings:	suspended ceilings, rigid ceilings, texture coats
walls:	texture coats, wallboards, plasters
building exterior:	wall panels, panels under entrances

Please note the following limitations regarding these surveys:

1. Sampling and inspection was not conducted if permanent visible damage would result from these activities. In such circumstances, inference is made to the potential for ACMs to be present based upon other observations made in the building (for example, holes are not cut into wall cavities to determine if insulated pipe work is present).

2. In each school, every room that was accessible was surveyed. In cases where access to a room was not possible, inference on that room is made based on what was observed throughout the rest of the school.

3. Plaster, unlike many other materials in schools such as floor tiles, ceiling tiles, etc., was originally fabricated on site. Each batch, which typically would be wheel barrow sized, could potentially be a bit different from the next. Asbestos, typically chrysotile, was used as well as other materials (hairs, wood) as a strengthening material and was applied “in shovelfuls” more or less at the discretion of the worker. Samples collected routinely in schools are based upon perceived differences in

texture, age of construction, etc., and may not reflect small differences from one batch to another, particularly since sample sizes are kept small to reduce damage. Accordingly, samples of plaster identified as not containing asbestos may well not be precisely indicative of the overall composition of the plaster in general. As a result, plaster should be assumed to contain asbestos unless a specific sample from the area in question has been analysed and shown to be asbestos free.

All inspections were scheduled such that sampling could be conducted after normal school hours. This school was surveyed on February 15, 1998.

Samples collected at the school were examined under both stereo and polarised light microscopy to determine fibre types and relative percentages of each asbestos mineral if it was present. As well, any ACMs were further categorised into one of three categories as noted below:

Priority 1: materials representing a potential health risk with normal routine building use and which require immediate removal. Such materials may include damaged ceiling tiles, damaged pipe insulation, damaged friable boiler insulation.

Priority 2: materials which do not pose a health risk under normal school usage but which pose a periodic risk to maintenance and custodial staff or which are currently undamaged but which might easily be damaged in the future; these materials require removal during the next suitable time (ie a major school break, next planned renovation project). Such materials may include undamaged ceiling tiles, damaged pipe insulation above ceilings, undamaged texture coats.

Priority 3: Non-friable materials or materials that are in good condition, are not generally accessible, and which currently pose no risk to any occupant. Such materials may include floor tiles, transite panels, mechanical insulation in good repair.

Refer to Appendix A for a summary of the Priorities of the ACMs.

Data are also available on an asbestos inventory data base, accessible from the school board offices prepared specifically by MTL for this project.

For a list of materials sampled, refer to Appendix B. Refer to Appendix C for a diagram of the school floor plan and sample locations. For a list of locations and quantities of asbestos containing materials, refer to Appendix D. Refer to Appendix E for a room by room account

of ACM's. Refer to Appendix F for photos of Priority 1 ACMs.

INVENTORY RESULTS.

Boiler Room: There are two boiler rooms in this school. In the Old Boiler Room, the two boilers are insulated with cement trowelled over fibreglass. The cement contains 60% chrysotile asbestos. The cement is in good condition and a Priority 3. Pipe elbows throughout the room are insulated with cement that contains 60% chrysotile asbestos. The cement is in good condition and a Priority 3.

In the New Boiler Room , the boiler is encased in steel with no access to the insulation underneath. The insulation on the exhaust contains 60% chrysotile asbestos, is in good condition and a Priority 3. The pipe elbows are insulated with asbestos cement(60% chrysotile). The cement is in good condition and a Priority 3. The Hot Water Tank is insulated with asbestos cement (60% chrysotile) over fibreglass. The cement is in good condition and a Priority 3. The elbows of the roof drain are insulated with asbestos cement, are in good condition and a Priority 3.

Exterior: No materials on the exterior contain asbestos.

Floors: Various types of 9" tiles throughout the school contain 10% chrysotile asbestos. None of the other floor coverings contain asbestos. The tile is in good condition and a Priority 3.

Walls: None of the wall materials in this school contain asbestos.

Ceilings: In various locations throughout the school, the ceiling is made up of 2'x4' transite panels that contain 40% chrysotile asbestos. The tile is in good condition and a Priority 2. None of the other types of ceiling materials in this school contain asbestos.

Pipe Systems: The pipes throughout the school are insulated with fibreglass or cardboard on the runs and asbestos cement (60% chrysotile) on the elbows. Asbestos cement on elbows above the ceiling are a Priority 3 and below the ceiling are a Priority 2. None of the other pipe materials contain asbestos. Damaged asbestos cement on pipe elbows below the ceiling is a Priority 1.

Appendix A:

Summary: The following is a summary of Priorities of the various ACMs at this school:

Priority 1:

- Music Room, damaged asbestos cement on a pipe elbow below the ceiling
- Room 01, damaged asbestos cement on pipe elbow below the ceiling
- Guidance Room, damaged asbestos cement on pipe elbows below the ceiling
- Janitor's Room, damaged asbestos cement on pipe elbows below the ceiling
- Room 115, damaged asbestos cement on pipe elbows below the ceiling
- Room 113, damaged asbestos cement on pipe elbow below the ceiling
- Room 110, damaged asbestos cement on pipe elbow below the ceiling
- Room 111, damaged asbestos cement on pipe elbow below the ceiling

Priority 2:

- various locations throughout the school, asbestos cement on pipe elbows located below the ceiling
- various locations throughout the school, asbestos ceiling tiles

Priority 3:

- Old Boiler Room, asbestos cement on boilers
- Old Boiler Room, asbestos cement on pipe elbows
- New Boiler Room, asbestos cement on boiler exhaust
- New Boiler Room, asbestos cement on pipe elbows
- New Boiler Room, asbestos cement on Hot Water Tank
- Asbestos cement on roof drains throughout new Boiler Room
- 2'x4' suspended ceiling panel throughout building

Appendix B:

Samples taken and locations

#	Sample description	Location	ACM
	Boiler Room		
87.1	Insulation on Boiler Exhaust	New Boiler Room	yes
87.2	Cement on pipe elbow	New Boiler Room, Heating Supply Line	yes
87.3	Cement on Hot Water Tank	New Boiler Room	yes
87.4	Cement trowelled over Boiler	Old Boiler Room, Boiler #W.178	yes
87.5	Cement trowelled over fibreglass on pipe elbow	Old Boiler Room, Supply Line	yes
87.6	Cement trowelled over elbow of roof drain	New Boiler Room	yes
	Exterior		
	No materials on exterior were sampled.		
	Floors		
87.7	12" tile, gray/blue marble	Basement east storage room	no
87.8	12" tile, gray with white streaks	Basement East Stairwell	no
87.9	9" tile, gray with white streaks	Foyer outside Room 01	no
87.10	12" tile, off-white with beige and green	Foyer outside Room 01	no
87.11	Seamless flooring, gray with blue and brown	Room 03	no
87.17	12" tile, light beige with white and brown streaks	Music Room	no
87.18	9" tile, beige with white and brown streaks	Room 01	no
87.19	12" tile, pink	Room 01	no
87.21	9" tile, lime green with white streaks	Guidance Room	yes
87.22	9" tile, green with white streaks	Guidance Room	yes
87.23	12" tile, off-white with black specks	Janitor's Room by Guidance Room	no
87.24	12" tile, green marble	Girls Washroom	no
87.26	12" tile, pink	Janitor's Sink Room	no

Appendix B:

Samples taken and locations

#	Sample description	Location	ACM
87.27	Seamless flooring,green with black streaks	Storage room (1st floor)	no
87.28	12" tile, beige	Room 113	no
87.29	9" tile, white with black streaks	1st floor hallway, south end	no
87.30	9" tile, blue with dark blue and white streaks	1st floor hallway, south end	yes
87.31	Stair tread, red with red streaks	Joining hallway and exit	no
87.33	Aqua seamless	Caretaker's Supply Room	no
87.35	12" tile, gray marble	Gym Stage	no
87.36	12" tile, blue marble	Gym Stage	no
87.38	Seamless flooring, beige	Principal's Washroom	no
87.40	12" tile, green marble	East Hallway	no
87.43	12" tile, brown with dark and light brown pattern	North Hallway	no
87.44	Seamless flooring, tan	North Hallway	no
87.46	9" tile, gray	South west exit	no
87.47	12" tile, brown with dark brown spots	South west exit	no
	Walls		
	No wall samples were taken in this school.		
	Ceilings		
87.12	2'x4' suspended panel	Room 03	no
87.13	2'x4' suspended panel	Room 03	no
87.14	12" tile	Music Room	no
87.15	12" tile	Music Room	no
87.25	2'x2' suspended panel	Girls Washroom	no
87.48	2'x2' suspended panel	Library	no
87.49	2'x2' suspended panel	Library	no
87.32	2'x4' suspended panel	Boys Change Room	yes

Appendix B:

Samples taken and locations			
#	**Sample description**	**Location**	**ACM**
87.37	12" tile	Gym Stage	no
87.39	2'x2' suspended tile	North West Exit	no
87.41	2'x2' suspended tile	Creative Play Room	no
87.42	2'x2' suspended tile	Creative Play Room	no
	Pipes		
87.16	cement on pipe elbow	Music Room	yes
87.34	cement on pipe elbow	Phys. Ed. Instructor's Room	yes
	Miscellaneous		
87.20	seamless covering on counter top, red	Music Room	no
87.27	seamless covering on counter top, green with black	Room 109	no
87.45	seamless covering on counter top, beige with brown	Room 207	no

Appendix C:
Floor Plans and Sample Locations

Appendix D:

Quantity and locations of ACMs.

Boiler Room

Description	Locations	Quantity
insulation on boiler exhaust	New Boiler Room	15'x18" outside dia.
cement on pipe elbow	throughout New Boiler Room	100
cement on Hot Water Tank	New Boiler Room	12'x4.5' outside dia.
cement trowelled over (2) boiler	Old Boiler Room	200 $ft.^2$
cement on pipe elbows	throughout Old Boiler Room	45
cement on roof drain elbows	throughout New Boiler Room	6

Exterior

No materials on exterior of this school contains asbestos.

Floors

Description	Locations	Quantity ($ft.^2$)
9" tile, lime green with white streaks	Guidance Office	32
9" tile, green with white streaks	Guidance Office	122
9" tile, green with white streaks	Janitor's Room	147
9" tile, green with white streaks	1st floor, south hallway	50
9" tile, blue with dark blue and white streaks	1st floor, south hallway	50

Walls

No wall materials in this school contain asbestos.

Ceilings

Description	Locations	Quantity ($ft.^2$)
2'x4' suspended panel	Boys Change Room	232
2'x4' suspended panel	Girls Shower Area	100
2'x4' suspended panel	Women's Staff Washroom	25

Ceilings

Description	Locations	Quantity (ft.^{2})
2'x4' suspended panel	Men's Staff washroom	25
2'x4' suspended panel	Storage Washroom	25

Pipes

Description	Locations	Quantity
cement on pipe elbow below ceiling	Storage Room under east Stairwell	6
cement on pipe elbow below ceiling	Music Room	29
cement on pipe elbow below ceiling	Room 01	45
cement on pipe elbow below ceiling	Room 01 Foyer	6
cement on pipe elbow below ceiling	Guidance Room	8
cement on pipe elbow below ceiling	Janitor's Room	2
cement on pipe elbow below ceiling	Boys washroom	9
cement on pipe elbow below ceiling	Room 115	6
cement on pipe elbow below ceiling	Girls washroom	2
cement on pipe elbow below ceiling	Room 113	5
cement on pipe elbow below ceiling	Room 110	5
cement on pipe elbow below ceiling	Room 112	3
cement on pipe elbow below ceiling	Room 111	4
cement on pipe elbow below ceiling	First Floor Hallway	10
cement on pipe elbow below ceiling	Book Storage Room	4
cement on pipe elbow below ceiling	Phys. Ed. Instructor's Room	3
cement on pipe elbow above ceiling	Room 03	6
cement on pipe elbow above ceiling	Joining Hallway	4
cement on pipe elbow above ceiling	Library	2
cement on pipe elbow above ceiling	Room 107	2
cement on pipe elbow above ceiling	Room 108	2
cement on pipe elbow above ceiling	Gym Stage	6

Pipes

Description	Locations	Quantity
cement on pipe elbow above ceiling	Centre Hallway	2
cement on pipe elbow above ceiling	Health Room amd Washroom	2
cement on pipe elbow above ceiling	Staff Room	2
cement on pipe elbow above ceiling	North West Exit	2
cement on pipe elbow above ceiling	Gym Storage and Change Room	3
cement on pipe elbow above ceiling	Room 103	1
cement on pipe elbow above ceiling	Room 104	2
cement on pipe elbow above ceiling	Room 105	2
cement on pipe elbow above ceiling	Room 106	2
cement on pipe elbow above ceiling	East Hallway	5

Appendix E:

ACM's Room by Room (for quantities refer to Appendix D).

Room	ACMs
1st floor, south hallway	9" tile, green with white streaks 9" tile, blue with dark blue and white streaks
Book Storage Room	cement on pipe elbows below ceiling
Boys washroom	cement on pipe elbows below ceiling
Boys Change Room	2'x4' suspended panel
Centre Hallway	cement on pipe elbows above ceiling
East Hallway	cement on pipe elbows above ceiling
First Floor Hallway	cement on pipe elbows below ceiling
Girls washroom	cement on pipe elbows below ceiling
Girls Shower Area	2'x4' suspended panel
Guidance Office	9" tile, green with white streaks 9" tile, lime green with white streaks cement on pipe elbows below ceiling
Gym Stage	cement on pipe elbows above ceiling
Gym Storage and Change Room	cement on pipe elbows above ceiling
Health Room amd Washroom	cement on pipe elbows above ceiling
Janitor's Room	9" tile, green with white streaks cement on pipe elbows below ceiling
Joining Hallway	cement on pipe elbows above ceiling
Library	cement on pipe elbows above ceiling
Men's Staff washroom	2'x4' suspended panel
Music Room	cement on pipe elbows below ceiling
New Boiler Room	cement on Hot Water Tank insulation on boiler exhaust
North West Exit	cement on pipe elbows above ceiling
Phys. Ed. Instructor's Room	cement on pipe elbows below ceiling

ACM's Room by Room (for quantities refer to Appendix D).

Room	ACMs
Room 112	cement on pipe elbows below ceiling
Room 111	cement on pipe elbows below ceiling
Room 01 Foyer	cement on pipe elbows below ceiling
Room 01	cement on pipe elbows below ceiling
Room 110	cement on pipe elbows below ceiling
Room 03	cement on pipe elbows above ceiling
Room 113	cement on pipe elbows below ceiling
Room 115	cement on pipe elbows below ceiling
Room 107	cement on pipe elbows above ceiling
Room 108	cement on pipe elbows above ceiling
Room 106	cement on pipe elbows above ceiling
Room 105	cement on pipe elbows above ceiling
Room 104	cement on pipe elbows above ceiling
Room 103	cement on pipe elbows above ceiling
Staff Room	cement on pipe elbows above ceiling
Storage Room under east Stairwell	cement on pipe elbows below ceiling
Storage Washroom	2'x4' suspended panel
throughout Old Boiler Room	cement on pipe elbows cement trowelled over (2) boiler
throughout New Boiler Room	cement on roof drain elbows cement on pipe elbows
Women's Staff Washroom	2'x4' suspended panel

Appendix F:
* other Priority 1's throughout the school are similar to this photo.

Music Room, damaged asbestos cement on a pipe elbow below the ceiling