



Corporation of the City of
NEW WESTMINSTER

NWRFP-22-12

APPENDIX H

AUGUST 2015 HAZARDOUS BUILDING MATERIALS SURVEY

August 20, 2015



CITY OF NEW WESTMINSTER

511 Royal Avenue
New Westminster, BC V3L 1H9

Attention: Mr. Wayne Werbovetski, BArch, AIBC
Project Manager

Ref: PRE-RENOVATION HAZARDOUS BUILDING MATERIALS SURVEY OF THE MASSEY THEATRE BUILDING LOCATED AT 735 - 8TH AVENUE, NEW WESTMINSTER, BC

1.0 INTRODUCTION

Astech Consultants were retained by the City of New Westminster to conduct a Pre-Renovation Hazardous Building Materials Survey and compile a detailed report on the presence and location of asbestos containing building materials, PCB containing ballasts, lead, mercury, and stored chemicals at the Massey Theatre Building located at 735 - 8th Avenue, New Westminster, BC. This survey report does not include the Large Gymnasium including areas above and below the Gymnasium.

Astech Consultants Ltd. survey and report format is designed specifically to satisfy the current applicable regulation from the Workers' Compensation Board of British Columbia Occupational Health and Safety Regulation 20.112 regarding hazardous building material assessments by a Qualified Person for buildings and structures constructed year 1989 and prior, which is listed below.

PART 20: CONSTRUCTION, EXCAVATION AND DEMOLITION

Hazardous materials 20.112 Before work begins on the demolition or salvage of machinery, equipment, buildings or structures, the employer or owner must

- (a) ensure that a qualified person inspects the site to identify any asbestos-containing materials, lead or other heavy metal or toxic, flammable or explosive materials that may be handled, disturbed or removed,
- (b) have the inspection results available at the worksite, including any drawings, plans or specifications, as appropriate, to show the locations of any hazardous substances,
- (c) ensure that any hazardous materials found are safely contained or removed, and
- (d) if hazardous materials are discovered during demolition work that were not identified in the inspection required by paragraph (a), ensure that all work ceases until such materials are contained or removed.

This survey was conducted on June 3, 4, 8, 9, 18, & 22, 2015 by Rob Kingsley and Stephen Price of Astech Consultants, and is amalgamated with information obtained from our previous survey completed in June 2009, and from the provided Survey and Risk Assessment of Asbestos Containing Materials report by ACM Environmental Corporation dated June 8, 2007 and the Hazardous Building Materials Assessment report by Golder Associates Ltd. dated June 1, 2012. Areas such as inaccessible floor cavities, wall

cavities, and ceiling cavities which would require dismantling or damaging portions of the building in order to gain access were not investigated. No attempt was made to investigate the Large Gymnasium, areas above and below the Large Gymnasium, exterior of the Large Gymnasium, underground services, or the surrounding property.

2.0 METHODOLOGY

2.1 ASBESTOS CONTAINING MATERIALS

A visual inspection was undertaken in order to determine the type, location, and homogeneous nature of asbestos and potential asbestos containing building materials located at the subject building. During this inspection, one hundred thirty-three (133) bulk samples of potential asbestos containing materials were collected from specific locations of the subject building. The samples collected were submitted for analysis at our in-house laboratory in accordance with the Workers' Compensation Board of British Columbia Occupational Health and Safety Regulation, utilizing polarized light microscopy, and dispersion staining techniques. Results of laboratory analysis of samples collected during this survey and results of Astech's previously collected samples are attached.

2.2 LEAD PAINTS

A visual inspection was undertaken in order to determine the type and location of paints suspected of containing lead at the subject building. During this inspection, three (3) bulk samples of potential lead paint were collected from specific locations of the subject building. The samples collected were submitted for laboratory analysis in accordance with US EPA methods and the requirements of the Workers' Compensation Board of British Columbia Occupational Health and Safety Regulation. Results of laboratory analysis of samples collected during this survey are attached.

Once laboratory analytical results indicated the presence of lead paint, a return visit was undertaken to collect potential leachate lead paint samples of the affected paint which was sampled intact on the base substrate of wood at the exterior of the smoke vent and exterior stucco. The return visit was conducted June 22, 2015 and three (3) bulk samples of potential leachate lead paint were collected from where lead paints were previously identified. The samples collected were submitted for laboratory analysis in accordance with US EPA methods and the requirements of the Workers' Compensation Board of British Columbia Occupational Health and Safety Regulation. Results of laboratory analysis of samples collected during this return visit are attached.

2.3 PCB CONTAINING MATERIALS, LEAD, MERCURY, AND STORED CHEMICALS

A visual inspection was undertaken in order to determine the presence of:

- fluorescent light fixtures & HID light fixtures suspected of containing PCB ballasts or capacitors,
- construction materials suspected of containing lead and other heavy metals,
- thermostats and associated equipment suspected of containing mercury, and
- stored chemicals suspected of being toxic, flammable, or explosive.

3.0 INSPECTION RESULTS

3.1 ASBESTOS CONTAINING MATERIALS

LOWER/MAIN FLOOR

**Northeast Lobby, and
Northeast Stairwell to Second Floor**

- **Asbestos** containing floor tiles (some concealed).

**Storage beneath Northeast Stairwell,
Operations Office, Conference Room, and Storage Room (3 rooms), and
Drama Room Northwest Entrance Foyer/Storage**

- No asbestos materials observed.

Drama Area Ceiling Spaces

- **Asbestos** containing ceiling tile adhesive on walls and/or ceilings (above suspended ceiling).

**Small Storage Room (adjacent to Northwest Entrance Foyer/Storage, accessed from Drama Room),
Large Storage Room (north, accessed from Drama Room, formerly 2 rooms),
Drama Lounge (east, accessed from Drama Room),
Fan Room (accessed from Drama Lounge at northeast corner),
Office (accessed from Drama Room),
Drama Room including Entrance Ramp, and
Wardrobe Storage Room (accessed from Drama Room)**

- No asbestos materials observed.

Washroom Hallway (at rear of Drama Room)

- **Asbestos** containing paper backed sheet flooring (some concealed). **Note:** The newer sheet flooring beneath the washup sink is non-asbestos.
- **Asbestos** containing insulating cement at fittings of the mechanical piping system (mostly concealed above suspended ceiling and wall enclosure).

**Boys' and Girls' Washroom (1 room, at rear of Drama Room), and
Staff Washroom (at rear of Drama Room)**

- **Asbestos** containing paper backed sheet flooring (some concealed).

Northeast Corridor/Ramp to Crawlspace (accessed from Northeast Lobby)

- **Asbestos** containing insulating cement may be on some fittings of the mechanical piping system.

**Hallway to North Crawlspace/Storage and Large Gymnasium Crawlspace, and
North Crawlspace/Storage including Two Rooms within (below Rooms North of Main Corridor)**

- No asbestos materials observed.

Centre North (below Main Corridor) and West (below Theatre Lobby & Plasket Gallery) Crawlspace

- **Asbestos** containing preformed insulation on mechanical piping system (near west end of Centre North Crawlspace).

**Maintenance/Fire Control Room (adjacent to Stairwell to Stage Left)
Stairwell to Stage Left**

- No asbestos materials observed.

Storage Area beneath Stage including Three Rooms within

- **Asbestos** containing filling compound on gypsum board (some concealed).
- **Asbestos** containing insulating cement on fittings of small diameter mechanical piping system (near entrance door).
- **Asbestos** containing mastic on joints of ductwork (some concealed).

Dressing Room Corridor and Exit Corridor

- **Asbestos** containing filling compound on gypsum board and feathered onto adjoining plaster (some concealed).
- **Asbestos** containing insulating cement on fittings of mechanical piping system.

Fan Room 1 beneath Stairwell including Wall Cavity behind

- **Asbestos** containing filling compound on gypsum board (some concealed).
- **Asbestos** containing mastic on joints of ductwork (some concealed).

**Dressing Room 2,
Dressing Room 3, and
Men's Change Room 4**

- **Asbestos** containing insulating cement on fittings of mechanical piping system.

**Male Washroom 5,
Male Washroom 6,
Women's Washroom 7, and
Women's Washroom 8**

- No asbestos materials observed.

**Female Change Room 9,
Dressing Room 10, and
Dressing Room 11**

- **Asbestos** containing insulating cement on fittings of mechanical piping system.

Janitor Room (near Dressing Rooms)

- No asbestos materials observed.

Southeast Stairwell to Second Floor Stage

- **Asbestos** containing filling compound on gypsum board (some concealed).

Old Hallway (east of South Crawlspace) including Stairwell to Theatre

- No asbestos materials observed.

Storage/Crawlspace (accessed from Old Hallway) (beneath Band Room 104B)**Southwest Crawlspace (accessed from floor hatch in Band Storage Room)**

- **Asbestos** containing cementitious drain pipe (some concealed including beneath floor slab).

Wall Cavities and Ceiling Spaces

- **Asbestos** containing mastic on joints of ductwork (some concealed). Note: The black duct mastic is non-asbestos.
- **Asbestos** containing preformed insulation and/or insulating cement on mechanical piping (mostly in inaccessible wall cavities and ceiling spaces).
- **Asbestos** containing cementitious drain pipe (some concealed).

SECOND FLOOR**Main Corridor**

- **Asbestos** containing floor tiles (concealed beneath a layer of non-asbestos sheet flooring and other building materials).
- **Asbestos** containing filling compound on some gypsum board and feathered onto adjoining plaster (some concealed).
- **Asbestos** containing ceiling tile adhesive on ceiling (above suspended ceiling).

**Small Gymnasium 102, and
Storage Room (accessed from Small Gymnasium 102)**

- No asbestos materials observed.

Office, Washroom, and Shower Room (3 rooms, accessed from Small Gymnasium 102)

- **Asbestos** containing floor tiles (some concealed).

Fire Exit Stairwell (from Small Gymnasium 102 to exterior)

- No asbestos materials observed.

Fan Room (accessed from Small Gymnasium 102 wall hatch)

- **Asbestos** containing mastic on joints of ductwork (some concealed including within ductwork).

Football Lounge (adjacent to Northeast Stairwell)

- No asbestos materials observed.

Small Storage Room (at east end of Main Corridor)

- **Asbestos** containing floor tiles (concealed beneath a layer of non-asbestos sheet flooring and other building materials).

Large Storage Room

- **Asbestos** containing floor tiles (concealed beneath a layer of non-asbestos sheet flooring, wood, and other building materials).
- **Asbestos** containing filling compound on gypsum board and feathered onto adjoining plaster (some concealed).

Female Staffroom including Closet, Washroom, and Shower (accessed from Large Gymnasium)

- **Asbestos** containing floor tiles in Washroom (some concealed).
- **Asbestos** containing filling compound on gypsum board and feathered onto adjoining plaster (some concealed).

Large Gymnasium Partition Wall Storage Room (accessed from Drama Room wall hatch and Large Gymnasium)

- No asbestos materials observed.

Short Hallway to Large Gymnasium (adjacent to Large Storage Room)

- **Asbestos** containing floor tiles (concealed beneath carpet and other building materials).
- **Asbestos** containing ceiling tile adhesive on ceiling (above suspended ceiling).

**Janitor Room including Closet (across from Custodian Room),
Custodian Room, and
Office**

- No asbestos materials observed.

Short Hallway to Large Gymnasium (adjacent to Office)

- **Asbestos** containing floor tiles (concealed beneath carpet and other building materials).
- **Asbestos** containing ceiling tile adhesive on ceiling (above suspended ceiling).

Medical Room

- **Asbestos** containing paper backed sheet flooring (some concealed).

Male Staffroom including Closet, Washroom, and Shower (accessed from Large Gymnasium)

- **Asbestos** containing paper backed sheet flooring in Washroom (some concealed).
- **Asbestos** containing filling compound on gypsum board and feathered onto adjoining plaster (some concealed).

**Women's Washroom,
Men's Washroom, and
Women's Washroom (across from Handicap Washroom)**

- Non-asbestos flooring materials.
- Non-asbestos filling compound on gypsum board.
- No asbestos materials observed.

Handicap Washroom including Janitor Room within

- **Asbestos** containing ceiling tile adhesive on ceiling (some above suspended ceiling and some above non-asbestos 12" ceiling tiles).
- Non-asbestos flooring materials.
- Non-asbestos filling compound on gypsum board.

Northwest Entrance Foyer

- **Asbestos** containing filling compound on gypsum board (some concealed).

Two Storage Rooms (beneath Northwest Stairwell)

- **Asbestos** containing vinyl tread (some concealed).
- **Asbestos** containing floor tiles (some concealed beneath a layer of **asbestos** containing vinyl tread and other building materials).
- **Asbestos** containing filling compound patches on some plaster walls and ceilings (some concealed).

Theatre Lobby

- **Asbestos** containing filling compound on gypsum board and feathered onto adjoining plaster (some concealed).

**Plasket Gallery,
Plasket Gallery Concession, and
Plasket Gallery Kitchen including Usher Jacket Storage Room**

- No asbestos materials observed.

Hallway (from Theatre Lobby to Plasket Gallery Kitchen)

- **Asbestos** containing floor tiles (concealed beneath a layer of non-asbestos paper backed sheet flooring and other building materials).

Massey Theatre Ticket Sales Office

- No asbestos materials observed.

Theatre Entrance Hallway including Two Storage Rooms

- **Asbestos** containing ceiling tile adhesive on walls (behind non-asbestos 12" tiles) in Storage Rooms.

**Theatre Control Room, and
Theatre Seating Area**

- No asbestos materials observed.

Stage including Laundry Closet

- Non-asbestos woven textile fire safety curtain. The curtain is a CSC-G1PC Proscenium Fire Safety Curtain manufactured by Canvas Specialty Company and can be described as a high temperature coated fibreglass fabric with vertical double-stitched seams.
- No asbestos materials observed.

Storage Room including Mezzanine (Stage Right)

- **Asbestos** containing filling compound on gypsum board (some concealed).

Stage Supplies/Workshop including Mezzanine, Mezzanine Stairwell, and Room within

- No asbestos materials observed.

Southwest Stairwell to Third Floor

- **Asbestos** containing vinyl stair tread (some concealed).

Wall Cavity/Ceiling Space (accessed from Southwest Stairwell wall hatch)

- No asbestos materials observed.

South Corridors including Steps (from Theatre Lobby to Stage)

- **Asbestos** containing paper backed sheet flooring (some concealed beneath carpet and other building materials).
- **Asbestos** containing vinyl stair tread (some concealed).
- **Asbestos** containing filling compound on gypsum board (some concealed).

Band Room 104A including Steps and Rear Vestibule

- **Asbestos** containing filling compound on gypsum board (some concealed).
- **Asbestos** containing 2' x 4' ceiling tiles and contaminated track system. **Note:** The newer ceiling tiles that are distributed throughout the ceiling system should also be considered as **asbestos** contaminated.

**Storage Room (accessed from Band Room 104A),
Band Storage Room/Office (between Band Rooms), and
Office (Lunchroom) (accessed from Band Storage Room/Office)**

- **Asbestos** containing filling compound on gypsum board (some concealed).

Stairwell to Third Floor (from Band Storage Room/Office)

- **Asbestos** containing floor tiles (some concealed).
- **Asbestos** containing filling compound on gypsum board (some concealed).

Band Room 104B including Closets

- **Asbestos** containing filling compound on gypsum board (some concealed).
- **Asbestos** containing 2' x 4' ceiling tiles and contaminated track system. **Note:** The newer ceiling tiles that are distributed throughout the ceiling system should also be considered as **asbestos** contaminated.

Two Soundproof Rooms (accessed from Band Room 104B)

- **Asbestos** containing filling compound on gypsum board (some concealed).
- **Asbestos** containing ceiling tile adhesive on ceilings (above non-asbestos 12" ceiling tiles).

Vestibule (from exterior to Band Room 104B)

- **Asbestos** containing floor tiles (concealed beneath a layer of non-asbestos paper backed sheet flooring, wood, and other building materials).
- **Asbestos** containing filling compound on gypsum board (some concealed).

Floor Cavities, Wall Cavities, and Ceiling Spaces

- **Asbestos** containing mastic on joints of ductwork (some concealed).
- **Asbestos** containing preformed insulation and/or insulating cement on mechanical piping (mostly in inaccessible wall cavities and ceiling spaces).
- **Asbestos** containing cementitious drain pipe (some concealed).

THIRD FLOOR**Main Corridor**

- **Asbestos** containing floor tiles (concealed beneath a layer of non-asbestos sheet flooring and other building materials).
- **Asbestos** containing filling compound on some gypsum board and feathered onto adjoining plaster (some concealed).
- **Asbestos** containing ceiling tile adhesive on ceiling (above suspended ceiling).

Short Hallway to Large Gymnasium Balcony (at east end of Main Corridor)

- **Asbestos** containing floor tiles (concealed beneath a layer of non-asbestos sheet flooring and other building materials).
- **Asbestos** containing filling compound on gypsum board at former doorway and feathered onto adjoining plaster (some concealed).

Boiler Room including Mezzanine

- **Asbestos** containing filling compound on gypsum board (some concealed).
- **Asbestos** containing mastic/grout between sections of heat exchangers (3 in each boiler) behind outer metal casings of the 2 older boilers.
- **Asbestos** containing gaskets and packing materials at valves and flanges of mechanical piping systems is assumed to be present in the Boiler Room and likely in other areas of the building. Destructive testing on operating mechanical systems not conducted at this time.

Janitor Room (across from Boiler Room)

- **Asbestos** containing floor tiles (some concealed).

Drama Room including Stairwell to Fourth Floor Attic/Fan Room

- **Asbestos** containing floor tiles (concealed beneath a layer of non-asbestos floor tiles and other building materials).
- **Asbestos** containing filling compound on gypsum board (some concealed).

Storage beneath Stairwell (accessed from Drama Room)

- No asbestos materials observed.

Foyer, Office, and Washroom (between Art Room and Drama Room)

- **Asbestos** containing filling compound on gypsum board (some concealed).
- **Asbestos** containing filling compound patches on plaster (some above suspended ceiling).
- **Asbestos** containing aluminized paper insulation within incandescent light fixture in Washroom.

Art Room (formerly 2 rooms)

- **Asbestos** containing floor tiles (concealed beneath carpet and other building materials, and may be multi-layered).
- **Asbestos** containing filling compound on gypsum board (some concealed).

Stairwell to Fourth Floor Storage Room (above Art Room)

- **Asbestos** containing filling compound on gypsum board (some concealed).

**Janitor Room (across from Art Room), and
Short Hallway to Large Gymnasium Balcony (adjacent to Northwest Stairwell)**

- **Asbestos** containing floor tiles (concealed beneath a layer of non-asbestos sheet flooring and other building materials).

Northwest Stairwell to Second Floor including Display Room atop Stairwell

- **Asbestos** containing vinyl stair tread (some concealed).
- **Asbestos** containing filling compound on gypsum board (some concealed).

**Kiln Room, and
Office (at west end of Main Corridor)**

- **Asbestos** containing floor tiles (concealed beneath a layer of non-asbestos sheet flooring and other building materials).
- **Asbestos** containing filling compound on gypsum board (some concealed).
- **Asbestos** containing ceiling tile adhesive on ceiling (behind non-asbestos 12" ceiling tiles).

Music Room including Short Hallway to Main Corridor

- **Asbestos** containing floor tiles (concealed beneath a layer of carpet, non-asbestos sheet flooring, and other building materials).
- **Asbestos** containing filling compound on gypsum board (some concealed).
- **Asbestos** containing ceiling tile adhesive on ceiling (behind non-asbestos 12" ceiling tiles).

Storage Room (accessed from Music Room)

- **Asbestos** containing floor tiles (concealed beneath a layer of non-asbestos sheet flooring and other building materials).
- **Asbestos** containing filling compound on gypsum board (some concealed).
- **Asbestos** containing ceiling tile adhesive on ceiling (behind non-asbestos 12" ceiling tiles).

Balcony Lobby

- **Asbestos** containing filling compound on gypsum board and feathered onto adjoining plaster (some concealed).

Massey Theatre Administration Office including Closets

- **Asbestos** containing ceiling tile adhesive on ceiling (behind non-asbestos 12" ceiling tiles).

Theatre Balcony including Three Entrance Foyers

- **Asbestos** containing mastic on joints of ductwork (some concealed).

Stairwell to Fourth Floor Massey Theatre Boardroom

- **Asbestos** containing filling compound on gypsum board and feathered onto adjoining plaster (some concealed).

Hallway (above Band Storage Room/Office)

- **Asbestos** containing floor tiles (some concealed).
- **Asbestos** containing filling compound on gypsum board (some concealed).
- **Asbestos** containing mastic on joints of ductwork (some concealed).

Storage Room (above Band Storage Room/Office)

- **Asbestos** containing filling compound on gypsum board (some concealed).
- **Asbestos** containing mastic on joints of ductwork (some concealed).
- **Asbestos** containing insulating cement on fittings of mechanical piping system.

Mechanical Room (above Band Storage Room/Office)

- **Asbestos** containing floor tiles (loose near doorway).
- **Asbestos** containing filling compound on gypsum board (some concealed).
- **Asbestos** containing mastic on joints of ductwork (some concealed).
- **Asbestos** containing insulating cement on fittings of mechanical piping system, and debris.

Floor Cavities, Wall Cavities, and Ceiling Spaces

- **Asbestos** containing mastic on joints of ductwork (some concealed).
- **Asbestos** containing preformed insulation and/or insulating cement on mechanical piping (mostly in inaccessible wall cavities and ceiling spaces).

FOURTH FLOOR**Storage Room (above Art Room)**

- **Asbestos** containing filling compound on gypsum board (some concealed).

Theatre Control Room (5 rooms, accessed from Theatre Balcony)

- **Asbestos** containing ceiling tile adhesive on ceiling (behind non-asbestos 12" ceiling tiles).

Massey Theatre Boardroom

- No asbestos materials observed.

Wall Cavities and Ceiling Spaces including Stage and Theatre Catwalks

- **Asbestos** containing mastic on joints of ductwork (some concealed).
- **Asbestos** containing preformed insulation and/or insulating cement on mechanical piping (mostly in inaccessible wall cavities and ceiling spaces).

Attic Space (above Main Corridor)

- **Asbestos** containing mastic on joints of ductwork (some concealed).

Attic Space (between Drama Room and Storage Room above Art Room)

- **Asbestos** containing mastic on joints of ductwork (some concealed).
- **Asbestos** containing preformed insulation and insulating cement on mechanical piping.

EXTERIOR**Loading Dock and Ramp, and
Walls and Canopies**

- No asbestos materials observed.

Windows

- **Asbestos** containing cement board covering 2 former exterior windows at the Plasket Gallery (some concealed).
- **Asbestos** containing sealant in aluminum-framed windows at the south side Band Rooms addition (mostly concealed).

Rooftops

- **Asbestos** containing black mastic on rectangular ventilation duct on Centre South Rooftop (some concealed and some on adjoining building materials).
- **Asbestos** containing grey caulking on boiler exhaust vent on Main Upper Rooftop.
- **Asbestos** containing brown caulking on perimeter metal flashings on Theatre Stage Rooftop and on metal flashings at base of smoke vent walls (some concealed and some on adjoining building materials).

3.2 PCB CONTAINING MATERIALS

The visual inspection determined that there are approximately five hundred (500) fluorescent light fixtures (including some in display cases and signs) at the building that are both old and new. The older light fixtures are suspected of having PCB containing ballasts. PCB ballast identification requires the disassembly of the light fixture in order to locate the manufacturer's identification code.

3.3 LEAD

The visual inspection and/or laboratory analytical results (current and previous) determined the following:

- non-leachable paints/primers containing lead were used on the exterior wood and metal surfaces of the smoke vent (some of which is in a deteriorated condition and flaking),
- non-leachable paints containing lead were used on exterior stucco surfaces,
- paints and/or primers containing lead were used on plaster surfaces, wood mouldings/trim, doors, door frames, wood window frames and sills, and other wood surfaces, and some mechanical systems/equipment (some of which is in a deteriorated condition and flaking),
- primers containing lead were used on structural steel components,
- glazing finishes of ceramic tiles are likely lead containing,
- connection bells of cast iron drain pipes contain a lead packing material (including below ground) both inside and outside the building and there are lead sleeves at toilets, and
- there are lead roof vents and caps on the rooftops of the building.

3.4 LIQUID MERCURY

The visual inspection determined that there is a mercury containing thermostat in the Lower/Main Floor Dressing Room Area Fan Room 1 at the building. There are also numerous fluorescent light tubes/bulbs at the building that contain mercury.

3.5 STORED CHEMICALS AND OTHER HAZARDOUS MATERIALS

The following list of materials were present inside and outside the building at time of inspection (including items likely to be retained for future use):

- containers of paint, solvents, cleaners, petroleum products, rodent poison, and boiler chemicals,
- compressor bearing petroleum products,
- batteries in emergency lighting,
- numerous fire extinguishers,
- compressors with suspect ozone depleting substances (CFC's) in a few refrigerators, coolers, vending machines, air conditioners, and air handling units,
- smoke/heat/fire detectors with a radioactive component within, and
- piping containing natural gas leading to heating equipment.

4.0 RECOMMENDATIONS

4.1 ASBESTOS CONTAINING MATERIALS

Prior to the renovation of a building or its components, asbestos containing materials that are directly impacted by the work must first be removed and disposed of by a qualified hazardous materials abatement contractor's trained and authorized personnel. The asbestos containing materials not impacted by the work may remain in place in their existing stable condition in which they are considered to be safely enclosed or encapsulated. Workers must be advised in writing of their presence and location so that the asbestos containing materials are not inadvertently disturbed. Removing, enclosing, encapsulating, or otherwise disturbing (e.g. drilling) asbestos containing materials must be performed by a qualified hazardous materials abatement contractor's trained personnel in accordance with the Workers' Compensation Board of British Columbia Occupational Health and Safety Regulation. Disposal of asbestos containing materials must be performed in accordance with the BC Ministry of Environment - Environmental Management Act - Hazardous Waste Regulation.

4.2 POLYCHLORINATED BIPHENYL (PCB) CONTAINING BALLASTS/CAPACITORS

Where affected by a renovation project, it is recommended that the identification of PCB ballasts/capacitors be performed by qualified personnel prior to or in conjunction with the project, at a time when it becomes feasible to isolate electrical power and disassemble/disconnect the light fixtures. The ballasts/capacitors that are identified as PCB containing must be removed in accordance with the Workers' Compensation Board of British Columbia Occupational Health and Safety Regulation, and disposed of in accordance with the BC Ministry of Environment - Environmental Management Act - Hazardous Waste Regulation.

4.3 LEAD BASED PAINTS

Lead based paints on building materials not impacted by the renovation project may remain in place as long as they are in a stable condition in which the lead is considered to be safely encapsulated within the paint, however, there are a number of areas where the lead based paints are in a deteriorated condition and flaking/delaminating from the base substrate, therefore requiring repair in order to negate the potential skin absorption and other hazards related to damaged lead based paints. Lead based paints that are in good repair (stable condition) do not pose a hazard to building occupants.

Where lead or potential lead based paints and/or primers are affected by a project, the work must be performed by a qualified person or contractor in accordance with the Workers' Compensation Board of

British Columbia Occupational Health and Safety Regulation and the WCB publication entitled Lead-Containing Paints and Coatings - Preventing Exposure in the Construction Industry.

Where the base substrate material is to be removed in conjunction with lead paint removal, the base substrate and lead based paints and/or primers should be removed intact, in accordance with the worker's/contractor's risk assessment and site specific work procedures. The workers conducting the work and workers in close proximity to the work being performed, should be protected with personal protective equipment as determined by the contractor's risk assessment and site specific work procedures.

Lead containing paints which remain attached to concrete, wood, and/or other building materials must be labelled as lead based paints (LBP) for transporting to a licensed/approved disposal site or recycling facility. A licensed/approved facility receiving the waste must be informed of the lead content of these materials and be agreeable to receiving these materials. Prior to acceptance of waste with lead paints at a licensed/approved disposal facility, the contractor generating the waste must ensure that all waste materials containing LBPs are sampled intact, fastened directly to the base substrate, and representative of the waste stream created by demolition. Astech Consultants has collected three samples for analysis utilizing a Toxicity Characteristic Leachate Procedure for lead (TCLP lead) test to determine the potential for soil and/or groundwater contamination. The contractor shall have any additional samples analyzed utilizing a Toxicity Characteristic Leachate Procedure for lead (TCLP lead) test to determine the potential for soil and/or groundwater contamination, if deemed necessary by the site receiving the waste.

If the lead paints are to be separated or removed from the building materials by means of sanding, scraping, abrading, blasting, etc., more stringent work procedures would apply. The removed lead paints, depending on lead concentrations and leachate results, may become a Hazardous Waste and therefore must be disposed of in accordance with the BC Ministry of Environment - Environmental Management Act - Hazardous Waste Regulation.

If affected by a renovation project, the lead in bells of drain pipes, lead sleeves at toilets, and lead roof jacks must first be removed, and be recycled or disposed of, in accordance with the BC Ministry of Environment - Environmental Management Act - Hazardous Waste Regulation.

4.4 MERCURY

Where affected by the renovation project, the mercury containing thermostats and light tubes/bulbs must first be removed, and be relocated for future use, recycled or disposed of, in accordance with the BC Ministry of Environment - Environmental Management Act - Hazardous Waste Regulation.

4.5 STORED CHEMICALS AND OTHER HAZARDOUS MATERIALS

Stored Chemicals

Prior to a project that affects the listed materials, stored chemicals, ozone depleting substances within refrigeration equipment, and radioactive equipment must first be relocated for future use, or be removed, and be recycled or disposed of, in accordance with the BC Ministry of Environment - Environmental Management Act - Hazardous Waste Regulation.

Natural Gas

The natural gas that is contained in some piping must be shut off and purged by Terasen Gas or a qualified trades person prior to work that would affect the gas.

5.0 ESTIMATED CONTRACTOR BUDGETS FOR HAZARDOUS MATERIALS ABATEMENT

The following estimated budgets for complete removal and disposal of hazardous building materials are based on current market conditions with the site work being performed by a qualified abatement contractor during a single phase project.

ASBESTOS CONTAINING MATERIALS	UNIT PRICING	BUDGETS
Asbestos Floor Tiles, Vinyl Stair Treads, and Contaminated Building Materials	\$2.50 to \$3.25 per square foot	\$ 35,200.00
Asbestos Paper Backed Sheet Flooring and Contaminated Building Materials	\$3.00 to \$3.50 per square foot	\$ 4,200.00
Asbestos Filling Compound, Affected Gypsum Board & Plaster, and Contaminated Building Materials	\$3.00 to \$3.25 per square foot	\$ 76,000.00
Asbestos Ceiling Tile Adhesive and Associated Contaminated Building Materials	\$2.50 to \$3.00 per square foot	\$ 21,150.00
Asbestos 2' x 4' Ceiling Tiles and Contaminated Track System (including scaffold/lift equipment and enclosure system for access and containment)	\$4.50 to \$5.00 per square foot	\$ 18,000.00
Asbestos Insulating Cement on Fittings of Mechanical Piping (accessible)	\$60.00 per fitting	\$ 4,500.00
Asbestos Insulations and/or Insulating Cement on Mechanical Piping (small amount in crawlspace and attic, but mostly concealed in inaccessible wall cavities and ceiling spaces)	\$20.00 to \$30.00 per lineal foot or fitting	\$ 9,000.00
Asbestos Cementitious Drain Pipe (excluding underground)	\$15.00 to \$20.00 per lineal foot	\$ 6,000.00
Asbestos Aluminized Paper Insulation within Incandescent Light Fixtures	\$10.00 each	\$ 10.00
Asbestos Mastic on Joints of Ductwork/Plenums (differing sizes both exposed and concealed)	\$6.00 to \$24.00 per lineal foot of ductwork	\$ 44,000.00
Asbestos Mastic/Grout Between Sections of Heat Exchangers (3 in Each Boiler) behind Outer Metal Casings of the 2 Older Boilers (based on dismantling the boilers and removing the heat exchangers intact for disposal)	\$2,800.00 each	\$ 5,600.00
Asbestos Cement Board Covering Former Exterior Windows	\$4.00 to \$6.00 per square foot	\$ 200.00
Asbestos Sealant in Exterior Aluminum-Framed Windows	\$100.00 each	\$ 1,800.00
Potential Asbestos Gaskets and Packing Materials at Flanges and Valves of Mechanical Piping Systems	\$60 to \$100 each	\$ 3,000.00
Asbestos Black Mastic on Rectangular Ventilation Duct and Contaminated Building Materials	Not Applicable	\$ 600.00
Asbestos Grey Caulking on Boiler Exhaust Vent and Contaminated Building Materials	Not Applicable	\$ 100.00
Asbestos Brown Caulking on Perimeter Metal Flashings and Contaminated Building Materials	\$2.50 to \$3.00 per square foot	\$ 1,200.00
HAZARDOUS BUILDING MATERIALS	UNIT PRICING	BUDGETS
Determination and Disposal of PCB containing Ballasts (estimated at 40% containing PCBs)	\$22.00 to \$24.00 each	\$ 8,400.00
Lead Paint/Primer (some Flaking/Delaminating) to be Removed from Wood or Concrete Surfaces in Preparation for Refinishing/Repainting (unit price is depending upon extent and quantity of removal to satisfy the requirements for refinishing/repainting), and from Structural Steel Components (where cutting or welding to the steel is necessary)	\$4.00 to \$10.00 per square foot	Not Determined
Non-Leachable Lead Paint remaining attached to building materials for recycle/disposal	Not Applicable	No Extra Cost
Lead and Potential Lead Paint remaining attached to building materials for recycle/disposal, dependent on TCLP (lead leachate) results (if deemed necessary by receiving site)	Not Applicable	Not Yet Determined
Lead Products for recycle (lead in bells of drain pipes, lead sleeves, and lead roof vents)	\$20.00 each	\$ 2,400.00
Mercury containing thermostats for recycle	\$15.00 each	\$ 15.00
Mercury containing light bulbs/tubes for recycle, if not retained for future use	\$2.50 each	\$ 3,800.00
Stored Chemicals including refrigeration equipment and radioactive equipment for recycle or disposal	Not Applicable	\$ 2,400.00
SUBTOTAL		\$ 247,575.00
10% CONTINGENCY		\$ 24,757.50
ESTIMATED TOTAL (excluding GST)		\$ 272,332.50

BUDGET NOTES:

1. The unit prices listed above are based on a minimum of 500 sq.ft. per application of removal.
2. Based on the substantial impact to hazardous building materials listed above in order to conduct necessary renovation work including, but not limited to, fire safety, electrical, mechanical, seismic, structural, and building envelope upgrades throughout the building, it is recommended that most, if not all, hazardous building materials be considered for complete removal and disposal.

6.0 OWNER'S RESPONSIBILITIES

For the remediation of hazardous building materials, contract specifications, quality control, and final acceptance of the work remain the responsibility of the Owner. In order to ensure that the Owner has acted in a responsible manner, and to ensure regulatory board compliance, it is recommended that a detailed hazardous materials abatement specification be provided to a select group of qualified and properly insured (with proof of necessary asbestos inclusion rider) hazardous materials abatement contractors. As well, the performance of the asbestos abatement work by the contractor's trained and authorized personnel should be inspected and air monitored on a daily basis. Project Documentation should also be provided including, but not necessarily limited to, a Notice of Project for work involving Asbestos, Risk Assessment, Exposure Control Plan, and Site Specific Work Procedures, Worker Respirator Fit Test Forms/Logs and Training Acknowledgement Forms, Certification of DOP Testing of HEPA Filtered Equipment used on site, Air Sample Results, Material Safety Data Sheets (MSDS) for products used on site, Transportation Waybills, and Waste Manifest Forms.

7.0 ASTECH CONSULTANTS' PROJECT CONSULTING SERVICES**PROJECT SCOPE OF WORK & TENDER PROCESS:**

- a) **Scope of Work** - Interface with Owner and Project Planning Team to determine project bid options and preparation of detailed Hazardous Building Materials Abatement Specification Section 02080 for inclusion with Front End Contract Documents to be issued to a select group of qualified and insured (with asbestos inclusion rider) Hazmat Abatement Contractors.
- b) **Mandatory Pre-Bid Site Walk-Through** - Once the documents are prepared and approved, Astech Consultants would assist in organizing and conducting a mandatory pre-bid meeting and site inspection for the select group of qualified Hazmat Abatement Contractors. Astech would assist with any clarifications or interpretations as may arise before, during, and after the close of tenders.
- c) **Bid Review** - We could also assist in reviewing the bids received and make recommendations for contract award.

PROJECT SITE INSPECTIONS:

- a) **Asbestos Pre-Contamination Inspections** - Very critical third party inspections that determine if all preparation work is complete, in compliance with regulatory board requirements and the Contract Specifications, before the actual asbestos abatement project can begin. Inspections ensure enforcement of safe work procedures, and review of relevant project documentation, including worker training, and respirator fit testing.

- b) Asbestos Abatement Inspections** - Once actual asbestos abatement is in progress Astech Consultants will conduct inspections inside the work areas. The perimeter of the work areas, and adjacent areas of the building, will also be inspected and air monitored.
- c) Asbestos Visual Clearance Inspections** - Perhaps the most critical of all inspections. The visual clearance inspections are a comprehensive and meticulous inspection of the work areas at the conclusion of removal activities to ensure that asbestos abatement is complete, and that asbestos materials have been properly cleaned up and disposed of.
- d) Other Hazardous Materials Inspections** - Visual inspections will be conducted on an ongoing basis to ensure that other hazardous materials have been properly removed and either recycled, salvaged, or disposed of.

PROJECT AIR SAMPLING (ASBESTOS AND LEAD):

- a)** ambient asbestos air samples adjacent to the work areas, to verify that airborne asbestos fibres have not migrated outside the work areas.
- b)** occupational asbestos air samples inside the work areas to establish and assess work procedures, and ensure that work procedures do not create unnecessarily high asbestos fibre concentrations.
- c)** clean room asbestos air samples in the worker decontamination facility to verify that airborne asbestos fibres have not migrated outside the "High Risk" work areas, as applicable.
- d)** air clearance asbestos air samples at the conclusion of visual clearance inspection of the "High Risk" work areas, as applicable.
- e)** ambient lead air samples adjacent to the work area, to verify that airborne lead has not migrated outside the work area, if necessary.
- f)** occupational lead air samples inside the work area to establish and assess work procedures, and ensure that work procedures do not create unnecessarily high lead concentrations, if necessary.
- g)** air sample results are documented, and submitted to the abatement contractor for posting on site daily.

PROJECT REPORTS:

Inspections requiring action by the Hazmat Abatement Contractor will be in written form and be submitted for immediate action. A Substantial and/or Final Completion letter will be submitted to the Client at the conclusion of the project. Once the project is completed, copies of all relevant documentation are retained in a comprehensive Final Report that will be submitted to the Client.

ASTECH FEE SCHEDULE FOR PROJECT CONSULTING SERVICES:

Astech Consultants Ltd. has estimated that a single phase project for complete removal and disposal of hazardous materials can be scheduled to be completed in forty to forty-five shifts, dependent upon the contractor's crew size and the extent of lead paint abatement required. Our consulting services fee schedule for a forty shift project can be estimated as follows:

Service	Hours	Lab	Unit	Extension
Interface/Meetings with Owner & Project Planning Team, and Preparation of Hazmat Abatement Specification Section 02080	32		\$ 75.00	\$ 2,400.00
Mandatory and Second Pre-Bid Site Meetings with Project Team and Bidders	12		\$ 75.00	\$ 900.00
Assist with Clarifications, Review of Bids, and Written Recommendations for Contract Award	2		\$ 75.00	\$ 150.00
Start-Up Meeting with Client/Contractor, Project Site Inspections, Collection of Air Samples (Asbestos and Lead), and Written Documentation	240		\$ 75.00	\$ 18,000.00
Laboratory Analysis of Air Samples (Asbestos)		120	\$ 30.00	\$ 3,600.00
Laboratory Analysis of Air Samples (Lead) with Rush 24 Hour Turnaround Times, if Required		16	\$120.00	\$ 1,920.00
Review of Contractor Submittals and Final Report	8		\$ 75.00	\$ 600.00
Surcharge (5%), for Asbestos Inclusion Insurance				\$ 1,378.50
TOTAL (excluding GST)				\$ 28,948.50

IMPORTANT ITEMS FOR CONSIDERATION:

- a) Astech's Fee Schedule for project consulting services should be considered as an upset maximum price for a **forty shift project**. Should fewer hours or samples be required, the applicable savings will be passed on. Conversely, should the abatement contractor's work schedule be greater than forty shifts and still require inspections and air monitoring by Astech, additional fees would be applicable.
- b) Astech Consultants does not charge out materials and equipment that are required for this project.

We hope you have found the above information useful. If you have any questions, or require clarification please contact this office.

Sincerely,

Rob Kingsley
Astech Consultants Ltd.
Ref: 14058HE01.RK



ASBESTOS BULK SAMPLE REPORT

Date: June 26, 2015
 Client: CITY OF NEW WESTMINSTER
 Location: **Massey Theatre Building**
735 - 8th Avenue
New Westminister, BC

Comments: 1) Analysed as per NIOSH 9002, except for Vermiculite as per EPA/600/R-04/004.
 2) WCB defines asbestos containing material as 0.5% or more asbestos, with the exception of Vermiculite which is defined as "any asbestos".
 3) Sample(s) will be disposed of after 90 days, unless the Client requests otherwise.

Sample Collected on June 3, 2015

Sample	Location	Description	Layer: Colour	Non-Asbestos		Asbestos	
				%	Type	%	Type
14058BS01	Third Floor - Boiler Room	Mastic/Grout (at Joints of Older Sectional Boiler behind Metal Casing	1: Black	85%	Non-Fibrous	15%	Chrysotile

Analyst(s): Jesse James

Samples Collected on June 4, 2015

Sample	Location	Description	Layer: Colour	Non-Asbestos		Asbestos		
				%	Type	%	Type	
14058BS02a	Exterior - Centre South Rooftop (Centre Area)	Tar & Gravel Roofing Membrane	1: Black	65%	Synthetic	35%	Non-Fibrous	None Detected
14058BS02b	Exterior - Centre South Rooftop (Centre Area)	Roofing Mastic	2: Black	5%	Cellulose	95%	Non-Fibrous	None Detected
14058BS02c	Exterior - Centre South Rooftop (Centre Area)	Roofing Membrane	3: Black	65%	Synthetic	35%	Non-Fibrous	None Detected
14058BS02d	Exterior - Centre South Rooftop (Centre Area)	Roofing Mastic	4: Black	5%	Cellulose	95%	Non-Fibrous	None Detected
14058BS02e	Exterior - Centre South Rooftop (Centre Area)	Vapour Barrier	5: Black	99%	Cellulose	1%	Non-Fibrous	None Detected
14058BS03a	Exterior - Centre South Rooftop (West End)	Tar & Gravel Roofing Membrane	1: Black	65%	Synthetic	35%	Non-Fibrous	None Detected

Sample	Location	Description	Layer: Colour	Non-Asbestos	Asbestos
				% Type	% Type
14058BS03b	Exterior - Centre South Rooftop (West End)	Roofing Mastic	2: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS03c	Exterior - Centre South Rooftop (West End)	Roofing Membrane	3: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS03d	Exterior - Centre South Rooftop (West End)	Roofing Mastic	4: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS03e	Exterior - Centre South Rooftop (West End)	Vapour Barrier	5: Black	99% Cellulose 1% Non-Fibrous	None Detected
14058BS04a	Exterior - Southeast Rooftop	Tar & Gravel Roofing Membrane	1: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS04b	Exterior - Southeast Rooftop	Roofing Mastic	2: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS04c	Exterior - Southeast Rooftop	Roofing Membrane	3: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS04d	Exterior - Southeast Rooftop	Roofing Mastic	4: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS04e	Exterior - Southeast Rooftop	Vapour Barrier	5: Black	99% Cellulose 1% Non-Fibrous	None Detected
14058BS05	Exterior - Centre South Rooftop	Caulking (at Metal Wall Flashing)	1: Grey	100% Non-Fibrous	None Detected
14058BS06a	Exterior - Centre South Rooftop	Coating Wall Stucco (Outer Layer)	1: Beige 2: White	100% Non-Fibrous	None Detected
14058BS06b	Exterior - Centre South Rooftop	Wall Stucco (Inner Layer)	3: Grey	100% Non-Fibrous	None Detected
14058BS07	Exterior - Southeast Rooftop	Mastic (at Exhaust Vent)	1: Black	2% Cellulose 98% Non-Fibrous	None Detected
14058BS08a	Exterior - East Rooftop (South Area)	Tar & Gravel Roofing Membrane	1: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS08b	Exterior - East Rooftop (South Area)	Roofing Mastic	2: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS08c	Exterior - East Rooftop (South Area)	Roofing Membrane	3: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS08d	Exterior - East Rooftop (South Area)	Roofing Mastic	4: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS08e	Exterior - East Rooftop (South Area)	Vapour Barrier	5: Black	99% Cellulose 1% Non-Fibrous	None Detected
14058BS09	Exterior - East Rooftop	Caulking (at Metal Wall Flashing)	1: Off-White	100% Non-Fibrous	None Detected
14058BS10a	Exterior - East Rooftop (North Area)	Tar & Gravel Roofing Membrane	1: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS10b	Exterior - East Rooftop (North Area)	Roofing Mastic	2: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS10c	Exterior - East Rooftop (North Area)	Roofing Membrane	3: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS10d	Exterior - East Rooftop (North Area)	Roofing Mastic	4: Black	5% Cellulose 95% Non-Fibrous	None Detected

Sample	Location	Description	Layer: Colour	Non-Asbestos	Asbestos
				% Type	% Type
14058BS10e	Exterior - East Rooftop (North Area)	Vapour Barrier	5: Black	99% Cellulose 1% Non-Fibrous	None Detected
14058BS11a	Exterior - Northeast Rooftop (above Northeast Lobby & Stairwell)	Tar & Gravel Roofing Membrane	1: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS11b	Exterior - Northeast Rooftop (above Northeast Lobby & Stairwell)	Roofing Mastic	2: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS11c	Exterior - Northeast Rooftop (above Northeast Lobby & Stairwell)	Roofing Membrane	3: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS11d	Exterior - Northeast Rooftop (above Northeast Lobby & Stairwell)	Roofing Mastic	4: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS11e	Exterior - Northeast Rooftop (above Northeast Lobby & Stairwell)	Vapour Barrier	5: Black	99% Cellulose 1% Non-Fibrous	None Detected
14058BS12a	Exterior - Northeast Rooftop (above Northeast Lobby & Stairwell)	Coating Wall Stucco (Outer Layer)	1: Beige 2: Light Grey	100% Non-Fibrous	None Detected
14058BS12b	Exterior - Northeast Rooftop (above Northeast Lobby & Stairwell)	Wall Stucco (Inner Layer)	3: Dark Grey	100% Non-Fibrous	None Detected
14058BS13	Exterior - Northeast Rooftop (above Northeast Lobby & Stairwell)	Caulking (at Sill of Former Window)	1: White	100% Non-Fibrous	None Detected
14058BS14	Exterior - East Rooftop	Caulking (at Perimeter Metal Flashing)	1: Brown	100% Non-Fibrous	None Detected
14058BS15	Exterior - Centre South Rooftop	Mastic (on Rectangular Ventilation Duct)	1: Black	75% Non-Fibrous	25% Chrysotile
14058BS16a	Exterior - Rooftop above Stairwell to Fourth Floor Massey Theatre Boardroom	Roofing Membrane	1: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS16b	Exterior - Rooftop above Stairwell to Fourth Floor Massey Theatre Boardroom	Roofing Mastic	2: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS16c	Exterior - Rooftop above Stairwell to Fourth Floor Massey Theatre Boardroom	Roofing Membrane	3: Black	65% Synthetic 35% Non-Fibrous	None Detected

Sample	Location	Description	Layer: Colour	Non-Asbestos	Asbestos
				% Type	% Type
14058BS16d	Exterior - Rooftop above Stairwell to Fourth Floor Massey Theatre Boardroom	Roofing Mastic	4: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS16e	Exterior - Rooftop above Stairwell to Fourth Floor Massey Theatre Boardroom	Vapour Barrier	5: Black	99% Cellulose 1% Non-Fibrous	None Detected
14058BS17a	Exterior (at Ground Level)	Coating Wall Stucco (Outer Layer) (at Southwest Corner)	1: Beige 2: Light Grey	100% Non-Fibrous	None Detected
14058BS17b	Exterior (at Ground Level)	Wall Stucco (Inner Layer) (at Southwest Corner)	3: Dark Grey	100% Non-Fibrous	None Detected
14058BS18a	Exterior - West Rooftop above Third Floor Massey Theatre Administration Office (Centre Section)	Tar & Gravel Roofing Membrane	1: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS18b	Exterior - West Rooftop above Third Floor Massey Theatre Administration Office (Centre Section)	Roofing Mastic	2: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS18c	Exterior - West Rooftop above Third Floor Massey Theatre Administration Office (Centre Section)	Roofing Membrane	3: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS18d	Exterior - West Rooftop above Third Floor Massey Theatre Administration Office (Centre Section)	Roofing Mastic	4: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS18e	Exterior - West Rooftop above Third Floor Massey Theatre Administration Office (Centre Section)	Vapour Barrier	5: Black	99% Cellulose 1% Non-Fibrous	None Detected
14058BS19a	Exterior - West Rooftop above Third Floor Massey Theatre Administration Office (North Section)	Tar & Gravel Roofing Membrane	1: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS19b	Exterior - West Rooftop above Third Floor Massey Theatre Administration Office (North Section)	Roofing Mastic	2: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS19c	Exterior - West Rooftop above Third Floor Massey Theatre Administration Office (North Section)	Roofing Membrane	3: Black	65% Synthetic 35% Non-Fibrous	None Detected

Sample	Location	Description	Layer: Colour	Non-Asbestos	Asbestos
				% Type	% Type
14058BS19d	Exterior - West Rooftop above Third Floor Massey Theatre Administration Office (North Section)	Roofing Mastic	4: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS19e	Exterior - West Rooftop above Third Floor Massey Theatre Administration Office (North Section)	Vapour Barrier	5: Black	99% Cellulose 1% Non-Fibrous	None Detected
14058BS20a	Exterior - West Rooftop above Third Floor Massey Theatre Administration Office	Coating Wall Stucco (Outer Layer)	1: Beige 2: Light Grey	100% Non-Fibrous	None Detected
14058BS20b	Exterior - West Rooftop above Third Floor Massey Theatre Administration Office	Wall Stucco (Inner Layer)	3: Dark Grey	100% Non-Fibrous	None Detected
14058BS21	Exterior - West Rooftop above Third Floor Massey Theatre Administration Office	Wall Construction Felt (behind Stucco)	4: Black	80% Cellulose 10% Animal 10% Non-Fibrous	None Detected
14058BS22	Exterior - West Rooftop above Third Floor Massey Theatre Administration Office	Caulking (on Wood Sill at Metal Door)	1: Off-White	100% Non-Fibrous	None Detected
14058BS23	Exterior - West Rooftop above Third Floor Massey Theatre Administration Office	Mastic (on Screw Holes of Exhaust Vent)	1: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS24	Exterior - West Rooftop above Third Floor Massey Theatre Administration Office	Caulking (at Exhaust Vent Base Flashing)	1: Grey	2% Synthetic 98% Non-Fibrous	None Detected
14058BS25	Exterior - West Rooftop above Third Floor Massey Theatre Administration Office	Mastic (at Exhaust Vent Base)	1: Black	2% Cellulose 98% Non-Fibrous	None Detected
14058BS26a	Exterior - Main Upper Rooftop (Southwest Section)	Tar & Gravel Roofing Membrane	1: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS26b	Exterior - Main Upper Rooftop (Southwest Section)	Roofing Mastic	2: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS26c	Exterior - Main Upper Rooftop (Southwest Section)	Roofing Membrane	3: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS26d	Exterior - Main Upper Rooftop (Southwest Section)	Roofing Mastic	4: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS26e	Exterior - Main Upper Rooftop (Southwest Section)	Vapour Barrier	5: Black	99% Cellulose 1% Non-Fibrous	None Detected

Sample	Location	Description	Layer: Colour	Non-Asbestos	Asbestos
				% Type	% Type
14058BS27a	Exterior - Main Upper Rooftop (Centre Section)	Tar & Gravel Roofing Membrane	1: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS27b	Exterior - Main Upper Rooftop (Centre Section)	Roofing Mastic	2: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS27c	Exterior - Main Upper Rooftop (Centre Section)	Roofing Membrane	3: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS27d	Exterior - Main Upper Rooftop (Centre Section)	Roofing Mastic	4: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS27e	Exterior - Main Upper Rooftop (Centre Section)	Vapour Barrier	5: Black	99% Cellulose 1% Non-Fibrous	None Detected
14058BS28a	Exterior - Main Upper Rooftop (Northeast Section)	Tar & Gravel Roofing Membrane	1: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS28b	Exterior - Main Upper Rooftop (Northeast Section)	Roofing Mastic	2: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS28c	Exterior - Main Upper Rooftop (Northeast Section)	Roofing Membrane	3: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS28d	Exterior - Main Upper Rooftop (Northeast Section)	Roofing Mastic	4: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS28e	Exterior - Main Upper Rooftop (Northeast Section)	Vapour Barrier	5: Black	99% Cellulose 1% Non-Fibrous	None Detected
14058BS29	Exterior - Main Upper Rooftop	Mastic (at Air Handling Unit Electrical Conduit Roof Penetration)	1: Black	2% Cellulose 98% Non-Fibrous	None Detected
14058BS30	Exterior - Main Upper Rooftop	Caulking (on Boiler Exhaust Vent)	1: Grey	75% Non-Fibrous	25% Chrysotile
14058BS31a	Exterior - Theatre Stage Rooftop	Tar & Gravel Roofing Membrane	1: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS31b	Exterior - Theatre Stage Rooftop	Roofing Mastic	2: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS31c	Exterior - Theatre Stage Rooftop	Roofing Membrane	3: Black	65% Synthetic 35% Non-Fibrous	None Detected
14058BS31d	Exterior - Theatre Stage Rooftop	Roofing Mastic	4: Black	5% Cellulose 95% Non-Fibrous	None Detected
14058BS31e	Exterior - Theatre Stage Rooftop	Vapour Barrier	5: Black	99% Cellulose 1% Non-Fibrous	None Detected
14058BS32	Exterior - Smoke Vent Rooftop	Felt (beneath Metal Roof Cladding)	1: Black	45% Synthetic 55% Non-Fibrous	None Detected
14058BS33	Exterior - Theatre Stage Rooftop	Caulking (at Perimeter Metal Flashing)	1: Brown	95% Non-Fibrous	5% Chrysotile
14058BS34	Exterior (at Fourth Floor Massey Theatre Boardroom)	Window Sealant (in Metal-Framed Window)	1: Black	5% Cellulose 95% Non-Fibrous	None Detected

Sample	Location	Description	Layer: Colour	Non-Asbestos		Asbestos	
				%	Type	%	Type
14058BS35a	Exterior - Lower West Rooftop (North Section)	Tar & Gravel Roofing Membrane	1: Black	65%	Synthetic 35% Non-Fibrous	None Detected	
14058BS35b	Exterior - Lower West Rooftop (North Section)	Roofing Mastic	2: Black	5%	Cellulose 95% Non-Fibrous	None Detected	
14058BS35c	Exterior - Lower West Rooftop (North Section)	Roofing Membrane	3: Black	65%	Synthetic 35% Non-Fibrous	None Detected	
14058BS35d	Exterior - Lower West Rooftop (North Section)	Roofing Mastic	4: Black	5%	Cellulose 95% Non-Fibrous	None Detected	
14058BS35e	Exterior - Lower West Rooftop (North Section)	Vapour Barrier	5: Black	99%	Cellulose 1% Non-Fibrous	None Detected	
14058BS36a	Exterior - Lower West Rooftop (South Section)	Tar & Gravel Roofing Membrane	1: Black	65%	Synthetic 35% Non-Fibrous	None Detected	
14058BS36b	Exterior - Lower West Rooftop (South Section)	Roofing Mastic	2: Black	5%	Cellulose 95% Non-Fibrous	None Detected	
14058BS36c	Exterior - Lower West Rooftop (South Section)	Roofing Membrane	3: Black	65%	Synthetic 35% Non-Fibrous	None Detected	
14058BS36d	Exterior - Lower West Rooftop (South Section)	Roofing Mastic	4: Black	5%	Cellulose 95% Non-Fibrous	None Detected	
14058BS36e	Exterior - Lower West Rooftop (South Section)	Vapour Barrier	5: Black	99%	Cellulose 1% Non-Fibrous	None Detected	
14058BS37	Exterior (West Side)	Paint Cement Board (in Former Wood-Framed Window Location)	1: Blue 2: Grey	25%	Non-Fibrous	75% Chrysotile	
14058BS38	Exterior (West Side)	Paint Window Putty (at Wood-Framed Window)	1: White 2: Tan	100%	Non-Fibrous	None Detected	
14058BS39	Exterior (West Side)	Paint Window Putty (at Wood-Framed Window)	1: White 2: Tan	100%	Non-Fibrous	None Detected	
14058BS40	Exterior (West Side)	Paint Window Putty (at Wood-Framed Window)	1: White 2: Tan	100%	Non-Fibrous	None Detected	

Analyst(s): Brittany Ford, Jesse James

Samples Collected on June 8, 2015

Sample	Location	Description	Layer: Colour	Non-Asbestos		Asbestos	
				%	Type	%	Type
14058BS41	Second Floor - Women's Washroom (Theatre)	Gypsum Board Filling Compound (North Wall)	1: White	100%	Non-Fibrous	None Detected	
14058BS42	Second Floor - Women's Washroom (Theatre)	Ceramic Tile Grout	1: White	2%	Cellulose 98% Non-Fibrous	None Detected	
14058BS43	Second Floor - Women's Washroom (Theatre)	Ceramic Tile Mortar	2: Grey	5%	Cellulose 95% Non-Fibrous	None Detected	

Sample	Location	Description	Layer: Colour	Non-Asbestos	Asbestos
				% Type	% Type
14058BS44	Second Floor - Women's Washroom (Theatre) Ceiling Space	Gypsum Board Filling Compound (Wall at Duct Enclosure)	1: White	100% Non-Fibrous	None Detected
14058BS45	Second Floor - Men's Washroom (Theatre) Ceiling Space	Duct Mastic (on Joint of Washroom Exhaust Duct)	1: Grey	2% Synthetic 98% Non-Fibrous	None Detected
14058BS46	Second Floor - Janitor Room (accessed from Handicap Washroom (Theatre))	8" Ceramic Tile Grout	1: White	2% Cellulose 98% Non-Fibrous	None Detected
14058BS47	Second Floor - Janitor Room (accessed from Handicap Washroom (Theatre))	8" Ceramic Tile Mortar	2: Grey	2% Cellulose 98% Non-Fibrous	None Detected
14058BS48	Second Floor - Janitor Room (accessed from Handicap Washroom (Theatre))	Sheet Flooring Wear Surface	3: Cream	10% Cellulose 90% Non-Fibrous	None Detected
		Jute Backing	4: Brown	95% Cellulose 5% Non-Fibrous	None Detected
14058BS49	Second Floor - Janitor Room (accessed from Handicap Washroom (Theatre))	Floor Levelling Compound	5: Black	100% Non-Fibrous	None Detected
14058BS50	Third Floor - Massey Theatre Administration Office	Sheet Flooring Wear Surface	1: Brown	100% Non-Fibrous	None Detected
		Jute Backing (beneath Carpet)	2: Brown	95% Cellulose 5% Non-Fibrous	None Detected
14058BS51	Third Floor - Massey Theatre Administration Office	Flooring Felt (beneath Jute Backed Sheet Flooring)	3: Black	60% Cellulose 10% Synthetic 10% Animal 20% Non-Fibrous	None Detected
14058BS52	Lower/Main Floor - Female Change Room 9	Insulating Cement (Pipe Elbow)	1: Grey	65% Glass 35% Non-Fibrous	None Detected

Analyst(s): Brittany Ford, Jesse James

Samples Collected on June 9, 2015

Sample	Location	Description	Layer: Colour	Non-Asbestos	Asbestos
				% Type	% Type
14058BS53	Lower/Main Floor - Drama Room	Paint 2' X 4' Ceiling Tile	1: White 2: Grey	65% Cellulose 30% Glass 5% Non-Fibrous	None Detected
14058BS54	Lower/Main Floor - Drama Area Ceiling Space	Fibrous Material and Concrete Residue	1: Grey	8% Cellulose 92% Non-Fibrous	None Detected
14058BS55	Lower/Main Floor - Washroom Hallway (at Rear of Drama Room)	Insulating Cement (Pipe Elbow)	1: Grey	40% Glass 45% Non-Fibrous	15% Chrysotile

Sample	Location	Description	Layer: Colour	Non-Asbestos	Asbestos
				% Type	% Type
14058BS56	Lower/Main Floor - Northeast Stairwell to Second Floor	Vinyl Stair Tread	1: Grey	100% Non-Fibrous	None Detected
14058BS57	Lower/Main Floor - Northeast Stairwell to Second Floor	Vinyl Stair Riser	1: Black	8% Cellulose 92% Non-Fibrous	None Detected
14058BS58	Second Floor - Vestibule (from exterior to Band Room 104B)	Sheet Flooring Wear Surface	1: Mosaic Grey	100% Non-Fibrous	None Detected
		Paper Backing	2: Grey	65% Synthetic 35% Non-Fibrous	None Detected
14058BS59	Second Floor - Southwest Stairwell to Third Floor	12" Floor Tile	1: Beige	100% Non-Fibrous	None Detected
14058BS60	Second Floor - Theatre Lobby	12" Floor Tile	1: Purple	100% Non-Fibrous	None Detected
14058BS61	Second Floor - Theatre Lobby	Floor Tile Adhesive	2: Black	3% Cellulose 97% Non-Fibrous	None Detected
14058BS62	Third Floor - Drama Room	12" Floor Tile	1: Black	100% Non-Fibrous	None Detected
14058BS63	Third Floor - Drama Room	12" Floor Tile	2: Brown	98% Non-Fibrous	2% Chrysotile
14058BS64	Third Floor - Drama Room	Floor Tile Adhesive	3: Black	3% Cellulose 97% Non-Fibrous	None Detected
14058BS65	Third Floor - Theatre Balcony Entrance Foyer	12" Floor Tile	1: Beige	100% Non-Fibrous	None Detected

Analyst(s): Jesse James, Brittany Ford

Samples Collected on June 18, 2015

Sample	Location	Description	Layer: Colour	Non-Asbestos	Asbestos
				% Type	% Type
14058BS66	Second Floor - Stage	Woven Textile Fire Curtain	1: White	99% Glass 1% Non-Fibrous	None Detected
14058BS67	Exterior (at South Band Rooms Addition)	Window Sealant (in Aluminum-Framed Window)	1: Grey	85% Non-Fibrous	15% Chrysotile
14058BS68a	Exterior (at South Band Rooms Addition)	Paint Wall Stucco (Outer Layer)	1: Beige	2% Cellulose 98% Non-Fibrous	None Detected
			2: Grey		
14058BS68b	Exterior (at South Band Rooms Addition)	Wall Stucco (Inner Layer)	3: Light Grey	2% Cellulose 98% Non-Fibrous	None Detected

Analyst(s): Jesse James



American Industrial Hygiene Association (AIHA) Bulk Asbestos Proficiency Analytical Testing (BAPAT)
Astech Consultants Ltd. Laboratory Participant ID# 200542

Samples Collected on May 29, 2009

- Bulk Sample # 8599BS01** : **Third Floor - Boiler Room**
Sample Type : Gypsum Board Filling Compound (Wall)
Result : **5 - 10% Chrysotile Asbestos**
- Bulk Sample # 8599BS02** : **Third Floor - Boiler Room**
Sample Type : Wall Plaster (Outer Layer)
Result : 1 - 5% Cellulose Fibres
: No Asbestos Fibres Observed
- Bulk Sample # 8599BS03** : **Third Floor - Boiler Room**
Sample Type : Wall Plaster (Inner Layer)
Result : 5 - 10% Animal Fibres
: 1 - 5% Cellulose Fibres
: No Asbestos Fibres Observed
- Bulk Sample # 8599BS04** : **Third Floor - Boiler Room**
Sample Type : Insulating Cement (HWS Flange)
Result : 35 - 40% Glass Fibres
: 25 - 30% Cellulose Fibres
: No Asbestos Fibres Observed
- Bulk Sample # 8599BS05** : **Third Floor - Main Corridor**
Sample Type : Jute Backed Sheet Flooring (Beige & Pink) (Top Layer)
Result : 10 - 15% Cellulose Fibres
: No Asbestos Fibres Observed
- Bulk Sample # 8599BS06** : **Third Floor - Main Corridor**
Sample Type : Sheet Flooring Adhesive (Off-White) (Second Layer)
Result : 5 - 10% Cellulose Fibres
: No Asbestos Fibres Observed
- Bulk Sample # 8599BS07** : **Third Floor - Main Corridor**
Sample Type : Floor Tile (Black) (Third Layer)
Result : **1 - 5% Chrysotile Asbestos**
- Bulk Sample # 8599BS08** : **Third Floor - Main Corridor**
Sample Type : Floor Tile Adhesive (Black) (Bottom Layer)
Result : 10 - 15% Cellulose Fibres
: No Asbestos Fibres Observed
- Bulk Sample # 8599BS09** : **Third Floor - Main Corridor**
Sample Type : 2' X 4' Ceiling Tile
Result : 60 - 65% Cellulose Fibres
: 20 - 25% Glass Fibres
: No Asbestos Fibres Observed
- Bulk Sample # 8599BS10** : **Third Floor - Main Corridor**
Sample Type : Ceiling Tile Adhesive (Brown) (above Suspended Ceiling System)
Result : **25 - 30% Chrysotile Asbestos**

- Bulk Sample # 8599BS11** : **Third Floor - Main Corridor**
 Sample Type : Ceiling Plaster (above Suspended Ceiling System)
 Result : 1 - 5% Cellulose Fibres
 : 1 - 5% Animal Fibres
 : No Asbestos Fibres Observed
- Bulk Sample # 8599BS12** : **Third Floor - Main Corridor**
 Sample Type : Gypsum Board Filling Compound (West Wall)
 Result : No Asbestos Fibres Observed
- Bulk Sample # 8599BS13** : **Third Floor - Main Corridor**
 Sample Type : Sealant Tape (Black) (at Interior Window)
 Result : No Asbestos Fibres Observed
- Bulk Sample # 8599BS14** : **Third Floor - Northwest Stairwell to Second Floor**
 Sample Type : Vinyl Stair Tread (Rust)
 Result : 1 - 5% **Chrysotile Asbestos**
- Bulk Sample # 8599BS15** : **Third Floor - Northwest Stairwell to Second Floor**
 Sample Type : Gypsum Board Filling Compound (Wall)
 Result : 1 - 5% **Chrysotile Asbestos**
- Bulk Sample # 8599BS16** : **Second Floor - Main Corridor Wall Cavity**
 Sample Type : Insulating Cement (Pipe Elbow)
 Result : 65 - 70% **Chrysotile Asbestos**
- Samples Collected on June 11, 2009
- Bulk Sample # 8599BS17** : **Second Floor - Northwest Entrance Foyer**
 Sample Type : Jute Backed Sheet Flooring (Black)
 Result : 20 - 25% Cellulose Fibres
 : No Asbestos Fibres Observed
- Bulk Sample # 8599BS18** : **Second Floor - Men's Washroom Ceiling Space**
 Sample Type : Insulating Cement (Grey) (Pipe Elbow)
 Result : 65 - 70% Glass Fibres
 : 1 - 5% Cellulose Fibres
 : No Asbestos Fibres Observed
- Bulk Sample # 8599BS19** : **Second Floor - Men's Washroom**
 Sample Type : Gypsum Board Filling Compound (Wall)
 Result : No Asbestos Fibres Observed
- Bulk Sample # 8599BS20** : **Second Floor - Short Hallway to Large Gymnasium**
 Sample Type : Duct Mastic (Black)
 Result : 1 - 5% Cellulose Fibres
 : No Asbestos Fibres Observed
- Bulk Sample # 8599BS21** : **Second Floor - Medical Room**
 Sample Type : Paper Backed Sheet Flooring (Brown Mosaic)
 Result : 40 - 45% **Chrysotile Asbestos**
 : 1 - 5% Cellulose Fibres

Bulk Sample # 8599BS22	: Second Floor - Office
Sample Type	: 2' X 4' Ceiling Tile (Tan with Salmon Backing)
Result	: 65 - 70% Cellulose Fibres
	: 25 - 30% Glass Fibres
	: No Asbestos Fibres Observed
Bulk Sample # 8599BS23	: Second Floor - Janitor Room
Sample Type	: Wall Plaster (Grey) (Inner Layer)
Result	: 1 - 5% Animal Fibres
	: 1 - 5% Cellulose Fibres
	: No Asbestos Fibres Observed
Bulk Sample # 8599BS24	: Second Floor - Janitor Room
Sample Type	: Wall Plaster (White) (Outer Layer)
Result	: No Asbestos Fibres Observed
Bulk Sample # 8599BS25	: Second Floor - Large Storage Room
Sample Type	: Gypsum Board Filling Compound (Ceiling at Bulkhead)
Result	: 1 - 5% Chrysotile Asbestos
Bulk Sample # 8599BS26	: Second Floor - Northeast Stairwell
Sample Type	: 9" Floor Tile (Beige)
Result	: 1 - 5% Chrysotile Asbestos
Bulk Sample # 8599BS27	: Second Floor - Northeast Stairwell
Sample Type	: Floor Tile Adhesive (Black)
Result	: 1 - 5% Cellulose Fibres
	: No Asbestos Fibres Observed
Bulk Sample # 8599BS28	: Second Floor - Fan Room (accessed from Small Gym Wall Hatch)
Sample Type	: Gypsum Board Filling Compound (Wall)
Result	: 1 - 5% Chrysotile Asbestos
Bulk Sample # 8599BS29	: Second Floor - Fan Room (accessed from Small Gym Wall Hatch)
Sample Type	: Insulating Cement (Pipe Elbow)
Result	: 60 - 65% Glass Fibres
	: 5 - 10% Cellulose Fibres
	: No Asbestos Fibres Observed
Bulk Sample # 8599BS30	: Fourth Floor - Ceiling Space (above Theatre Control Room and Balcony)
Sample Type	: Duct Mastic (Red)
Result	: 25 - 30% Chrysotile Asbestos
Bulk Sample # 8599BS31	: Second Floor - Wall Cavity (accessed from SW Stairwell Wall Hatch)
Sample Type	: Wall Stucco (Outer Layer)
Result	: 1 - 5% Cellulose Fibres
	: No Asbestos Fibres Observed
Bulk Sample # 8599BS32	: Second Floor - Wall Cavity (accessed from SW Stairwell Wall Hatch)
Sample Type	: Wall Stucco (Inner Layer)
Result	: 1 - 5% Cellulose Fibres
	: No Asbestos Fibres Observed

- Bulk Sample # 8599BS33** : **Second Floor - Wall Cavity (accessed from SW Stairwell Wall Hatch)**
 Sample Type : Wall Construction Paper (Black) (Bottom Layer)
 Result : 90 - 95% Cellulose Fibres
 : No Asbestos Fibres Observed
- Bulk Sample # 8599BS34** : **Fourth Floor - Massey Theatre Board Room**
 Sample Type : Gypsum Board Filling Compound (Wall)
 Result : 1 - 5% Cellulose Fibres
 : No Asbestos Fibres Observed
- Bulk Sample # 8599BS35** : **Third Floor - Short Music Room Hallway (from Main Corridor)**
 Sample Type : Gypsum Board Filling Compound (Wall Patch at New Entranceway)
 Result : No Asbestos Fibres Observed
- Bulk Sample # 8599BS36** : **Third Floor - Music Room**
 Sample Type : Gypsum Board Filling Compound (South Wall)
 Result : **5 - 10% Chrysotile Asbestos**
- Bulk Sample # 8599BS37** : **Third Floor - Music Room**
 Sample Type : Jute Backed Sheet Flooring (Beige) (Top Layer)
 Result : 20 - 25% Cellulose Fibres
 : No Asbestos Fibres Observed
- Bulk Sample # 8599BS38** : **Third Floor - Music Room**
 Sample Type : Floor Tile (Beige) (Bottom Layer)
 Result : **1 - 5% Chrysotile Asbestos**
- Bulk Sample # 8599BS39** : **Third Floor - Kiln Room**
 Sample Type : Gypsum Board Filling Compound (Wall)
 Result : **5 - 10% Chrysotile Asbestos**

Samples Collected on June 15, 2009

- Bulk Sample # 8599BS40** : **Lower/Main Floor - Centre North Crawlspace**
 Sample Type : Insulating Cement (White) (Pipe Elbow)
 Result : 55 - 60% Cellulose Fibres
 : 25 - 30% Glass Fibres
 : No Asbestos Fibres Observed
- Bulk Sample # 8599BS41** : **Lower/Main Floor - Storage Area Beneath Stage**
 Sample Type : Insulating Cement (Grey) (Small Diameter Pipe Elbow)
 Result : **60 - 65% Chrysotile Asbestos**
 : **5 - 10% Amosite Asbestos**
- Bulk Sample # 8599BS42** : **Lower/Main Floor - Storage Area Beneath Stage**
 Sample Type : Gypsum Board Filling Compound (Wall)
 Result : **1 - 5% Chrysotile Asbestos**
- Bulk Sample # 8599BS43** : **Lower/Main Floor - Fan Room (accessed from Drama Lounge)**
 Sample Type : Insulating Cement (Grey & White) (Pipe Elbow)
 Result : 60 - 65% Glass Fibres
 : 20 - 25% Cellulose Fibres
 : No Asbestos Fibres Observed

- Bulk Sample # 8599BS44** : **Lower/Main Floor - Drama Room**
Sample Type : Gypsum Board Filling Compound (Wall)
Result : No Asbestos Fibres Observed
- Bulk Sample # 8599BS45** : **Lower/Main Floor - Washroom Hallway (at Rear of Drama Room)**
Sample Type : Paper Backed Sheet Flooring (Brown & Beige)
Result : **40 - 45% Chrysotile Asbestos**
- Bulk Sample # 8599BS46** : **Lower/Main Floor - Storage/Crawlspace (Beneath Band Room Area) (Accessed from Old Hallway)**
Sample Type : Duct Mastic (Black)
Result : 1 - 5% Cellulose Fibres
: No Asbestos Fibres Observed
- Bulk Sample # 8599BS47** : **Second Floor - Theatre Storage Room (Stage Right)**
Sample Type : Gypsum Board Filling Compound (Wall)
Result : **1 - 5% Chrysotile Asbestos**
- Bulk Sample # 8599BS48** : **Second Floor - Massey Theatre Ticket Sales Office**
Sample Type : 12" Floor Tile (Blue)
Result : No Asbestos Fibres Observed
- Bulk Sample # 8599BS49** : **Second Floor - Massey Theatre Ticket Sales Office**
Sample Type : Floor Tile Adhesive (Black)
Result : 5 - 10% Cellulose Fibres
: No Asbestos Fibres Observed
- Bulk Sample # 8599BS50** : **Second Floor - Male Staff Washroom (Accessed from Large Gym)**
Sample Type : Paper Backed Sheet Flooring (Green)
Result : **40 - 45% Chrysotile Asbestos**

Samples Collected on June 16, 2009

- Bulk Sample # 8599BS51** : **Second Floor - Storage Room (Accessed from Band Room 104A)**
Sample Type : Gypsum Board Filling Compound (Wall)
Result : **1 - 5% Chrysotile Asbestos**
- Bulk Sample # 8599BS52** : **Second Floor - Soundproof Room (Accessed from Band Room 104B)**
Sample Type : Ceiling Tile Adhesive (Brown)
Result : **1 - 5% Tremolite Asbestos**
- Bulk Sample # 8599BS53** : **Second Floor - Stairwell to Third Floor (Acc. from Band Storage/Office)**
Sample Type : 12" Floor Tile (Beige)
Result : **5 - 10% Chrysotile Asbestos**
- Bulk Sample # 8599BS54** : **Third Floor - Storage Room (Above Band Storage/Office)**
Sample Type : Gypsum Board Filling Compound (Ceiling)
Result : **1 - 5% Chrysotile Asbestos**
: 5 - 10% Cellulose Fibres

- Bulk Sample # 8599BS55** : **Third Floor - Mechanical Room (Above Band Storage/Office)**
Sample Type : Insulating Cement (Pipe Elbow)
Result : **15 - 20% Chrysotile Asbestos**
: 25 - 30% Glass Fibres
: 10 - 15% Cellulose Fibres
- Bulk Sample # 8599BS56** : **Third Floor - Mechanical Room (Above Band Storage/Office)**
Sample Type : Duct Mastic (Aluminized, Painted Blue)
Result : **20 - 25% Chrysotile Asbestos**
- Bulk Sample # 8599BS57** : **Third Floor - Mechanical Room (Above Band Storage/Office)**
Sample Type : Gypsum Board Filling Compound (Wall)
Result : **1 - 5% Chrysotile Asbestos**
- Bulk Sample # 8599BS58** : **Second Floor - South Corridor**
Sample Type : Paper Backed Sheet Flooring (Brown Mosaic)
Result : **30 - 35% Chrysotile Asbestos**



LEAD (in Paint) BULK SAMPLE REPORT

Date: June 26, 2015
Client: CITY OF NEW WESTMINSTER
Location: **Massey Theatre Building**
735 - 8th Avenue
New Westminister, BC

Comments: 1) Submitted samples were digested in accordance with EPA Analytical Method 3051 modified and analyzed in accordance with EPA Analytical Method 200.15.
2) Sample results report lead only.
3) WCB defines lead-containing surface coating material as a paint or other similar material that dries to a solid film that contains over 90 mg/kg (90 μ g/g or 90 PPM or 0.009%) dry weight of lead.
4) Samples will be disposed of after 25 days, unless the client requests otherwise.

Samples Collected on June 4, 2015

Bulk Sample # 14058LS01 : Exterior (East Side at Third Floor)
Sample Type : Paint (Brown & Cream, Mixed) (on Wood Trim at Former Window)
Result : **3,120 mg/kg**

Bulk Sample # 14058LS02 : Exterior (at Smoke Vent)
Sample Type : Paint (Brown & Cream, Mixed) (on Underside of Wood Roof Overhang)
Result : **15,400 mg/kg**

Bulk Sample # 14058LS03 : Exterior (West Side at Third Floor)
Sample Type : Paint (White) (on Wood Windowsill)
Result : **2,280 mg/kg**



LEACHATE LEAD SAMPLE REPORT

Date: June 26, 2015
Client: CITY OF NEW WESTMINSTER
Location: **Massey Theatre Building**
735 - 8th Avenue
New Westminster, BC

Comments: 1) Samples were analyzed in accordance with EPA Analytical Methods 6020A & 1311.
2) Sample results report leachate lead only.
3) Reportable Detection Limit is 0.10 mg/L.
4) Ministry of Environment defines lead leachate hazardous waste level as 5.0 mg/L or greater.
5) Samples will be disposed of after 30 days, unless the client requests otherwise.

Samples Collected on June 22, 2015

Bulk Sample # 14058LLS01 : Exterior (at Smoke Vent)
Sample Type : Paint (Brown & Cream, Mixed) (on Underside of Wood Roof Overhang)
Result : 3.54 mg/L

Bulk Sample # 14058LLS02 : Exterior (above Plasket Gallery)
Sample Type : Paint (Brown & Others, Mixed) (on West Stucco Wall)
Result : <0.10 mg/L

Bulk Sample # 14058LLS03 : Exterior (at South Band Rooms Addition)
Sample Type : Paint (Brown & Others, Mixed) (on South Stucco Wall)
Result : <0.10 mg/L