



Hazardous Building Materials Assessment

St. Thomas More School

Plan Number: 023006

MBC Group – ENV-08628

June 27, 2024

Subject: Hazardous Building Materials Assessment

For: Alberta Infrastructure
6950 113 Street
Edmonton, Alberta, T6H 5V7
Attn: Rob Eckert

Contract ID: 041231

CSF ID: 71830

Plan Number: 023006

Site Address: St. Thomas More School
10208 – 114 Street, Fairview, Alberta, T0H 1L0

Date of Site Visit: May 2, 2024 – May 3, 2024

MBC Group File #: ENV-08628

Author: Jeff Wright, CMI, CMRC, C-NRPP
Senior Environmental Consultant

MBC Group
12834 – 163 Street
Edmonton, Alberta, T5V 1K6
Cell: (780) 893-3544
Email: Jeff.Wright@mbc-group.ca

Report Date: June 27, 2024

Contents

Executive Summary.....	5
Introduction	6
Site History and Background Information.....	6
Regulations and Guidelines.....	6
Assessment & Sampling Methodologies.....	8
Scope and Methodology	10
Asbestos Survey Results.....	11
Lead Survey Results	14
Mercury.....	15
Radioactive Materials	15
Ozone Depleting Substances; CFC's Halon, HFC; HCFC.....	15
PCBs.....	15
Mould.....	16
Biohazards (Pigeon, Mouse, Bat, Sewage).....	16
Chemicals	16
Other Unsafe Observations	16
General Comments and Recommendations	16
Closure	24
Appendix I: Photographs.....	25
Appendix II: Laboratory Results	31
Appendix III: Sample Location Map	32
Appendix IV: Works Cited	33



Photograph 1: East Main Entrance Elevation

Executive Summary

The hazardous building materials assessment involved the collection of bulk asbestos and lead in paint samples, and the inspection of other potential hazardous building materials by **MBC Group** at the requested location of **St. Thomas More School** at 10208 – 114 Street, Fairview, Alberta to evaluate the presence and extent of hazardous building materials. Those materials identified as hazardous will need to be handled safely and disposed of accordingly.

During the assessment, polyethylene sheeting was present in various areas of the school, covering walls, ceilings, and floor spaces. All polyethylene sheeting can be removed and disposed of as asbestos waste.

The roof materials were reportedly replaced in 2005. No sampling was conducted for roofing materials.

Inspection of crawl space areas was not performed due to no crawl space access hatches being located.

Asbestos Handling

- Asbestos-containing materials (**vinyl floor tile, floor mastic, drywall joint compound, exterior window putty, and block wall cavity vermiculite insulation**) requiring removal prior to renovation/demolition were identified throughout the building.

Lead Paint Handling

- The paint samples that were analyzed from **rooms 8, and 11 and from exterior doors** were found to contain lead in concentrations of <90 mg/kg and are therefore not considered to be lead-containing paint. Removal of the painted surfaces can be undertaken following **Regular Paint Handling** practices.

Lead Disposal

- All paint samples that were analyzed were found to contain lead in concentrations of <90 mg/kg, therefore, further leachable lead analysis is not required, and the paint debris can be disposed of at a regular class 2 landfill with proper authorization.
- Sources of lead-based batteries, emergency lighting, were identified throughout the building.
- Sources of asbestos and lead-containing materials, cast iron drainpipes with bell and spigot housings may be present within wall/ceiling cavities.

Other Hazardous Materials

- Sources of microbial growth, mould, were not identified within the building.
- Source of moisture impacted ceiling tile materials were identified within room 40.
- Sources of radioactive material, smoke detectors, were identified throughout the building.
- Sources of ozone depleting substances, refrigerators, and water fountains/coolers were identified throughout the building.

- Sources of mercury and polychlorinated biphenyls, thermostat, and florescent lighting, were identified throughout the building.
- Sources of biohazard materials were not identified within the building.
- Sources of chemicals were identified within the building.

Introduction

The hazardous building materials assessment was conducted on May 2, 2024 and May 3, 2024, by Jeff Wright and Jeanette Marty of **MBC Group**. The assessment was conducted on behalf of Rob Eckert of **Alberta Infrastructure**. The following report is an overview of the observations, findings, conclusions, and recommendations generated during the assessment.

Site History and Background Information

The site is an educational institution located in Fairview, Alberta. The interior of the school contains drywall wall finishes in some rooms, cinderblock walls throughout, industrial sheet vinyl and/or vinyl floor tile in most areas. The exterior is comprised of cinderblock, concrete slab, and stucco finishes. The roofing materials are tar/gravel composition and had been reported to have been replaced in 2005.

During the inspection, various rooms, and hallways contained polyethylene sheeting covering walls, ceilings, and floors. Some materials behind the polyethylene sheeting have been removed, such as ceiling materials, within various rooms. Other materials behind the polyethylene sheeting remained intact.

Regulations and Guidelines

Exposure to asbestos-containing materials and lead is regulated under the Alberta Occupational Health & Safety Act, Regulation and Code, March 2023 (OH&S): Part 4: Chemical Hazards, Biological Hazards, and Harmful Substances. Under the heading General Requirements an employer must ensure that a worker's exposure to any substances listed in Schedule 1: Table 2 is kept as low as practicable and does not exceed its occupational exposure limit (OH&S Code 2023).

The Government of Alberta developed a best practice manual for asbestos titled Alberta Asbestos Abatement Manual, AAAM, published in August 2019. The following excerpts are from the manual.

- This manual describes the principles to be followed when selecting the most appropriate techniques for safe abatement of asbestos-containing materials. The manual presents basic information on asbestos and asbestos products, health hazards, and requirements for worker protection, safe work procedures, inspection criteria, applicable legislation and competency profiles for those persons involved in abatement activities.

Waste considered environmentally hazardous must be disposed of in accordance with The Alberta User Guide for Waste Managers, Alberta Environmental Protection.

Other Regulations and Guidelines

Alberta Occupational Health and Safety (OHS) does not define lead-based paint (LBP), nor does it specify any safe levels of lead in paint. The Alberta OHS Code, Part 4 – Chemical Hazards, Biological Hazards, and Harmful Substances, stipulates the requirements for worker exposure to harmful substances. A code of practice (Section 26) is required if lead is present in a quantity of 10 kilograms or greater at a concentration at 0.1% by weight or more. These sections of the regulation apply to any workplace where a worker is or may be exposed to potentially hazardous levels of inorganic lead. The code also states that workers may not be exposed to levels of airborne lead above the OEL. Exposure monitoring, personal protective equipment, training, housekeeping, and other requirements are also specified in the regulations.

For the purposes of compliance with the Alberta regulations, if there is a detectable level of lead in paint the OHS Code applies. In general, the OHS Code requires conducting an initial exposure assessment (air sampling) to evaluate if employees are exposed to lead. It applies to all workplace and construction activities that entail alteration, repair, demolition, renovation, removal, or salvage of structures or materials that contain lead.

Alberta Occupational Health and Safety (OHS) published a Bulletin in November of 2013 that refers to the *Canada Consumer Product Safety Act, Surface Coating Materials Regulations* (SOR/2005-109) for the total allowable amount of lead in paint. The regulation stipulates that the total amount of lead may not exceed 90 mg/kg (ppm or about 0.009%) in surface coatings. For the purposes of this assessment, lead based paint (LBP) is defined as a bulk sample of paint that has been found to exceed 90 mg/kg as analyzed by a laboratory.

Lead based paint is a potential concern both as a source of direct exposure (inhalation or ingestion of dust or paint chips), and as a contributor to lead in interior dust and exterior soil. A risk assessment of potential occupational exposure to lead must consider not only the presence of lead (any amount) but also the activity or impact of activity on the paints containing lead.

The guideline addresses this issue by establishing three tiers of trigger tasks where employees conducting these activities are assumed to potentially exceed the exposure limits and must be protected accordingly. There are also requirements under the Environmental Protection and Enhancement Act to prevent the release of lead into the environment.

The PCB Regulation, SOR/2008-273 (with amendments including Regulation SOR/2010-57) was published to improve the protection of Canada's environment and the health of Canadians by minimizing the risks posed by the use, storage, and release of polychlorinated biphenyls (PCBs) and outlines the handling, storage and disposal of PCBs and PCB-containing equipment. The Regulation defines PCB-contaminated material as any material containing more than 50 parts per million (ppm) or 50 milligrams per kilogram (mg/kg) of PCBs. PCB content of ballasts can be evaluated through referencing the Environment Canada Report EPS 2/CC/2 (revised) August 1991, *Identification of Lamp Ballasts Containing PCBs*.

Radioactive material found in smoke detectors is regulated under the Nuclear Safety and Control Act (amended July 2013). Americium can be found in smoke detectors and is used to detect the presence of smoke or heat.

The Nuclear Substances and Radiation Devices Regulation (SOR 2000-207) defines the disposal requirements of smoke detectors that contain a nuclear substance.

In 1994, the federal government filed the Ozone-Depleting Substances Regulations to amend controls on production and consumption of chlorofluorocarbons (CFC), halons, tetrachloride, and methyl-chloroform. The Federal Halocarbon Regulations, effective July 1, 1999, was filed to ensure uniformity with respect to the release, recovery, and recycling of ODS and their halocarbon alternatives in refrigeration and air conditioning. The Canadian Environmental Protection Act (1999), Ozone-Depleting Substances Regulations, 1998, controls the import, manufacture, use, sale, and export of ODS. The regulation also requires that permits be obtained to import, or export used, recovered, recycled, and reclaimed ODS.

In Alberta, there is no specific regulation or standards governing the aspects of mould within buildings or on the work site. There are however numerous guidelines and protocols set forth generated by many governmental departments and non-governmental organizations with the premise of assessing and remediating these conditions while not adversely affecting occupants or other areas of these same buildings.

The latest document produced by the Government of Alberta incorporates many aspects of the previously existing documents, from throughout North America, into one useable publication entitled “Best Practices - Mould at the Work Site.”

Mould assessments and remediation protocols are derived from documents prepared by Health Canada, New York City Department of Health, Canada Mortgage and Housing, Alberta Workplace Health and Safety, Local Health Authorities, American Conference of Governmental Industrial Hygienists (ACGIH), American Society of Heating Refrigeration and Air conditioning Engineers (ASHRAE) and the Canadian Construction Association (CCA).

Assessment & Sampling Methodologies

The assessment process involved the evaluation of data obtained from the buildings history and visual inspection to formulate an initial hypothesis about the origin, identity, location, and extent of hazardous building materials. A sampling strategy was developed as determined by site condition; samples were collected and sent for analysis by an independent laboratory, the results interpreted, and recommendations for appropriate handling of identified hazardous building materials are provided in this report.

Asbestos Sample Collection

Suspected potential asbestos-containing materials (ACM) were visually identified, sampled in accordance with the sampling protocols outlined in the Alberta Asbestos Abatement Manual, AAAM, 2019; 7.1. Bulk sampling of materials suspected to contain asbestos was conducted and samples were submitted to an independent laboratory for analyses and classification.

All bulk asbestos materials samples were analyzed by polarized light microscopy (PLM), by **Eurofins | Enviro-Works**.

A chain of custody, COC, was initiated to assign pertinent information to all samples suspected of containing asbestos. The date, type of sampling media, requested analysis methodology, sample collection location, sample measurement, and name of the person in care and control of the sample, and other relative assessment information was recorded. The COC was attached to the samples and the samples were sent to the laboratory. Analysis was returned with a copy of the COC specifying the condition of the sample at the time it was logged, the requested analysis, and signature of the attending lab technician.

Lead-Based Paint (LBP) and other Lead Products Sample Collection

Sampling for lead-based paint was conducted. Samples of suspect paint were collected and sent for analysis.

All lead-based paint and other lead product samples were analyzed by **Eurofins | Enviro-Works**.

Other building materials suspected to contain lead such as lead-acid batteries in emergency backup lighting systems, lead sheeting, lead joint packing in cast iron drain line joints (bells and spigots) were noted when observed.

Mercury

T-type and F-type light tubes as well as mercury vapor lamps which potentially contain mercury, and mercury-containing thermostat(s) were noted when observed. Compact fluorescent lights (CFL) which also contain mercury were noted when observed.

Polychlorinated Biphenyls (PCBs)

The suspected presence of PCB light ballasts was determined by the age of the building. Sampling of liquid PCB in transformers and hydraulic equipment was not included in the scope of work. During the assessment, approximately twenty-five (25) light ballasts were inspected.

UFFI

Plan Number: 023006 | Contract ID: 041231 | CFS ID: 71830

The possibility exists for sources of UFFI (Urea Formaldehyde Foam Insulation) within wall and ceiling cavities. No UFFI was observed during the assessment.

Mould

The presence of mould was noted when observed during the site visit.

Radioactive Materials

Smoke detectors suspected of containing radioactive materials were noted when observed.

Ozone Depleting Substances: CFC's, Halon, HFC, HCFC

Visual inspections throughout all accessible areas in the building were conducted. The visible presence of potential ozone depleting substances was noted when observed.

Biohazards

Visual inspections throughout all accessible areas in the building were conducted. The visible presence of potential biohazards was noted when observed.

Chemicals

Visual inspections throughout accessible areas in the building were conducted. The presence of chemicals was noted when observed.

Table 1: Sampling Methodologies

Analyte	Methodology
Bulk Asbestos PLM	NIOSH 9002; EPA 600/R-93/116; EPA 600/R-04/004
Lead in Paint	ASTM E1645/ASTM E3193
Mould	ASTM D9391-09

Scope and Methodology

The survey conducted by **MBC Group** consisted of the following:

- Visual survey of potentially hazardous building materials.
- Individual field sampling and independent laboratory analysis of suspected ACM, and lead-containing materials.
- Interpretation of laboratory analysis results.
- Preparation of a report including results and recommendations.

The survey consisted of a visual inspection of all accessible areas within the building. The information pertaining to each specified area, including the quantities and condition of suspected hazardous materials was documented.

Asbestos Survey Results

Sample #	Location	Material	Result
A1	Admin Office Wall 1	Drywall Joint Compound	None Detected
A2	Entrance Foyer Hallway Wall	Drywall Joint Compound	None Detected
A3	Foyer Hallway (north) Ceiling Tile 1 (small pinhole)	Ceiling Tile	None Detected
A4	Foyer Hallway (north) Ceiling Tile 2 (small pinhole)	Ceiling Tile	None Detected
A5	Foyer Hallway (north) Ceiling Tile 3 (large pinhole)	Ceiling Tile	None Detected
A6	Foyer Hallway (north) Ceiling Tile 4 (large pinhole)	Ceiling Tile	None Detected
A7	Foyer Hallway (north) Ceiling Ducting Mastic 1	Duct Mastic	None Detected
A8	Foyer Hallway (north) Ceiling Ducting Mastic 2	Duct Mastic	None Detected
A9	Room 40 Linoleum Flooring 1	Sheet Vinyl Flooring	None Detected
A10	Room 40 Linoleum Flooring 2	Sheet Vinyl Flooring	None Detected
A11	Room 40 Ceiling Spray Insulation 1	Spray Insulation	None Detected
A12	Room 40 Ceiling Spray Insulation 2	Spray Insulation	None Detected
A13	Room 40 South Block Wall Insulation	Vermiculite Insulation	None Detected
A14	Copy Room Vinyl Floor Tile 1 Light Blue	Vinyl Floor Tile	None Detected
A15	Copy Room Vinyl Floor Tile 2 Light Blue	Vinyl Floor Tile	None Detected
A16	Copy Room Floor Leveling Compound 1	Floor Leveling Compound	None Detected
A17	Copy Room Floor Leveling Compound 2	Floor Leveling Compound	None Detected
A18	Room 35 South Wall 1	Drywall Joint Compound	None Detected
A19	Room 35 South Wall 2	Drywall Joint Compound	None Detected
A20	Resource Room Vinyl Floor Tile 1 Light Grey Stripped	Vinyl Floor Tile	None Detected
A21	Resource Room Vinyl Floor Tile 2 Light Grey Stripped	Vinyl Floor Tile	None Detected
A22	North Staff Washroom Linoleum 1	Sheet Vinyl Flooring	None Detected
A23	North Staff Washroom Linoleum 2	Sheet Vinyl Flooring	None Detected
A24	North Hallway Vinyl Floor Tile 1 Speckled Beige	Vinyl Floor Tile	Chrysotile <1%
A25	North Hallway Vinyl Floor Tile 2 Speckled Beige	Vinyl Floor Tile	Chrysotile <1%

A26	North Hallway Vinyl Floor Tile 1 Light Beige	Vinyl Floor Tile	None Detected
A27	North Hallway Vinyl Floor Tile 2 Light Beige	Vinyl Floor Tile	None Detected
A28	Boiler Room Cold Air Insulation 1	Duct Insulation	None Detected
A29	Boiler Room Cold Air Insulation 2	Duct Insulation	None Detected
A30	Boiler Room Heat Return Elbow 1	Pipe Parging/Insulation	None Detected
A31	Boiler Room Heat Return Elbow 2	Pipe Parging/Insulation	None Detected
A32	Music Room Textured Ceiling Tile 1	Ceiling Tile	None Detected
A33	Music Room Textured Ceiling Tile 2	Ceiling Tile	None Detected
A34	Computer Room (23) Ceiling Tile 1 Large Pinhole	Ceiling Tile	None Detected
A35	Computer Room (23) Ceiling Tile 2 Large Pinhole	Ceiling Tile	None Detected
A36	Computer Room (23) Bulkhead Wall 1	Drywall Joint Compound	None Detected
A37	Computer Room (23) Bulkhead Wall 2	Drywall Joint Compound	None Detected
A38	Room 31 Linoleum Flooring 1 Beige	Sheet Vinyl Flooring	None Detected
A39	Room 31 Linoleum Flooring 2 Beige	Sheet Vinyl Flooring	None Detected
A40	Room 31 North Block Wall Insulation	Vermiculite Insulation	Actinolite / Tremolite <1%
A41	Room 26 Bulkhead Wall 1	Drywall Joint Compound	None Detected
A42	Room 26 Bulkhead Wall 2	Drywall Joint Compound	None Detected
A43	Room 28 Sink Undercoat 1	Sink Undercoat	None Detected
A44	Room 28 Sink Undercoat 2	Sink Undercoat	None Detected
A45	Gym Storage 1 Wall 1	Drywall Joint Compound	Chrysotile 1-5%
A46	Gym Storage 1 Wall 2	Drywall Joint Compound	Chrysotile 1-5%
A47	Storage Room Vinyl Floor Tile 1 Light Grey	Vinyl Floor Tile	None Detected
A48	Storage Room Vinyl Floor Tile 2 Light Grey	Vinyl Floor Tile	None Detected
A49	Storage Room South Window Caulking 1 (Interior)	Window Caulking	None Detected
A50	Storage Room South Window Caulking 2 (Interior)	Window Caulking	None Detected
A51	Room 18 Linoleum Flooring 1 Off- White	Sheet Vinyl Flooring	None Detected
A52	Room 18 Linoleum Flooring 2 Off- White	Sheet Vinyl Flooring	None Detected
A53	South Resource Room Vinyl Floor Tile 1 Green	Vinyl Floor Tile	Chrysotile 10-25%

Plan Number: 023006 | Contract ID: 041231 | CFS ID: 71830

A54	South Resource Room Vinyl Floor Tile 2 Green	Vinyl Floor Tile	Chrysotile 10-25%
A55	South Resource Room Vinyl Floor Tile 1 Grey	Vinyl Floor Tile	Chrysotile 10-25%
A56	South Resource Room Vinyl Floor Tile 2 Grey	Vinyl Floor Tile	Chrysotile 10-25%
A57	Staff Bathroom Vinyl Floor Tile 1 White	Vinyl Floor Tile	None Detected
A58	Staff Bathroom Vinyl Floor Tile 2 White	Vinyl Floor Tile	None Detected
A59	Room 13 Vinyl Floor Tile 1 Light Green	Vinyl Floor Tile	Chrysotile 25-50%
A60	Room 13 Vinyl Floor Tile 2 Light Green	Vinyl Floor Tile	Chrysotile 25-50%
A61	Room 11 Square Duct Wrap Insulation 1	Duct Insulation	None Detected
A62	Room 11 Square Duct Wrap Insulation 2	Duct Insulation	None Detected
A63	Sensory Room Wall 1	Drywall Joint Compound	None Detected
A64	Sensory Room Wall 2	Drywall Joint Compound	None Detected
A65	Room 7 East Block Wall Insulation	Vermiculite Insulation	Actinolite / Tremolite <1%
A66	SE Staffroom Linoleum Flooring 1 Checkered	Sheet Vinyl Flooring	None Detected
A67	SE Staffroom Linoleum Flooring 2 Checkered	Sheet Vinyl Flooring	None Detected
A68	Infirmery Vinyl Floor Tile 1 White Streaked	Vinyl Floor Tile	None Detected
A69	File Room Vinyl Floor Tile White Streaked	Vinyl Floor Tile	None Detected
A70	Exterior East Window Caulking 1 Grey	Window Caulking	Chrysotile 1-5%
A71	Exterior East Window Caulking 2 Grey	Window Caulking	Chrysotile 1-5%
A72	Exterior SE Window Caulking 1 Grey	Window Caulking	None Detected
A73	Exterior SE Window Caulking 2 Grey	Window Caulking	Chrysotile 1-5%
A74	Exterior SE Wall Stucco 1	Exterior Stucco	None Detected
A75	Exterior SE Wall Stucco 2	Exterior Stucco	None Detected

*Bolded results indicate samples found to contain asbestos.

The results of the laboratory analysis indicate that fifteen (15) of the seventy-five (75) samples submitted for analysis were found to be asbestos-containing. A copy of the independent laboratory analysis is included in the Appendices.

MBC was provided with a historical hazardous materials report compiled by **Envirofocus Consulting Ltd.** dated August 17, 2023. Positive samples result for asbestos from this report are summarized in the table below:

Envirofocus Consulting Ltd – August 17, 2023 – Hazardous Building Materials Assessment Report

6	Westend North Hallway Floor Tile Off-White	Vinyl Floor Tile	Chrysotile 1-5%
7	Westend North Hallway Floor Mastic	Floor Mastic	Chrysotile <1%
11	Storage Room 13 Vinyl Floor Tile Green with Green Waves	Vinyl Floor Tile	Chrysotile 1-5%
12	Resource Room Vinyl Floor Tile Dark Green	Vinyl Floor Tile	Chrysotile 1-5%
16	Gym South Block Wall Insulation	Vermiculite Insulation	Actinolite / Tremolite <1%
17	Gym Storage Area Vinyl Floor Tile White	Vinyl Floor Tile	Chrysotile 1-5%
19	Gym Storage Area Wall	Drywall Joint Compound	Chrysotile 1-5%
30	Boys Washroom Southside Wall	Drywall Joint Compound	Chrysotile 1-5%
31	South Storage Room Wall	Drywall Joint Compound	Chrysotile 1-5%
32	Janitor/Boiler Room Southside Ceiling	Ceiling Texture	Actinolite / Tremolite <1%
33	Janitor/Boiler Room Southside Elbow Insulation Larger Pipe Green	Pipe Parging/Insulation	Chrysotile 1-5%
4B	Stage Area Ceiling Elbow Insulation	Roof Pipe Parging/Insulation	Chrysotile 1-5%

Lead Survey Results

Lead in Paint Analysis

Sample #	Location	Result mg/kg	Guideline
L-1	Room 8 Door Paint Grey	53.4	90 mg/kg
L-2	Room 11 Floor Paint Red	<24.2	
L-3	Exterior NW Entrance Door Paint Pink	<22.3	
L-4	Exterior South Central Entrance Door Paint Pink	<24.1	
L-5	Exterior SW Entrance Door Paint Pink	<22.3	

Bolded results indicate levels more than guidelines.

The results of the laboratory analysis indicate that none (0) of the five (5) samples submitted for analysis were found to be above the recommended guidelines. A copy of the independent laboratory analysis is included in the Appendixes.

Approximately sixteen (16) sources of lead-based batteries, exit signs, were identified throughout the building.

Approximately twenty-four (24) sources of lead-based batteries, emergency lighting, were identified throughout the building.

Other potential sources of asbestos and lead-containing materials, cast iron drainpipes with bell and pigot housings may be present within wall/ceiling cavities.

Mercury

Two hundred and twelve (212) suspected mercury-containing fluorescent light fixtures were visually identified throughout the school. Other lighting fixtures have been upgraded to LED.

Approximately eighteen (18) suspected mercury-containing thermostats were observed throughout the school.

Mercury sources must be removed and disposed of appropriately prior to demolition of the building.

Radioactive Materials

Approximately thirty-six (36) smoke detectors suspected of containing radioactive materials were identified throughout the building, within classrooms, and common hallway areas.

Ozone Depleting Substances; CFC's Halon, HFC; HCFC

Approximately seven (7) ozone depleting substances were visually identified within the building. Refrigerators/freezers within the southeast staff room, and foods lab were observed. Water coolers within the hallways were observed.

UFFI

The possibility exists for sources of UFFI (Urea Formaldehyde Foam Insulation) within wall and ceiling cavities, none were observed at the time of our assessment.

PCBs

Fluorescent ballast serial numbers and label information should be inspected and compared to the Environment Canada Publication, Environmental Protection Series - Identification of Lamp Ballasts Containing PCBs reference document and any identified PCB ballasts should be stored and disposed of accordingly. During the assessment, approximately twenty-five (25) light ballasts were inspected and found to contain no PCB's.

Mould

Suspicion of fungal contamination was not identified within the building.

Biohazards (Pigeon, Mouse, Bat, Sewage)

Biohazard materials were not identified within the building.

Chemicals

Cleaning chemicals were observed throughout the custodial spaces. Various chemicals were observed within the science lab (33) preparation room. Various paint materials were observed within the art room (24). All paints, paint containers and industrial chemicals should be collected, sorted, and sent for disposal where necessary.

Unsafe Circumstances Observed

During the assessment, ceiling materials had been previously removed within the hallway areas, leaving low hanging light fixtures, and wiring. Overhead hazards should be noted within the building. No other unsafe site conditions were observed during the assessment.

Moisture impacted ceiling tiles were observed within room 40. After inspection, all materials measured less than (<)15% moisture content and are therefore considered to be dry.

General Comments and Recommendations

The following comments apply to the analysis as reported.

Asbestos

Vinyl Floor Tile Abatement

- Professional abatement will be required to remove the ACM identified.
- Removal of the ACM should be completed following **Low-Risk** abatement procedures as outlined in the Alberta Asbestos Abatement Manual (current edition).
- Remove approximately 850 ft² of speckled beige floor tile from the north hallway (runs east/west) beginning at the senior high entrance. Include the abatement of all floor tile mastic.
- Remove approximately 700 ft² of speckled beige floor tile from the northwest hallway (runs north/south) beginning at the junior high entrance. Include the abatement of all floor tile mastic.
- Remove approximately 200 ft² of speckled beige floor tile from the east foods' lab storage room (room 28). Include the abatement of all floor tile mastic.
- Remove approximately 750 ft² of speckled beige floor tile from room 27. Include the abatement of all floor tile mastic.

Plan Number: 023006 | Contract ID: 041231 | CFS ID: 71830

- Remove approximately 220 ft² of speckled beige floor tile from the west stage hallway (runs east/west). Include the abatement of all floor tile mastic.
- Remove approximately 850 ft² of speckled beige floor tile from the southwest hallway (runs north/south) beginning at the grade 5/6 gym entrance. Include the abatement of all floor tile mastic.
- Remove approximately 250 ft² of vinyl floor tile from all gym storage rooms, if present. Include the abatement of all floor tile mastic.
- Remove approximately 280 ft² of green and grey floor tile from the resource room. Include the abatement of all floor tile mastic.
- Remove approximately 220 ft² of light green floor tile from room 13. Include the abatement of all floor tile mastic.
- Remove approximately 220 ft² of speckled beige floor tile from room 10. Include the abatement of all floor tile mastic.
- Remove approximately 220 ft² of speckled beige floor tile from room 9 (below carpet). Include the abatement of all floor tile mastic.

Drywall/Plaster Joint Compound Abatement

- Professional abatement will be required to remove the ACM identified.
- Removal of the ACM should be completed following **Moderate-Risk** abatement procedures, depending on abatement contractors' work methods, as outlined in the Alberta Asbestos Abatement Manual (current edition).
- Remove approximately 350 ft² of drywall ceiling materials from the gym girl's changeroom area.
- Remove approximately 120 ft² of drywall ceiling materials from the PE office area.
- Remove approximately 325 ft² of drywall ceiling materials from gym storage room 1 area.
- Remove approximately 120 ft² of drywall ceiling materials from gym storage room 3 area.
- Remove approximately 350 ft² of drywall ceiling materials from the gym boy's changeroom area.

Block Wall Vermiculite Insulation Abatement

- Professional abatement will be required to remove the ACM identified.
- Removal of the ACM should be completed following **High-Risk** abatement procedures as outlined in the Alberta Asbestos Abatement Manual (current edition).
- Remove approximately 160,000 ft² of block wall vermiculite insulation materials from all cinder block walls throughout the school.

Exterior Window Putty (Grey/Brown) Abatement

- Professional abatement will be required to remove the ACM identified.
- Removal of the ACM should be completed following **Low-Risk** abatement procedures as outlined in the Alberta Asbestos Abatement Manual (current edition).
- Remove approximately 32 windows from the exterior of the school (wrap and remove or hand tool scrape methods).

Low-Risk – Window Putty / Vinyl Floor Tile Abatement

- Removal of the ACM should be completed following **Low-Risk** abatement procedures as outlined in the Alberta Asbestos Abatement Manual (current edition).
- Submit a completed Asbestos Project Notification Form, NOP, to Workplace Health and Safety 72 hours before workers may be exposed to airborne fibres, including setup operations that may release fibres. A copy of the acknowledgement should remain on site for the duration of the project.
- Ensure the work area is isolated utilizing barriers and warning signs restricting access to the area until the work is completed.
- A worker decontamination area should be installed adjacent to the work area.
- Ensure that the heating, ventilation, and air conditioning (HVAC) systems are isolated from the abatement area.
- Access contents in the work area. Manipulate and dispose of or otherwise clean, store and protect all contents ensuring that the work area is free of any content.
- During abatement localized wetting of the ACM must be undertaken to minimize fibre release.
- Where necessary, a polyethylene drop sheet should be used to prevent the spread of asbestos dust to adjoining areas.
- Removal and cleaning of dust must be completed utilizing a damp cloth and a High Efficiency Particulate Assembly, HEPA, equipped vacuum cleaner. The HEPA-equipped vacuum cleaner should be Di-octyl Phthalate/Poly Alpha Olefins, DOP/PAO, tested prior to the commencement of the abatement project. A copy of the successful DOP/PAO test should remain on site for the duration of the project.
- Ensure all workers are, at a minimum, equipped with a National Institute for Occupational Safety and Health, NIOSH, approved half-mask respirators with P-100, R-100 or N-100 particulate filters and disposable coveralls.
- Upon completion of work efforts, the work area must be visually inspected to ensure that all visible asbestos-containing debris has been cleaned. Following completion of a successful final visual inspection, the area should be encapsulated.

Moderate Risk – Drywall Materials Abatement

- Removal of the asbestos-containing materials should be completed following moderate-risk abatement procedures as outlined in the Alberta Asbestos Abatement Manual, (current edition). Submit a completed Asbestos Project Notification Form, NOP, to Workplace Health and Safety 72 hours before workers may be exposed to airborne fibres, including set up operations that may release fibres. A copy of the acknowledgement should remain on site for the duration of the project. Ensure the work area is isolated utilizing barriers and warning signs restricting access to the area until the work is completed.
- Access contents in work area. Manipulate and dispose of or otherwise clean, store and protect all contents ensuring that the work area is free of any content.
- Install fiber reinforced polyethylene sheeting containment enclosure separating the abatement work zone from the remainder of the area. Ensure negative pressure is achieved and maintained throughout the abatement process.

Plan Number: 023006 | Contract ID: 041231 | CFS ID: 71830

- Containment should be constructed utilizing 6 mil thick polyethylene sheeting and a two-stage decontamination facility should be attached to the entrance of the containment.
- Where floor finishes are to remain, ensure that the floor has two layers of 6 mil thick polyethylene sheeting running at 90 degrees to one another, to avoid tearing. The floor covering should overlap the wall by 30 cm, with the wall sheeting overlapping the turn-up on the inside of the containment to avoid breaches. Ensure that the heating, ventilation, and air conditioning (HVAC) systems are isolated from the abatement area.
- Install high efficiency particulate assembly (HEPA) filtered air filtration device (AFD) in containment to provide negative air pressure. Exhaust outdoors. Ensure that negative air is achieved within the containment and maintained at a minimum of -5 Pascal's throughout the entire remediation process. The AFDs should be Di-octyl Phthalate/Poly Alpha Olefins, DOP/PAO, tested prior to the commencement of the abatement project. A copy of the successful DOP/PAO test should remain on site for the duration of the project. During abatement localized wetting of the asbestos-containing materials must be undertaken to minimize fibre release. Removal and cleaning of dust must be undertaken utilizing a damp cloth and HEPA-equipped vacuum cleaner. The HEPA-equipped vacuum cleaner should be DOP/PAO tested prior to the commencement of the abatement project. A copy of the successful DOP/PAO test should remain on site for the duration of the project.
- Ensure all workers are, at a minimum, equipped with a National Institute for Occupational Safety and Health, NIOSH, approved half-mask respirator with P-100, R-100 or N-100 particulate filters and disposable coveralls. Workers may be required to wear full-face or powered air purifying respirators, PAPR, depending on the fibre levels encountered during the project.
- On-site occupational and perimeter air quality monitoring will be required daily during the abatement project. Upon project completion, an aggressive air clearance must also be completed. **MBC Group** can provide these services.
- Upon completion of work efforts, the work area must be visually inspected to ensure that all visible asbestos-containing debris has been cleaned. Following completion of a successful final visual inspection, the area should be encapsulated.

High-Risk – Vermiculite Abatement

- Removal of the asbestos-containing materials should be completed following high-risk abatement procedures as outlined in the Alberta Asbestos Abatement Manual (current edition).
- Submit a completed Asbestos Project Notification Form, NOP, to Workplace Health and Safety 72 hours before workers may be exposed to airborne fibres, including set-up operations that may release fibres. A copy of the acknowledgement should remain on site for the duration of the project.
- Ensure the work area is isolated utilizing barriers and warning signs restricting access to the area until the work is completed.
- Access contents in the work area. Manipulate and dispose of or otherwise clean, store and protect all contents ensuring that the work area is free of any content.
- Install fiber reinforced polyethylene sheeting containment enclosure separating the abatement work zone from the remainder of the area. Ensure negative pressure is achieved and maintained throughout the abatement process.

- Containment should be constructed utilizing 6 mil thick polyethylene sheeting and a three-stage decontamination facility should be attached to the entrance of the containment that should include a clean room, a shower facility, and a dirty room. A waste transfer room may be constructed should there be enough room to do so.
- Where floor finishes are to remain Ensure that the floor has two layers of 6 mil thick polyethylene sheeting running at 90 degrees to one another, to avoid tearing. The floor covering should overlap the wall by 30 cm, with the wall sheeting overlapping the turn-up on the inside of the containment to avoid breaches.
- Ensure that the heating, ventilation, and air conditioning (HVAC) systems are isolated from the abatement area.
- Install high efficiency particulate assembly (HEPA) filtered air filtration device (AFD) in containment to provide negative air. Exhaust outdoors.
- Ensure that negative air is achieved within containment and maintained at a minimum of -5 Pascals throughout the entire abatement process.
- The AFDs should be Di-octyl Phthalate/Poly Alpha Olefins, DOP/PAO, tested prior to the commencement of the abatement project. A copy of the successful DOP/PAO test should remain on site for the duration of the project.
- During abatement localized wetting of the asbestos-containing materials must be undertaken to minimize fibre release.
- Removal and cleaning of dust must be undertaken utilizing a damp cloth and a HEPA-equipped vacuum cleaner. The HEPA-equipped vacuum cleaner should be DOP/PAO tested prior to the commencement of the abatement project. A copy of the successful DOP/PAO test should remain on site for the duration of the project.
- Ensure all workers are, at a minimum, equipped with a National Institute for Occupational Safety and Health, NIOSH, approved powered air purifying respirators with P-100, R-100 or N-100 particulate filters and disposable coveralls. Street clothing may not be worn underneath disposable coveralls.
- Upon completion of the work effort, the work area must be visually inspected to ensure that all visible asbestos-containing debris has been cleaned. Following completion of a successful final visual inspection, the area should be encapsulated.

The possibility exists for other forms of asbestos-containing materials to exist on the property. Limitations were encountered during the assessment with respect to access to various areas. This report may not represent all possible areas that contain asbestos products.

Lead Paint Handling

- The paint samples that were analyzed from **rooms 8, and 11 and exterior doors** were found to contain lead in concentrations of <90 mg/kg and are therefore not considered to be lead-containing paint. Removal of the painted surfaces can be undertaken following **Regular Paint Handling** practices.

Lead Disposal

Plan Number: 023006 | Contract ID: 041231 | CFS ID: 71830

- All paint samples that were analyzed were found to contain lead in concentrations of <90 mg/kg, therefore, further leachable lead analysis is not required, and the paint debris can be disposed of at a regular class 2 landfill with proper authorization.
- Approximately 40 suspect lead-based batteries, exit signs and emergency lighting, were observed within the building.
- Sources of asbestos and lead containing materials, cast iron drainpipes with bell and spigot housings may be present within wall cavities.

Remove all sources of lead-based batteries, exit signs/emergency lighting, and lead packing within bell and spigot housings within the building. They must be removed and properly disposed of prior to demolition/renovations.

Mercury Thermostats/Florescent Lights

Mercury Thermostats

- Remove approximately eighteen (18) mercury thermostats throughout the school.

Mercury Florescent Lights

- Remove approximately two hundred and twelve (212) mercury florescent light fixtures throughout the school.

Radioactive

- Remove approximately thirty-six (36) smoke detectors suspected throughout the school.

Ozone Depleting Substances

- Remove approximately seven (7) ozone depleting substances throughout the school.
 - Refrigerators/freezers within the southeast staff room, and foods lab.
 - Water coolers within the hallway areas.

Urea Formaldehyde Foam Insulation (UFFI)

- The possibility exists for sources of UFFI (Urea Formaldehyde Foam Insulation) within wall and ceiling cavities, none were observed at the time of our assessment.

PCB's

- Fluorescent ballast serial numbers and label information should be inspected and compared to the Environment Canada Publication, Environmental Protection Series - Identification of Lamp Ballasts Containing PCBs reference document and any identified PCB ballasts should be stored and disposed of accordingly.
- During the assessment, approximately twenty-five (25) light ballasts were inspected and found to contain no PCB's.

Chemicals

- Cleaning chemicals were observed throughout the custodial spaces. Various chemicals were observed within the science lab (33) preparation room. Various paint materials were observed within the art room (24). All paints, paint containers and industrial chemicals should be collected, sorted, and sent for disposal where necessary.

Limitations

The conclusions presented in this report represent the judgement of the assessor based on current environmental and health and safety standards, and on-site conditions on the date(s) cited in this report. Due to the nature of the investigation and the limited data available, the assessor cannot warrant undiscovered environmental liabilities.

This report is intended for client use only. Any use of this document by a third party, or any reliance on or decisions made based on the findings described in this report, are the sole responsibility of such third parties, and **MBC Group** accepts no responsibility for damages, suffered by any third party because of decisions made or actions conducted based on this report. No other warranties are implied or expressed.

The data, conclusions and recommendations which are presented in this report, and the quality thereof, are based on a scope of work authorized by the client. The hazardous building materials sampling program included asbestos bulk sampling and/or paint chip sampling in select representative areas for laboratory analysis. Note, however, that no scope of work, no matter how exhaustive, can guarantee to identify all contaminants. This report therefore cannot warrant that all building conditions are represented by those identified at specific locations.

Recommendations, when included, are made in good faith, and are based on several successful experiences.

Note also that standards, guidelines, and practices related to environmental investigations may change with time. Those which were applied at the time of this investigation may be obsolete or unacceptable later.

Any comments given in this report on potential remediation problems and possible methods are intended only for the guidance of the designer. The scope of work may not be sufficient to determine all the factors that may affect construction, clean-up methods and/or costs. Contractors bidding on this project or undertaking clean-ups should, therefore, make their own interpretation of the information presented and draw their own conclusions as to how the conditions may affect their work.

Any results from an analytical laboratory or other subcontractor reported herein have been carried out by others, and **MBC Group** cannot warrant their accuracy. Similarly, **MBC Group** cannot guarantee the accuracy of information supplied by the client.

Closure

This report is based on observations and collected data from May 2, 2024, and May 3, 2024. The conclusions made in this report are not a certification of the site's air quality. No warranty is expressed or implied as to final site conditions. This report provides an analysis and assessment of materials tested and is based on information provided to **MBC Group**.

Please contact the writer with any questions or concerns.

Sincerely,



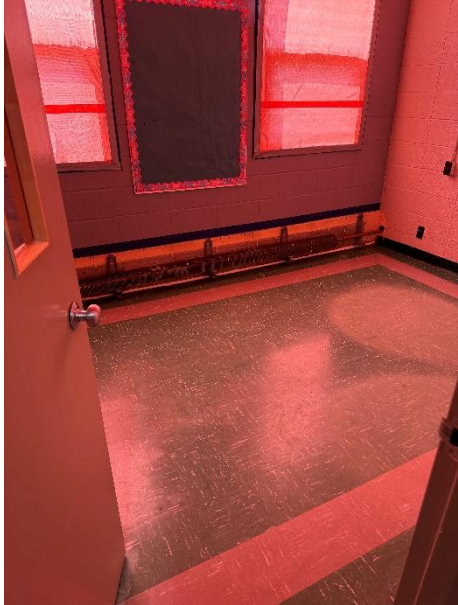
Jeff Wright, CMI, CMRC, C-NRPP
Senior Environmental Consultant

Reviewed by:



Andrew Grant, B.Sc., P.Eng., EP, CRSP, C-NRPP
National Director and Practice Lead, Environmental Services

Appendix I: Photographs

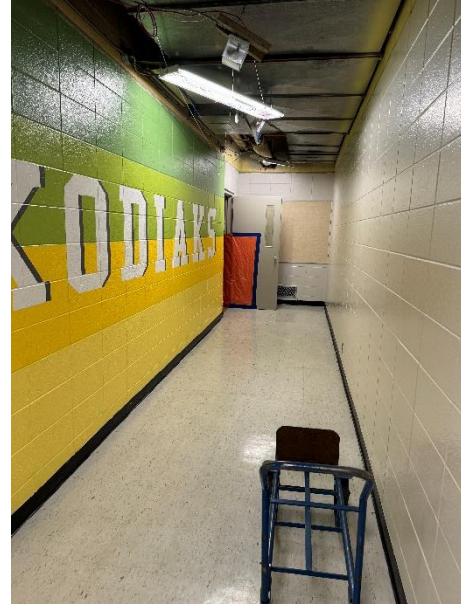
	
North Hallway / Asbestos Vinyl Floor Tile (speckled beige)	Room 31 North Block Wall / Asbestos Vermiculite Insulation
	
Gym Storage Room 1 / Asbestos Drywall Joint Compound	South Resource Room / Asbestos Vinyl Floor Tile (green and grey)

	
Room 13 / Asbestos Vinyl Floor Tile (light green)	Room 7 East Block Wall / Asbestos Vermiculite Insulation
	
Exterior East Window Caulking / Asbestos Window Caulking (grey)	Exterior Southeast Window Caulking / Asbestos Window Caulking (grey/brown)

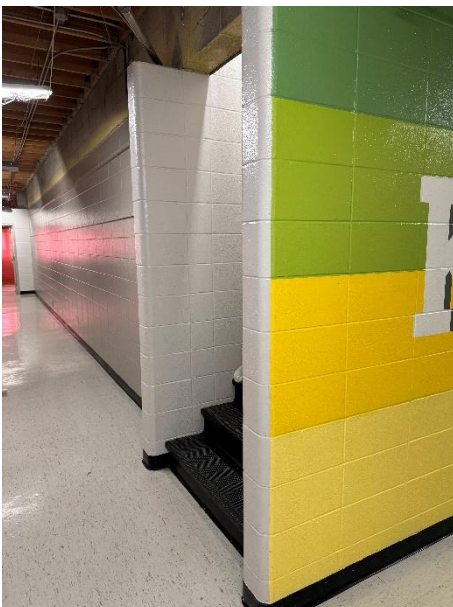
	
Gym Girl's Changeroom / Asbestos Drywall Joint Compound (assumed)	Gym Boy's Changeroom / Asbestos Drywall Joint Compound (assumed)
	
Room 27 / Asbestos Vinyl Floor Tile (speckled beige)	Foods' Lab Storage Room / Asbestos Vinyl Floor Tile (speckled beige)



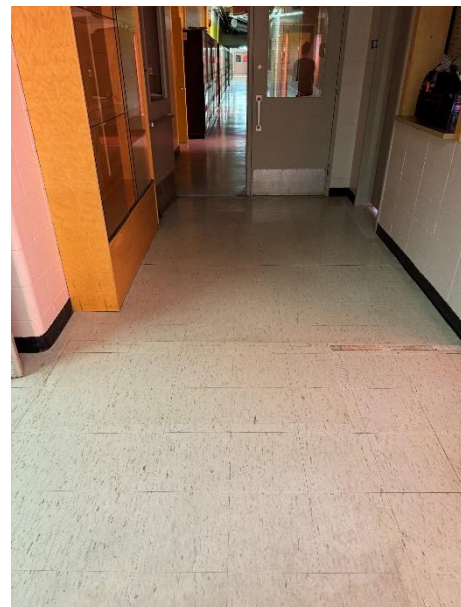
Northwest Hallway / Asbestos Vinyl Floor Tile
(speckled beige)



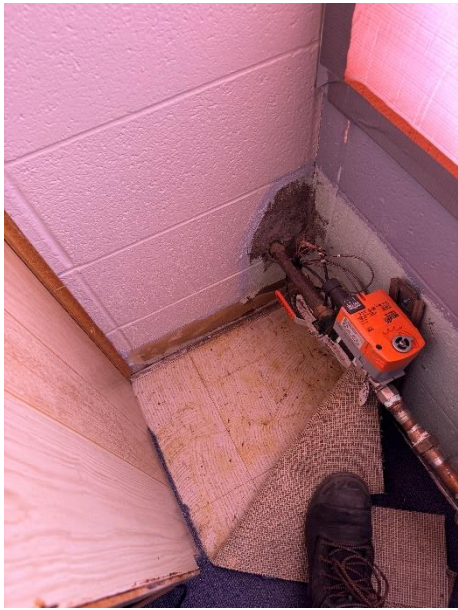
West Stage Hallway / Asbestos Vinyl Floor Tile
(speckled beige)



Southwest Hallway / Asbestos Vinyl Floor Tile
(speckled beige)



Southwest Hallway Foyer / Asbestos Vinyl Floor
Tile (speckled beige)

	
Room 10 / Asbestos Vinyl Floor Tile (speckled beige)	Room 9 / Asbestos Vinyl Floor Tile (speckled beige)
	
Typical Emergency Lighting (throughout)	Typical Exit Signs (throughout)

Plan Number: 023006 | Contract ID: 041231 | CFS ID: 71830

	
Typical Mercury Thermostat (throughout)	Typical Mercury Thermostat (throughout)

Appendix II: Laboratory Results

Certificate of Analysis

Client: MBC Group
12834 163 St
Edmonton, AB T5V 1K6
Date Submitted: 06-May-24
Date Completed: 08-May-24
Lab ID : 24050629
COC No. 122191
Project: ENV-08628
Contact: Jeff, Jeanette

Bulk Asbestos Fiber Analysis by Polarized Light Microscopy (PLM) NIOSH 9002

Sample No.	Date Sampled	Client Sample Description	Sample Type	Asbestos Type and Content	Non-Asbestos Constituents
24050629-001	2024-05-02	A1 - Admin Office DWJC (1)	Compounds with Sheets, Yellow/White	None Detected	Cellulose Other Perlite
24050629-002	2024-05-02	A2 - Entrance Foyer Hallway DWJC (2)	Compound, White	None Detected	Other Perlite
24050629-003	2024-05-02	A3 - Foyer Hallway North Ceiling Tile (Small)	Ceiling Tile, Beige	None Detected	Cellulose Glass Fibers/ Mineral Wool Other Perlite
24050629-004	2024-05-02	A4 - Foyer Hallway North Ceiling Tile (Small)	Ceiling Tile, Beige	None Detected	Cellulose Glass Fibers/ Mineral Wool Other Perlite
24050629-005	2024-05-02	A5 - Foyer Hallway North Ceiling Tile (Large)	Ceiling Tile, Beige	None Detected	Cellulose Glass Fibers/ Mineral Wool Other Perlite
24050629-006	2024-05-02	A6 - Foyer Hallway North Ceiling Tile (Large)	Ceiling Tile, Beige	None Detected	Cellulose Glass Fibers/ Mineral Wool Other Perlite
24050629-007	2024-05-02	A7 - Foyer Hallway Ceiling Duct Mastic (1)	Mastic, Grey	None Detected	Other
All Sample Consumed					
24050629-008	2024-05-02	A8 - Foyer Hallway Ceiling Duct Mastic (2)	Mastic, Grey	None Detected	Other
All Sample Consumed					
24050629-009	2024-05-02	A9 - Room 40 Lino 1	Vinyl Sheet, White	None Detected	Other
24050629-010	2024-05-02	A10 - Room 40 Lino 2	Vinyl Sheet with Mastic, White/Transparent	None Detected	Other
24050629-011	2024-05-02	A11 - Room 40 Ceiling Spray Insulation	Insulation, Grey	None Detected	Cellulose Glass Fibers/ Mineral Wool Other Perlite
24050629-012	2024-05-02	A12 - Room 40 Ceiling Spray Insulation	Insulation, Grey	None Detected	Cellulose Glass Fibers/ Mineral Wool Other Perlite

Sample No.	Date Sampled	Client Sample Description	Sample Type	Asbestos Type and Content		Non-Asbestos Constituents
24050629-013	2024-05-02	A13 - Room 40 South Block Wall Insulation	Vermiculite & Mica	None Detected		Other Vermiculite & Mica
24050629-014	2024-05-02	A14 - Copy Room VCT Light Blue	Tile with Mastic, Blue/Black	None Detected		Other
24050629-015	2024-05-02	A15 - Copy Room VCT Light Blue	Tile with Mastic, Blue/Black	None Detected		Other
24050629-016	2024-05-02	A16 - Copy Room Levelling Compound (1)	Levelling Compound with Mastic, Grey/Black	None Detected		Other
24050629-017	2024-05-02	A17 - Copy Room Levelling Compound	Levelling Compound with Mastic, Grey/Black	None Detected		Other
24050629-018	2024-05-02	A18 - Room 35 South Wall DWJC	Compound, White	None Detected		Other Perlite
24050629-019	2024-05-02	A19 - Room 35 South Wall DWJC	Compound, White	None Detected		Other Perlite
24050629-020	2024-05-02	A20 - Resource Room VCT Light Grey	Tile, Grey	None Detected		Other
24050629-021	2024-05-02	A21 - Resource Room VCT Light Grey	Tile, Grey	None Detected		Other
24050629-022	2024-05-02	A22 - North Staff Washroom Lino 1	Vinyl with Backing and Mix, Beige/Grey	None Detected		Cellulose Other
24050629-023	2024-05-02	A23 - North Staff Washroom Lino 2	Vinyl with Backing and Mix, Beige/Grey	None Detected		Cellulose Other
24050629-024	2024-05-02	A24 - North Hallway Speckled Beige VCT (1)	Tile, Grey/Beige	Chrysotile	*<1%	Other
24050629-025	2024-05-02	A25 - North Hallway Speckled Beige VCT	Tile, Grey/Beige	Chrysotile	*<1%	Other
24050629-026	2024-05-02	A26 - North Hallway Light Beige VCT	Tile, Beige	None Detected		Other
24050629-027	2024-05-02	A27 - North Hallway Light Beige VCT	Tile, Beige	None Detected		Other
24050629-028	2024-05-02	A28 - Boiler Room Cold Air Insulation (1)	Woven Sheet, Beige	None Detected		Cellulose Other
24050629-029	2024-05-02	A29 - Boiler Room Cold Air Insulation (2)	Woven Sheet, Beige	None Detected		Cellulose Other
24050629-030	2024-05-02	A30 - Boiler Room Heat Return Elbow (1)	Fibrous Mix with Sheet and Insulation, Beige/Grey/Yellow	None Detected		Cellulose Glass Fibers/ Mineral Wool Other Perlite
24050629-031	2024-05-02	A31 - Boiler Room Heat Return Elbow (2)	Fibrous Mix with Sheet and Insulation, Beige/Grey/Yellow	None Detected		Cellulose Glass Fibers/ Mineral Wool Other Perlite
24050629-032	2024-05-02	A32 - Music Room Textured Ceiling Tile (1)	Insulation and Sheet, Yellow/White	None Detected		Glass Fibers/ Mineral Wool Other Perlite
24050629-033	2024-05-02	A33 - Music Room Textured Ceiling Tile (2)	Insulation and Sheet, Yellow/White	None Detected		Glass Fibers/ Mineral Wool Other Perlite
24050629-034	2024-05-02	A34 - Room 23 Ceiling Tile (Large)	Ceiling Tile, Beige	None Detected		Cellulose Glass Fibers/ Mineral Wool Other Perlite
24050629-035	2024-05-02	A35 - Room 23 Ceiling Tile (Large)	Ceiling Tile, Beige	None Detected		Cellulose Glass Fibers/ Mineral Wool Other Perlite

Sample No.	Date Sampled	Client Sample Description	Sample Type	Asbestos Type and Content			Non-Asbestos Constituents
24050629-036	2024-05-02	A36 - Room 23 Bulkhead DWJC (1)	Compound, White	None Detected			Other Perlite
24050629-037	2024-05-02	A37 - Room 23 Bulkhead DWJC (2)	Compound, White	None Detected			Other Perlite
24050629-038	2024-05-02	A38 - Room 31 Beige Lino 1	Vinyl with Backing and Mastic, White/Grey/Yellow	None Detected			Cellulose Other
24050629-039	2024-05-02	A39 - Room 31 Beige Lino 2	Vinyl with Backing and Mastic, White/Grey/Yellow	None Detected			Cellulose Other
24050629-040	2024-05-02	A40 - Room 31 North Block Wall Vermic	Vermiculite & Mica	Actinolite/Tremolite	<1%	Vermiculite & Mica	Other
24050629-041	2024-05-02	A41 - Room 26 Bulkhead DWJC (1)	Compound, White	None Detected			Other Perlite
24050629-042	2024-05-02	A42 - Room 26 Bulkhead DWJC (2)	Compound, White	None Detected			Other Perlite
24050629-043	2024-05-02	A43 - Room 28 Sink Undercoat	Mastic, White	None Detected			Other
24050629-044	2024-05-02	A44 - Room 28 Sink Undercoat	Mastic, White	None Detected			Other
24050629-045	2024-05-02	A45 - Gym Storage 1 Drywall Ceiling (1)	Compound, Beige	Chrysotile	1-5%		Other
24050629-046	2024-05-02	A46 - Gym Storage 1 Drywall Ceiling (2)	Compound, Beige	Chrysotile	1-5%		Other
24050629-047	2024-05-02	A47 - Storage Room - VCT - Light Grey (1)	Tile, Grey	None Detected			Other
24050629-048	2024-05-02	A48 - Storage Room - VCT - Light Grey (2)	Tile, Grey	None Detected			Other
24050629-049	2024-05-02	A49 - Storage Room - Window Putty (1)	Putty, Grey	None Detected			Other
24050629-050	2024-05-02	A50 - Storage Room - Window Putty (2)	Putty, Grey	None Detected			Other
24050629-051	2024-05-02	A51 - Room 18 Off White Lino (1)	Vinyl Sheet with Mastic, Beige/Brown/Yellow	None Detected			Other
24050629-052	2024-05-02	A52 - South Room 18 Off White Lino (2)	Vinyl Sheet with Mastic, Beige/Brown/Yellow	None Detected			Other
24050629-053	2024-05-02	A53 - South Resource Room - Green 9x9 Tile (1)	Tile with Mastic, Green/Black	Chrysotile	10-25%		Other
24050629-054	2024-05-02	A54 - South Resource Room - Green 9x9 Tile (2)	Tile with Mastic, Green/Black	Chrysotile	10-25%		Other
24050629-055	2024-05-02	A55 - South Resource Room - Grey 9x9 Tile (1)	Tile with Mastic, Grey/Black	Chrysotile	10-25%		Other
24050629-056	2024-05-02	A56 - South Resource Room - Grey 9x9 Tile (2)	Tile with Mastic, Grey/Black	Chrysotile	10-25%		Other
24050629-057	2024-05-02	A57 - South Staff Washroom White VCT (1)	Tile with Mastic, White/Brown	None Detected			Other
24050629-058	2024-05-02	A58 - South Staff Washroom White VCT (2)	Tile with Mastic, White/Brown	None Detected			Other
24050629-059	2024-05-02	A59 - Room 13 Light Green VCT (1)	Tile with Mastic, Green/Black	Chrysotile	25-50%		Other
24050629-060	2024-05-02	A60 - Room 13 Light Green VCT (2)	Tile with Mastic, Green/Black	Chrysotile	25-50%		Other
24050629-061	2024-05-02	A61 - Room 11 Square Duct Wrap (1)	Sheets, White/Beige	None Detected			Cellulose Other

Sample No.	Date Sampled	Client Sample Description	Sample Type	Asbestos Type and Content		Non-Asbestos Constituents
24050629-062	2024-05-02	A62 - Room 11 Square Duct Wrap (1)	Sheets with Insulation, White/Beige/Yellow	None Detected		Cellulose Glass Fibers/ Mineral Wool Other Perlite
24050629-063	2024-05-02	A63 - Sensory Room DWJC (1)	Compounds with Sheets and Drywall, White/Brown/Grey	None Detected		Cellulose Other Perlite
24050629-064	2024-05-02	A64 - Sensory Room DWJC (2)	Compound, White	None Detected		Other Perlite
24050629-065	2024-05-02	A65 - Room 7 East Wall Vermiculite	Vermiculite & Mica	Actinolite/Tremolite	<1%	Vermiculite & Mica Other
24050629-066	2024-05-02	A66 - SE Staff Room Lino Checkered (1)	Vinyl with Backing, Beige/Brown	None Detected		Cellulose Other
24050629-067	2024-05-02	A67 - SE Staff Room Lino Checkered (2)	Vinyl with Backing, Beige/Brown	None Detected		Cellulose Other
24050629-068	2024-05-02	A68 - Infirmary White Streaked VCT (1)	Tile, White	None Detected		Other
24050629-069	2024-05-02	A69 - Infirmary White Streaked VCT (2)	Tile with Mastic, White/Black	None Detected		Other
24050629-070	2024-05-02	A70 - East Exterior Window Caulking (1)	Caulking, Grey	Chrysotile	1-5%	Other
24050629-071	2024-05-02	A71 - East Exterior Window Caulking (2)	Caulking, Grey	Chrysotile	1-5%	Other
24050629-072	2024-05-02	A72 - SE Exit Window Caulking (1)	Caulking, Grey/Brown	None Detected		Other
24050629-073	2024-05-02	A73 - SE Exit Window Caulking (2)	Caulking, Grey/Black/Brown	Chrysotile	1-5%	Other
24050629-074	2024-05-02	A74 - SE Exterior Stucco (1)	Cementitious Mix, Grey	None Detected		Other
24050629-075	2024-05-02	A75 - SE Exterior Stucco (2)	Cementitious Mix, Grey	None Detected		Other

* = Trace amounts detected; Below replicable detection limit

Eurofins Enviro-Works Inc. is accredited by CALA to ISO/IEC 17025. For scope of accreditation visit www.enviro-works.com. Samples will be stored for 60 days after they are submitted. This analytical report reflects only the results of the materials tested. Eurofins Enviro-Works Inc. is not responsible for the procedures used during sample collection. Eurofins Enviro-Works Inc. is not responsible for any consultation, interpretation or course of action taken with respect to these results. Please be aware that TEM is recommended for any cementitious material, and/or vermiculite matrix that are determined after analysis to be non-detected, as trace amounts of asbestos may be below the resolution of a PLM. Eurofins Enviro-Works Inc. privacy policy includes the limitation of access or discussion of these results to include only the client listed in the report.



Approved By:

Ann-Marie Kalman, B.Sc.
Lab Manager

Certificate of Analysis

Client: MBC Group
12834 163 St
Edmonton, AB T5V 1K6

Date Submitted: 2024-05-06
Date Completed: 2024-05-08

Lab ID: 24050630
COC No.: 125173
Project: ENV-08628
Contact: Jeff, Jeanette
Analyst: cpotolicki

Method: ASTM E1645-16 (prep) and ASTM E3193-20 (analysis) - Lead Paint by FAAS

Sample ID	Date Sampled	Description	Lead (mg/kg)	Qualifier
24050630-001	2024-05-03	L1 - Room 8 Grey Door Paint	53.4	J4
24050630-002	2024-05-03	L2 - Room 11 Red Floor Paint	< 24.2	
24050630-003	2024-05-03	L3 - NW Entrance Grey Exit Door Paint	< 22.3	
24050630-004	2024-05-03	L4 - South Central Entrance Pink Door Paint	< 24.1	
24050630-005	2024-05-03	L5 - SW Entrance Pink Door Paint	< 22.3	

Qualifier	Qualifier Description
J4	Due to insufficient sample amount received, standard prep factors and/or reporting limits were altered to accommodate.

Eurofins Enviro-Works Inc. is a proficient member of the AIHA ELPAT quality control program. Samples will be stored for 60 days after they are submitted. Eurofins Enviro-Works Inc. is not responsible for the procedures used during sample collection. Eurofins Enviro-Works Inc. is not responsible for any consultation, interpretation or course of action taken with respect to these results. Eurofins Enviro-Works Inc. privacy policy includes the limitation of access or discussion of these results to include only the client listed in the report.



Approved By:

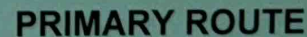


Ann-Marie Kalman,
B.Sc.
Lab Manager

Appendix III: Sample Location Map



Sr. High
Entrance



Muster Point: Bus Lane

Appendix IV: Works Cited

- Government of Alberta. (2013, September). *Asbestos Management Technical Bulletin, Issue No. 2B - Revised, September 2013*. Retrieved from <http://www.infrastructure.alberta.ca/>: <http://www.infrastructure.alberta.ca/Content/docType486/Production/TB-020B.pdf>
- Government of Alberta. (2023). *Occupational Health and Safety Act, Occupational Health and Safety Code*. Edmonton: Alberta King's printer.
- Center For Disease Control. (2009, 8 24). *NIOSH National Institute for Occupational Safety and Health*. Retrieved 8 25, 2009, from NIOSH National Institute for Occupational Safety and Health: <http://www.cdc.gov/niosh/>
- Government of Alberta. (2019). *Alberta Asbestos Abatement Manual*. Employment and Immigration. Edmonton: Alberta King's Printer.
- American Conference of Governmental Hygienists. (2019). *Industrial Ventilation a manual of Recommended Practices*. Cincinnati: ACGIH.
- Center For Disease Control. (2009, 8 24). *NIOSH National Institute for Occupational Safety and Health*. Retrieved 8 25, 2009, from NIOSH National Institute for Occupational Safety and Health: <http://www.cdc.gov/niosh/>
- U.S. Department of health, Education, and Welfare, Public Health Service, Center for Disease Control. (1977). *Occupational Exposure sampling Strategy Manual*. Cincinnati: U.S. Government Printing Office.
- American Conference of Governmental Industrial Hygienists (2021). *2022 Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs)*.
- ANSI/ IICRC Standard and Reference Guide for Professional Mold Remediation IICRC S520 2015 *Third Edition*. Institute of Inspection Cleaning and Restoration Certification.
- Assessment, Remediation and Post Remediation Verification of Mold in Buildings (2004). American Industrial Hygiene Association - AIHA.
- Best Practices - Mould at the Work Site (2009). Government of Alberta Employment & Immigration.
- Bio-aerosols Assessment and Control (1999). American Conference of Governmental Industrial Hygienists - ACGIH.
- Clean-up Procedures for Mold in Houses (2004). Canada Mortgage and Housing Corporation - CMHC.
- Do I have a Workplace Mold Problem (2001). Alberta Workplace Health and Safety Bulletin BH018.
- Fungal Air Testing, Investigation and Reporting Requirements for Extensively Mould-Contaminated Buildings; Alberta Health Services 2011
- Fungal Contamination: A Manual for Investigation, Remediation and Control (2005). Bailey; Building Environmental Consultants Inc.
- Fungal Contamination in Public Buildings: A guide to recognition and management (1995). Health Canada.

Plan Number: 023006 | Contract ID: 041231 | CFS ID: 71830

Fungal Contamination in Public Buildings: Health Effects and Investigation Methods (2004). Health Canada.

Guidelines on Assessment and Remediation of Fungi in Indoor Environments (2008). New York City Department of Health.

Indoor Air Quality in Office Buildings: A technical guide (1995). Health Canada.

Indoor Air Quality Tool Kit (2009). Alberta Employment, Immigration and Industry.

Mould Guidelines for the Canadian Construction Industry (2004). CCA82-2004. Canadian Construction Association.

Mould in Indoor Environments (2004) Alberta Research Council Inc.

Mould in the Workplace (2004). Canadian Centre for Occupational Health and Safety - CCOHS.

Mold Remediation in Schools and Commercial Buildings (2001). United States Environmental Protection Agency.

Recognition, Evaluation, and Control of Indoor Mould (2008). American Industrial Hygiene Association.

Standards of Practice for the Assessment of Indoor Environmental Quality (2003). Vol. 1: Mold sampling; Assessment of Mold Contamination. Indoor Environmental Standards Organization - IESO.

World Health Organization (WHO) Guidelines for Indoor Air Quality-Dampness and Mould (2009).

Contact us



Telephone

1 (800) 547-0608

Website

www.mbc-group.ca

Email

assignments@mbc-group.ca



Locations

Ottawa Head Office

Unit 100, 666 Kirkwood Avenue
Ottawa, Ontario K1Z 5X9

Montreal Office

Suite 720, 1980 Sherbrooke Street W
Montreal, Quebec H3H 1E8

Regina Office

Suite 101, 1621 Albert Street
Regina, Saskatchewan S4P 2S5

Calgary Office

Suite 208, 7260 - 12 Street SE
Calgary, Alberta T2H 2S5

Edmonton Office

12834 - 163 Street,
Edmonton, Alberta T5V 1K6

Edmonton Laboratory

4286 91A Street NW,
Edmonton, Alberta T6E 5V2

Burnaby Office and Laboratory

Unit 309, 8327 Eastlake Drive
Burnaby, British Columbia V5A 4W2

10 satellite offices across Canada