ASBESTOS REASSESSMENT



CPH

200 University Ave West, Waterloo, Ontario

June 22, 2023

UNIVERSITY OF WATERLOO | Safety Office

Summary

UW Safety Office conducted an asbestos building materials reassessment of CPH (Building 29) located at the University of Waterloo Campus. The reassessment was performed by Robert Mullins (Safety Office) and Nathan Cheng (Safety Office Coop Student) on **June 22-2023.**

The objective of the reassessment was to evaluate the condition and quantity of previously reported ACM, as detailed in the University of Waterloo Asbestos Management Database and develop corrective action plans as required for the purposes of long-term management. The results of this assessment are ***not*** intended for construction, renovation, demolition or project tendering purposes. This reassessment is ***only*** to be used for the purposes of long-term management and routine maintenance.

The reassessed areas consisted of all locations where asbestos building materials were previously identified, excluding finishes and roof area.

CPH assessment was based on the latest floor plans:

- 1st Floor- May 2023
- 2nd Floor- September 2021
- 3rd Floor- September 2021
- 4th Floor- September 2021

Methodology

Prior to reassessment, the most up to date floor plans were used to help identify any changes to the current asbestos management survey and updated accordingly.

Each room, corridor, service area, etc. where ACM was previously identified was inspected for the condition of ACM.

Limitations on Reassessment

The reassessment **excluded** the following:

- Owner or occupant articles (e.g., stored items, appliances, etc.);
- Underground materials or equipment (e.g., vessels, drums, underground storage tanks, pipes, etc.).
- Building envelope, structural components, inaccessible or concealed materials or other items where sampling may cause consequential damage to the property.
- Energized systems (e.g., internal boiler components, elevators, mechanical or electrical components);
- Controlled products (e.g., stored chemicals, operational or process-related substances); and
- Materials not typically associated with construction (e.g., settled dust, spills, residual contamination from prior spills, etc.).

Evaluation of ACM Condition

1. To evaluate the condition of **ACM sprayed or trowelled on fireproofing**, **sprayed or trowelled thermal insulation (non-mechanical)**, or **texture**, **decorative** or **acoustic finishes,** the following criteria was applied:

Good	Surface of material shows no significant signs of damage, deterioration or delamination. Good condition includes unencapsulated or unpainted fireproofing or texture finishes, where no or limited delamination or damage is observed, or encapsulated fireproofing or texture finishes where the encapsulant or paint has been applied after the damage or fallout occurred.
Poor	A sprayed material that shows signs of significant damage or is significantly delaminating or deteriorating. This may be limited to surface delamination, or some portion of the substrate may be exposed.

In locations where damage exists in isolated areas, both good and poor condition may be applicable. The extent of each condition will be recorded. Fair condition is not utilized in the evaluation of ACM sprayed or trowelled fireproofing, sprayed or trowelled thermal insulation (non-mechanical), or texture, decorative or acoustic finishes.

The evaluation of the above products above ceilings may be limited by the number of observations and by building components such as ducts or full height walls that obstruct the above ceiling observations.

2. To evaluate the condition **of mechanical insulation on vessels**, **boilers, breeching, ducts**, **pipes**, **fan units, equipment** etc. the following criteria was applied:

Good	Insulation is completely covered in jacketing and exhibits no evidence of damage or deterioration. No insulation is exposed. Includes conditions where the jacketing has minor damage (i.e. scuffs or stains), but the jacketing is not penetrated.
Fair	Minor penetrating damage to jacketed insulation (cuts, tears, nicks, deterioration or delamination) or undamaged insulation that has never been jacketed. Insulation is exposed but not showing surface disintegration. The extent of missing insulation ranges from minor to none. Damage can be repaired.

Poor	Original insulation jacket is missing, damaged, deteriorated or delaminated. Insulation is exposed and significant areas have been dislodged. Damage cannot be readily repaired. Includes components where insulation may have been removed incompletely.

The evaluation of mechanical insulation may be limited by the number of observations made and building components such as ducts or full height walls that obstruct observations. It is often not possible to observe each foot of mechanical insulation from all angles.

Potentially friable ACM are products that are basically non-friable while in place but have the potential to generate friable dust upon removal or if significantly disturbed without appropriate procedures. These products may become friable if damaged. Potentially friable materials include materials such as **acoustic ceiling tiles** and **plaster**. To evaluate the condition of potentially friable materials, the following criteria was applied:

Good	No significant damage or deterioration. Still serving its intended use as a building material or finish.
Fair	Showing signs of some cracking or breakage, but is not deteriorating (e.g. cracked plaster, broken but in place ceiling tile, missing tile or section of plaster etc.). The condition is such that it is still serving its intended use as a building material or finish but may require repair for mainly cosmetic purposes.
Poor	Significant deterioration or breaking apart of the material. Material has deteriorated to the point it is not serving its intended use as building material or finish. Material has deteriorated to a point it has become friable. Normally potentially friable ACM in Poor condition is not repairable and requires at least localized removal and replacement.

Non-Friable ACM cover a wide range of products with a wide variation in their tendency to release dust or asbestos fibres to the air. Many of these materials, (particularly where the matrix is an unweathered bitumen, asphalt or tar material) do not release fibres except in very unusual circumstances or during significant disturbance (e.g., use of abrasive power tools). Others with a cementitious matrix (asbestos- cement products) can more readily release dust due to abrasion, demolition, weathering, etc. The potential for asbestos release from non-friable ACM is always lower than from friable ACM.

3. To evaluate the condition of Non-Friable Materials, the following criteria are applied:

Good	No significant damage or deterioration. Still serving its intended use as a building material or finish.

Fair	Showing signs of some cracking or breakage but is not deteriorating (e.g. cracked vinyl floor tile, missing piece of tile or transite, etc.). The condition is such that it is still serving its intended use as a building material or finish but may require repair for mainly cosmetic purposes.
Poor	Significant deterioration or breaking apart of the material to the point at which it cannot be repaired, and it will require at least local removal. Material has deteriorated to the point it is not serving its intended use as building material or finish. Material may have deteriorated to a point where traffic or disturbance may cause it to become friable.

Evaluation of ACM Debris

The identification of the exact location or presence of debris on the top of ceiling tiles is limited by the number of observations made and the presence of building components such as ducts or full height walls that obstruct observations.

The presence of fallen or dislodged ACM is noted separately from the ACM source and is referred to as Debris. Debris may be friable if from a friable ACM source or a badly deteriorated non-friable ACM source. Debris may also be non-friable (such as fallen pieces of transite sheet or mastic fittings, or broken, dislodged floor tiles).

Asbestos Fair/Poor Condition Summary List (June 2023)

UNIVERSITY OF Waterloo

Building:	Figures:	Notes:
Carl A. Pollock Hall		HM - Homogenous Material - Homogeneous with previously sampled material
Date Built:		SL - Sample Location - Material Sampled
1971		VC - Visually Confirmed - Deemed ACM based on surveyor recognition
Building Size:		AMP - Asbestos Management Plan
120,500 SF		ACM - Asbestos-Containing Material

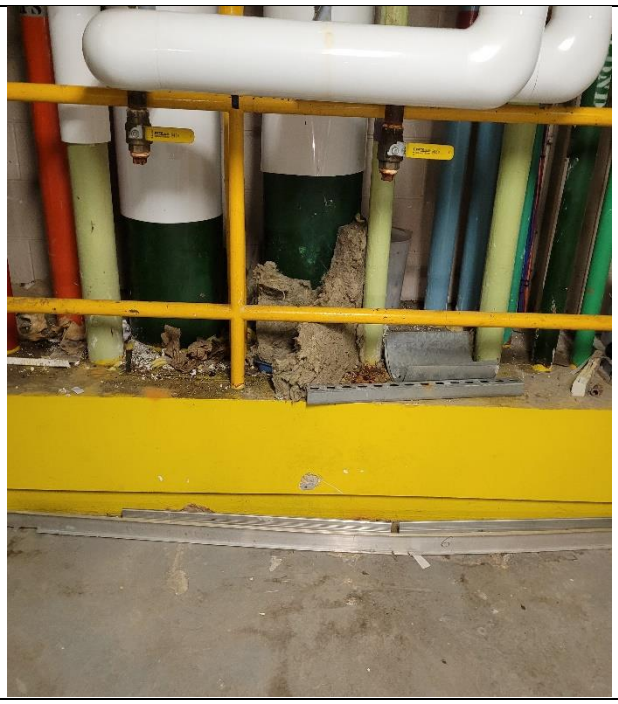
All quantities list an

Room Number	Room Description	Inspected Item	Inspected Material	Material Description	Material Detailed Location	Friability	Quantity	Condition	Sample / Identification Summary	Sample ID	Sample Report Date	% Asbestos & Fibre Typ	Asbestos Classification
3983	Mechanical Room	Mechanical	Pipe Fitting	Parged Cement	Ceiling	F	100	Poor	HM	CPH-S05	2/10/2016	60% Chrysotile	ACM
		Mechanical	Pipe Fitting	Parged Cement	Ceiling	F	1	Poor	HM	CPH-S05	2/10/2016	60% Chrysotile	ACM

Required Remediation

Abatement Item #2023-1

Location	**CPH 3983**
Inspection Date	**June 22-2023**
Material	**Debris**
Condition	
Notes	
Recommendation	**Clean up debris using Type 2 procedures**



Abatement Item #2023-2

Location	**CPH 1330**	No Pics
Inspection Date	**June 22-2023**	
Material	**Ceiling Tiles**	
Condition		
Notes	**ACM Ceiling Tiles in Electrical Room**	
Recommendation	**Remove and treat as ACM waste**	

Abatement Item #2023-3

Location	**CPH3983**
Inspection Date	**June 22-2023**
Material	**Piping**
Condition	**Poor**
Notes	**Rips in fabric**
Recommendation	**Repair- Type 2 operations**



Abatement Item #2023-4

Location	**CPH3983**
Inspection Date	**June 22-2023**
Material	**Piping**
Condition	**Poor**
Notes	**Rips in fabric**
Recommendation	**Repair- Type 2 operations**

