



Type-2 Ceiling Space Investigation for Asbestos-Containing Materials

Simard Hall Building, University of Ottawa Campus, Ottawa, Ontario

BCE Project: **22-1102**

Report Issued: February 3, 2023



Prepared for:

Patrick Labrèche
Environment Health & Safety Officer,
University of Ottawa

Prepared by:

Buller Crichton Environmental Inc.
1 Raymond St., Suite 102
Ottawa, ON K1R 1A2
613-729-5291

1 INTRODUCTION

Buller Crichton Environmental Inc. (BCE) was retained by the University of Ottawa (Client) to complete a Type-2 ceiling space investigation for the entire Simard Hall building to determine the presence or absence of asbestos-containing cementitious overspray adhered to the concrete deck. The survey was completed by BCE from January 9th-13th, 2023.

This report was prepared as requested by the Client to fulfill the following:

- Ontario Occupational Health & Safety Act – R.S.O. 1990, as amended, including:
 - Designated Substances – Ontario Regulation 490/09, as amended
 - Designated Substances – Asbestos on Construction Projects and in Buildings and Repair Operations – Ontario Regulation 278/05.

This report should be provided to contractors prior to conducting demolition or renovation work at the Site.

2 SURVEY LIMITATIONS

The following areas were not accessed during the site visit:

- Room 0031 – Labelled “Alt Café”

3 SCOPE OF WORK

BCE’s scope of work was limited to the following:

1. Review all ceiling spaces above acoustic tiles within the building via Type-2 entry procedures to determine the presence/absence of cementitious overspray adhered and/or sprayed to the concrete deck.
 - a. Access was granted by a mobile Type-2 containment.
2. Apply orange stickers to the ceiling tile grid in areas that were observed to have asbestos-containing cementitious overspray adhered to metal lathe or the concrete deck. Additionally, apply orange stickers to the ceiling grid where smooth plaster was observed in poor condition, or plaster debris was observed within the ceiling space.
3. Apply green stickers to the ceiling tile grid in areas with no cementitious overspray, minor amounts of overspray in good condition or poor condition plaster present on the concrete deck.
4. Complete precautionary PCM air samples within representative areas of the mobile Type-2 containment system.
 - a. The formal report associated with this sampling is attached within **Appendix C**
5. Provide a comprehensive AutoCAD drawing indicating whether cementitious overspray or plaster is present or absent in each room surveyed.

BCE also reviewed the following report prior to the site assessment:

- “Expanded Designated Substances Report - Update, Simard Hall, 60 University Private, Ottawa, Ontario” – prepared by Buller Crichton Environmental Inc. dated February 18th, 2022.

4 STANDARDS, REGULATIONS AND GUIDELINES

4.1 Designated Substances

Section 30 of the *Occupational Health & Safety Act (OH&S Act)* requires that a document summarizing the presence of these designated substances must be available to contractors and subcontractors requesting tenders, prior to beginning a construction project (including building renovation or demolition). This report serves that purpose. However, scaled drawings and contract specifications are still required should this job be tendered to multiple contractors.

4.1.1 Asbestos

Ontario Regulation 278/05 – Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations and made under the *OH&S Act*, outlines specific procedures for identifying asbestos in buildings and on construction sites. In addition, it outlines requirements for their removal and / or re-assessment and management depending on whether any identified materials are to remain in the building. Asbestos-containing materials (ACM) in good condition can remain in the building if it is managed as prescribed in this regulation, including but not limited to implementation of an Asbestos Management Plan (AMP), annual condition assessment, notification to tenants and training for specified workers. However, any ACM must be removed prior to disturbance because of renovations and / or demolition of the Site.

R.R.O. 1990, *Regulation 347 General – Waste Management* as amended (*O. Reg. 347/90*), made under the *Ontario Environmental Protection Act*, R.S.O. 1990, Chapter E.19, as amended (EPA) sets out requirements for general waste management including ACM. This regulation requires the disposal of asbestos waste in double sealed containers (e.g., a six-mil polyethylene bag or hard plastic barrel), properly labelled and free of cuts, tears, or punctures. The waste must be disposed of in a licensed waste facility which has been properly notified of the presence of asbestos waste.

5 METHODOLOGY

Site sampling and assessment was completed from January 9th-16th, 2023 by Jessica Joubarne of BCE with the support of Elite Environmental Group Inc. personnel. A mobile Type 2 containment was utilized to access ceiling spaces throughout the building. Precautionary PCM air monitoring was completed adjacent to the mobile containment (one sample per shift), with results presented in **Appendix C**.

In each area, a visual inspection was completed to determine the presence or absence, and condition of cementitious overspray. In areas with cementitious overspray or smooth plaster in poor condition was present, an orange sticker was attached to the ceiling tile grid. Green stickers were attached to

the ceiling tile grid in areas where smooth plaster was observed in good condition, or no plaster (bare concrete/corrugated metal) was present. BCE also applied green stickers in situations where minor amounts of cementitious overspray was present in good condition.

6 RESULTS AND DISCUSSION

Based on the review of previous reports and visual assessment, the following is a summary of the results. A comprehensive drawing is attached as **Appendix B**.

6.1 Non-Plaster/Cementitious Overspray Ceilings

6.1.1. Bare Concrete/Corrugated Metal:

The following photo is an example of bare concrete observed during the ceiling investigation. Corrugated metal ceilings were also observed in various locations. These areas were marked with a **green** sticker.



Photo 1. Example of bare concrete ceiling.

6.2 Cementitious Overspray Ceilings

6.2.1. Cementitious Overspray on Metal Lathe:

The following photos are examples of cementitious overspray on metal lathe observed during the ceiling investigation. These areas were marked with an **orange** sticker.



Photo 2. Example of cementitious overspray observed in good condition.



Photo 3. Example of cementitious overspray observed in poor condition.

6.2.2. Cementitious Overspray on Concrete Deck:

The following photos are examples of cementitious overspray on the concrete deck observed during the ceiling investigation. These areas were marked with an **orange** sticker.



Photo 4. Example of cementitious overspray on concrete deck.

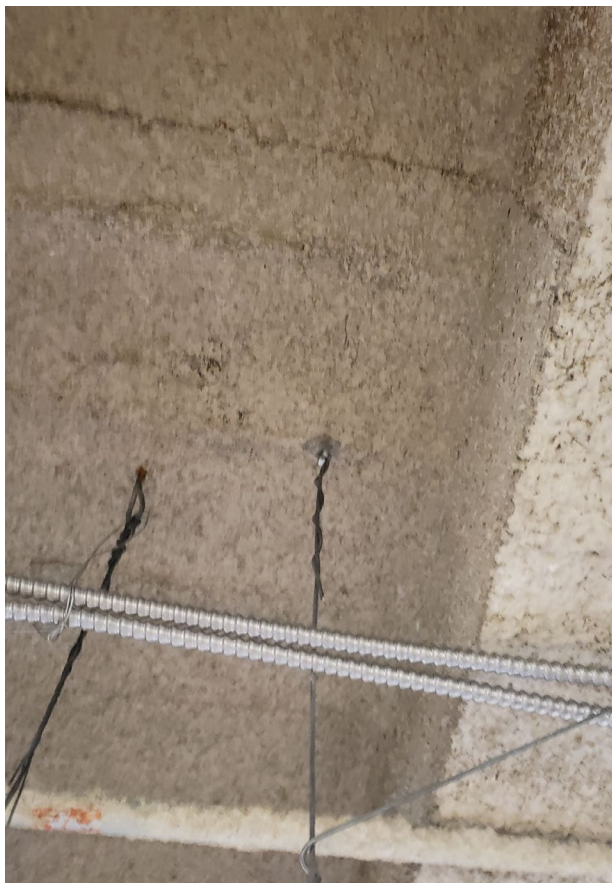


Photo 5. Example of cementitious overspray on concrete deck.

6.2.3. Minimal Cementitious Overspray on Concrete Deck:

The following photos are examples of minimal cementitious overspray on the concrete deck observed during the ceiling investigation. These areas were marked with a **green** sticker.



Photo 6. View of minimal overspray on concrete deck.



Photo 7. View of minimal overspray on concrete deck.

6.2.4. Smooth Plaster:

The following photos are examples of smooth plaster observed during the ceiling investigation. These areas were marked with a **green** sticker if observed in good condition, and marked with an **orange** sticker if observed in poor condition.



Photo 8. Example of smooth plaster observed in good condition.



Photo 9. Example of smooth plaster in poor condition.

7 RECOMMENDATIONS

7.1 General Recommendations

Based on the findings, the *general recommendations* are:

- Entry into ceiling spaces throughout the building where cementitious overspray was identified or smooth plaster in poor condition was identified above dropped acoustic ceiling tile grid will require Type-2 asbestos abatement precautions due to the presumed presence of asbestos-containing debris.
 - Please refer to **Appendix B** for locations of asbestos-containing cementitious overspray & plaster;
- This report should be provided along with the full building DSR and project specific DSR to contractors prior to conducting demolition or renovation work at the Site. Further, contractors shall have an exposure control plan in place for each designated substance identified in this report.
- This report should be used to supplement the full building DSR as there are many other asbestos-containing materials within the building that could impact work being completed in ceiling spaces (asbestos-containing ceiling tiles, asbestos-containing drywall joint compound, etc.)

8 REPORT LIMITATIONS

This report was prepared for the exclusive use of the Client. This report is based on data and information collected during the Site visit by Buller Crichton Environmental Inc. as described in this report.

The conclusions and recommendations contained in this report are based upon professional opinions regarding the subject matter. These opinions are in accordance with currently accepted environmental assessment standards and practices applicable to these locations and are subject to the following inherent limitations:

- The data and findings presented in this report are valid as of the date of the investigation. The passage of time, manifestation of latent conditions or occurrence of future events may warrant further exploration at the properties, analysis of the data, and re-evaluation of the findings, observations, and conclusions expressed in this report.
- The findings, observations and conclusions expressed by BCE in this report are not, and should not be considered, an opinion concerning compliance of any past or present owner or operator of the building with any federal, provincial, or local laws or regulations.
- Additional Designated Substances not identified in this report may become evident during demolition activities. Should additional information become available, BCE requests that this information be brought to our attention so that we may re-assess the conclusions presented herein. All quantities contained in this report are approximate and based on visual observations made in accessible areas.
- Although effort was made to expose and sample potential designated substances, there is a possibility that additional concealed substances/materials may be present beneath existing flooring, behind wall cavities, roof systems, above ceilings, and any other inaccessible areas such as pipe chases at the Site.
- Should further designated substances be encountered during any renovation or demolition activities, those materials must be managed in accordance with applicable regulations.

9 CLOSURE

If you have any questions or require any further information, please feel free to contact the undersigned at 613-729-5291. Thank you for the opportunity to be of service. We look forward to working with you again.

Best Regards,

BULLER CRICHTON ENVIRONMENTAL INC.
1 Raymond St., Suite 102
Ottawa, ON K1R 1A2

Prepared by:



Jessica Joubarne, HBSc.
Jr. Environmental Health & Safety Technician

Reviewed by:



Derek Stashick, B.Ed, CMI, C-NRPP
Senior Project Manager/Consultant

Appendix A - Site Photographs




Photo #		Material Location / Description
10		<p>View of Type 2 (intermediate/Moderate Risk) mobile containment used during the ceiling space investigation.</p>
2		<p>Example of asbestos-containing cementitious overspray on metal lathe, with overspray observed on the concrete deck.</p>

Photo #		Material Location / Description
3		View of non asbestos-contain sprayed fireproofing within 035 corridor above 2' x 2' acoustic ceiling tiles.

Appendix B - Site Drawings



NOTES:

ASBESTOS-CONTAINING PLASTER AND CEMENTITIOUS PLASTER OVERSPRAY PRESENT THROUGHOUT

DUE TO DAMAGED / DELAMINATING PLASTER, ALL ENTRY INTO CEILING SPACES MUST BE COMPLETED UNDER TYPE-2 PRECAUTIONS, WITH THE EXCEPTION OF THE AREAS DENOTED WITH GREEN.

LEGEND

- SMOOTH ASBESTOS-CONTAINING PLASTER IN GOOD CONDITION
- CLEAN (BARE CONCRETE / METAL / OTHER NON-ACM MATERIALS)
- NO ACCESS (SOLID CEILING / KEYS NOT PROVIDED)

1 LEVEL 00 FLOOR PLAN, SIMARD HALL
NTS

Project:	TYPE 2 CEILING INVESTIGATIONS	Date:	FEBRUARY 1, 2023
Project Location:	SIMARD HALL, 60 UNIVERSITY PRIVATE, OTTAWA ON	Completed by:	JR
Client:	UNIVERSITY OF OTTAWA	Checked by:	DS
		Project Number:	22-1102
		Figure Number:	SMD-01



NOTES:

ASBESTOS-CONTAINING PLASTER AND CEMENTITIOUS PLASTER OVERSPRAY PRESENT THROUGHOUT

DUE TO DAMAGED / DELAMINATING PLASTER, ALL ENTRY INTO CEILING SPACES MUST BE COMPLETED UNDER TYPE-2 PRECAUTIONS, WITH THE EXCEPTION OF THE AREAS DENOTED WITH GREEN.

LEGEND

- SMOOTH ASBESTOS-CONTAINING PLASTER IN GOOD CONDITION
- SMOOTH ASBESTOS-CONTAINING PLASTER IN POOR CONDITION
- SPRAYED ASBESTOS-CONTAINING PLASTER ON METAL LATH
- ASBESTOS-CONTAINING PLASTER ON DECK
- MINIMAL ASBESTOS-CONTAINING PLASTER OVERSPRAY ON DECK
- NO ACCESS (SOLID CEILING / KEYS NOT PROVIDED)
- CLEAN (BARE CONCRETE / METAL / OTHER NON-ACM MATERIALS)

1 LEVEL 0 FLOOR PLAN, SIMARD HALL
NTS

Project:	TYPE 2 CEILING INVESTIGATIONS	Date:	FEBRUARY 1, 2023
Project Location:	SIMARD HALL, 60 UNIVERSITY PRIVATE, OTTAWA ON	Completed by:	JR
Client:	UNIVERSITY OF OTTAWA	Checked by:	DS
		Project Number:	22-1102
		Figure Number:	SMD-02



NOTES:

ASBESTOS-CONTAINING PLASTER AND CEMENTITIOUS PLASTER OVERSPRAY PRESENT THROUGHOUT

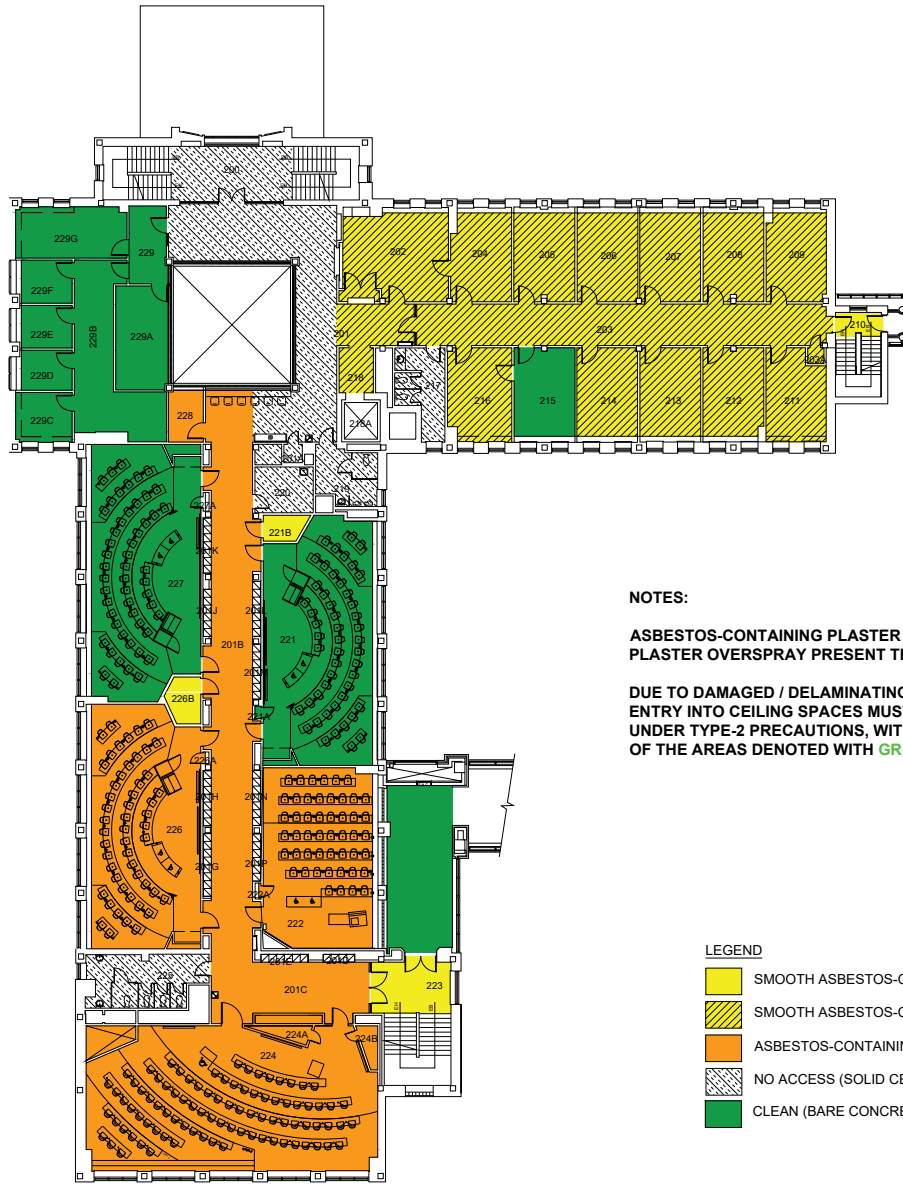
DUE TO DAMAGED / DELAMINATING PLASTER, ALL ENTRY INTO CEILING SPACES MUST BE COMPLETED UNDER TYPE-2 PRECAUTIONS, WITH THE EXCEPTION OF THE AREAS DENOTED WITH GREEN.

LEGEND

- SMOOTH ASBESTOS-CONTAINING PLASTER IN GOOD CONDITION
- SMOOTH ASBESTOS-CONTAINING PLASTER IN POOR CONDITION
- SPRAYED ASBESTOS-CONTAINING PLASTER ON METAL LATHE
- ASBESTOS-CONTAINING PLASTER ON DECK
- NO ACCESS (SOLID CEILING / KEYS NOT PROVIDED)
- CLEAN (BARE CONCRETE / METAL / OTHER NON-ACM MATERIALS)

1 LEVEL 1 FLOOR PLAN, SIMARD HALL
NTS

Project:	TYPE 2 CEILING INVESTIGATIONS	Date:	FEBRUARY 1, 2023
Project Location:	SIMARD HALL, 60 UNIVERSITY PRIVATE, OTTAWA ON	Completed by:	JR
Client:	UNIVERSITY OF OTTAWA	Checked by:	DS
		Project Number:	22-1102
		Figure Number:	SMD-03



NOTES:

ASBESTOS-CONTAINING PLASTER AND CEMENTITIOUS PLASTER OVERSPRAY PRESENT THROUGHOUT

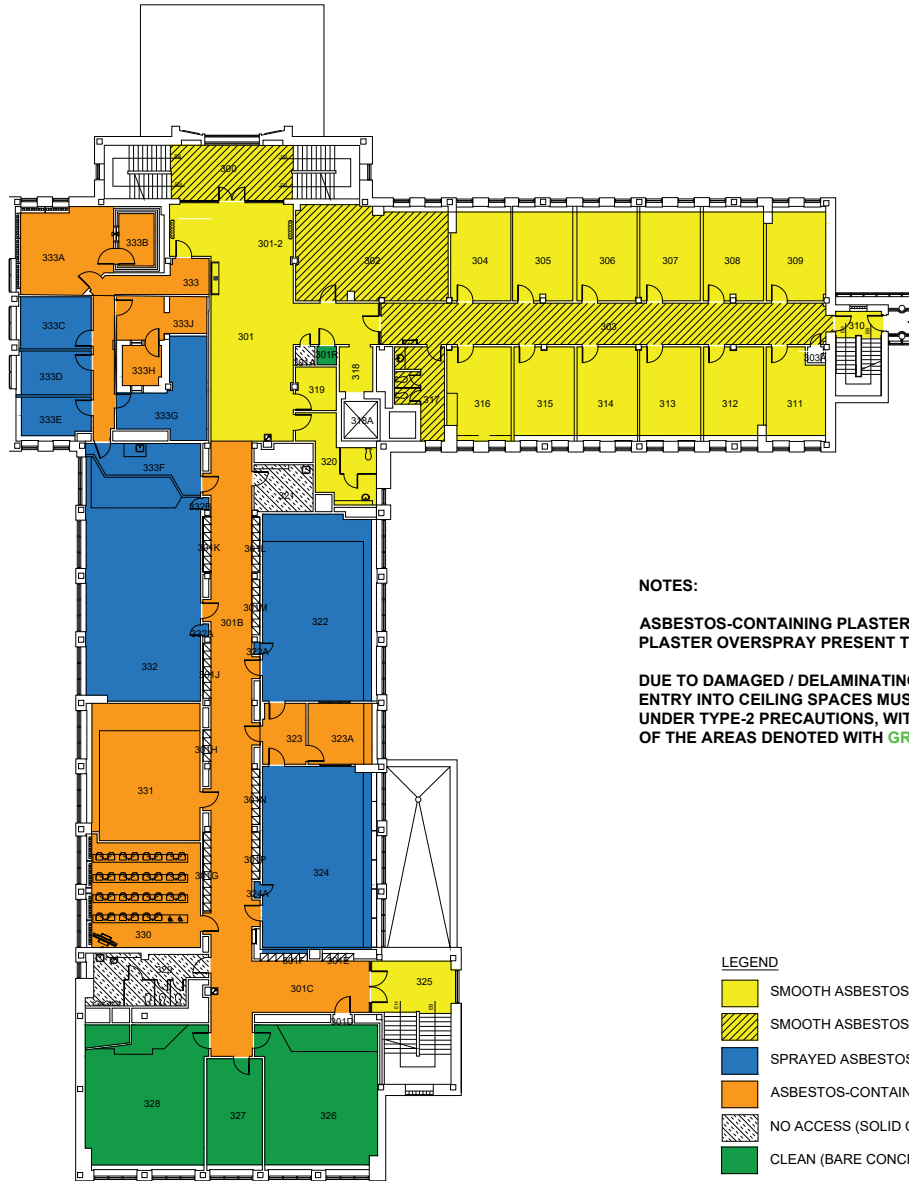
DUE TO DAMAGED / DELAMINATING PLASTER, ALL ENTRY INTO CEILING SPACES MUST BE COMPLETED UNDER TYPE-2 PRECAUTIONS, WITH THE EXCEPTION OF THE AREAS DENOTED WITH GREEN.

LEGEND

- SMOOTH ASBESTOS-CONTAINING PLASTER IN GOOD CONDITION
- SMOOTH ASBESTOS-CONTAINING PLASTER IN POOR CONDITION
- ASBESTOS-CONTAINING PLASTER ON DECK
- NO ACCESS (SOLID CEILING / KEYS NOT PROVIDED)
- CLEAN (BARE CONCRETE / METAL / OTHER NON-ACM MATERIALS)

1 LEVEL 2 FLOOR PLAN, SIMARD HALL
NTS

Project:	TYPE 2 CEILING INVESTIGATIONS	Date:	FEBRUARY 1, 2023
		Completed by:	JR
Project Location:	SIMARD HALL, 60 UNIVERSITY PRIVATE, OTTAWA ON	Checked by:	DS
		Project Number:	22-1102
Client:	UNIVERSITY OF OTTAWA	Figure Number:	SMD-04

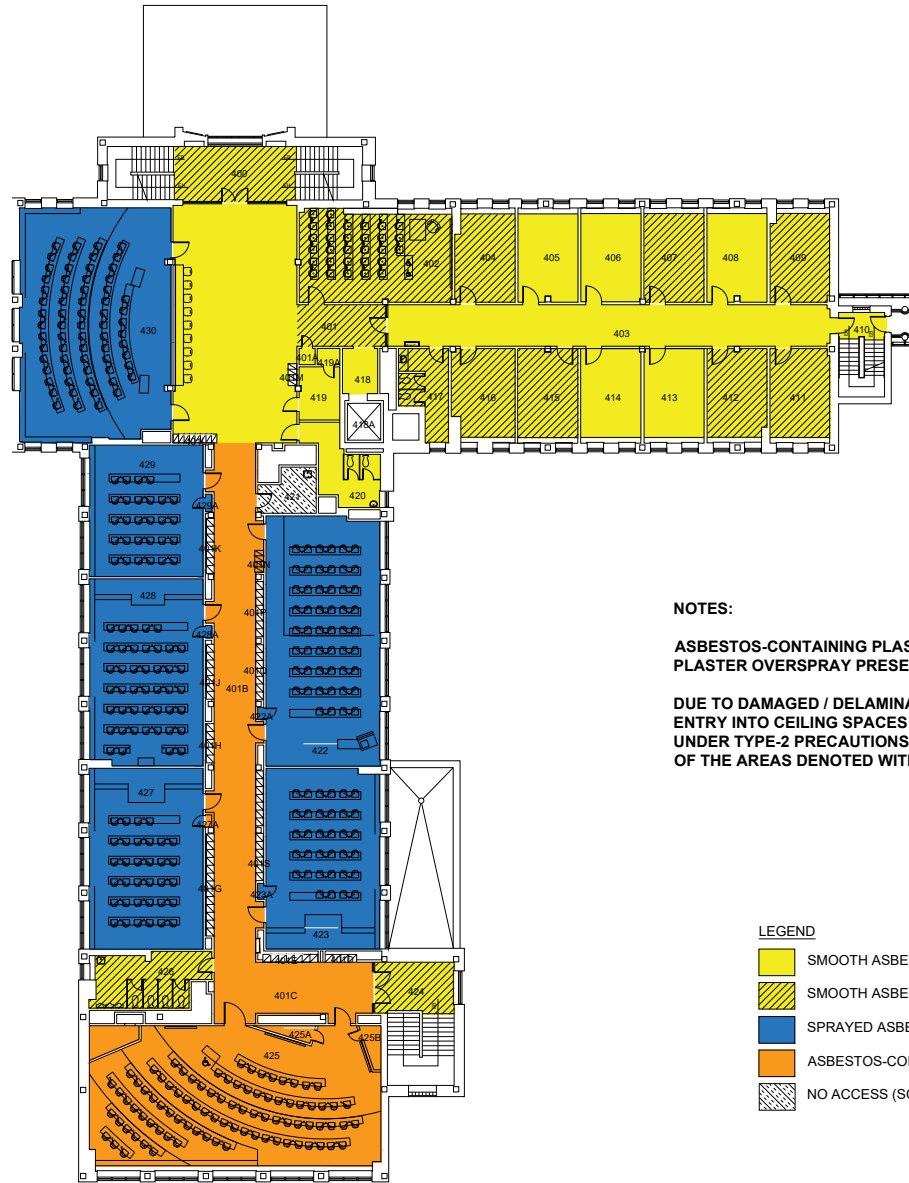


NOTES:
ASBESTOS-CONTAINING PLASTER AND CEMENTITIOUS PLASTER OVERSPRAY PRESENT THROUGHOUT
DUE TO DAMAGED / DELAMINATING PLASTER, ALL ENTRY INTO CEILING SPACES MUST BE COMPLETED UNDER TYPE-2 PRECAUTIONS, WITH THE EXCEPTION OF THE AREAS DENOTED WITH GREEN.

- LEGEND**
- SMOOTH ASBESTOS-CONTAINING PLASTER IN GOOD CONDITION
 - SMOOTH ASBESTOS-CONTAINING PLASTER IN POOR CONDITION
 - SPRAYED ASBESTOS-CONTAINING PLASTER ON METAL LATHE
 - ASBESTOS-CONTAINING PLASTER ON DECK
 - NO ACCESS (SOLID CEILING / KEYS NOT PROVIDED)
 - CLEAN (BARE CONCRETE / METAL / OTHER NON-ACM MATERIALS)

1 LEVEL 3 FLOOR PLAN, SIMARD HALL
 NTS

Project:	TYPE 2 CEILING INVESTIGATIONS	Date:	FEBRUARY 1, 2023
Project Location:	SIMARD HALL, 60 UNIVERSITY PRIVATE, OTTAWA ON	Completed by:	JR
Client:	UNIVERSITY OF OTTAWA	Checked by:	DS
		Project Number:	22-1102
		Figure Number:	SMD-05



NOTES:

ASBESTOS-CONTAINING PLASTER AND CEMENTITIOUS PLASTER OVERSPRAY PRESENT THROUGHOUT

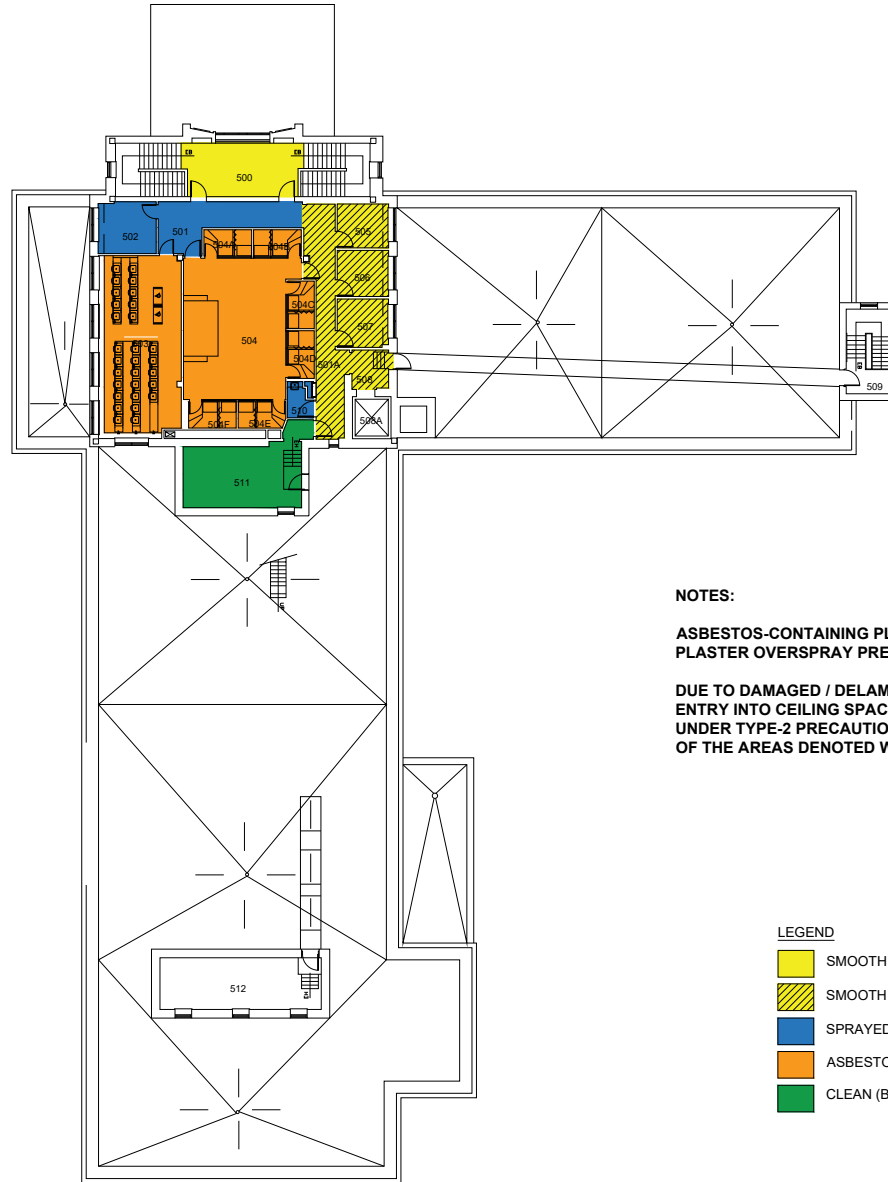
DUE TO DAMAGED / DELAMINATING PLASTER, ALL ENTRY INTO CEILING SPACES MUST BE COMPLETED UNDER TYPE-2 PRECAUTIONS, WITH THE EXCEPTION OF THE AREAS DENOTED WITH GREEN.

LEGEND

- SMOOTH ASBESTOS-CONTAINING PLASTER IN GOOD CONDITION
- SMOOTH ASBESTOS-CONTAINING PLASTER IN POOR CONDITION
- SPRAYED ASBESTOS-CONTAINING PLASTER ON METAL LATHE
- ASBESTOS-CONTAINING PLASTER ON DECK
- NO ACCESS (SOLID CEILING / KEYS NOT PROVIDED)

1 LEVEL 4 FLOOR PLAN, SIMARD HALL
NTS

Project:	TYPE 2 CEILING INVESTIGATIONS	Date:	FEBRUARY 1, 2023
		Completed by:	JR
Project Location:	SIMARD HALL, 60 UNIVERSITY PRIVATE, OTTAWA ON	Checked by:	DS
		Project Number:	22-1102
Client:	UNIVERSITY OF OTTAWA	Figure Number:	SMD-06



NOTES:

ASBESTOS-CONTAINING PLASTER AND CEMENTITIOUS PLASTER OVERSPRAY PRESENT THROUGHOUT

DUE TO DAMAGED / DELAMINATING PLASTER, ALL ENTRY INTO CEILING SPACES MUST BE COMPLETED UNDER TYPE-2 PRECAUTIONS, WITH THE EXCEPTION OF THE AREAS DENOTED WITH GREEN.

LEGEND

- SMOOTH ASBESTOS-CONTAINING PLASTER IN GOOD CONDITION
- SMOOTH ASBESTOS-CONTAINING PLASTER IN POOR CONDITION
- SPRAYED ASBESTOS-CONTAINING PLASTER ON METAL LATHE
- ASBESTOS-CONTAINING PLASTER ON DECK
- CLEAN (BARE CONCRETE / METAL / OTHER NON-ACM MATERIALS)

1 LEVEL 5 FLOOR PLAN, SIMARD HALL
NTS

Project:	TYPE 2 CEILING INVESTIGATIONS	Date:	FEBRUARY 1, 2023
Project Location:	SIMARD HALL, 60 UNIVERSITY PRIVATE, OTTAWA ON	Completed by:	JR
Client:	UNIVERSITY OF OTTAWA	Checked by:	DS
		Project Number:	22-1102
		Figure Number:	SMD-07

Appendix C - PCM Air Sampling Report

Precautionary Air Monitoring Report

DISTRIBUTION OF REPORT

Patrick Labrèche	plabrech@uottawa.ca	uOttawa
Derek Stashick	derek@bullercrichton.ca	Buller Crichton Environmental Inc.

PROJECT INFORMATION

Inspection Date: January 9-13, 2023 Report Date: January 16, 2023	BCE Representative(s): Jessica Joubarne	BCE Project: 22-1102 Report: #1
Site Address: Simard Hall – uOttawa 60 University Private, Ottawa, Ontario Site Specific Information: Throughout Building	Project Detail: Precautionary PCM Air Sampling During Type-2 Ceiling Space Investigation for Presence of Plaster/Sprayed Fireproofing	
	Client: uOttawa	Contractor: Elite Environmental Group Inc.

INTRODUCTION AND BACKGROUND

Buller Crichton Environmental Inc. (BCE) was retained by uOttawa (Client) to complete precautionary PCM air sampling during the Type 2 (Intermediate/Moderate Risk) work procedures occurring within Simard Hall located at 60 University Private, Ottawa, Ontario (Site).

The mobile Type 2 (Intermediate/Moderate Risk) containment was provided and constructed by Elite Environmental Group Inc. personnel to allow for the inspection of the ceiling space for presence of asbestos-containing plaster/sprayed fireproofing.

SCOPE OF WORK

BCE's scope of work was limited to the following:

1. Reviewing all ceiling spaces above acoustic tiles within the building via Type-2 entry procedures to determine the presence/absence of plaster or sprayed fireproofing above the dropped ceiling.
 - a. Access will be granted by a mobile Type-2 containment.
2. Applying green stickers to the ceiling tile grid in areas with good condition plaster or minor amounts of overspray present on the concrete deck.
3. Complete precautionary PCM air samples within representative areas of Type-2 enclosures.

This report will address item #3.

STANDARDS, GUIDELINES AND REGULATIONS

- Ontario Regulation 278/05 made under the Occupational Health and Safety Act (O. Reg. 278/05):
 - O. Reg. 278/05 applies to every building in which asbestos is present and to the owner of the building.
 - O. Reg. 278/05 also applies to every project and its owner when the owner or his agent hires a contractor or subcontractor to perform work or supply services.
 - The Regulation requires that all work that may expose a worker to asbestos be classified as a Type 1, Type 2, or Type 3 operation. The procedures for carrying out Type 1, Type 2, and Type 3 operations are outlined in sections 14, 15, 16, 17, and 18 of the Regulation.

AIR SAMPLING METHODOLOGY

Air samples were collected using 25-mm three-piece filter cassettes containing a 0.8µm cellulose ester membrane filter and equipped with a 50-mm electrically conductive extension cowl. The filter cassettes were attached to a high-volume air sampling pump calibrated with a primary calibration device and filter cassette in line to a known flow rate. At the completion of air testing the samples were analyzed in accordance with U.S. National Institute of Occupational Safety and Health (NIOSH) Manual of Analytical Methods, Method 7400, Issue 3: Asbestos and other Fibres by PCM (June 14, 2019), using the asbestos fibre counting rules. As required by NIOSH Method 7400, field blanks were also analyzed to ensure that no contamination of the filters occurred during sampling or analytical procedures.

The Limit of Detection (LOD) depends on sample volume and quantity of interfering dust. Fibres less than approximately 0.25 µm in diameter will not be detected by this method. This analytical method gives an index of airborne fibres as it cannot differentiate between asbestos and other fibres. Only fibres with a length greater than 5 µm and a length to width ratio equal or greater than 3:1 were counted. Fibres with a diameter of 0.25 µm or smaller cannot be detected using this method. Other airborne particles that fall within the counting range criteria will act as positive interferences. Result of analysis has been field blank corrected and is reported as the concentration of fibres per cubic centimeter of air (f/cc).

AIR SAMPLING RESULTS

Table 1 provides a summary of PCM air sampling findings.

Table 1 – PCM Air Sampling

PCM Air Sampling Results – January 9-13, 2023								
Sample ID	Sample Type	Location/Description	Flow Rate (L/min)	Air Volume (L)	Fibres	Fields	Fibres/mm ²	Result (fibre/cc)
AS-1102-01	Ambient	Jan 9 th – Level 0	15.82	870	<5.5	100	<7	<0.05
AS-1102-02	Ambient	Jan 10 th – Level 1	15.55	1711	<5.5	100	<7	<0.05
AS-1102-03	Ambient	Jan 11 th – Level 4	15.55	1244	<5.5	100	<7	<0.05
AS-1102-04	Ambient	Jan 12 th – Level 5	15.55	855	<5.5	100	<7	<0.05
AS-1102-05	Ambient	Jan 13 th – Level 1	15.55	1400	<5.5	100	<7	<0.05
AS-824-05	Quality Control	Field Blank*	NA	NA	0	100	<7	NA
AS-824-06	Quality Control	Field Blank*	NA	NA	0	100	<7	NA

Analyst | Counter ID: Jessica Joubarne | 14 | NIOSH 7400, BCE 2021 Analyzed on: January 9-13, 2023
 Samples were analyzed at the BCE Laboratory, located at 102-1 Raymond Street, Ottawa, ON K1R 1A2
 BCE is in good standing with the EMSL Interlaboratory PCM Round Robin program.

1. Calibration of air sampling equipment checked against a primary standard.
2. *Field blanks per NIOSH requirement
3. Sample media to be discarded in 30 days unless otherwise requested by the client.
4. Results only relate to the samples tested.

PCM air monitoring results indicate that fibre concentrations were below the Occupational Exposure Limit - Time Weighted Average (OEL-TWA) of 0.1 fibres per cubic centimetre (f/cc) as prescribed by the Canadian Occupational Health and Safety Regulations (SOR/86-304) (0.1 f/cc).

Based on the analytical results obtained, no concerns were identified with respect to airborne fibre concentrations.

REPORT LIMITATIONS

In performing the assessment, BCE has relied in good faith on information provided by other individuals noted in this report.

Interpretation of the sample results are based on current industry standards. This includes sample comparison against applicable guidelines and threshold values as well as comparison against standard samples.

Work performed by BCE was conducted in accordance with generally accepted scientific practices current in this geographical area at the time the work was performed. No warranty is either expressed or implied, or intended by the agreement executed with the Client, or by furnishing oral or written reports or findings. The Client acknowledges that subsurface/concealed conditions may vary from those encountered inspected. BCE could only comment on the conditions observed on the dates and times the assessment was performed. The work was limited to those areas of concern identified by the Client. Other areas of concern may exist but were not investigated within the scope of this assignment.

BCE makes no other representations whatsoever, including those concerning the legal significance of its findings or as to other legal matters mentioned in this report, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation and these interpretations may change over time. BCE accepts no responsibility for consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

Information provided by BCE is intended for Client use only. BCE will not provide results or information to any party other than the Client, unless the Client, in writing, requests information to be provided to a third party.

Any use which a third party makes of this report is the responsibility of such third parties. BCE accepts no responsibility for damages, if any, suffered by any third party because of decisions made or actions based on this report. BCE states that to the best of our knowledge, the information presented is accurate.

CLOSURE

If you have any questions or require any further information, please feel free to contact the undersigned at 613-729-5291. Thank you for the opportunity to be of service. We look forward to working with you again.

Best Regards,

BULLER CRICHTON ENVIRONMENTAL INC.

1 Raymond St., Suite 102

Ottawa, ON K1R 1A2

Prepared by:



Jessica Joubarne, HBSc.
Jr. Environmental Health & Safety Technician

Reviewed by:



Derek Stashick, B.Ed, CMI, C-NRPP
Senior Project Manager/Consultant