HAZARDOUS MATERIALS SURVEY AND 2022 REASSESSMENT VANIER HALL, OTTAWA, ON

Project No.: Z1920014HZ / CCC-230252-00

Prepared for:

University of Ottawa

Prepared by:

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Date:

January 19, 2023

McINTOSH PERRY

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REASSESSMENT SURVEY 2022

McIntosh Perry Limited (MPL) was retained by the University of Ottawa, to complete to a hazardous materials survey of Marchand Residence located at 136 Jean-Jacques-Lussier Private. The survey was conducted on October 10th to 15th, 2019. The reassessment was completed on July 14th, 2022.

The purpose of the reassessment was to evaluate the condition and quantity of previously reported asbestos-containing materials (ACM) and develop corrective action plans as required for the purposes of long-term management.

The assessment and reassessment determined the following findings and recommendations.

Summary of the Reassessment Findings:

- ACM Plaster Wall and Ceiling finishes were observed to be in Good, Fair, and Poor Condition in select areas throughout the subject building.
- ACM Window Caulking was observed to be in Good Condition throughout the subject building. subject building.
- ACM Tar was observed to be in Good Condition in Room 1021 of the subject building.
- Water damaged materials were observed in select locations during the site survey.
- No mould affected materials were observed during the site survey.

Summary of Recommendations:

- Perform a reassessment of asbestos materials on an annual basis.
- Perform a pre-construction assessment and remove all asbestos-containing materials (ACM) prior to alterations or maintenance work if ACM may be disturbed by the work.
- Follow appropriate safe work procedures when handling or disturbing asbestos.
- Sample any presumed ACM prior to alteration or maintained work if presumed ACM may be disturbed by the work.

EXECUTIVE SUMMARY

McIntosh Perry Limited (MPL) was retained by the University of Ottawa, to complete a hazardous materials survey for Vanier Hall located at 136 Jean-Jacques-Lussier Private. The survey was conducted from October 10th to 15th, 2019. The Reassessment Survey was completed on July 14th, 2022.

The purpose of the survey was to determine the presence of building materials containing Designated Substances and other hazardous materials, as defined under the Ontario Occupational Health and Safety Act. Designated Substances are eleven chemical agents prescribed under Ontario Regulation 490/09. In addition, a visual assessment was conducted for the presence of polychlorinated biphenyls (PCBs), radioactive materials, ozone depleting substances (ODSs), other halocarbons and mould.

Based on the assessment conducted by MPL, the following ACMs were identified or suspected to be present in the building:

Table A: Summary of Asbestos-Containing Materials Identified

Material Description	Friable?	Location	Type of Asbestos
Plaster	Yes	Throughout Building	Chrysotile
Window Caulking	No	Specific Areas Only	Chrysotile
Tar	No	Specific Areas Only	Chrysotile
Transite Rainwater Leaders	No	Specific Areas Only	Suspected
Fire doors	-	Throughout Building	Suspected
Roofing Materials	-	Roof	Suspected

Note: Please refer to the complete report for specific details and recommendations.

All repairs or removal of asbestos-containing materials must be conducted according to Ontario Regulation 278/05, Regulation respecting Asbestos on Construction Projects and in Buildings and Repair Operations - made under the Occupational Health and Safety Act. Asbestos containing waste must also be handled and disposed of according to Ontario Regulation 347/90 as amended – made under the Environmental Protection Act. Any suspect building materials encountered that were not assessed as part of this survey, should be assumed to contain asbestos until proven otherwise by analytical testing;

Sub-trades working with or in close proximity to asbestos-containing material should be informed of its presence;

Given that asbestos containing materials (ACMs) have been identified and will likely remain in place, an Asbestos Management Plan (AMP) is therefore required and an inventory of ACMs must be kept on site. All ACMs must be routinely inspected to ensure no damage has occurred, and the inventory must be updated once in each 12-month period and as may be required based on expected changing site conditions, abatement and/or renovation activities.

Based on the assessment conducted by MPL, the following Designated Substances and Hazardous Materials were identified or suspected to be present in the building:

Table B: Summary of Designated Substances & Hazardous Materials Identified

Material Description	Location
Lead Paint	Throughout Building
Mercury Vapour	Throughout Building
Silica	Throughout Building
Above Ground Storage Tanks (ASTs)	Specific Areas Only
Ozone Depleted Substances	Specific Areas Only
Water Damage/Staining	Specific Areas Only

Note: Please refer to the complete report for specific details and recommendations.

Designated Substances area regulated under Ontario Regulation 490/09 — Designated Substances, made under the Ontario Health and Safety Act, which applies to controlling designated substances in the workplace.

In addition to Ontario Regulation 490/09, the following guidelines must also be adhered to when conducting work activities that that involve disturbance of the above-mentioned materials:

- Guideline: Lead on Construction Projects, issued April 2011 by the Occupational Health and Safety branch of the Ministry of Labour
- Guideline: Silica on Construction Projects issued April 2011 by the Occupational Health and Safety branch of the Ministry of Labour.
- Environmental Abatement Council of Canada (EACC) Mould Abatement Guidelines.

Prior to any renovations or demolition activities within building, designated substances and hazardous materials must be decommissioned by a licensed contractor such that they are contained and not released to the environment during decommissioning as per O. Reg. 347/09- made under the Environmental Protection Act.

Any suspect building materials encountered that were not assessed as part of this survey, should be assumed to contain designated substances or hazardous materials until proven otherwise by analytical testing.

This report should be made available to contractors tendering on any renovation or demolition work. In turn, all contractors requesting tenders from subcontractors shall furnish this report to subcontractors.

<u>This executive summary is not to be used alone. This report should be reviewed in its entirety.</u>

McINTOSH PERRY

January 19, 2023

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Attention: Joel Lajeunesse, Project Manager

Re: Vanier Hall - 136 Jean-Jacques-Lussier Private
Hazardous Materials Survey and 2022 Reassessment
McIntosh Perry Limited Reference No. Z1920014HZ / CCC-230252-00

1.0 INTRODUCTION

In accordance with your instructions, McIntosh Perry Limited (MPL) carried out a Hazardous Materials Survey at Vanier Hall located at 136 Jean-Jacques-Lussier Private. The survey of the building was conducted from October 10th to 15th, 2019. The Reassessment Survey was completed on July 14th, 2022.

The purpose of the survey was to determine the presence of building materials containing Designated Substances and other hazardous materials, as defined under the Ontario Occupational Health and Safety Act. Designated Substances are eleven chemical agents prescribed under Ontario Regulation 490/09. In addition, a visual assessment was conducted for the presence of polychlorinated biphenyls (PCBs), radioactive materials, ozone depleting substances (ODSs), other halocarbons and mould.

MPL completed the following,

- Visual review of the building to identify materials which could contain Designated Substances and hazardous materials;
- Bulk sampling and analysis of building materials suspected of containing asbestos (if required);
- Bulk sampling and analysis of representative paints and finishes suspected of containing lead (if required);
- Review of previously completed Hazardous Materials Survey(s) and historical building record(s); and,
- Recommendations for appropriate action where required.

2.0 PROPERTY DESCRIPTION

The subject building is a seven-storey university building constructed in 1954. The subject building was observed to be constructed with a concrete slab floor; metal roof supported by steel trusses, beams and columns and contains an area of 150,320 square feet. The interior walls were gypsum wallboard and plaster. Within the subject building, ceilings were observed to be either suspended ceiling tiles, while open ceilings were observed in other areas of the building. The floors were generally polished concrete, terrazzo, and laminate, with the exception of select areas containing vinyl floor tiles and carpet.

3.0 FINDINGS & RECOMMENDATIONS

Designated Substances

3.1 Asbestos

Findings

A total of thirty-six (36) bulk samples were collected during the survey and sent to an independent accredited laboratory for analysis. A summary of potential asbestos-containing samples collected along with the sample location, type and friability are presented in Table 1.

Laboratory certificates of analysis for asbestos are included in Appendix C.

Table 1: Asbestos Laboratory Results

Sample ID	Location	Material	Type and Content	Friability
BS 1.1	Room 5041	Sprayed Fireproofing (Grey)	None Detected	N/A
BS 1.2	Room 5063	Sprayed Fireproofing (Grey)	None Detected	N/A
BS 1.3	Room 5068	Sprayed Fireproofing (Grey)	None Detected	N/A
BS 1.4	Room 5000H	Sprayed Fireproofing (Grey)	None Detected	N/A
BS 1.5	Room 5000H	Sprayed Fireproofing (Grey)	None Detected	N/A
BS 1.6	Room 5000H	Sprayed Fireproofing (Grey)	None Detected	N/A
BS 1.7	Room 5000H	Sprayed Fireproofing (Grey)	None Detected	N/A
BS 2.1	Room 5076	Wall/Ceiling Plaster (White)	None Detected	N/A
		Wall/Ceiling Plaster (Grey)	None Detected	N/A
BS 2.2	Room 5076	Wall/Ceiling Plaster (White)	None Detected	N/A
		Wall/Ceiling Plaster (Grey)	None Detected	N/A
BS 2.3	Room 5040	Wall/Ceiling Plaster (White)	None Detected	N/A
		Wall/Ceiling Plaster (Grey)	None Detected	N/A
BS 2.4	Room 5040	Wall/Ceiling Plaster (White)	None Detected	N/A
		Wall/Ceiling Plaster (Grey)	None Detected	N/A

Sample ID	Location	Material	Type and Content	Friability
BS 2.5	Room 1026	Wall/Ceiling Plaster (White)	None Detected	N/A
		Wall/Ceiling Plaster (Grey)	None Detected	N/A
BS 2.6	Room 5082	Wall/Ceiling Plaster (White)	None Detected	N/A
		Wall/Ceiling Plaster (Grey)	0.5% Chrysotile	Friable
BS 2.7	Room 5082	Wall/Ceiling Plaster (White)	None Detected	N/A
		Wall/Ceiling Plaster (Grey)	Stop Positive	Friable
BS 3.1	Room 5000F	SCT-2'x4'-Pinholes w/ Large Fissures	None Detected	N/A
BS 3.2	Room 5000F	SCT-2'x4'-Pinholes w/ Large Fissures	None Detected	N/A
BS 3.3	Room 5000F	SCT-2'x4'-Pinholes w/ Large Fissures	None Detected	N/A
BS 4.1	Room 1021	Tar (Black)	2% Chrysotile	Non-Friable
BS 4.2	Room 1021	Tar (Black)	Stop Positive	Non-Friable
BS 4.3	Room 1021	Tar (Black)	Stop Positive	Non-Friable
BS 5.1	Room 7028	Tar Paper Debris	None Detected	N/A
BS 5.2	Room 7028	Tar Paper Debris	<0.5% Chrysotile	N/A
BS 5.3	Room 7028	Tar Paper Debris	<0.5% Chrysotile	N/A
BS 6.1	Room 0140	Wall Mastic (Black)	None Detected	N/A
BS 6.2	Room 0140	Wall Mastic (Black)	None Detected	N/A
BS 6.3	Room 0140	Wall Mastic (Black)	None Detected	N/A
BS 7.1	Room 1070	Window Caulking (Black)	1% Chrysotile	Non-Friable
BS 7.2	Room 1070	Window Caulking (Black)	Stop Positive	Non-Friable
BS 7.3	Room 1070	Window Caulking (Black)	Stop Positive	Non-Friable

N/A – Not Applicable
VFT – Vinyl Floor Tiles
SCT-Suspended Ceiling Tiles
Stop Positive – Material considered being asbestos-containing as per O. Reg. 278/05.

Please refer to Appendix E – Asbestos-Containing Materials Checklist for material conditions, quantities (where applicable), and recommended actions.

The following building materials (if present) were investigated for asbestos content,

3.1.1 Fireproofing

Sprayed fireproofing (Grey) was observed and sampled in Rooms 5043, 5063, 5068 and 5000H. The laboratory analytical results of samples collected indicate that this material does not contain asbestos.

3.1.2 Mechanical Pipe Insulation

3.1.2.1 Mechanical Pipe Straight Insulation

Mechanical pipe straight insulation was observed in Rooms 0140, 0189, 0100K. MPL made several incisions throughout to investigate its composition, and it was visually identified as fiberglass, and therefore not suspected of containing asbestos.

Mechanical pipe straight insulation was observed and previously sampled in Room 0140. The laboratory analytical results for the samples collected indicate that this material does not contain asbestos.

3.1.2.2 Mechanical Piping Elbows/Fittings Insulation

No mechanical pipe elbows/fittings insulation was observed in the subject building.

3.1.2.3 Mechanical Piping Hangers Insulation

No mechanical pipe hanger insulation was observed in the subject building.

3.1.2.4 HVAC Duct Insulation

No HVAC duct insulation was observed in the subject building.

3.1.2.5 Other Mechanical Insulation

No other mechanical insulation was observed in the subject building.

3.1.3 Flexible Duct Connector

Flexible duct connectors were observed in Room 2041. This material was visually identified as a non-asbestos containing material (i.e. rubber).

3.1.4 Heat Shield or Heat Shield Insulation

No heat shield insulation was observed in the subject building.

3.1.5 Texture Finishes

No texture coat finishes were observed in the subject building.

3.1.6 Plaster

Previously identified wall plaster was observed in Room 1000E, 1000H, 3000K and 3000N. This material contains 1% Chrysotile asbestos. Since plaster is a homogeneous material, all areas must be treated as asbestos-containing unless additional testing confirms otherwise. This material is considered friable and observed to be in good condition with the exception of select areas that were observed to be in fair and poor condition during the 2022 Reassessment.

Ceiling and wall plaster were observed and sampled from Room 1026, 5040, 5076, and 5082. The laboratory analytical results for the samples collected indicate that this material contains 0.5% Chrysotile. Since plaster is a homogeneous material, all areas must be treated as asbestos-containing unless additional testing confirms otherwise. This material is considered friable and observed to be in good condition with the exception of select areas that were observed to be in fair and poor condition during the 2022 Reassessment.

3.1.7 Drywall Joint Compound

Drywall joint compound was previously sampled from Rooms 014B,014E, 1011, 1017, 1025, and 1030. The laboratory analytical results for the samples collected indicate that this material does not contain asbestos.

3.1.8 Ceiling Tiles

Several different types of ceiling tiles were observed and sampled within the subject building as follows:

- Suspended ceiling tile (2'x4'-Pinholes) was observed and previously sampled in Room 3047 were previously sampled and the laboratory analytical results indicate that this material does not contain asbestos.
- Suspended ceiling tile (2'x4'-Larege and Small Pinholes) was observed and previously sampled in Room 3000F. was sampled and the laboratory analytical results indicate that this material does not contain asbestos.
- Suspended ceiling tiles (2'x4'-Pinholes and Large Fissures) were observed in Rooms 1021, 4000B, 4001, 4002, 4003, 4004, 4005, 4006, 4007, 4008, 4008A, 4009, 4010, 4012, 4013, 4015, 4016, 4017, 4018, 45019, 4020, 4021, 4022, 4023, 4024, 4025, 4026, 4027, 4028, 4040, 4041, 4042, 4043, 4044, 4044 (A-C), 4047, 4048, 4049, 4058, 4059, , (4059A-C), 4062, 4063, , 4064, 4064 (A-C), 4067, 4068, 4069, 5000H, 5015, 5016, 5017, 5018, 5019, 5020, 5021, 5022, 5023, 5024, 5025, 5026, 5027 and 5078. The laboratory analytical results of ceiling tile samples collected indicate that this material does not contain asbestos.
- Suspended ceiling tiles (2'x4'-Pinholes w/ Small Fissures) were observed in Room 5042, 5076, 5077, 5080, 5080(A-C). The date stamp on the back of these tiles indicated that they were manufactured in 2012 and therefore, this material is not considered to contain asbestos.
- Suspended ceiling tiles (2'x4'-Pinholes w/ Small Fissures) were observed in Room 1001(A-F). The date stamp on the back of these tiles indicated that they were manufactured in 2010 and therefore, this material is not considered to contain asbestos.
- Suspended ceiling tiles (2'x4'-Pinholes w/ Texture) were observed in Room 5002. The date stamp on the back of these tiles indicated that they were manufactured in 2012 and therefore, this material is not considered to contain asbestos.

3.1.9 Vinyl Floor Tiles

No vinyl floor tiles were observed in the subject building.

3.1.10 Vinyl Sheet Flooring

Several different types of ceiling tiles were observed and sampled within the subject building as follows:

- Vinyl sheet flooring (Grey) was observed and previously sampled in Room 3047. The laboratory analytical results indicate that this material does not contain asbestos.
- Vinyl sheet flooring (Beige) was observed and previously sampled in Room 1025. The laboratory analytical results for the samples collected indicate that this material does not contain asbestos.
- Vinyl sheet flooring (Red) was observed and previously sampled in Room 1030. The laboratory analytical results for the samples collected indicate that this material does not contain asbestos.
- Vinyl sheet flooring (Light Grey) was observed and previously sampled in Room 1011. The laboratory analytical results for the samples collected indicate that this material does not contain asbestos.

3.1.11 Brick Mortar

No brick mortar was observed in the subject building.

3.1.12 Concrete Block Mortar

No concrete block mortar was observed subject building.

3.1.13 Transite (Asbestos Cement)

Transite rainwater leaders are suspected to be present in Room 5068 and 5069. The condition of the material could not be visually assessed in these areas due to the presence of fireproofing insulation covering the transite. To avoid possible damage, no bulk samples of the transite piping were collected. However, this material is known to contain asbestos. This material is considered to be non-friable and was observed in good condition.

3.1.14 Caulking

Window caulking (Black) was observed and sampled from Room 1070 and all stairwells throughout the subject building. The laboratory analytical results indicate that this material contains 1% Chrysotile asbestos. This material is considered to be non-friable and was observed in good condition.

3.1.15 Cementitious Coating

No cementitious coating finishes were observed in the subject building.

3.1.16 Tar

Several different types of tar materials were observed and sampled within the subject building as follows:

- Tar (Black) was sampled and observed on the ceiling in Room 1021. The laboratory analytical results indicate that this material contains 2% Chrysotile asbestos. This material is considered non-friable and was observed to be in fair condition.

- Tar paper debris was sampled and observed from Room 7028. The laboratory analytical results indicate that this material contains <0.5% Chrysotile asbestos. Under O. Reg.278/05 this material is less than the stated regulatory limit and is considered to be non-asbestos containing.

- Tar adhesive (Black) was observed and previously sampled in Rooms 0141B and 0141E. The laboratory analytical results indicate that this material does not contain asbestos.

3.1.17 Mastic

Wall mastic (Black) observed and sampled on the walls of Room 0140. The laboratory analytical results for the samples collected indicate that this material does not contain asbestos.

3.1.18 Fire Doors

Fire doors were observed at various locations throughout the subject building. To avoid possible damage, no bulk samples of the internal door insulation materials were collected. Prior to removal and/or replacement, fire doors should be examined and tested for asbestos content. Fire doors should be considered to contain asbestos until bulk samples and analysis proves otherwise. All fire doors were observed to be in good condition.

3.1.19 Roofing Material

To avoid damage and compromising the integrity of roofing material, no bulk samples of the roofing materials were collected. Prior to removal and/or replacement, roofing materials should be examined and tested for asbestos content. Roofing materials should be considered to contain asbestos until bulk samples and analysis proves otherwise.

Recommendations

- Asbestos-containing materials identified to be in poor condition must be repaired/removed immediately, following Type 1/2/3 asbestos abatement work procedures as detailed in O. Reg. 278/05 and disposed of as asbestos waste under O. Reg. 347;

- Asbestos-containing materials that have been identified to be in fair condition should be either repaired (where possible) and/or closely monitored for signs of further deterioration. Depending on

type of material and location, these materials should be scheduled for removal if there is potential risk of exposure to worker and/or occupants;

- Materials identified to contain asbestos that are in good condition and do not pose a risk to workers or occupants can be managed in place. Prior to renovation/demolition activities that may disturb the ACMs, these materials must be removed following appropriate Type 1/2/3 asbestos abatement work procedures as detailed in O. Reg. 278/05 and disposed of as asbestos waste under O. Reg. 347;

- Please refer to Appendix E – Asbestos-Containing Materials Checklist for material conditions, quantities (where applicable), and recommended actions;

- Prior to renovation/demolition of materials which are assumed to be asbestos-containing (suspect materials which were not sampled, i.e., roofing materials and fire doors), these materials must either be tested for asbestos content or removed following appropriate asbestos abatement work procedures (Type 1/2/3) as detailed in O. Reg. 278/05 and disposed of as asbestos waste under O. Reg. 347;

- All repairs or removal of asbestos-containing materials must be conducted according to Ontario Regulation 278/05, Regulation respecting Asbestos on Construction Projects and in Buildings and Repair Operations - made under the Occupational Health and Safety Act. Asbestos containing waste must also be handled and disposed of according to Ontario Regulation 347/90 as amended – made under the Environmental Protection Act. Any suspect building materials encountered that were not assessed as part of this survey, should be assumed to contain asbestos until proven otherwise by analytical testing;

- Sub-trades working with or in close proximity to asbestos-containing material should be informed of its presence; and

- Given that asbestos containing materials (ACMs) have been identified and will likely remain in place, an Asbestos Management Plan (AMP) is therefore required and an inventory of ACMs must be kept on site. All ACMs must be routinely inspected to ensure no damage has occurred, and the inventory must be updated once in each 12-month period and as may be required based on expected changing site conditions, abatement and/or renovation activities.

3.2 Lead

Findings

3.2.1 Paint Finishes

Various paint finishes previously identified to contain lead were observed throughout the subject building as follows,

Table 2:

Previously Sampled Lead Paint Finishes

Sample I.D.	Location	Material	Colour	Lead Concentration Weight by Conc. (%)
VNR-4-LBP-050906-10	Room 4020	Door Frame Paint	Dark Green	0.13
VNR-3-LBP-050906-11	Room 3015	Wall Paint	White	0.08
VNR-2-LBP-051006-14	Room 2070	Stair Railing Paint	Grey	1.20
PB-2	Room 1011	Door Frame Paint	Grey	<0.002

The paint finishes highlighted in pink in the above table are considered lead-containing paints or surface coatings with concentrations greater than 0.1% lead by weight. These paint finishes were observed to be in good condition with the exception of select areas that were observed good condition with the exception of select areas that were observed to be in poor condition.

All remaining paints tested were below the laboratory limit of detection for lead. However, all other paints throughout the subject building that are not mentioned in this report must be considered to be lead-containing unless sampling and analysis proves otherwise.

Lead may also be present in the following materials in the building:

- Solder used on copper domestic water lines;
- Solder used in bell fittings for cast iron pipes;
- Solder used in electrical equipment;
- Ceramic tile glaze; and
- Concrete and mortar products, etc.

Recommendations

Paints identified to contain lead that are in poor condition must be immediately repaired and/or stabilized following a minimum Type 1/2 lead abatement procedures as per OMOL "Lead on Construction Project" dated April 2011.

Paints identified to contain lead that are in fair condition should be either repaired (where possible) and/or closely monitored for signs of further deterioration.

Paints identified to contain lead that are in good condition and do not pose a risk to workers or occupants can be managed in place.

Detailed worker protection protocols are outlined in the OMOL Guideline "Lead on Construction Projects" dated April 2011. Generally, the removal of the lead-based paint with the use of a chemical gel or paste, or a power tool equipped with a HEPA filter is considered a Type 1 operation. The removal of lead-based paint by scraping or sanding using non-powered hand tools is considered a Type 2 operation. The removal of lead-based paint using abrasive blasting, or power tools without a HEPA filter, is considered a Type 3 operation, and requires the most stringent worker protection protocols (similar to asbestos); Furthermore, high temperature cutting or welding would also require Type 3 Operations under the Guideline for Lead on Construction Projects.

If this type of work is required, it may be prudent to chemically remove the lead paint in selected locations prior to performing any high temperature cutting or welding.

All lead materials that are removed must follow the Ministry of Labour and Environmental Abatement Council of Ontario Lead Guidelines.

Please refer to Appendix F – Hazardous Materials Checklist for material conditions, quantities (where applicable), and recommended actions.

Precautions should be taken as required during major renovations and demolition projects to ensure that workers' exposure levels to airborne lead does not exceed 0.05 mg/m3. This can be achieved by:

- providing workers with proper training;
- providing the workers with respiratory protection;
- wetting the surface of the materials to prevent dust emissions; and,
- providing workers with hygiene facilities to properly wash prior to exiting the work area.

Sub-trades working with or in close proximity to lead based paint should be informed of its presence.

All waste material must be handled and disposed of according to the Revised Regulation of Ontario 347/90 as amended – made under the Environmental Protection Act. Lead waste generated may also be subject to Leachate Criteria (Schedule 4) of this regulation.

3.3 Mercury

Findings

3.3.1 Thermostat Switches

MPL did not observe thermostats containing liquid mercury within the subject building.

3.3.2 Fluorescent Light Tubes

MPL identified fluorescent light fixtures throughout the surveyed area containing 2 to 4 fluorescent light tubes per fixture. Mercury is likely to be present in vapor form in the fluorescent light tubes.

3.3.3 Pressure Gauges and Float Switches

MPL identified pressure gauges containing liquid mercury in Room 0189.

MPL also identified suspected float switches that may contain liquid mercury within the Room 0189 within the subject building. They were observed in good condition.

Recommendations

Please refer to Appendix F – Hazardous Materials Checklist for equipment conditions, quantities (where applicable), and recommended actions.

Precautions must be taken to prevent mercury liquid/vapours from becoming airborne during building demolition. Exposure to mercury is regulated under Ontario Regulation 490/09, Designated Substances - made under the Occupational Health and Safety Act." Prior to renovations to the building, all mercury containing fluorescent light tubes, thermostats, and equipment must be removed and stored in a safe, secure location and/or properly disposed of in accordance with R.R.O. 1990, Regulation 347 General – Waste Management, made under the Environmental Protection Act.

3.4 Silica

Findings

Silica is expected to be present in building materials such as concrete, brick, mortar and ceramic tiles located throughout the structures. Free crystalline silica (α-Quartz) may be a component in ceiling tiles and gypsum board. Silica (including free crystalline silica) may also be a component of concrete and brick surfaces noted in the building.

Recommendations

Please refer to Appendix F – Hazardous Materials Checklist for equipment conditions, quantities (where applicable), and recommended actions.

Precautions should be taken as required during major renovations and demolition projects on concrete (i.e. coring through concrete slabs, demolition of masonry, etc.) to ensure that workers' exposure levels to airborne silica does not exceed 0.05 mg/m^3.

This can be achieved by:

- providing workers with proper training;
- providing the workers with respiratory protection;
- wetting the surface of the materials to prevent dust emissions; and,
- providing workers with facilities to properly wash prior to exiting the work area.

Demolition work that is likely to impact silica-containing materials should be carried out in accordance with the requirement detailed in the Ontario Ministry of Labour document entitled "Guideline: Silica on Construction Projects", dated April 2011.

Other Hazardous Materials

3.5 Polychlorinated Biphenyls (PCBs)

Findings

3.5.1 Light Ballasts

The subject building is illuminated by LED and fluorescent lights. MPL assessed representative ballasts in the building, and these ballasts were identified as non-PCBs content. These light ballasts were observed to be manufactured by Phillips.

3.5.2 Transformers

MPL did not observe any PCBs containing electrical transformers within the subject building. Transformers that could be assessed were observed to be dry-type and manufactured by Warner Power.

Recommendations

Since no PCB-containing equipment was observed or suspected to be present during the site survey, no further action is required.

3.6 Ozone Depleting Substances (ODSs) and Other Halocarbon

Findings

A visual assessment for equipment potentially containing ODSs and other halocarbons was conducted. MPL observed equipment such as refrigerators, water fountains, water coolers, freezers, etc. which contain or are suspected of containing ODSs or other halocarbons.

Recommendations

Please refer to Appendix F – Hazardous Materials Checklist for equipment conditions, quantities (where applicable), and recommended actions.

Under the management of a licensed contractor, equipment containing R-22 and R-134a does not represent a significant threat to human health or the environment however, a licensed contractor must decommission equipment such that CFCs are contained and not released to the environment during servicing or operation.

3.7 Radioactive Materials

Findings

A visual assessment of the subject building was conducted to determine if any electrical components containing radioactive materials were present. MPL identified equipment suspected of containing radioactive materials in Room 2041.

Recommendations

Please refer to Appendix F – Hazardous Materials Checklist for equipment conditions, approximate (where applicable), and recommended actions.

These materials do not pose a hazard as long as they remain contained and properly disposed at the time of removal or replacement.

Prior to any renovations or demolition of the building, all equipment containing radioactive materials must be decommissioned by a licensed contractor such that radioactive materials are contained and not released to the environment during decommissioning as per O.Reg. 347/09.

3.8 Underground and Above Ground Storage Tanks (USTs and ASTs)

Findings

A visual survey of the subject building was conducted to determine if any USTs and ASTs were present. MPL observed one (1) diesel Storage Tanks located in Rooms 0140 and 7028A.

Recommendations

Please refer to Appendix F – Hazardous Materials Checklist for equipment conditions, quantities (where applicable), and recommended actions.

Prior to any demolition in the buildings within the facility, all USTs and ASTs equipment must be decommissioned by a licensed contractor such that substances are contained and not released to the environment during decommissioning.

3.9 Mould

Findings

3.9.1 Mould

A visual survey of the subject building was conducted to determine if any mould was present. MPL did not observe any areas with obvious signs of visible mould growth.

3.9.2 Water Damage

A visual survey of the subject building was conducted to determine if any water damaged was present. MPL identified select areas throughout the subject building, where materials were affected by water damage during the 2022 Reassessment.

Recommendations

Please refer to Appendix F – Hazardous Materials Checklist for equipment conditions, quantities (where applicable), and recommended actions.

Water stained/damaged wall and ceiling plaster that is also determined to contain asbestos must be replaced following appropriate asbestos abatement procedures as outlined in O.Reg. 278/05.

This report should be made available to contractors tendering on any renovation or demolition work. In turn, all contractors requesting tenders from subcontractors shall furnish this report to subcontractors.

4.0 GENERAL CONSIDERATIONS AND LIMITATIONS

The information presented in this report is based on information provided by others, direct visual observation made by personnel with McIntosh Perry Limited (MPL), and the results of laboratory testing as identified herein.

It should be noted that there might be hazardous materials in locations not visible during our investigation. In the event such material is encountered during demolition operations in the building, this material should be tested and dealt with accordingly.

The findings detailed in this report are based upon the information available at the time of preparation of the report. No investigative method eliminates the possibility of obtaining imprecise or incomplete information. Professional judgement was exercised in gathering and analyzing the information obtained and in the formulation of our conclusions and recommendations.

MPL does not certify or warrant the environmental status of the property nor the building on the property.

Please note that the passage of time affects the information provided in the report. Environmental conditions of a site can change. Opinions relating to the site conditions are based upon information that existed at the time that the conclusions were formulated.

The client expressly agrees that it has entered into this agreement with MPL, both on its own behalf and as agent on behalf of its employees and principals.

The client expressly agrees that MPL's employees and principals shall have no personal liability to the client in respect of a claim, whether in contract, tort and/or any other cause of action in law. Accordingly, the client expressly agrees that it will bring no proceedings and take no action in any court of law against any of MPL's employees or principals in their personal capacity.

We trust that we have detailed our findings clearly and that we have satisfactorily addressed the scope of work you require at this time. In the event you wish us to review our findings with you, or require our services further in this regard, please do not hesitate to contact our office.

Yours truly,

MCINTOSH PERRY LIMITED

Lauren Hamilton, B.Eng.
Project Technician
Hazardous Materials/ Environmental Health & Safety

John Tufts, B.Sc.
Project Manager
Hazardous Materials/ Environmental Health & Safety

APPENDIX A

Regulatory Requirements

REGULATORY REQUIREMENTS

In Ontario, there is a total of eleven Designated Substances. These substances have been regulated under Ontario Regulation 490/09 — *Designated Substances*, made under the Ontario Health and Safety Act, which applies to controlling designated substances in the workplace.

In addition to the Ontario Regulation 490/09 noted above, the following were observed for this survey:

Guideline: Lead on Construction Projects, issued April 2011 by the Occupational Health and Safety branch of the Ministry of Labour

Guideline: Silica on Construction Projects issued April 2011 by the Occupational Health and Safety branch of the Ministry of Labour.

The Occupational Health and Safety Act (OHSA), R.S.O. 1990, c.0.1, s.30 (1) specifies that: "Before beginning a project, the owner shall determine whether any Designated Substances are present at the project site and shall prepare a list of all Designated Substances that are present at the site.

Section 30 of The Act requires that the list of Designated Substances be provided to prospective contractors and subcontractors who may do work on a site and come into contact at the site with Designated Substances.

The Ministry of Labour has designated the following substances:

- Acrylonitrile
- Arsenic
- Asbestos
- Benzene
- Coke Oven Emissions
- Ethylene Oxide
- Isocyanates
- Lead
- Mercury
- Silica
- Vinyl Chloride

Ontario Regulation 278/05 (O. Reg. 278/05), the Regulation respecting Asbestos on Construction Projects and in Buildings and Repair Operations, made under the Occupational Health and Safety Act (OHSA), requires owners of a building to identify Asbestos-containing Materials (ACMs) prior to potential disturbance of the materials.

In addition, an owner of a building is required to have an Asbestos Management Plan (AMP) if ACMs (friable or non-friable) are present in the building and are to remain in place. An inventory of ACMs must be kept on site. All ACMs must be routinely inspected to ensure no damage has occurred, and the inventory must be updated once in each 12-month period and as may be required based on expected changing site conditions, abatement and/or renovation activities. Removal of all asbestos containing materials is required prior to building demolition.

In addition to the Designated Substances, the building was also surveyed for the presence of other hazardous materials such as polychlorinated biphenyls (PCBs), radioactive materials, ozone depleting substances (ODSs), other halocarbons, and mould.

We understand that this survey has been conducted to comply with the regulatory requirements of Ontario Regulation 278/05.

APPENDIX B

Survey Methodology & Background Information

SURVEY METHODOLOGY

For the purpose of this survey, not all Designated Substances or suspect hazardous material were sampled. Selective sampling was carried out only for substances that were suspected to be present or those deemed to have a likely source of origin in the survey areas.

Materials that were homogeneous in nature and/or similar in appearance to other materials tested were considered to be of similar composition. The likelihood of ACMs being present in inaccessible areas such as above gypsum board ceilings or behind gypsum wallboards was determined by assessing the presence of asbestos-containing systems in adjacent areas. Equipment such as boilers, motors, blowers, electrical panels, fire doors etc., were not de-energized or disassembled to examine internal components or materials. These items should be considered to contain hazardous materials until proven otherwise.

During the survey, representative samples of suspect building materials were collected and sent to CAELA accredited independent laboratory for analysis. Laboratory Certificate of Analysis are attached in Appendix C.

Other potential hazardous materials were identified by visual observation and/or by reviewing Material Safety Data Sheets (MSDS) and/or safety labels where available.

Investigated Areas

The survey included all accessible areas and ceiling space within Vanier Hall as required under our scope of work. No destructive investigations were performed as part of this survey. Photographs of the areas investigated can be found in Appendix D.

The assessment was directed on the interior structure and finishes of the building. It did not consider current or past owner or occupant articles within the building (i.e. contents, furniture, etc.) and does not report on possible contaminants in the soil under and surrounding the building, or contents of vessels, drums, etc. that may be concealed.

Sampling and Assessment Methodologies

Sampling was conducted as part of this assessment. Results for asbestos and lead samples can be found in the Findings & Recommendation Section 3.0.

A historical review of previous designated substance survey reports and abatement reports was examined as part of this survey. Due to concerns regarding certain historical analytical results, mainly in 2008 and prior years, confirmatory re-sampling was conducted for selected materials previously identified not to contain asbestos. However, building materials previously identified to be asbestos-containing were not re-sampled. The reports are listed as follows,

- Project Specific Designated Substance Survey 1 Nicholas Consolidated on Campus-Vanier Hall by CM3 Environmental (dated February 7, 2019, reference#TLW-2301);
- Mould and Particulate Sampling Rooms 0115 and 0117-Vanier Hall by CM3 Environmental (dated March 16,2018, reference#TLW-1862);
- Asbestos Abatement Summary Vanier Hall-Level 0 by CM3 Environmental (dated September 26, 2016, reference# TLW-1156);

- Asbestos Sampling-Cork Ceiling Room 0188, Vanier Hall by CM3 Environmental (dated June 3, 2016, reference# TLW-1058);
- Asbestos Sampling Report Vanier Hall Building -Animal Care Wing by EHS Partnerships LTD (dated February 9, 2016, reference#04-0033-16-007);
- Potential Asbestos Containing Material Assessment, Room 0140, Vanier Hall by EHS Partnerships LTD (dated July 16, 2015, reference#04-0033-15-020);
- Potential Asbestos Material Assessment, Vanier Hall, D-Stairwell & Rooms 0141B & E by EHS Partnerships LTD (dated March 11, 2015, reference# 04-0033-15-013);
- Project Specific Asbestos Sampling Report – Dust, Vanier Hall – Social Science Faculty Old Tunnel Access by EHS Partnerships LTD (dated April 27, 2012, reference# 04-0033-12-013);
- Potential Asbestos Sampling Report – Plaster on Drywall and Plaster on Lathe, Vanier Hall-Penthouse by EHS Partnerships LTD (dated January 23, 2012, reference# 04-0033-12-001);
- Project Specific Asbestos Sampling-Pipe Shaft Debris, Vanier Hall, Somerset Wing, Basement by EHS Partnerships (dated October 20, 2011, reference# 04-0033-11-005);
- Asbestos Abatement Work Room 002A, Vanier Hall by Conestoga Rovers & Associates (dated October 2006, reference# 47378); and,
- Designated Substance Inventory by Conestoga Rovers & Associates (dated July 2006, reference#45870(2)).

Asbestos

Background Information on Asbestos

Asbestos is a generic name that has been given to a group of naturally occurring fibrous minerals. In the past, asbestos was commonly used as a component in building materials such as insulation, fireproofing and acoustic or decorative panels. Although there are many types of asbestos, the three main forms of commercial importance in Ontario are chrysotile, amosite and crocidolite.

An Asbestos-Containing Material (ACM) is defined by O. Reg. 278/05 as a material that contains 0.5% or more asbestos by dry weight. ACMs are placed into two general classes, “friable” and “non-friable” ACMs. Friable ACMs are those materials that when dry can be crumbled, pulverized and reduced to powder by hand pressure. Typical friable ACMs include acoustical or decorative texture coats, fireproofing and thermal insulation. Non-friable ACMs are much more durable as they are held together by a binder such as cement, vinyl or asphalt. Typical non-friable ACMs include floor tiles, fire blankets, roofing materials and cementitious products such as wallboards, pipes or siding.

It has been recognized that hazardous situations may exist in buildings where asbestos-containing materials are found. This is especially true where asbestos fibres may become airborne as a result of material ageing, physical damage, and water damage or air movement.

In contrast, there is little reason for concern if the asbestos is in good condition, has not been damaged and is not in a location where it is likely to be disturbed.

Asbestos Survey Methodology

The asbestos survey included the identification of potential friable and non-friable asbestos-containing materials within the surveyed areas of the subject building.

The likelihood of ACMs being present in inaccessible areas such as above gypsum wallboard ceilings and walls was determined by assessing the presence of asbestos-containing materials in adjacent areas.

Fiberglass insulation was not submitted for analysis as it can be identified visually as non-asbestos material.

Building materials suspected of containing asbestos were identified and representative sampling and laboratory testing of these materials was conducted. The number of bulk material samples collected from a homogeneous area was in accordance with Table 1. O. Reg. 278/05 s. 3 (3) below. Building materials suspected of containing asbestos were collected using wetting techniques and hand sampling tools.

Table 1 - O. Reg. 278/05 s. 3(3): Minimum Asbestos Bulk Material Sample Requirements

Item	Type of material	Size of area of homogeneous material	Minimum number of bulk material samples to be collected
1.	Surfacing material, including without limitation, material that is applied to surfaces by spraying, by troweling or otherwise, such as acoustical plaster on ceilings and fireproofing materials on structural members	Less than 90 square metres	3
		90 or more square metres, but less than 450 square metres	5
		450 or more square metres	7
2.	Thermal insulation, except as described in item 3	any size	3
3.	Thermal insulation patch	Less than 2 linear metres or 0.5 square metres	1
4.	Other material	Any size	3

Preliminary identification of the samples was made using polarized light microscopy (PLM), with confirmation of presence and type of asbestos made by dispersion staining optical microscopy. This analytical procedure follows the U.S. Environmental Protection Agency Test Method EPA/600/R-93/116 Method for the Determination of Asbestos in Bulk Building Materials, June 1993.

All bulk samples were analysed for asbestos content by Paracel Laboratories Ltd., an independent laboratory. Paracel is a fully accredited facility for asbestos analysis and is accredited under National Voluntary Laboratory Accreditation (NVLAP Lab Codes 200812-0 and 200863-0). Paracel is accredited for asbestos bulk analysis in PLM in Ottawa and Mississauga, respectively. For the Scope of Accreditation under the (CALA) Membership Number 1262, Paracel is accredited for asbestos in air samples by PCM.

Vinyl floors tiles were analyzed using the phase light microscopy (PLM) method of analysis. However, given the composition of vinyl floor products, the PLM analysis method may be prone to yielding false negative analytical results. Therefore, prior to removal or replacement, vinyl floor products previously identified to be negative, should undergo additional analysis by Transmission Electron Microscopy (TEM) to confirm asbestos content, if any.

Materials identified to contain asbestos were assessed on the relative possibility of fibre release into the air due to a combination of their condition and accessibility.

Evaluation of ACMs Based on Condition

In evaluating an ACM's condition, the following criteria was applied:

- Good – Material shows no signs of damage and/or is encapsulated. Asbestos-containing material could remain in place until eventual building demolition or major renovation.
- Fair – Material shows signs of minor damage (<5% damage) or otherwise near the end of useful life. This includes minor shrinking, cracking, delamination and/ or other damage. Material should be monitored closely and scheduled to be repaired, encapsulated or removed.
- Poor – Damage is greater than 5% to any ACM material and is highly recommended to be removed, repaired or encapsulated.

Note: The above evaluation criteria was also applied to other hazardous materials where applicable. Please refer to the Asbestos and Hazardous Materials Checklist in Appendix E & F for further details.

Lead

Background Information on Lead

Lead was a common additive in exterior and hard-wearing paint applications. Lead was used to prolong shelf life of paint and to increase its flexibility and durability to wear and weather. Acute exposure to lead by inhalation or ingestion may cause headaches, fatigue, nausea, abdominal cramps and joint pain. Chronic exposures can cause reduced haemoglobin production and reduced lifespan. It has also been known to impact the body's central and peripheral nervous systems and brain function and has been linked to learning disabilities in children.

Currently in Ontario, there is no regulatory limit that determines what concentration of lead constitutes a "lead containing material". On October 21, 2010, Health Canada, under the *Hazardous Products Act*, stated that the lead content in surface-coating materials, furniture, toys and other articles for children, should not exceed 90 mg/kg (0.009%, 90 ppm). However, this is intended for the importation or sale of products within Canada. Therefore, this is not to be misconstrued as a limit established to define a lead-containing material or a limit with respect to lead on construction projects.

The Environmental Abatement Council of Canada (EACC) has also developed the "*Lead Guideline for Construction, Renovation, Maintenance or Repair*" dated October 2014, which discusses the classification, handling, disturbance and removal of lead-containing materials. For the purpose of this guideline, paints or surface coatings containing less than or equal to 0.1% lead by weight (1000 mg/kg or 1000 ppm) are considered low-level lead paints or surface coatings. If these materials (and their respective surfaces) are disturbed in a non-aggressive manner and performed using adequate dust control procedures, then worker protection from the inhalation of lead is not required.

Furthermore, paints or surface coatings containing greater than 0.1% lead by weight are considered lead-containing paints or surface coatings. If these materials (and their respective surfaces) are disturbed, appropriate lead abatement procedures must always be followed.

Exposure to lead-containing materials is regulated under Ontario Regulation 490/09, *Designated Substances* - made under the Occupational Health and Safety Act. Care must be taken to prevent lead-containing particles from becoming airborne during the disturbance of lead-containing surfaces (i.e., during renovation or demolition projects). All lead abatement work must follow procedures outlined in the Guideline Lead on Construction Projects, issued in September 2004 (amended in April 2011) by the Occupational Health and Safety branch of the Ministry of Labour (Type 1-3). Similarly, the lead abatement work procedures outlined in the EACC Lead Guideline for Construction, Renovation, Maintenance or Repair (October 2014) may also be implemented (Class 1-3).

Lead is known to have been used in solder on copper plumbing fixtures, in lead conduit pipes, in lead-calcium battery plates, ammunition, and in nuclear and X-ray shielding devices. However, these materials were not sampled during this investigation, but were noted where applicable.

To verify lead content in paints, representative bulk samples of paint and finishes suspected of containing lead were collected. Bulk samples were scraped down to the building base structure, with all possible layer's present, placed in sealed plastic bags and labeled; and then submitted to an independent laboratory for analysis. Samples were treated with a dilute nitric acid sample digestion prior to filtration. Analysis utilized for lead detection in filtered samples was inductively coupled plasma optical emission spectrometry (ICP-OES).

Mercury

Background Information on Mercury

Mercury is known to cause poisoning in humans through the inhalation of vapours, ingestion of contaminated materials or skin absorption through direct contact with the liquid.

Precautions must be taken to prevent mercury vapours from becoming airborne during renovations or demolition of the building. Exposure to airborne mercury is regulated under the Revised O. Reg. 490/09 as amended – Regulation respecting Mercury – made under the Occupational Health and Safety Act; and under O. Reg. 558, which amended O. Reg. 347/90 (General - Waste Management), mercury is classified as a Schedule 2(b) Hazardous Waste Chemical. Its hazardous waste number is U151.

Mercury is found in products such as thermostats, temperature and pressure gauges, fluorescent lamps and batteries. Mercury in products can be released to the environment through breakage, or disposal at the end of a product's useful life. Improper disposal of these mercury products poses a health and environmental risk to everyone. In addition, the disposal of mercury-containing products can create wastes that are often classified as hazardous. Wastes that leach mercury in concentrations exceeding Ontario Regulation 347/90 (General - Waste Management) limits are also considered hazardous.

The mercury in thermostats switch contains approximately 3-4 grams of mercury in a glass ampoule, typically attached to a metal coil. Mercury-containing switches have been used in thermostats for over 40 years.

Mercury is an essential component in fluorescent lamps and HID lamps. The mercury is in a vapour form and in the phosphor coating on the lamp tube. Estimates of the mercury content contained in compact, 4 foot, and 8-foot lamps are 10 mg, 23 mg, and 46 mg respectively.

Most fluorescent lamps qualify as hazardous waste when removed from service and are therefore prohibited from disposal in the solid waste stream. Fluorescent lamps would be classified as 146T on your facility

Generator Registration Report under O. Reg. 347/90 - General Waste Management, as amended by O. Reg. 558/00. Under this regulation, if the leachate results exceed 0.1 milligrams of mercury per litre for a given waste, then the facility must treat the waste as hazardous waste. Most fluorescent and HID lamps will exceed the leachate toxicity limit; therefore, these wastes must be registered and treated as hazardous waste or sent for recycling.

Silica

Background Information on Silica

Silica is expected to be present in building materials such as concrete, brick, mortar and ceramic tiles located throughout the structures. Free crystalline silica (α-Quartz) may be a component in ceiling tiles and gypsum board. Silica (including free crystalline silica) may also be a component of concrete and brick surfaces noted in the building.

Exposure to airborne silica is regulated under Ontario Regulation 490/09, *Designated Substances* - made under the Occupational Health and Safety Act.

Polychlorinated Biphenyls (PCBs)

Background Information on PCBs

Polychlorinated Biphenyls (PCBs) were commonly used as dielectric insulating fluid in electrical equipment such as transformers and capacitors, and in the fluorescent and HID lamp ballasts. The production of PCBs in the North America started in 1929 and was banned at the beginning of 1979. After 1981, no manufacturers produced fluorescent and HID lamps with PCB-containing ballasts.

PCBs are not a designated substance under the Occupational Health and Safety Act.

PCB Regulations (SOR/2008-273)

The *PCB Regulations* (the Regulations) set specific deadlines for ending the use of PCBs in concentrations at or above 50 mg/kg, eliminating all PCBs and equipment containing PCBs currently in storage and limiting the period of time PCBs can be stored before being destroyed. The Regulations also establish sound practices for the better management of the remaining PCBs in use (i.e. those with content of less than 50 mg/kg), until their eventual elimination, to prevent contamination of dielectric fluids and dispersion of PCBs in small quantities into other liquids.

Ozone Depleting Substances (ODSs) and Other Halocarbons

Background Information on ODSs

Within Ontario, the general use of ozone depleting substances (ODSs) and other halocarbons is controlled through Regulation 463/10 of the Environmental Protection Act. Production of ODSs in the form of hydro chlorofluorocarbons (HCFCs) and chlorofluorocarbons (CFCs) ceased in Canada in 1993 as a result of their ozone-depleting characteristics. Importation of CFCs into Canada ceased in 1997 and total ban was placed on their use since 2010. The use of these materials is still permitted in existing equipment, but equipment must be serviced by a licensed contractor such that CFCs are contained and not released to the environment during servicing or operation.

Radioactive Materials

There are two types of smoke detectors commonly found in building (residential, institutional, commercial, industrial, etc). Photoelectric-type smoke detectors detect smoke using an optical sensor, whereas ionization-type smoke detectors use an ionization chamber containing radioactive material. The ionization type is cheaper and is particularly common in older buildings. A typical modern detector contains about 1.0 microcurie of the radioactive element americium, a decrease from 3 microcurie in 1978. The use of sealed radioactive material sources in fire detection systems is still permitted and regulated by the Canadian Nuclear Safety Commission (CNSC) and the Canadian Nuclear Safety Act. The radioactive sources in smoke alarms are sealed and contained within a metal case inside the smoke detector and must not be damaged or tampered with.

Mould & Water Damage

Mould growth inside buildings is due to excess moisture caused by leakages, condensation or capillary movement of water into the building. Toxic moulds such as *Stachybotrys chartarum* and some species of *Aspergillus* spp. are greenish-black, wet and slimy moulds that grow on soaking wet cellulose-based materials. They are often found near water leaks or where drying is very slow and can form after flooding if insufficient cleanup and drying occurred. They will generally not occur if materials are kept dry.

MPL conducted a general visual assessment for any obvious signs of visible mould and/or water damage. Based on our visual observations, the following guidelines were used in providing our recommendations for remedial action where required:

- Institute of Inspection Cleaning and Restoration Certification (IICRC) S520 Standard and Reference for Professional Mould Remediation,
- The Canadian Construction Association (CCA) Mould Guidelines for the Canadian construction industry (CCA document 82-2004)
- Environmental Abatement Council of Canada (EACC) Mould Abatement Guidelines.

Other Designated Substances

Select Designated Substances (acrylonitrile, arsenic, coke oven emissions, ethylene oxide, isocyanates, benzene, or vinyl chloride) are not expected to be present in the building in matrix or sufficient quantities to cause an exceedance of Ministry of Labour exposure guidelines. As such, no sampling was conducted for these materials.

Vinyl Chloride

Vinyl chloride (monomer) is likely to be present in stable form within poly vinyl-chloride (PVC) piping and conduits and as a component of interior finishes. Such building materials are not considered to be hazardous in their current matrix/composition.

Acrylonitrile

Acrylonitrile or ACN (also known as vinyl cyanide) is an explosive, flammable liquid used in the manufacture of acrylic fibres, rubber-like materials and pesticide fumigants. Acrylonitrile was not noted and would not be expected to be present in the project specific area/surveyed area/subject building.

Arsenic

Arsenic is used in metallurgy for hardening copper, lead and alloys, in pigment production, in the manufacture of certain types of glass, in insecticides, fungicides and rodenticides, as a by-product in the smelting of copper ores, and as a dopant material in semiconductor manufacturing. Arsenic or arsenic compounds were not noted and are not expected to be present in the project specific area/surveyed area/subject building.

Benzene

Benzene or benzol is a colourless liquid. It is used as an intermediate in the production of styrene, phenol, cyclohexane, and other organic chemicals, and in the manufacture of detergents, pesticides, solvents, and paint removers. It is also found in gasoline. Benzene may be present in stable form in roofing materials, paints and adhesives located throughout the subject building. Such building materials are not considered to be hazardous in their current matrix/composition.

Coke Oven Emissions

Coke oven emission is benzene soluble fraction of total particulate matter of the substances emitted into the atmosphere from metallurgical coke ovens.

Ethylene Oxides

Ethylene oxide is a colourless gas liquefying below 12°C. It is used generally as a fumigant and sterilizing agent for medical equipment. It is used generally as a fumigant and sterilizing agent for medical equipment.

Isocyanates

Isocyanates compounds may be present in stable form in paint finishes, varnishes, and polyurethane plastics, synthetic rubbers, foams and adhesives. Such building materials are not considered to be hazardous in their current matrix/composition.

In order to reduce the potential for exposure to workers or occupants, any suspect hazardous building material(s) that are not detailed within this survey due to inaccessibility and/or are discovered during renovation/demolition activities, must be properly assessed and/or tested prior to their disturbance.

APPENDIX C

Laboratory Analytical Reports

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Certificate of Analysis

McIntosh Perry Limited (Concord)

6240 Hwy 7, Suite 200
Woodbridge, ON L4H 0R2
Attn: Diana Banakh

Client PO:
Project: Z1920014HZ (Vanier Hall)
Custody:

Report Date: 22-Nov-2019
Order Date: 18-Nov-2019

Order #: 1947116

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
1947116-01	BS1.1 Sprayed Insulation - 5041
1947116-02	BS1.2 Sprayed Insulation - 5063
1947116-03	BS1.3 Sprayed Insulation - 5068
1947116-04	BS1.4 Sprayed Insulation - 5th Hallway
1947116-05	BS1.5 Sprayed Insulation - 5th Hallway
1947116-06	BS1.6 Sprayed Insulation - 5th Hallway
1947116-07	BS1.7 Sprayed Insulation - 5th Hallway
1947116-08.1	BS2.1 Wall/Ceiling Plaster - 5076
1947116-08.2	BS2.1 Wall/Ceiling Plaster - 5076
1947116-09.1	BS2.2 Wall/Ceiling Plaster - 5076
1947116-09.2	BS2.2 Wall/Ceiling Plaster - 5076
1947116-10.1	BS2.3 Wall/Ceiling Plaster - 5040
1947116-10.2	BS2.3 Wall/Ceiling Plaster - 5040
1947116-11.1	BS2.4 Wall/Ceiling Plaster - 5040
1947116-11.2	BS2.4 Wall/Ceiling Plaster - 5040
1947116-12.1	BS2.5 Wall/Ceiling Plaster - 1026
1947116-12.2	BS2.5 Wall/Ceiling Plaster - 1026
1947116-13.1	BS2.6 Wall/Ceiling Plaster - 5082
1947116-13.2	BS2.6 Wall/Ceiling Plaster - 5082
1947116-14.1	BS2.7 Wall/Ceiling Plaster - 5082
1947116-14.2	BS2.7 Wall/Ceiling Plaster - 5082
1947116-15	BS3.1 SCT 2' x 4' PH with LF -5th elev lobby
1947116-16	BS3.2 SCT 2' x 4' PH with LF -5th elev lobby
1947116-17	BS3.3 SCT 2' x 4' PH with LF -5th elev lobby
1947116-18	BS4.1 Tar on Ceiling - RM1021
1947116-19	BS4.2 Tar on Ceiling - RM1021

Approved By:

Emma Diaz

Senior Analyst

Any use of these results implies your agreement that our total liabilty in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.

1947116-20	BS4.3 Tar on Ceiling - RM1021
1947116-21	BS5.1 Tar Paper Debris - RM 7028
1947116-22	BS5.2 Tar Paper Debris - RM 7028
1947116-23	BS5.3 Tar Paper Debris - RM 7028
1947116-24	BS6.1 Wall Mastic - RM0140
1947116-25	BS6.2 Wall Mastic - RM0140
1947116-26	BS6.3 Wall Mastic - RM0140
1947116-27	BS7.1 Window Caulking - Stairwall 1D
1947116-28	BS7.2 Window Caulking - Stairwall 1D
1947116-29	BS7.3 Window Caulking - Stairwall 1D

Certificate of Analysis

Report Date: 22-Nov-2019

Client: McIntosh Perry Limited (Concord)

Order Date: 18-Nov-2019

Client PO:

Project Description: Z1920014HZ (Vanier Hall)

Asbestos, PLM Visual Estimation **MDL - 0.5%**

Paracel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
1947116-01	10-Oct-19	Grey	Sprayed Insulation	No	**Client ID: BS1.1 Sprayed Insulation - 5041**	
					Cellulose	60
					Non-Fibers	40
1947116-02	10-Oct-19	Grey	Sprayed Insulation	No	**Client ID: BS1.2 Sprayed Insulation - 5063**	
					Cellulose	60
					Non-Fibers	40
1947116-03	10-Oct-19	Grey	Sprayed Insulation	No	**Client ID: BS1.3 Sprayed Insulation - 5068**	
					Cellulose	60
					Non-Fibers	40
1947116-04	10-Oct-19	Grey	Sprayed Insulation	No	**Client ID: BS1.4 Sprayed Insulation - 5th Hallway**	
					Cellulose	60
					Non-Fibers	40
1947116-05	10-Oct-19	Grey	Sprayed Insulation	No	**Client ID: BS1.5 Sprayed Insulation - 5th Hallway**	
					Cellulose	60
					Non-Fibers	40
1947116-06	10-Oct-19	Grey	Sprayed Insulation	No	**Client ID: BS1.6 Sprayed Insulation - 5th Hallway**	
					Cellulose	60
					Non-Fibers	40
1947116-07	10-Oct-19	Grey	Sprayed Insulation	No	**Client ID: BS1.7 Sprayed Insulation - 5th Hallway**	
					Cellulose	60
					Non-Fibers	40
1947116-08.1	10-Oct-19	White	Plaster	No	**Client ID: BS2.1 Wall/Ceiling Plaster - 5076**	
					Non-Fibers	100
1947116-08.2	10-Oct-19	Grey	Plaster	No	**Client ID: BS2.1 Wall/Ceiling Plaster - 5076**	
					Non-Fibers	100

Certificate of Analysis

Report Date: 22-Nov-2019

Client: McIntosh Perry Limited (Concord)

Order Date: 18-Nov-2019

Client PO:

Project Description: Z1920014HZ (Vanier Hall)

Asbestos, PLM Visual Estimation **MDL - 0.5%**

Paracel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
1947116-09.1	10-Oct-19	White	Plaster	No	**Client ID: BS2.2 Wall/Ceiling Plaster - 5076**	
					Non-Fibers	100
1947116-09.2	10-Oct-19	Grey	Plaster	No	**Client ID: BS2.2 Wall/Ceiling Plaster - 5076**	
					Non-Fibers	100
1947116-10.1	10-Oct-19	White	Plaster	No	**Client ID: BS2.3 Wall/Ceiling Plaster - 5040**	
					Non-Fibers	100
1947116-10.2	10-Oct-19	Grey	Plaster	No	**Client ID: BS2.3 Wall/Ceiling Plaster - 5040**	
					Non-Fibers	100
1947116-11.1	10-Oct-19	White	Plaster	No	**Client ID: BS2.4 Wall/Ceiling Plaster - 5040**	
					Non-Fibers	100
1947116-11.2	10-Oct-19	Grey	Plaster	No	**Client ID: BS2.4 Wall/Ceiling Plaster - 5040**	
					Non-Fibers	100
1947116-12.1	10-Oct-19	White	Plaster	No	**Client ID: BS2.5 Wall/Ceiling Plaster - 1026**	
					Non-Fibers	100
1947116-12.2	10-Oct-19	Grey	Plaster	No	**Client ID: BS2.5 Wall/Ceiling Plaster - 1026**	
					Non-Fibers	100
1947116-13.1	10-Oct-19	White	Plaster	No	**Client ID: BS2.6 Wall/Ceiling Plaster - 5082**	
					Non-Fibers	100
1947116-13.2	10-Oct-19	Grey	Plaster	**Yes**	**Client ID: BS2.6 Wall/Ceiling Plaster - 5082**	[AS-PT]
					Chrysotile	0.5
					Non-Fibers	99.5
1947116-14.1	10-Oct-19	White	Plaster	No	**Client ID: BS2.7 Wall/Ceiling Plaster - 5082**	
					Non-Fibers	100
1947116-14.2	10-Oct-19				**Client ID: BS2.7 Wall/Ceiling Plaster - 5082**	
					not analyzed	

Certificate of Analysis

Report Date: 22-Nov-2019

Client: McIntosh Perry Limited (Concord)

Order Date: 18-Nov-2019

Client PO:

Project Description: Z1920014HZ (Vanier Hall)

Asbestos, PLM Visual Estimation **MDL - 0.5%**

Paracel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
1947116-15	10-Oct-19	White/Grey	Ceiling Tile	No	**Client ID: BS3.1 SCT 2' x 4' PH with LF -5th elev lobby**	
					Cellulose	40
					MMVF	30
					Non-Fibers	30
1947116-16	10-Oct-19	White/Grey	Ceiling Tile	No	**Client ID: BS3.2 SCT 2' x 4' PH with LF -5th elev lobby**	
					Cellulose	40
					MMVF	30
					Non-Fibers	30
1947116-17	10-Oct-19	White/Grey	Ceiling Tile	No	**Client ID: BS3.3 SCT 2' x 4' PH with LF -5th elev lobby**	
					Cellulose	40
					MMVF	30
					Non-Fibers	30
1947116-18	10-Oct-19	Black	Tar	**Yes**	**Client ID: BS4.1 Tar on Ceiling - RM1021**	
					Chrysotile	2
					Non-Fibers	98
1947116-19	10-Oct-19				**Client ID: BS4.2 Tar on Ceiling - RM1021**	
					not analyzed	
1947116-20	10-Oct-19				**Client ID: BS4.3 Tar on Ceiling - RM1021**	
					not analyzed	
1947116-21	10-Oct-19	Black	Tar Paper	No	**Client ID: BS5.1 Tar Paper Debris - RM 7028** [AS-PRE]	
					Cellulose	60
					MMVF	0.55
					Non-Fibers	39.45
1947116-22	10-Oct-19	Black	Tar Paper	**Yes**	**Client ID: BS5.2 Tar Paper Debris - RM 7028** [AS-PRE, AS-PT]	
				[ASTrc]	**Chrysotile**	<MDL
					Cellulose	60
					Non-Fibers	40

PARACEL LABORATORIES LTD.

Order #: 1947116

Certificate of Analysis

Report Date: 22-Nov-2019

Client: McIntosh Perry Limited (Concord)

Order Date: 18-Nov-2019

Client PO:

Project Description: Z1920014HZ (Vanier Hall)

Asbestos, PLM Visual Estimation **MDL - 0.5%**

Paracel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
1947116-23	10-Oct-19	Black	Tar Paper	**Yes**	**Client ID: BS5.3 Tar Paper Debris - RM 7028**	[AS-PRE, AS-PT]
				[ASTrc]	**Chrysotile**	<MDL
					Cellulose	60
					Non-Fibers	40
1947116-24	10-Oct-19	Black	Mastic	No	**Client ID: BS6.1 Wall Mastic - RM0140**	[AS-PRE]
					Non-Fibers	100
1947116-25	10-Oct-19	Black	Mastic	No	**Client ID: BS6.2 Wall Mastic - RM0140**	[AS-PRE]
					MMVF	<MDL
					Non-Fibers	100
1947116-26	10-Oct-19	Black	Mastic	No	**Client ID: BS6.3 Wall Mastic - RM0140**	[AS-PRE]
					Non-Fibers	100
1947116-27	10-Oct-19	Beige	Caulking	**Yes**	**Client ID: BS7.1 Window Caulking - Stairwall 1D**	
					Chrysotile	1
					MMVF	1
					Non-Fibers	98
1947116-28	10-Oct-19				**Client ID: BS7.2 Window Caulking - Stairwall 1D**	
					not analyzed	
1947116-29	10-Oct-19				**Client ID: BS7.3 Window Caulking - Stairwall 1D**	
					not analyzed	

* MMVF: Man Made Vitreous Fibers: Fiberglass, Mineral Wool, Rockwool, Glasswool

** **Analytes in bold indicate asbestos mineral content.**

PARACEL LABORATORIES LTD.

Order #: 1947116

Certificate of Analysis

Report Date: 22-Nov-2019

Client: McIntosh Perry Limited (Concord)

Order Date: 18-Nov-2019

Client PO:

Project Description: Z1920014HZ (Vanier Hall)

Analysis Summary Table

Analysis	Method Reference/Description	Lab Location	NVLAP Lab Code *	Analysis Date
Asbestos, PLM Visual Estimation	by EPA 600/R-93/116	1 - Mississauga	200863-0	21-Nov-19

* Reference to the NVLAP term does not permit the user of this report to claim product certification , approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Mississauga Lab: 15 - 6800 Kitimat Rd Mississauga, Ontario, L5N 5M1

Qualifier Notes

Sample Qualifiers :

AS-PRE: Due to the difficult nature of the bulk sample (interfering fibers/binders), additional NOB preparation was required prior to analysis

AS-PT: Asbestos quantitation by PLM Point Count method.

ASTrc: Trace asbestos was observed below the noted detection limit but could not be accurately quantified.

Work Order Revisions | Comments

None

1947116

PARACEL LABORATORIES LTD. | RELIABLE.

Head Office
300-2319 St. Laurent Blvd.
Ottawa, Ontario K1G 4J8
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e: paracel@paracellabs.com

Chain of Custody
(Lab Use Only)

Client Name: McIntosh Perry	Project Reference: Z1920014HZ (Varier Hall)
Contact Name: Diana Banakh	Quote #: 19-651
Address: 6240 Highway 7, Suite 200, Concord, Ontario L4K 2A3	PO #:
	Email Address: d.banakh@mcintoshperry.com
Telephone:905-856-5200	

Turnaround Time:
☐ Immediate ☐ 1 Day
☐ 4 Hour 2 Day
☐ 8 Hour x Regular

Date Required:

ASBESTOS & MOLD ANALYSIS

Matrix: ☐ Air x Bulk ☐ Tape Lift ☐ Swab ☐ Other **Regulatory Guideline:** x ON ☐ QC ☐ AB ☐ SK ☐ Other:

Analyses: ☐ Microscopic Mold ☐ Culturable Mold ☐ Bacteria GRAM ☐ PCM Asbestos X PLM Asbestos ☐ Chatfield Asbestos ☐ TEM Asbestos

Paracel Order Number: 1947116

Sample ID		Sampling Date	Air Volume (L)	Analysis Required	Asbestos - Bulk: Identify Distinct Building Materials to Be Analyzed		Positive Stop?
BS1.1-1.7	Sprayed Insulation - 5041,5063,5068, 5th hallway	October 10th 2019	N/A	PLM			x
BS2.1-2.7	Wall/ceiling plaster 5076,5076,5040,5040,1026,5082,5082	October 10th 2019	N/A	PLM			x
BS3.1-3.3	SCT 2' x 4' PH with LF -5th elev lobby	October 10th 2019	N/A	PLM			x
BS4.1-4.3	Tar on ceiling - RM1021	October 10th 2019	N/A	PLM			x
BS5.1-5.3	Tar paper debris - RM 7028	October 10th 2019	N/A	PLM			x
BS6.1-6.3	Wall Mastic - RM0140	October 10th 2019	N/A	PLM			x
BS7.1-7.3	Window Caulking - Stairwall 1D	October 10th 2019	N/A	PLM			x

* If left blank, Paracel will analyze all materials identified during analysis ** If left blank, Paracel will analyze all materials as individual samples (**at additional cost**) per EPA 600/R -93/116

Comments: 32 samples

Method of Delivery: United

Relinquished By (Sign):	Received at Depot:	Received at Lab: Cynthia Ch	Verified By: Cynthia Ch
Relinquished By (Print): Diana Banakh			
Date/Time:	Date/Time:	Date/Time: Nov 18 2019 16:35	Date/Time: Nov 18 2019 16:44

APPENDIX D

Site Photographs

Photo 1: View of asbestos-containing tar (Black)observed to be in fair condition on the plaster ceiling in Room 1021.

Photo 2: View of asbestos-containing window caulking observed to be in good condition in Room 1070 and other stairwells throughout the subject building.

Photo 3: View of asbestos-containing wall plaster observed to be in poor condition in Room 5082.

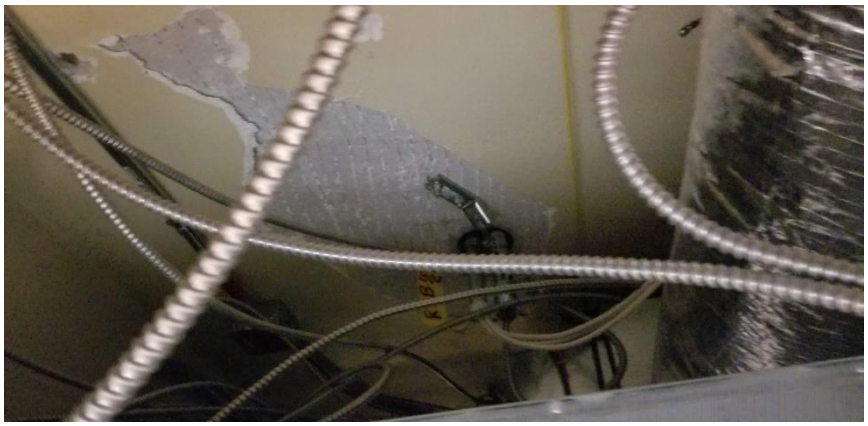


Photo 4: View of asbestos-containing ceiling plaster observed to be in poor condition above the suspended ceiling tiles in Room 1026.

Photo 5: View of asbestos-containing wall plaster observed to be in poor condition in Room 1070.

Photo 6: View of asbestos-containing wall plaster observed to be in poor condition Room 1076.

Photo 7: View of asbestos-containing wall plaster observed to be in poor condition in Room 0189.

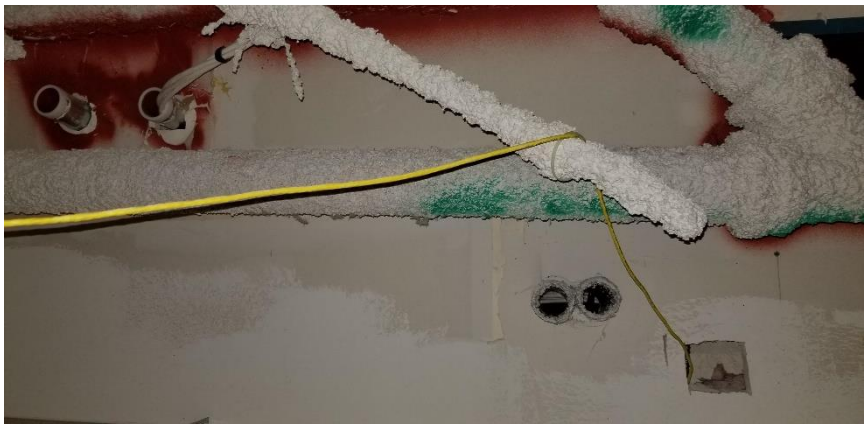


Photo 8: View of suspect transite pipe observed to be in good condition in Room 5068.

Photo 9: View of non-asbestos containing wall mastic (Black) observed in Room 0140.

Photo 10: View above ground storage tank observed to be in good condition in Room 7028A.

Photo 11: View of water-staining observed on suspended ceiling tiles in Room 5069A.

Photo 12: View of storage unit containing radioactive materials observed to be in good condition in Room 2041.

Photo 13: View of asbestos-containing plaster wall observed to be in poor condition in Room 0170 during the 2022 Reassessment.

Photo 14: View of asbestos-containing plaster wall observed to be in poor condition in Stairwell 1E during the 2022 Reassessment.

Photo 15: View of asbestos-containing plaster wall observed to be in poor condition in Room 3065 during the 2022 Reassessment.

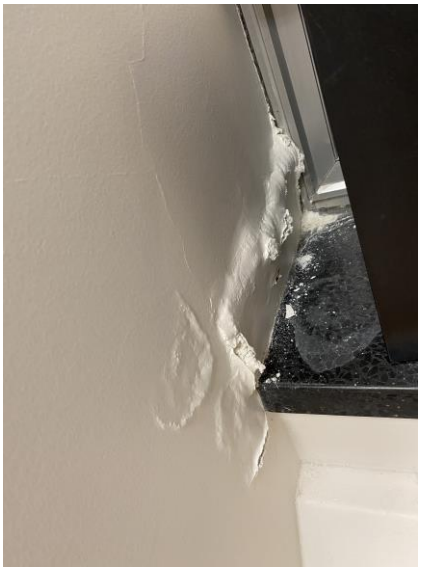


Photo 16: View of the water damaged asbestos-containing plaster wall observed to be in poor condition in Room 3079 during the 2022 Reassessment.

APPENDIX E

Asbestos-Containing Materials Checklists

Floor/Level	Location	Type of ACM	Asbestos Confirmed/ Suspected	Friable/Non-Friable	Damaged/ Deteriorated	Accessibility	Level of Work Near Material	Approx. Quantity	Unit	Recommended Action	Comments
0	Throughout Level	Ceiling and Wall Plaster	Confirmed	Friable	Good Condition	Difficult	Low	-	-	Manage in Place	
0	Room 0141	Ceiling and Wall Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	16	SF	Remove Following Type 3 Abatement Procedures	
0	Room 0170	Wall Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	2	SF	Remove Following Type 2 Abatement Procedures	
0	Room 0170	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	
0	Stairwell 0A	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	
0	Throughout Level	Fire Doors	Suspected	-	Good Condition	Easy	Low	-	-	Manage in Place	
1	Throughout Level	Ceiling and Wall Plaster	Confirmed	Friable	Good Condition	Difficult	Low	-	-	Manage in Place	
1	Throughout Level	Fire Doors	Suspected	-	Good Condition	Easy	Low	-	-	Manage in Place	
1	Stairwell 1C	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	4	SF	Monitor Condition of Material. Consider Removal or Repair.	
1	Stairwell 1E	Wall Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	1	SF	Remove Following Type 2 Abatement Procedures	
1	Room 1000E	Ceiling and Wall Plaster	Confirmed	Friable	Good Condition	Difficult	Low	Throughout	-	Manage in Place	
1	Room 1000H	Ceiling and Wall Plaster	Confirmed	Friable	Good Condition	Difficult	Low	Throughout	-	Manage in Place	
1	Room 1021	Tar on Ceiling	Confirmed	Non-Friable	Good Condition	Difficult	Low	60	LF	Manage in Place	
1	Room 1021	Ceiling and Wall Plaster	Confirmed	Non-Friable	Poor Condition	Difficult	Low	4	SF	Remove Following Type 2 Abatement Procedures	
1	Room 1024	Ceiling and Wall Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	8	SF	Repair or Remove Following Type 2 Abatement Procedures	
1	Room 1026	Ceiling and Wall Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	6	SF	Repair or Remove Following Type 2 Abatement Procedures	

Floor/Level	Location	Type of ACM	Asbestos Confirmed/ Suspected	Friable/Non-Friable	Damaged/ Deteriorated	Accessibility	Level of Work Near Material	Approx. Quantity	Unit	Recommended Action	Comments
1	Room 1041	Ceiling and Wall Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	3	SF	Repair or Remove Following Type 2 Abatement Procedures	
1	Room 1070	Window Caulking (Black)	Confirmed	Friable	Good Condition	Easy	Low	12	LF	Manage in Place	
1	Room 1070	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	3	SF	Monitor Condition of Material. Consider Removal or Repair.	
1	Room 1070A	Ceiling and Wall Plaster	Confirmed	Friable	Poor Condition	Easy	Low	1	SF	Repair or Remove Following Type 2 Abatement Procedures	
1	Room 1070	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	2	SF	Monitor Condition of Material. Consider Removal or Repair.	Water Damage on Window Sill
1	Room 1075	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	2	SF	Monitor Condition of Material. Consider Removal or Repair.	Water Damage on Window Sill
1	Room 1076	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	Water Damage on Window Sill
1	Room 1076	Wall Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	1	SF	Repair or Remove Following Type 2 Abatement Procedures	Water Damage on Window Sill
1	Room 1080	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	Water Damage on Window Sill
1	Room 1081	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	Water Damage on Window Sill
1	Room 1082	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	Water Damage on Window Sill
1	Room 1083	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	Water Damage on Window Sill
2	Throughout Level	Window Caulking (Black)	Confirmed	Friable	Good Condition	Easy	Low	Throughout	-	Manage in Place	Throughout All Stairwells
2	Throughout Level	Ceiling and Wall Plaster	Confirmed	Friable	Good Condition	Difficult	Low	-	-	Manage in Place	

Floor/Level	Location	Type of ACM	Asbestos Confirmed/ Suspected	Friable/Non-Friable	Damaged/ Deteriorated	Accessibility	Level of Work Near Material	Approx. Quantity	Unit	Recommended Action	Comments
2	Throughout Level	Fire Doors	Suspected	-	Good Condition	Easy	Low	-	-	Manage in Place	
2	Stairwell 2A	Ceiling Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	5	SF	Remove Following Type 2 Abatement Procedures	
2	Stairwell 2B	Ceiling Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	
2	Stairwell 2C	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	
2	Stairwell 2D	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	
2	Room 2063	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	
2	Room 2066	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	2	SF	Monitor Condition of Material. Consider Removal or Repair.	Water Damage on Window Sill
2	Room 2068	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	Water Damage on Window Sill
2	Room 2068	Wall Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	1	SF	Remove Following Type 2 Abatement Procedures	Water Damage on Window Sill
2	Room 2076B	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	Water Damage on Window Sill
2	Room 2079	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	Water Damage on Window Sill
2	Room 2081	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	Water Damage on Window Sill
3	Throughout Level	Window Caulking (Black)	Confirmed	Non-Friable	Good Condition	Easy	Low	Throughout	-	Manage in Place	Throughout All Stairwells
3	Stairwell 3B	Ceiling Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	5	SF	Monitor Condition of Material. Consider Removal or Repair.	Ceiling Bubble
3	Room 3065	Wall Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	2	SF	Remove Following Type 2 Abatement Procedures	Water Damage on Window Sill

Floor/Level	Location	Type of ACM	Asbestos Confirmed/ Suspected	Friable/Non-Friable	Damaged/ Deteriorated	Accessibility	Level of Work Near Material	Approx. Quantity	Unit	Recommended Action	Comments
3	Room 3067	Wall Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	Water Damage on Window Sill
3	Room 3076	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	3	SF	Monitor Condition of Material. Consider Removal or Repair.	Water Damage on Window Sill
3	Room 3076	Wall Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	1	SF	Remove Following Type 2 Abatement Procedures	Water Damage on Window Sill
3	Room 3077	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	
3	Room 3079	Wall Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	3	SF	Remove Following Type 2 Abatement Procedures	Water Damage on Window Sill
3	Room 3082	Wall Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	Water Damage on Window Sill
3	Room 3083	Wall Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	
3	Room 3000K	Ceiling and Wall Plaster	Confirmed	Friable	Good Condition	Difficult	Low	Throughout	-	Manage in Place	
3	Throughout Level	Ceiling and Wall Plaster	Confirmed	Friable	Good Condition	Difficult	Low	-	-	Manage in Place	
3	Room 3000N	Ceiling and Wall Plaster	Confirmed	Friable	Good Condition	Difficult	Low	Throughout	-	Manage in Place	
3	Throughout Level	Fire Doors	Suspected	-	Good Condition	Easy	Low	-	-	Manage in Place	
Roof	Throughout Level	Roofing Materials	Suspected	-	Good Condition	Easy	Low	-	-	Manage in Place	
4	Throughout Level	Window Caulking (Black)	Confirmed	Non-Friable	Good Condition	Easy	Low	Throughout	-	Manage in Place	Throughout All Stairwells
4	Throughout Level	Ceiling and Wall Plaster	Confirmed	Friable	Good Condition	Difficult	Low	-	-	Manage in Place	
4	Throughout Level	Fire Doors	Suspected	-	Good Condition	Easy	Low	-	-	Manage in Place	
4	Stairwell 4A	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	1	SF	Monitor Condition of Material. Consider Removal or Repair.	Wall Bubble

Floor/Level	Location	Type of ACM	Asbestos Confirmed/ Suspected	Friable/Non-Friable	Damaged/ Deteriorated	Accessibility	Level of Work Near Material	Approx. Quantity	Unit	Recommended Action	Comments
4	Stairwell 4B	Ceiling Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	2	SF	Monitor Condition of Material. Consider Removal or Repair.	Ceiling Bubble
4	Stairwell 4C	Wall Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	5	SF	Repair or Remove Following Type 2 Abatement Procedures	Hole in Wall
4	Room 4042	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	<1	SF	Monitor Condition of Material. Consider Removal or Repair.	
5	Throughout Level	Window Caulking (Black)	Confirmed	Non-Friable	Good Condition	Easy	Low	Throughout	-	Manage in Place	Throughout All Stairwells
5	Stairwell 5A	Ceiling Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	2	SF	Repair or Remove Following Type 2 Abatement Procedures	Hole in Ceiling
5	Stairwell 5B	Ceiling Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	3	SF	Monitor Condition of Material. Consider Removal or Repair.	Ceiling Bubble
5	Stairwell 5C	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	3	SF	Monitor Condition of Material. Consider Removal or Repair.	Wall Bubble
5	Room 5015	Ceiling and Wall Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	3	SF	Repair or Remove Following Type 2 Abatement Procedures	
5	Room 5040	Ceiling and Wall Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	4	SF	Repair or Remove Following Type 2 Abatement Procedures	
5	Room 5063	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	<1	SF	Monitor Condition of Material. Consider Removal or Repair.	Wall Bubble
5	Room 5068	Transite Rainwater Leader	Suspected	Non-Friable	Good Condition	Difficult	Low	30	LF	Manage in Place	
5	Room 5069	Transite Rainwater Leader	Suspected	Non-Friable	Good Condition	Difficult	Low	30	LF	Manage in Place	
5	Room 5076	Ceiling and Wall Plaster	Confirmed	Friable	Good Condition	Difficult	Low	Throughout	-	Manage in Place	
5	Room 5082	Ceiling and Wall Plaster	Confirmed	Friable	Poor Condition	Difficult	Low	9	SF	Repair or Remove Following Type 2 Abatement Procedures	
6	Throughout Level	Window Caulking (Black)	Confirmed	Non-Friable	Good Condition	Easy	Low	Throughout	-	Manage in Place	Throughout All Stairwells

Floor/Level	Location	Type of ACM	Asbestos Confirmed/ Suspected	Friable/Non-Friable	Damaged/ Deteriorated	Accessibility	Level of Work Near Material	Approx. Quantity	Unit	Recommended Action	Comments
6	Throughout Level	Ceiling and Wall Plaster	Confirmed	Friable	Good Condition	Difficult	Low	-	-	Manage in Place	
6	Throughout Level	Fire Doors	Suspected	-	Good Condition	Easy	Low	-	-	Manage in Place	
6	Stairwell 6A	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	7	SF	Monitor Condition of Material. Consider Removal or Repair.	Wall Bubble
6	Stairwell 6B	Ceiling Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	5	SF	Monitor Condition of Material. Consider Removal or Repair.	
6	Stairwell 6C	Wall Plaster	Confirmed	Friable	Fair Condition	Difficult	Low	2	SF	Monitor Condition of Material. Consider Removal or Repair.	Wall Bubble
7	Throughout Level	Ceiling and Wall Plaster	Confirmed	Friable	Good Condition	Difficult	Low	-	-	Manage in Place	
7	Throughout Level	Fire Doors	Suspected	-	Good Condition	Easy	Low	-	-	Manage in Place	
Roof	Throughout Level	Roofing Materials	Suspected	-	Good Condition	Easy	Low	-	-	Manage in Place	

Floor/Level	Location	Type	Component	Colour	Condition	Manufacturer	Approx. Quantity	Unit	Suspected/ Confirmed	Recommended Action	Comments
0	Throughout Level	Mercury	Fluorescent Light Tubes	N/A	Good Condition	Varies	-	-	Confirmed	Manage in Place	
0	Room 0140	USTs/ASTs	Diesel Storage Tank	N/A	Good Condition	N/A	1	C	Confirmed	Manage in Place	
0	Room 0141	Mould/ Water Damage	Plaster	N/A	Poor Condition	N/A	16	SF	Confirmed	Must be removed following Level II mould remediation procedures, as per EACO Guidelines	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
0	Room 0160	Ozone Depleting Substances (ODS)	Refrigerator/Freezer/Mini-Fridge/Water Cooler	N/A	Good Condition	Frigidaire, Whirlpool	2	C	Confirmed	Manage in Place	R-134A
0	Room 0170	Mould/ Water Damage	Plaster	N/A	Fair Condition	N/A	1	SF	Confirmed	Should be replaced as part of regular maintenance.	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
0	Throughout Level	Silica	Concrete, Mortar, Etc.	N/A	Good Condition	N/A	-	-	Confirmed	Manage in Place	
1	Throughout Level	Mercury	Fluorescent Light Tubes	N/A	Good Condition	Varies	-	-	Confirmed	Manage In Place	
1	Throughout Level	Silica	Concrete, Mortar, Etc.	N/A	Good Condition	N/A	-	-	Confirmed	Manage in Place	
1	Room 1001	Ozone Depleting Substances (ODS)	Refrigerator/Freezer/Mini-Fridge/Water Cooler	N/A	Good Condition	Danby	1	C	Confirmed	Manage in Place	
1	Room 1026	Ozone Depleting Substances (ODS)	Refrigerator/Freezer/Mini-Fridge/Water Cooler	N/A	Good Condition	Whirlpool	1	C	Confirmed	Manage in Place	
1	Room 1026A	Ozone Depleting Substances (ODS)	Refrigerator/Freezer/Mini-Fridge/Water Cooler	N/A	Good Condition	Kenmore	1	c	Confirmed	Manage in Place	
1	Room 1021	Mould/ Water Damage	Plaster	N/A	Poor Condition	N/A	4	SF	Confirmed	Must be removed following Level I mould remediation procedures, as per EACO Guidelines	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
1	Room 1024	Mould/ Water Damage	Plaster	N/A	Poor Condition	N/A	8	SF	Confirmed	Must be removed following Level I mould remediation procedures, as per EACO Guidelines	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
1	Room 1026	Mould/ Water Damage	Plaster	N/A	Poor Condition	N/A	6	SF	Confirmed	Must be removed following Level I mould remediation procedures, as per EACO Guidelines	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures

Floor/Level	Location	Type	Component	Colour	Condition	Manufacturer	Approx. Quantity	Unit	Suspected/ Confirmed	Recommended Action	Comments
1	Room 1041	Mould/ Water Damage	Plaster	N/A	Poor Condition	N/A	3	SF	Confirmed	Must be removed following Level I mould remediation procedures, as per EACO Guidelines	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
1	Room 1070A	Mould/ Water Damage	Plaster	N/A	Poor Condition	N/A	1	SF	Confirmed	Must be removed following Level I mould remediation procedures, as per EACO Guidelines	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
1	Room 1075	Mould/ Water Damage	Plaster	N/A	Fair Condition	N/A	2	SF	Confirmed	Should be replaced as part of regular maintenance.	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
1	Room 1076	Mould/ Water Damage	Plaster	N/A	Fair Condition	N/A	1	SF	Confirmed	Should be replaced as part of regular maintenance.	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
1	Room 1076	Mould/ Water Damage	Plaster	N/A	Poor Condition	N/A	2	SF	Confirmed	Must be removed following Level I mould remediation procedures, as per EACO Guidelines	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
1	Room 1080	Mould/ Water Damage	Plaster	N/A	Fair Condition	N/A	1	SF	Confirmed	Should be replaced as part of regular maintenance.	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
1	Room 1081	Mould/ Water Damage	Plaster	N/A	Fair Condition	N/A	1	SF	Confirmed	Should be replaced as part of regular maintenance.	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures

Floor/Level	Location	Type	Component	Colour	Condition	Manufacturer	Approx. Quantity	Unit	Suspected/ Confirmed	Recommended Action	Comments
1	Room 1082	Mould/ Water Damage	Plaster	N/A	Fair Condition	N/A	1	SF	Confirmed	Should be replaced as part of regular maintenance.	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
1	Room 1083	Mould/ Water Damage	Plaster	N/A	Fair Condition	N/A	1	SF	Confirmed	Should be replaced as part of regular maintenance.	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
2	Throughout Level	Mercury	Fluorescent Light Tubes	N/A	Good Condition	Varies	-	-	Confirmed	Manage in Place	
2	Room 2002	Ozone Depleting Substances (ODS)	Refrigerator/Freezer/Mini-Fridge/Water Cooler	N/A	Good Condition	Danby	1	C	Confirmed	Manage in Place	

APPENDIX F

Hazardous Containing Materials Checklists

Floor/Level	Location	Type	Component	Colour	Condition	Manufacturer	Approx. Quantity	Unit	Suspected/ Confirmed	Recommended Action	Comments
2	Room 2023	Lead	Paint	Grey	Poor Condition	N/A	<1	SF	Confirmed	Paint must be removed and/or stabilized following Class 1/2 or Type 1/2 lead Procedures as per MOL and EACO Guidelines.	
2	Room 2028	Lead	Paint	Grey	Poor Condition	N/A	<1	SF	Confirmed	Paint must be removed and/or stabilized following Class 1/2 or Type 1/2 lead Procedures as per MOL and EACO Guidelines.	
2	Room 2029	Lead	Paint	Grey	Poor Condition	N/A	2	SF	Confirmed	Paint must be removed and/or stabilized following Class 1/2 or Type 1/2 lead Procedures as per MOL and EACO Guidelines.	
2	Room 2030A	Lead	Paint	Grey	Poor Condition	N/A	1	SF	Confirmed	Paint must be removed and/or stabilized following Class 1/2 or Type 1/2 lead Procedures as per MOL and EACO Guidelines.	
2	Room 2041	Ozone Depleting Substances (ODS)	Refrigerator/Freezer/Mini-Fridge/Water Cooler	N/A	Good Condition	Various	2	C	Confirmed	Manage in Place	
2	Room 2041A	Ozone Depleting Substances (ODS)	Refrigerator/Freezer/Mini-Fridge/Water Cooler	N/A	Good Condition	Various	2	C	Confirmed	Manage in Place	
2	Room 2041	Radioactive Materials	Storage Unit	N/A	Good Condition	N/A	1	C	Confirmed	Manage in Place	
2	Room 2060	Ozone Depleting Substances (ODS)	Refrigerator/Freezer/Mini-Fridge/Water Cooler	N/A	Good Condition	Danby	1	C	Confirmed	Manage in Place	
2	Room 2066	Ozone Depleting Substances (ODS)	Refrigerator/Freezer/Mini-Fridge/Water Cooler	N/A	Good Condition	Danby	1	C	Confirmed	Manage in Place	
2	Room 2070	Lead	Paint	Grey	Poor Condition	N/A	1	SF	Confirmed	Paint must be removed and/or stabilized following Class 1/2 or Type 1/2 lead Procedures as per MOL and EACO Guidelines.	

Floor/Level	Location	Type	Component	Colour	Condition	Manufacturer	Approx. Quantity	Unit	Suspected/ Confirmed	Recommended Action	Comments
2	Room 2086	Ozone Depleting Substances (ODS)	Refrigerator/Freezer/Mini-Fridge/Water Cooler	N/A	Good Condition	Danby	1	C	Confirmed	Manage in Place	
3	Room 3065	Mould/ Water Damage	Plaster	N/A	Poor Condition	N/A	2	SF	Confirmed	Should be replaced as part of regular maintenance.	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
3	Room 3067	Mould/ Water Damage	Plaster	N/A	Fair Condition	N/A	1	SF	Confirmed	Should be replaced as part of regular maintenance.	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
3	Room 3076	Mould/ Water Damage	Plaster	N/A	Fair Condition	N/A	1	SF	Confirmed	Should be replaced as part of regular maintenance.	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
3	Room 3076	Mould/ Water Damage	Plaster	N/A	Poor Condition	N/A	1	SF	Confirmed	Should be replaced as part of regular maintenance.	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
3	Room 3077	Mould/ Water Damage	Plaster	N/A	Fair Condition	N/A	1	SF	Confirmed	Should be replaced as part of regular maintenance.	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
3	Room 3078	Mould/ Water Damage	Plaster	N/A	Fair Condition	N/A	1	SF	Confirmed	Should be replaced as part of regular maintenance.	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
3	Room 3079	Mould/ Water Damage	Plaster	N/A	Poor Condition	N/A	3	SF	Confirmed	Should be replaced as part of regular maintenance.	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures

Floor/Level	Location	Type	Component	Colour	Condition	Manufacturer	Approx. Quantity	Unit	Suspected/ Confirmed	Recommended Action	Comments
3	Room 3082	Mould/ Water Damage	Plaster	N/A	Fair Condition	N/A	1	SF	Confirmed	Should be replaced as part of regular maintenance.	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
3	Room 3083	Mould/ Water Damage	Plaster	N/A	Fair Condition	N/A	1	SF	Confirmed	Should be replaced as part of regular maintenance.	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
3	Room 3015	Lead	Paint	White	Good Condition	N/A	Throughout	-	Confirmed	Manage in Place	
3	Throughout Level	Mercury	Fluorescent Light Tubes	N/A	Good Condition	Varies	-	-	Confirmed	Manage in Place	
2	Throughout Level	Silica	Concrete, Mortar, Etc.	N/A	Good Condition	N/A	-	-	Confirmed	Manage in Place	
3	Throughout Level	Silica	Concrete, Mortar, Etc.	N/A	Good Condition	N/A	-	-	Confirmed	Manage in Place	
4	Room 4020	Lead	Paint	Dark Green	Enclosed	N/A	15	LF	Confirmed	Manage in Place	Underneath a layer of grey paint
4	Throughout Level	Mercury	Fluorescent Light Tubes	N/A	Good Condition	Varies	-	-	Confirmed	Manage in Place	
5	Throughout Level	Mercury	Fluorescent Light Tubes	N/A	Good Condition	Varies	-	-	Confirmed	Manage in Place	
5	Throughout Level	Silica	Concrete, Mortar, Etc.	N/A	Good Condition	N/A	-	-	Confirmed	Manage in Place	
5	Room 5015	Mould/ Water Damage	Plaster	N/A	Poor Condition	N/A	3	SF	Confirmed	Must be removed following Level I mould remediation procedures, as per EACO Guidelines	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
5	Room 5040	Mould/ Water Damage	Plaster	N/A	Poor Condition	N/A	4	SF	Confirmed	Must be removed following Level I mould remediation procedures, as per EACO Guidelines	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
5	Room 5082	Mould/ Water Damage	Plaster	N/A	Poor Condition	N/A	9	SF	Confirmed	Must be removed following Level I mould remediation procedures, as per EACO Guidelines	*Asbestos-containing plaster is present in this area. Please follow appropriate Abatement Procedures
6	Throughout Level	Mercury	Fluorescent Light Tubes	N/A	Good Condition	Varies	-	-	Confirmed	Manage in Place	
6	Throughout Level	Silica	Concrete, Mortar, Etc.	N/A	Good Condition	N/A	-	-	Confirmed	Manage in Place	
7	Throughout Level	Mercury	Fluorescent Light Tubes	N/A	Good Condition	Varies	-	-	Confirmed	Manage in Place	
7	Throughout Level	Silica	Concrete, Mortar, Etc.	N/A	Good Condition	N/A	-	-	Confirmed	Manage in Place	
7	Room 7028	USTs/ASTs	Diesel Storage Tank	N/A	Good Condition	N/A	1	C	Confirmed	Manage in Place	

APPENDIX G

Site Sampling & Location Plans

Legend:

▲ Asbestos Bulk Sample Locations

■ Lead Paint SampleLocations

ACM Window Caulking

Notes:

Asbestos-containing plaster present throught level.

REV	DATE	DESCRIPTION	BY

McINTOSH PERRY

6240 HIGHWAY 7, SUITE 200
WOODBRIDGE, ON., L4H 4G3

Tel: 905.856.5200 Fax: 905.695.0221
Toll Free: 1.888.348.8991

www.mcintoshperry.com

VANIER HALL

136 JEAN-JACQUES-LUSSIER

Dessin / Drawing:

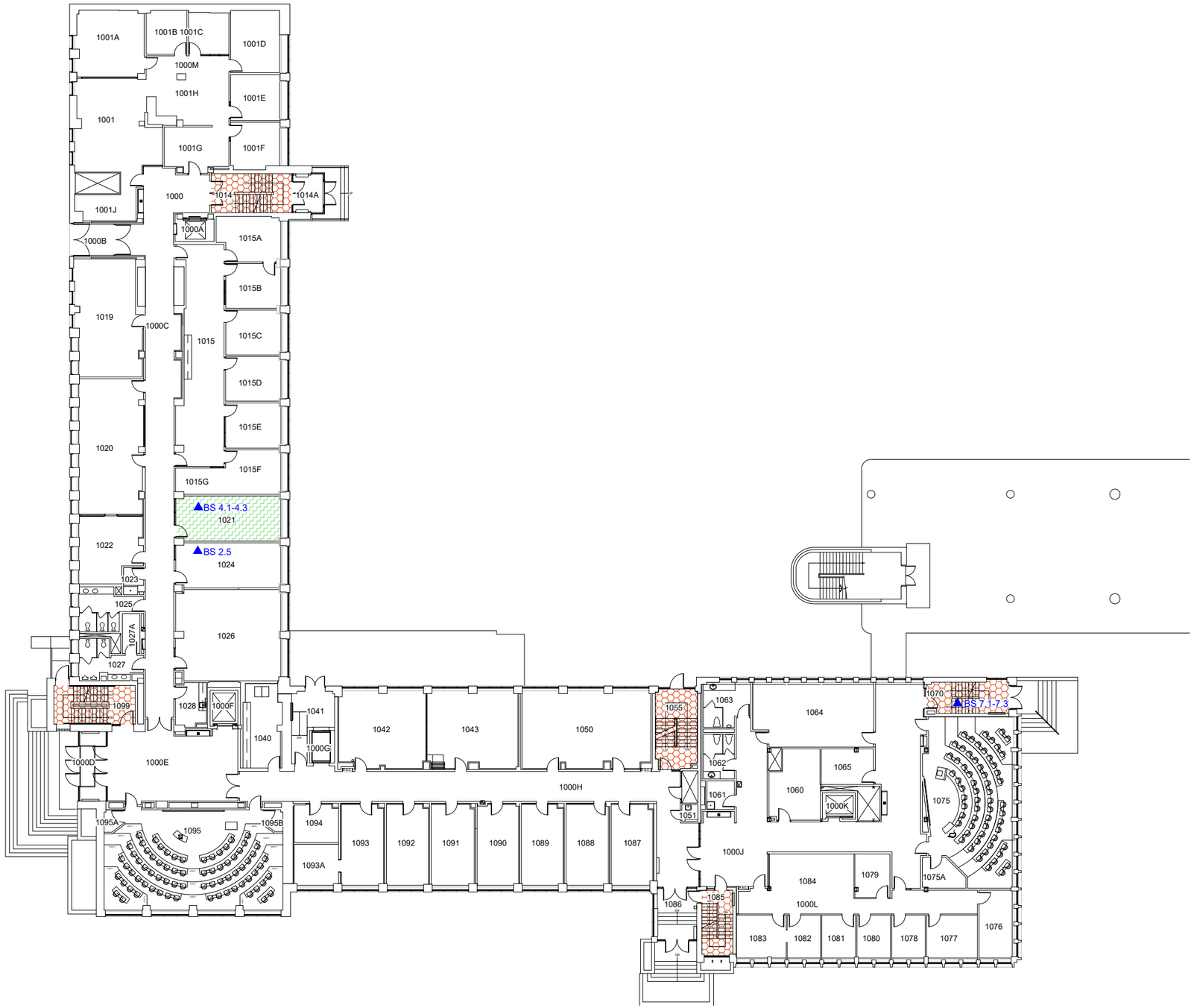
LEVEL 0

BUILDING COMBINATION

BUILDING COMBINED

Édifice/Bldg			Niveau/Level:
----	060	----	0 ----
----	----	----	Feuille/Sheet:
Échelle/Scale: 1:300	Revision: 1		A-0 of/de

JB 08/08/2015



Legend:

▲ Asbestos Bulk Sample Locations

■ Lead Paint Sample Locations

ACM Window Caulking ACM Tar

Notes:

Asbestos-containing plaster present throught level.

REV	DATE	DESCRIPTION	BY

McINTOSH PERRY
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Toll Free: 1.888.348.8991
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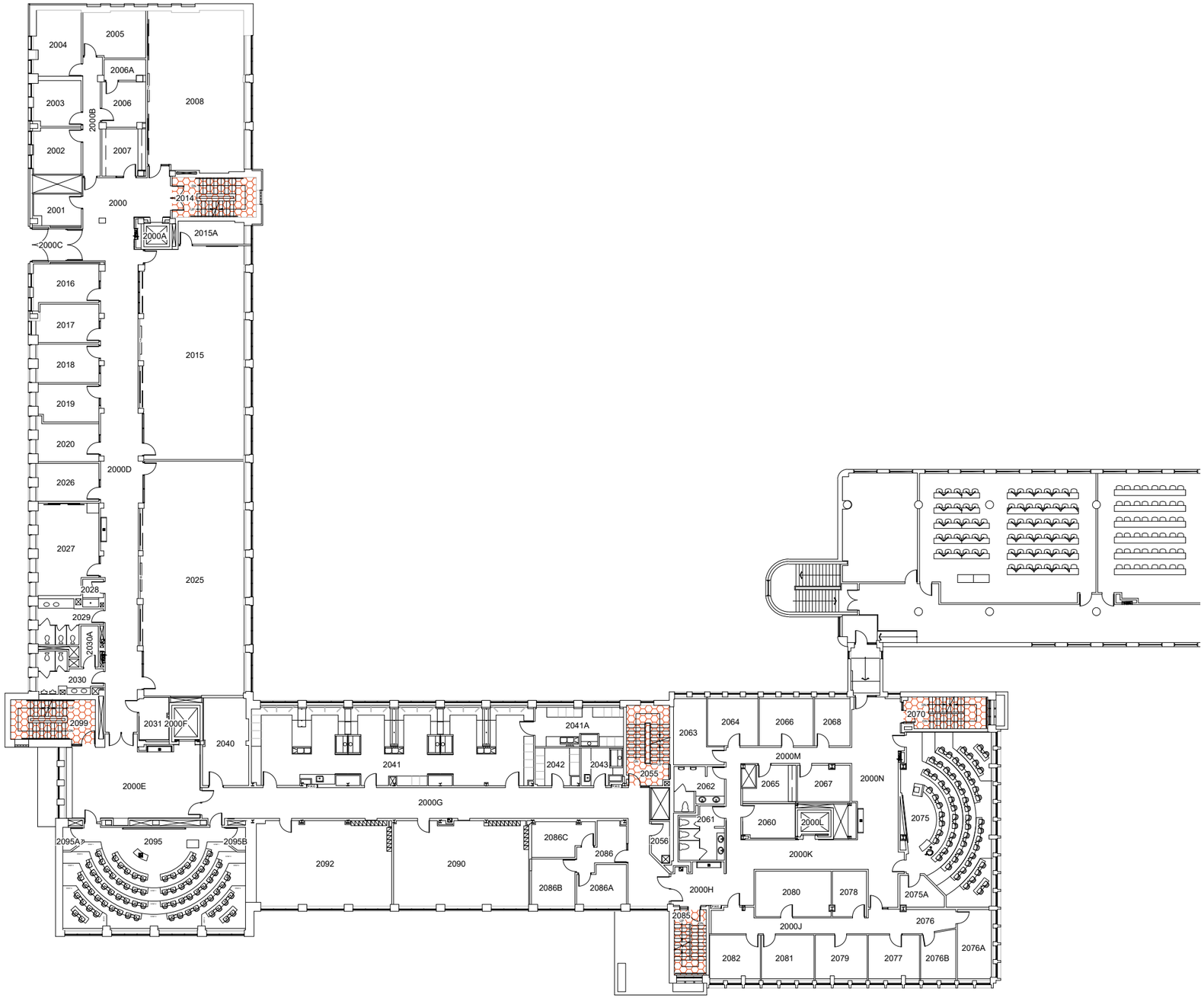
BUILDING COMBINED

Dessin / Drawing:
LEVEL 1
BUILDING COMBINATION

Édifice/Bldg	Niveau/Level:
---- 060 ----	0 ----
---- ---- ----	Feuille/Sheet: A-1
Échelle/Scale: 1:300	Revision: 1

JB 08/08/2015 of/de



Legend:

- ▲ Asbestos Bulk Sample Locations
- ■ Lead Paint SampleLocations
- ACM Window Caulking

Notes:

Asbestos-containing plaster present throught level.

REV	DATE	DESCRIPTION	BY

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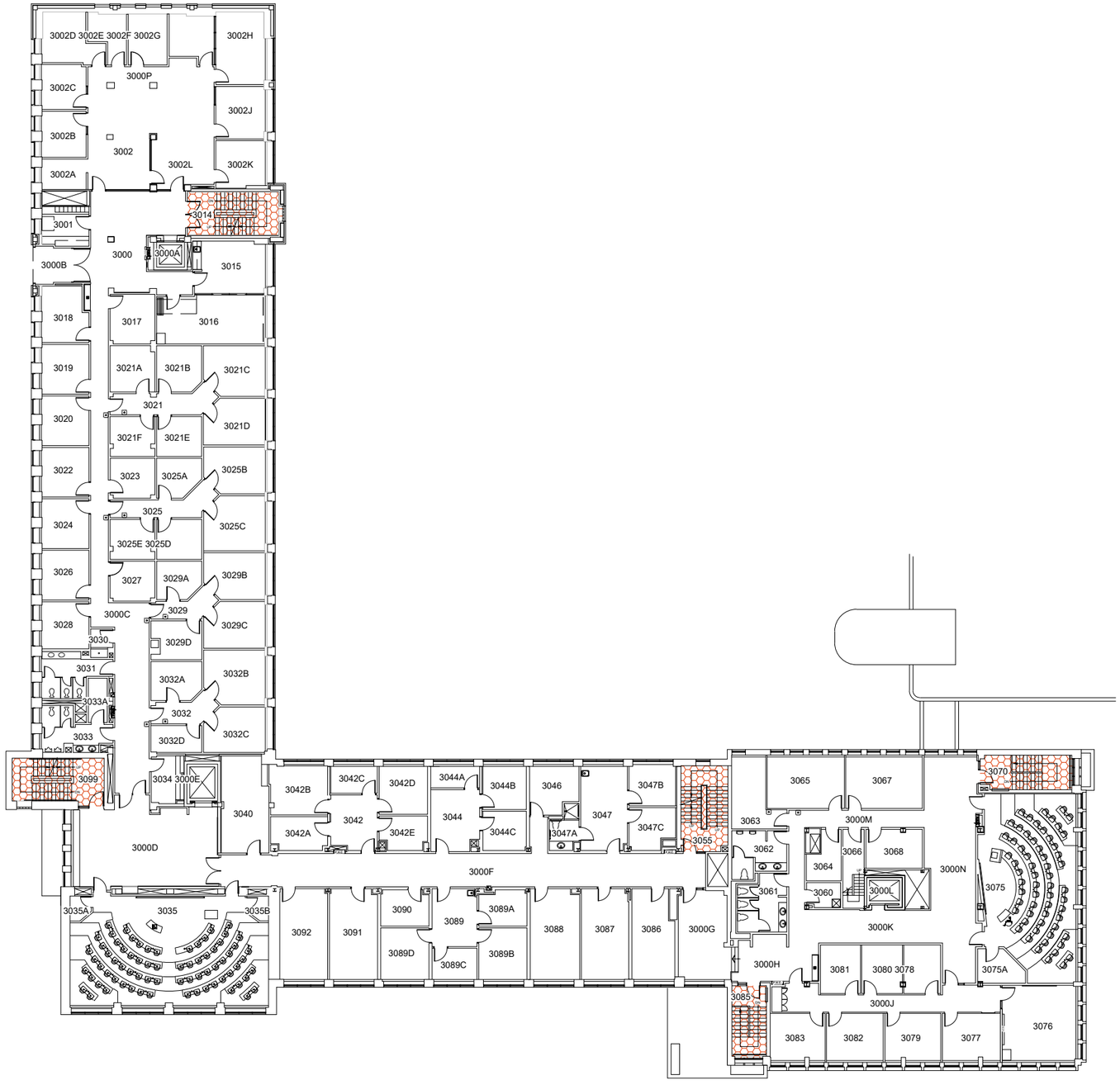
Dessin / Drawing:

LEVEL 2
BUILDING COMBINATION

Édifice/Bldg	Niveau/Level:
---- 060 ----	0 ----
Échelle/Scale: 1:350	Revision: 1
Feuille/Sheet: A-2 of/de	

BUILDING COMBINED

JB 08/09/2015



Legend:

▲ Asbestos Bulk Sample Locations

■ Lead Paint SampleLocations

ACM Window Caulking

Notes:

Asbestos-containing plaster present throught level.

REV	DATE	DESCRIPTION	BY

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Dessin / Drawing:

LEVEL 3

BUILDING COMBINATION

BUILDING COMBINED

Édifice/Bldg			Niveau/Level:
----	060	----	0 ----
----	----	----	Feuille/Sheet:
Échelle/Scale:	Revision:		A-3
1:350	1		of/de

JB 08/06/2015

Legend:

- ▲ Asbestos Bulk Sample Locations
- ■ Lead Paint SampleLocations
- ACM Window Caulking

Notes:

Asbestos-containing plaster present throught level.

REV	DATE	DESCRIPTION	BY

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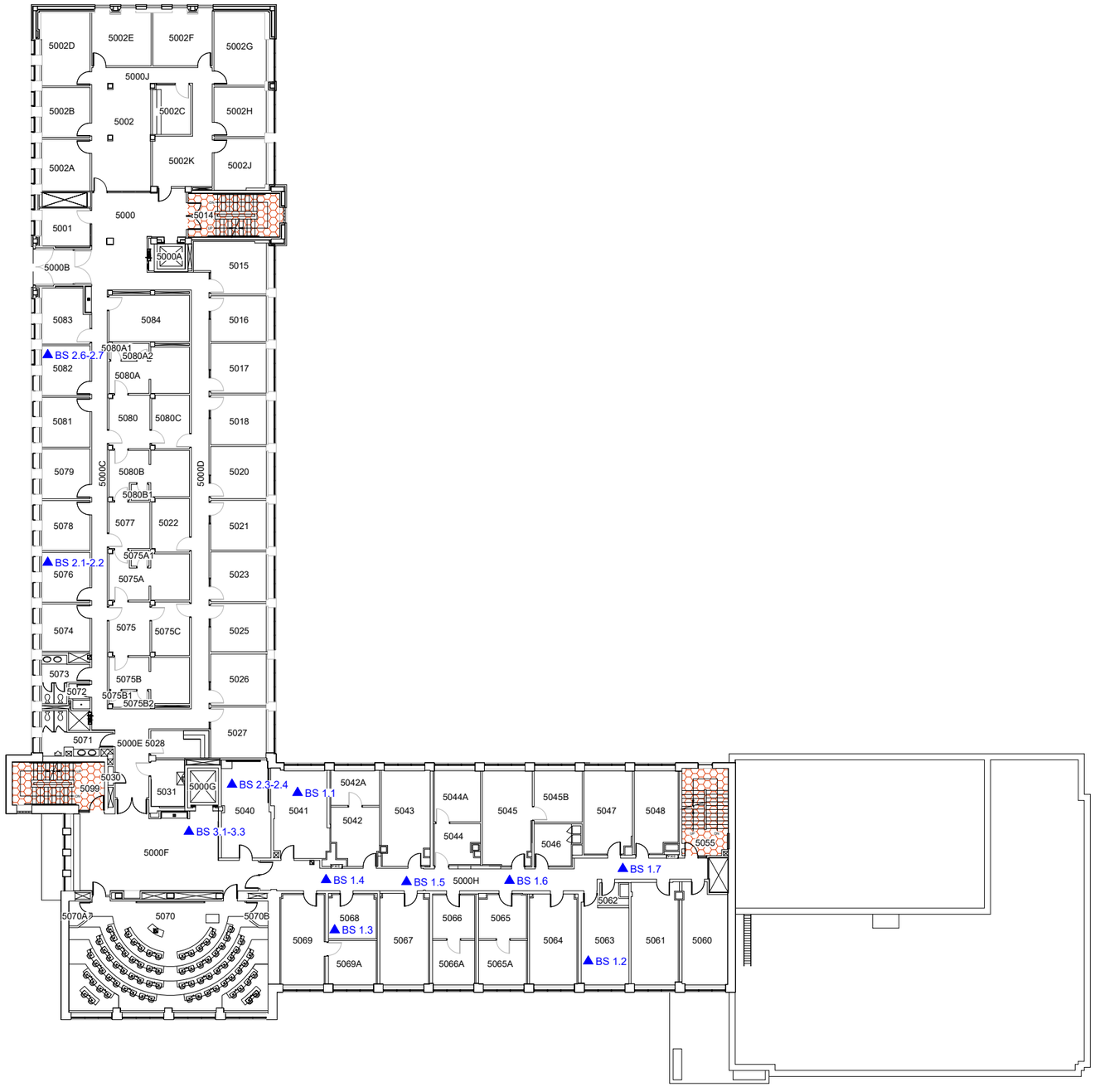
Dessin / Drawing:
LEVEL 4
BUILDING COMBINATION

Édifice/Bldg			Niveau/Level:
----	060	----	0 ----
----	----	----	Feuille/Sheet:
Échelle/Scale: 1:350	Revision: 1		A-4 of/de

BUILDING COMBINED
JB
08/06/2015



Legend:

- ▲ Asbestos Bulk Sample Locations
- ■ Lead Paint SampleLocations
- ACM Window Caulking

Notes:

Asbestos-containing plaster present throught level.

REV	DATE	DESCRIPTION	BY

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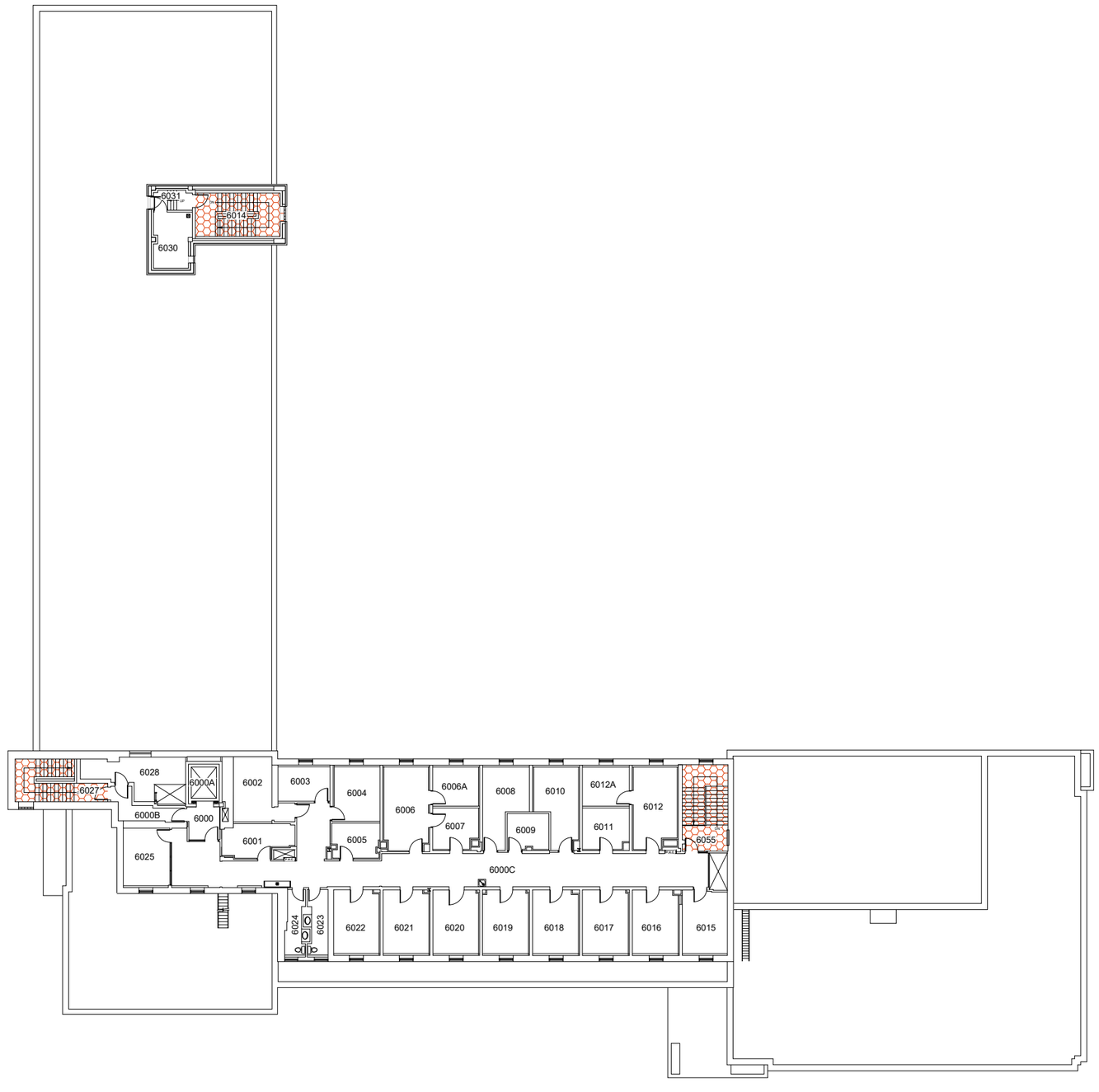
136 JEAN-JACQUES-LUSSIER

Dessin / Drawing:
LEVEL 4
BUILDING COMBINATION

BUILDING COMBINED

Édifice/Bldg			Niveau/Level:
----	060	----	0 ----
----	----	----	Feuille/Sheet:
Échelle/Scale: 1:350	Revision: 1		A-4 of/de

JB 08/06/2015



Legend:

- ▲ Asbestos Bulk Sample Locations
- ■ Lead Paint SampleLocations
- ACM Window Caulking

Notes:

Asbestos-containing plaster present throught level.

REV	DATE	DESCRIPTION	BY

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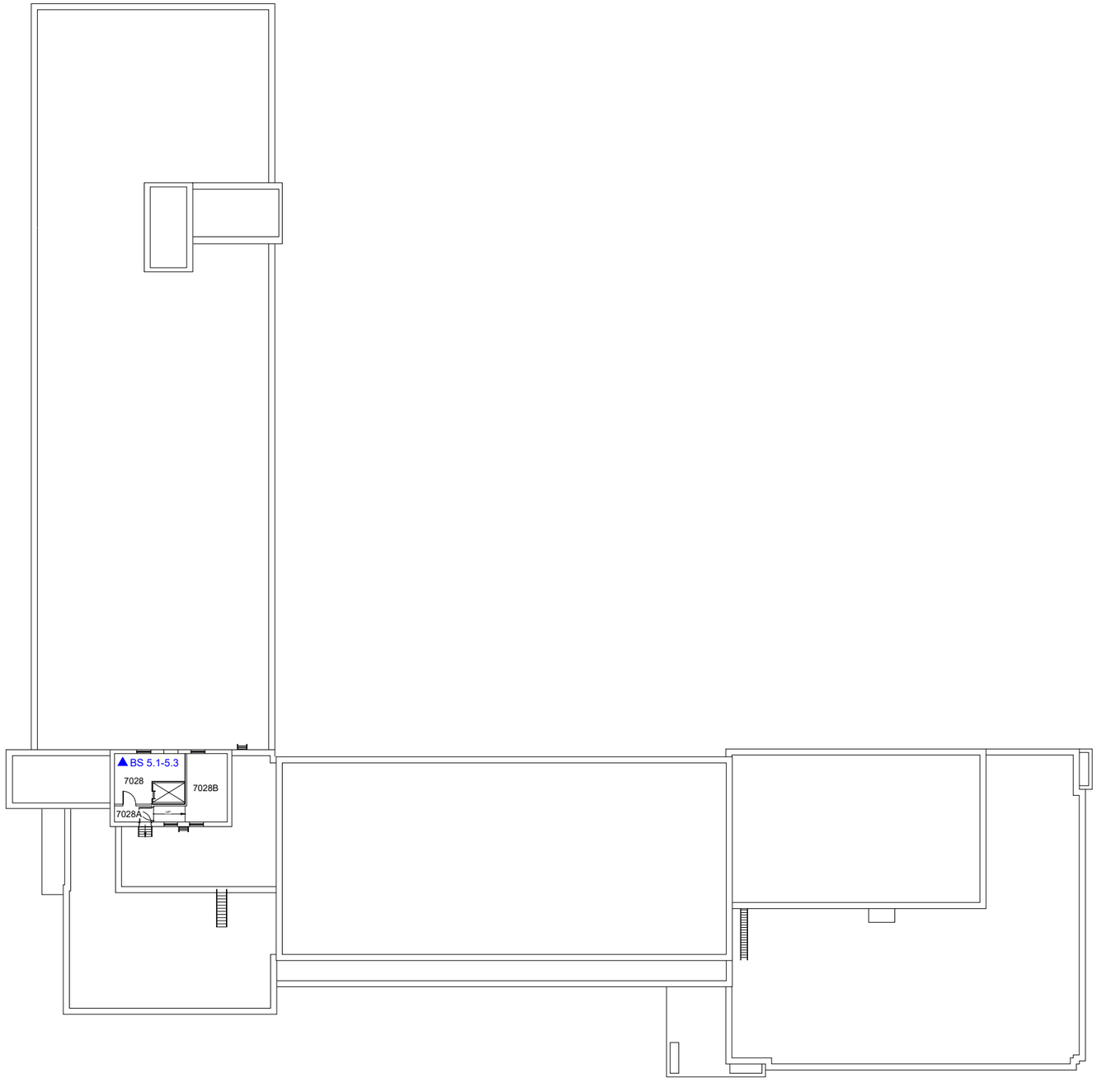
BUILDING COMBINED

Dessin / Drawing:
LEVEL 6
BUILDING COMBINATION

Édifice/Bldg	Niveau/Level:
---- 060 ----	0 ----
---- ---- ----	Feuille/Sheet: A-6
Échelle/Scale: 1:350	Revision: 1

JB 08/08/2015 of/de



Legend:

- ▲ Asbestos Bulk Sample Locations
- ■ Lead Paint SampleLocations
- ACM Window Caulking

Notes:

Asbestos-containing plaster present throught level.

REV	DATE	DESCRIPTION	BY

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Dessin / Drawing:
LEVEL 7
BUILDING COMBINATION

Édifice/Bldg			Niveau/Level:
----	060	----	0 ----
----	----	----	Feuille/Sheet:
Échelle/Scale: 1:350	Revision: 1		A-7 of/de

BUILDING COMBINED
JB
08/08/2015