

HAZARDOUS MATERIALS SURVEY AND 2023 REASSESSMENT 200 WILBROD STREET, OTTAWA, ON



Project No.: Z1920014HZ / CCC-230252-00

Prepared for:

University of Ottawa

Prepared by:

McIntosh Perry Limited (MPL)

MPL Contact:

John Tufts, Project Manager

Hazardous Materials / Environmental Health & Safety

T: 613-836-2184 E: j.tufts@mcintoshperry.com

Date:

March 12, 2024

McINTOSH PERRY

TABLE OF CONTENTS

REASSESSMENT SURVEY 2023	I
EXECUTIVE SUMMARY 2023	I
1.0 INTRODUCTION	1
2.0 PROPERTY DESCRIPTION	2
3.0 FINDINGS & RECOMMENDATIONS	2
<i>Designated Substances</i>	2
3.1 <i>Asbestos</i>	2
3.1.1 Fireproofing	4
3.1.2 Mechanical Pipe Insulation	4
3.1.3 Flexible Duct Connector	5
3.1.4 Heat Shield or Heat Shield Insulation	5
3.1.5 Texture Finishes	5
3.1.6 Plaster	5
3.1.7 Drywall Joint Compound	5
3.1.8 Ceiling Tiles	5
3.1.9 Vinyl Floor Tiles	6
3.1.10 Vinyl Sheet Floor	6
3.1.11 Transite (Asbestos Cement)	6
3.1.12 Caulking	7
3.1.13 Cementitious Coating	7
3.1.14 Fire Doors	7
3.1.15 Roofing Material	7
3.2 <i>Lead</i>	8
3.2.1 Paint Finishes	8
3.2.2 Battery Packs	9
3.3 <i>Mercury</i>	10
3.3.1 Thermostat Switches	10
3.3.2 Fluorescent Light Tubes	10

3.4	Silica.....	11
	Other Hazardous Materials	11
3.5	Polychlorinated Biphenyls (PCBs)	11
3.5.1	Light Ballasts	11
3.5.2	Transformers	11
3.6	Ozone Depleting Substances (ODSs) and Other Halocarbon.....	12
3.7	Radioactive Materials	12
3.8	Underground and Above Ground Storage Tanks (USTs and ASTs)	12
3.9	Mould.....	13
3.9.1	Mould	13
3.9.2	Water Damage.....	13
4.0	GENERAL CONSIDERATIONS AND LIMITATIONS	14

Appendix A – Regulatory Requirements

Appendix B – Survey Methodology & Background Information

Appendix C – Laboratory Certificate of Analysis

Appendix D– Site Photographs

Appendix E – Asbestos Containing Materials Checklist

Appendix F – Hazardous Containing Materials Checklist

Appendix G – Site Sampling & Location Plans

REASSESSMENT SURVEY 2023

McIntosh Perry Limited (**MPL**) was retained by the University of Ottawa, to complete to a hazardous materials survey of Marchand Residence located at 200 Wilbrod Street. The original survey was conducted on August 6th, 2019. **The reassessment was completed on August 24th, 2023.**

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 Pipe Straight Insulation (Aircell) was observed to be in Good Condition throughout the subject building except in room 010 which was found in Poor Condition.
- ACM Pipe Fitting Insulation (Parging Cement) were observed to be in Good Condition throughout the subject building.
- ACM Vinyl Floor Tiles and associated Mastic were observed to be in Good Condition throughout the subject building.
- Mould/Water damaged materials were observed in rooms 08C, 010C, 010B, 010, 011 and 100 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 2023

McIntosh Perry Limited (**MPL**) was retained by the University of Ottawa, to complete to complete a hazardous materials survey for the building located at 200 Wilbrod Street in Ottawa, ON. The original survey was conducted on August 6th, 2019. **The reassessment was completed on August 24th, 2023.**

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 previously identified or suspected to be present in the building:

Table 1: Summary of Asbestos-Containing Materials Identified

Material Description	Friable?	Location	Type of Asbestos
Mechanical Pipe Insulation	Yes	Specific Areas Only	Chrysotile
Mastic/Adhesive	No	Specific Areas Only	Chrysotile
Vinyl Floor Tiles	No	Specific Areas Only	Chrysotile
Roofing Materials	-	Roof	Suspected
Fire Doors	-	Throughout Building	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 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 previously 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
Lead Acid Batteries	Specific Areas Only
Mercury Liquid	Specific Areas Only
Ozone Depleted Substances	Specific Areas Only
Silica	Throughout Building
Mercury Vapour	Throughout Building
Mould/ Water Damage	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 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.

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

March 12, 2024

University of Ottawa
141 Louis-Pasteur Private
Ottawa, Ontario
K1N 1E3

via email: martine.bergeron@uottawa.ca

Attention: Martine Bergeron, Senior Specialist, Occupational Health and Safety

Re: 200 Wilbrod Street, Ottawa, ON
Hazardous Materials Survey and 2023 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 the institutional building located at 200 Wilbrod Street. The site is situated on the southwest corner of the intersection of Wilbrod Street and Ring Lane. The original survey was conducted on August 6th, 2019. **The reassessment was completed on August 24th, 2023.**

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;
- 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 single-storey institutional building, covering approximately 14, 700 square feet and constructed in 1920. The subject building was observed to be constructed with a concrete slab floor, exterior walls, and steel roof deck. The interior walls were gypsum wallboard and plaster on metal lath. Ceilings were observed to be either suspended ceiling tiles or plaster. The floors generally consisted of terrazzo, vinyl floor tiles and carpet.

3.0 FINDINGS & RECOMMENDATIONS

Designated Substances

3.1 Asbestos

Findings

A total of ninety (90) bulk samples were previously 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 02	Wall Plaster (White)	None Detected	N/A
		Wall Plaster (Grey)	None Detected	N/A
BS 1.2	Room 03	Wall Plaster (White)	None Detected	N/A
		Wall Plaster (Grey)	None Detected	N/A
BS 1.3	Room 03	Wall Plaster (Grey)	None Detected	N/A
BS 1.4	Room 06	Wall Plaster (White)	None Detected	N/A
		Wall Plaster (Grey)	None Detected	N/A
BS 1.5	Room 08C	Wall Plaster (White)	None Detected	N/A
		Wall Plaster (Grey)	None Detected	N/A
BS 1.6	Room 010B	Plaster (Grey)	None Detected	N/A
BS 1.7	Room 011	Wall Plaster (White)	None Detected	N/A
		Wall Plaster (Grey)	None Detected	N/A
BS 1.8	Room 015B	Wall Plaster (Grey)	None Detected	N/A
BS 1.9	Room 100	Wall Plaster (White)	None Detected	N/A
		Wall Plaster (Grey)	None Detected	N/A

Sample ID	Location	Material	Type and Content	Friability
BS 1.10	Room 100	Wall Plaster (White)	None Detected	N/A
		Wall Plaster (Grey)	None Detected	N/A
BS 1.11	Room 101	Wall Plaster (White)	None Detected	N/A
		Wall Plaster (Grey)	None Detected	N/A
BS 1.12	Room 113A	Wall Plaster (Grey)	None Detected	N/A
BS 2.1	Room 03	Drywall Joint Compound (White)	None Detected	N/A
BS 2.2	Room 06	Drywall Joint Compound (White)	None Detected	N/A
BS 2.3	Room 07	Drywall Joint Compound (White)	None Detected	N/A
BS 2.4	Room 08A	Drywall Joint Compound (White)	None Detected	N/A
BS 2.5	Room 08C	Drywall Joint Compound (White)	None Detected	N/A
BS 2.6	Room 010B	Drywall Joint Compound (White)	None Detected	N/A
BS 2.7	Room 010C	Drywall Joint Compound (White)	None Detected	N/A
BS 2.8	Room 011	Drywall Joint Compound (White)	None Detected	N/A
BS 2.9	Room 013	Drywall Joint Compound (White)	None Detected	N/A
BS 2.10	Room 014	Drywall Joint Compound (White)	None Detected	N/A
BS 2.11	Room 015B	Drywall Joint Compound (White)	None Detected	N/A
BS 2.12	Room 103	Drywall Joint Compound (White)	None Detected	N/A
BS 2.13	Room 113A	Drywall Joint Compound (White)	None Detected	N/A
BS 2.14	Room 115	Drywall Joint Compound (White)	None Detected	N/A
BS 2.15	Room 116	Drywall Joint Compound (White)	None Detected	N/A
BS 3.1	Room 07	Window Caulking (Grey)	None Detected	N/A
BS 3.2	Room 07	Window Caulking (Grey)	None Detected	N/A
BS 3.3	Room 07	Window Caulking (Grey)	None Detected	N/A
BS 4.1	Room 111	Acoustic Tile Mastic (Dark Brown)	None Detected	N/A
BS 4.2	Room 111	Acoustic Tile Mastic (Dark Brown)	None Detected	N/A
BS 4.3	Room 111	Acoustic Tile Mastic (Dark Brown)	None Detected	N/A
BS 5.1	Room 010	Ceiling Tile (2'x4'-Pinholes & Fissures)	None Detected	N/A
Bs 5.2	Room 010	Ceiling Tile (2'x4'-Pinholes & Fissures)	None Detected	N/A
BS 5.3	Room 010	Ceiling Tile (2'x4'-Pinholes & Fissures)	None Detected	N/A
BS 6.1	Room 111	Acoustic Tile (1'x1' with Uniform Pinholes)	None Detected	N/A
BS 6.2	Room 111	Acoustic Tile (1'x1' with Uniform Pinholes)	None Detected	N/A
BS 6.3	Room 111	Acoustic Tile (1'x1' with Uniform Pinholes)	None Detected	N/A
BS 7.1	Room 07	VFT (12"x12"-White with Black Flakes & Carpet Mastic)	None Detected	N/A
		Mastic (Black)	3% Chrysotile	Non-Friable
		Mastic (Yellow)	None Detected	N/A

Sample ID	Location	Material	Type and Content	Friability
BS 7.2	Room 07	VFT (12"x12"-White with Black Flakes & Carpet Mastic)	None Detected	N/A
		Mastic (Black)	Stop Positive	Non-Friable
		Mastic (Yellow)	None Detected	N/A
BS 7.3	Room 07	VFT (12"x12"-White with Black Flakes & Carpet Mastic)	None Detected	N/A
		Mastic (Black)	Stop Positive	Non-Friable
		Mastic (Yellow)	None Detected	N/A

N/A – Not Applicable

VFT – Vinyl Floor 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, approximate quantities (where applicable), and recommended actions.

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

3.1.1 Fireproofing

No fireproofing was observed in the subject building.

3.1.2 Mechanical Pipe Insulation

3.1.2.1 Mechanical Pipe Straight Insulation

Previously identified Aircell pipe insulation was observed in Room 03, 04, 05, 010, 011, 013, 014, 015A, 015B and 100. This material **contains 70% Chrysotile asbestos** and is considered to be friable. This material was observed to be in good condition.

3.1.2.2 Mechanical Piping Elbows/Fittings Insulation

Previously identified parging cement elbows were observed in Room 02A, 03, 05, 07, 08 (A&C), 010 (A-C), 011, 013, 014 and 015B. This material **contains 65% Chrysotile asbestos** and is considered to be friable. This material was observed to be in good condition with the exception of select areas that were observed in poor condition.

3.1.2.3 Mechanical Piping Hangers Insulation

Mechanical pipe hanger insulation was observed in Room 010 and 100. MPL made several incisions throughout to investigate its composition, and it was visually identified as fiberglass, and therefore not suspected of containing asbestos.

3.1.2.4 HVAC Duct Insulation

HVAC duct insulation observed within the subject building was visually identified to be a material not suspected to contain asbestos (i.e. fibreglass) and thus not sampled.

3.1.2.5 Other Mechanical Insulation

No other mechanical insulation was observed in the subject building.

3.1.3 Flexible Duct Connector

No flexible duct connectors were observed in the subject building.

3.1.4 Heat Shield or Heat Shield Insulation

No potential asbestos-containing 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

Wall plaster was observed throughout the subject building and previously sampled from Rooms 02, 03, 06, 08C, 010B, 011, 015B, 100, 101, and 113A. The laboratory analytical results of the wall plaster samples collected indicated that this material does not contain asbestos.

Ceiling plaster was previously sampled throughout the subject building. The laboratory analytical results of the samples collected indicated that this material does not contain asbestos.

3.1.7 Drywall Joint Compound

Drywall joint compound was observed throughout the subject building and previously sampled from Rooms 03, 06, 07, 08A, 08C, 010B, 010C, 011, 013, 014, 015B, 103, 113A, 115, and 116. The laboratory analytical results of the drywall joint compound samples collected indicated that this material does not contain asbestos.

3.1.8 Ceiling Tiles

Ceiling tiles were observed in various locations throughout the subject building.

- Suspended ceiling tiles (2'x4' – Pinholes & Small Fissures) were observed in Room 100. The date stamp on the back of these tiles indicated that they were manufactured in 2015 and therefore, this material is not considered to contain asbestos.
- Suspended ceiling tiles (2'x4' – Pinholes & Small Fissures) were observed in Room 102. The date stamp on the back of these tiles indicated that they were manufactured in 2016 and therefore, this material is not considered to contain asbestos.

- Suspended ceiling tiles (2'x4' – Pinholes & Fissures) were observed and sampled in Room 010. The laboratory analytical results indicate that this material does not contain asbestos.
- Glued-on ceiling tiles (1'x1' – Uniform Pinholes) were observed and sampled in Room 111. The laboratory analytical results indicate that this material does not contain asbestos. The associated mastic pucks (Dark Brown) were also determined not to contain asbestos.

3.1.9 Vinyl Floor Tiles

Several different types of vinyl floor tiles were observed and previously sampled within the building as follows:

- Previously identified asbestos-containing vinyl floor tiles (9"x9" – Light Grey w/ Streaks) were observed in Room 015A, and 015. This material **contains 3% Chrysotile asbestos** and is considered to be non-friable. The associated mastic was also found to **contain 5% Chrysotile asbestos**. This material was observed to be in good condition.
- Previously identified asbestos-containing vinyl floor tiles (9"x9" – Dark Grey w/ Streaks) were observed in Room 113A, 113B, 114A, and 114B. This material **contains 3% Chrysotile asbestos** and is considered to be non-friable. The associated mastic was also found to **contains 5% Chrysotile asbestos**. This material was observed to be in good condition.
- Previously identified asbestos-containing vinyl floor tiles (9"x9" – Pink) were observed in 015, 015A, 113A, 113B, 114A, and 114B. This material **contains 3% Chrysotile asbestos** and is considered to be non-friable. This material was observed to be in good condition.
- Vinyl floor tiles (12"x12"-White with Black Flakes) were observed and sampled in Room 03 and 07. The laboratory analytical results of the vinyl floor tile samples collected indicate that this material does not contain asbestos. The associated mastic (Black) was found to **contains 5% Chrysotile asbestos**. This material was observed to be in good condition.
- Vinyl floor tiles (12"x12" – White) were previously sampled in Rooms 05, 06, 07. The laboratory analytical results of the samples collected indicated that this material does not contain asbestos.

3.1.10 Vinyl Sheet Floor

No vinyl sheet flooring was observed in the subject building.

3.1.11 Transite (Asbestos Cement)

No transite materials were observed in the subject building.

3.1.12 Caulking

Window caulking (Grey) was previously sampled from Room 07. The laboratory analytical results indicate that this material does not contain asbestos.

3.1.13 Cementitious Coating

Cementitious wall coating was previously sampled in Room 010. The laboratory analytical results of the samples collected indicated that this material does not contain asbestos.

3.1.14 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.

3.1.15 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, approximate 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

A total of five (5) paint samples from the subject building were previously collected and analyzed for lead content. Results of bulk sampling testing are summarized in Table 2 and the laboratory certificate of analysis can be found in Appendix C.

Table 2:

Lead Sampling Locations and Laboratory Results

Sample I.D.	Location	Material	Colour	Lead Concentration Weight by Conc. (%)
Pb-1	111	Door Paint	Maroon	0.0529
Pb-2	111	Wall Paint	Beige	0.0259
Pb-4	012	Wall Paint	Pink	0.0027
Pb-5	03	Wall Paint	Light Green	0.0430
Pb-6	014	Wall Paint	Dark Purple	<0.0009
Previously Identified Lead Paint Finishes				
LBP-02	Site Exterior	Window Frame Paint	Black	0.01

Sample I.D.	Location	Material	Colour	Lead Concentration Weight by Conc. (%)
LBP-03	Front Entrance	Wall Paint	Beige	0.02

The paint finishes highlighted in blue in the above table were determined to contain low concentrations of lead which are less than or equal to 0.1%. These paint finishes were observed to be in good condition with the exception of select areas that were observed 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.

Laboratory certificate of analysis for the paint samples are also included in Appendix C.

3.2.2 Battery Packs

MPL identified lead-containing acid battery packs throughout the subject building. These battery packs were observed on walls and above exits throughout the surveyed building.

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 Guideline “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.

Please refer to Appendix F – Hazardous Materials Checklist for material conditions, approximate 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 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 observed thermostat switches suspected of containing liquid mercury throughout the subject building.

3.3.2 Fluorescent Light Tubes

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

Recommendations

Please refer to Appendix F – Hazardous Materials Checklist for equipment conditions, approximate 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, approximate 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/m³.

This can be achieved by:

- 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 Hammond Manufacturing.

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. Equipment containing ODSs or other halocarbons was observed in the subject building.

Recommendations

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

Under the management of a licensed contractor, equipment containing 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

MPL did not observe any electrical components containing radioactive materials.

Recommendations

Since no radioactive materials were observed or suspected to be present during the site survey, no further action is required.

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. No USTs and ASTs were present within the surveyed area.

Recommendations

Since no underground and/or above ground storage tanks (USTs and ASTs) were observed or suspected to be present during the site survey, no further action is required.

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 identified areas with 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 areas affected by water damage.

Recommendations

Since no suspected mould growth or water damaged materials were observed or suspected to be present during the site survey, no further action is required.

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



Pegah Parichehreh, M.Sc.
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 AIHA accredited independent laboratory for analysis. Laboratory Certificate of Analysis are attached in Appendix A.

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 200 Willbrod Avenue 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:

- Site Specific Designated Substances Assessment by EHS (dated March 6 2012, EHS Project No. 04-0033-12-009);
- Asbestos Abatement Project Summary Report by EHS (dated February 9, 2016, EHS Project No. 04-0033-15-014);
- Asbestos Sampling Report by EHS (report dated July 2 2015, EHS Project No. 04-0033-15-014);
- Asbestos Sampling Report by EHS (report dated October 6 2015, EHS Project No. 04-0033-15-014);

- Asbestos Abatement Project Summary Report by EHS (dated October 18 2015, EHS Project No. 04-0033-15-014);
- Asbestos Abatement Project Summary Report by EHS (dated October 9 2015, EHS Project No. 04-0033-15-014);
- Asbestos Sampling Report by SLR (report dated April 6 2009, SLR Project No. 216.09448.00);
- Pre-Construction Designated Substances Review by EHS (dated April 22 2015, EHS Project No. 04-0033-15-014); and,
- Project Specific Designated Substances Survey by EHS (dated September 2012, EHS Project No. 04-0033-12-030).

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.

As part of this survey, sampling was conducted for representative paints that were not previously sampled. Paints that were previously sampled and identified to contain lead were not re-sampled.

Where applicable, 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 hydrochlorofluorocarbons (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

Certificate of Analysis

McIntosh Perry Limited (Concord)

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

Client PO:
Project: Z1920014HZ
Custody:

Report Date: 12-Sep-2019
Order Date: 6-Sep-2019

Order #: 1936455

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

Paracel ID	Client ID
1936455-01.1	BS1.1 02 - Wall Plaster
1936455-01.2	BS1.1 02 - Wall Plaster
1936455-02.1	BS1.2 03 - Wall Plaster
1936455-02.2	BS1.2 03 - Wall Plaster
1936455-03	BS1.3 04 - Wall Plaster
1936455-04.1	BS1.4 06 - Wall Plaster
1936455-04.2	BS1.4 06 - Wall Plaster
1936455-05.1	BS1.5 08C - Wall Plaster
1936455-05.2	BS1.5 08C - Wall Plaster
1936455-06	BS1.6 010B - Wall Plaster
1936455-07.1	BS1.7 011 - Wall Plaster
1936455-07.2	BS1.7 011 - Wall Plaster
1936455-08	BS1.8 015B - Wall Plaster
1936455-09.1	BS1.9 100 - Wall Plaster
1936455-09.2	BS1.9 100 - Wall Plaster
1936455-10.1	BS1.10 100 - Wall Plaster
1936455-10.2	BS1.10 100 - Wall Plaster
1936455-11.1	BS1.11 101 - Wall Plaster
1936455-11.2	BS1.11 101 - Wall Plaster
1936455-12	BS1.12 113A - Wall Plaster
1936455-13	BS2.1 03 - Drywall Joint Compound
1936455-14	BS2.2 06 - Drywall Joint Compound
1936455-15	BS2.3 07 - Drywall Joint Compound
1936455-16	BS2.4 08A - Drywall Joint Compound
1936455-17	BS2.5 08C - Drywall Joint Compound
1936455-18	BS2.6 010B - Drywall Joint Compound

Approved By:



Emma Diaz
Senior Analyst

Certificate of Analysis

Report Date: 12-Sep-2019

Client: McIntosh Perry Limited (Concord)

Order Date: 6-Sep-2019

Client PO:

Project Description: Z1920014HZ

1936455-19	BS2.7 010C - Drywall Joint Compound
1936455-20	BS2.8 011 - Drywall Joint Compound
1936455-21	BS2.9 013 - Drywall Joint Compound
1936455-22	BS2.10 014 - Drywall Joint Compound
1936455-23	BS2.11 015B - Drywall Joint Compound
1936455-24	BS2.12 103 - Drywall Joint Compound
1936455-25	BS2.13 113A - Drywall Joint Compound
1936455-26	BS2.14 115 - Drywall Joint Compound
1936455-27	BS2.15 116 - Drywall Joint Compound
1936455-28	BS3.1 07 - Window Caulking (Grey)
1936455-29	BS3.2 07 - Window Caulking (Grey)
1936455-30	BS3.3 07 - Window Caulking (Grey)
1936455-31	BS4.1 111 - Acoustic Tile Mastic Puck (Dark Brown)
1936455-32	BS4.2 111 - Acoustic Tile Mastic Puck (Dark Brown)
1936455-33	BS4.3 111 - Acoustic Tile Mastic Puck (Dark Brown)
1936455-34	BS5.1 010 - Ceiling Tile 2x4' - Pinholes & Fissures
1936455-35	BS5.2 010 - Ceiling Tile 2x4' - Pinholes & Fissures
1936455-36	BS5.3 010 - Ceiling Tile 2x4' - Pinholes & Fissures
1936455-37	BS6.1 111 - Acoustic Tile - 1x1' w/ Uniform Pinholes
1936455-38	BS6.2 111 - Acoustic Tile - 1x1' w/ Uniform Pinholes
1936455-39	BS6.3 111 - Acoustic Tile - 1x1' w/ Uniform Pinholes
1936455-40.1	BS7.1 07 - VFT12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)
1936455-40.2	BS7.1 07 - VFT12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)
1936455-40.3	BS7.1 07 - VFT12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)
1936455-41.1	BS7.2 07 - VFT12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)
1936455-41.2	BS7.2 07 - VFT12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)
1936455-41.3	BS7.2 07 - VFT12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)
1936455-42.1	BS7.3 07 - VFT12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)
1936455-42.2	BS7.3 07 - VFT12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)
1936455-42.3	BS7.3 07 - VFT12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)

Certificate of Analysis

Report Date: 12-Sep-2019

Client: McIntosh Perry Limited (Concord)

Order Date: 6-Sep-2019

Client PO:

Project Description: Z1920014HZ

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
1936455-01.1	06-Aug-19	White	Plaster	No	Client ID: BS1.1 02 - Wall Plaster	
					Non-Fibers	100
1936455-01.2	06-Aug-19	Grey	Plaster	No	Client ID: BS1.1 02 - Wall Plaster	
					Non-Fibers	100
1936455-02.1	06-Aug-19	White	Plaster	No	Client ID: BS1.2 03 - Wall Plaster	
					Non-Fibers	100
1936455-02.2	06-Aug-19	Grey	Plaster	No	Client ID: BS1.2 03 - Wall Plaster	
					Non-Fibers	100
1936455-03	06-Aug-19	Grey	Plaster	No	Client ID: BS1.3 04 - Wall Plaster	
					Non-Fibers	100
1936455-04.1	06-Aug-19	White	Plaster	No	Client ID: BS1.4 06 - Wall Plaster	
					Non-Fibers	100
1936455-04.2	06-Aug-19	Grey	Plaster	No	Client ID: BS1.4 06 - Wall Plaster	
					Non-Fibers	100
1936455-05.1	06-Aug-19	White	Plaster	No	Client ID: BS1.5 08C - Wall Plaster	
					Non-Fibers	100
1936455-05.2	06-Aug-19	Grey	Plaster	No	Client ID: BS1.5 08C - Wall Plaster	
					Non-Fibers	100
1936455-06	06-Aug-19	Grey	Plaster	No	Client ID: BS1.6 010B - Wall Plaster	
					Non-Fibers	100
1936455-07.1	06-Aug-19	White	Plaster	No	Client ID: BS1.7 011 - Wall Plaster	
					Non-Fibers	100
1936455-07.2	06-Aug-19	Grey	Plaster	No	Client ID: BS1.7 011 - Wall Plaster	
					Non-Fibers	100

Certificate of Analysis

Client: **McIntosh Perry Limited (Concord)**

Client PO:

Report Date: 12-Sep-2019

Order Date: 6-Sep-2019

Project Description: **Z1920014HZ**

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
1936455-08	06-Aug-19	Grey	Plaster	No	Client ID: BS1.8 015B - Wall Plaster	
					Non-Fibers	100
1936455-09.1	06-Aug-19	White	Plaster	No	Client ID: BS1.9 100 - Wall Plaster	
					Non-Fibers	100
1936455-09.2	06-Aug-19	Grey	Plaster	No	Client ID: BS1.9 100 - Wall Plaster	
					Non-Fibers	100
1936455-10.1	06-Aug-19	White	Plaster	No	Client ID: BS1.10 100 - Wall Plaster	
					Non-Fibers	100
1936455-10.2	06-Aug-19	Grey	Plaster	No	Client ID: BS1.10 100 - Wall Plaster	
					Non-Fibers	100
1936455-11.1	06-Aug-19	White	Plaster	No	Client ID: BS1.11 101 - Wall Plaster	
					Non-Fibers	100
1936455-11.2	06-Aug-19	Grey	Plaster	No	Client ID: BS1.11 101 - Wall Plaster	
					Non-Fibers	100
1936455-12	06-Aug-19	Grey	Plaster	No	Client ID: BS1.12 113A - Wall Plaster	
					Non-Fibers	100
1936455-13	06-Aug-19	White	Drywall Joint Compound	No	Client ID: BS2.1 03 - Drywall Joint Compound	
					Non-Fibers	100
1936455-14	06-Aug-19	White	Drywall Joint Compound	No	Client ID: BS2.2 06 - Drywall Joint Compound	
					Non-Fibers	100
1936455-15	06-Aug-19	White	Drywall Joint Compound	No	Client ID: BS2.3 07 - Drywall Joint Compound	
					Non-Fibers	100
1936455-16	06-Aug-19	White	Drywall Joint Compound	No	Client ID: BS2.4 08A - Drywall Joint Compound	
					Non-Fibers	100

Certificate of Analysis

Report Date: 12-Sep-2019

Client: McIntosh Perry Limited (Concord)

Order Date: 6-Sep-2019

Client PO:

Project Description: Z1920014HZ

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
1936455-17	06-Aug-19	White	Drywall Joint Compound	No	Client ID: BS2.5 08C - Drywall Joint Compound	
					Non-Fibers	100
1936455-18	06-Aug-19	White	Drywall Joint Compound	No	Client ID: BS2.6 010B - Drywall Joint Compound	
					Non-Fibers	100
1936455-19	06-Aug-19	White	Drywall Joint Compound	No	Client ID: BS2.7 010C - Drywall Joint Compound	
					Non-Fibers	100
1936455-20	06-Aug-19	White	Drywall Joint Compound	No	Client ID: BS2.8 011 - Drywall Joint Compound	
					Non-Fibers	100
1936455-21	06-Aug-19	White	Drywall Joint Compound	No	Client ID: BS2.9 013 - Drywall Joint Compound	
					Non-Fibers	100
1936455-22	06-Aug-19	White	Drywall Joint Compound	No	Client ID: BS2.10 014 - Drywall Joint Compound	
					Non-Fibers	100
1936455-23	06-Aug-19				Client ID: BS2.11 015B - Drywall Joint Compound	
					[Z-01]	
					not analyzed	
1936455-24	06-Aug-19	White	Drywall Joint Compound	No	Client ID: BS2.12 103 - Drywall Joint Compound	
					Non-Fibers	100
1936455-25	06-Aug-19	White	Drywall Joint Compound	No	Client ID: BS2.13 113A - Drywall Joint Compound	
					Non-Fibers	100
1936455-26	06-Aug-19	White	Drywall Joint Compound	No	Client ID: BS2.14 115 - Drywall Joint Compound	
					Non-Fibers	100
1936455-27	06-Aug-19	White	Drywall Joint Compound	No	Client ID: BS2.15 116 - Drywall Joint Compound	
					Non-Fibers	100
1936455-28	06-Aug-19	Grey	Caulking	No	Client ID: BS3.1 07 - Window Caulking (Grey)	
					Non-Fibers	100

Certificate of Analysis

Report Date: 12-Sep-2019

Client: McIntosh Perry Limited (Concord)

Order Date: 6-Sep-2019

Client PO:

Project Description: Z1920014HZ

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
1936455-29	06-Aug-19	Grey	Caulking	No	Client ID: BS3.2 07 - Window Caulking (Grey)	
					Non-Fibers	100
1936455-30	06-Aug-19	Grey	Caulking	No	Client ID: BS3.3 07 - Window Caulking (Grey)	
					Non-Fibers	100
1936455-31	06-Aug-19	Brown	Mastic	No	Client ID: BS4.1 111 - Acoustic Tile Mastic Puck (Dark Brown)	
					Non-Fibers	100
1936455-32	06-Aug-19	Brown	Mastic	No	Client ID: BS4.2 111 - Acoustic Tile Mastic Puck (Dark Brown)	
					Non-Fibers	100
1936455-33	06-Aug-19	Brown	Mastic	No	Client ID: BS4.3 111 - Acoustic Tile Mastic Puck (Dark Brown)	
					Non-Fibers	100
1936455-34	06-Aug-19	Brown	Ceiling Tile	No	Client ID: BS5.1 010 - Ceiling Tile 2x4' - Pinholes & Fissures	
					Cellulose	95
					Non-Fibers	5
1936455-35	06-Aug-19	Brown	Ceiling Tile	No	Client ID: BS5.2 010 - Ceiling Tile 2x4' - Pinholes & Fissures	
					Cellulose	95
					Non-Fibers	5
1936455-36	06-Aug-19	Brown	Ceiling Tile	No	Client ID: BS5.3 010 - Ceiling Tile 2x4' - Pinholes & Fissures	
					Cellulose	95
					Non-Fibers	5
1936455-37	06-Aug-19	Grey	Ceiling Tile	No	Client ID: BS6.1 111 - Acoustic Tile - 1x1' w/ Uniform Pinholes	
					Cellulose	40
					MMVF	30
					Non-Fibers	30

Certificate of Analysis

Client: McIntosh Perry Limited (Concord)

Client PO:

Report Date: 12-Sep-2019

Order Date: 6-Sep-2019

Project Description: Z1920014HZ

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
1936455-38	06-Aug-19	Grey	Ceiling Tile	No	Client ID: BS6.2 111 - Acoustic Tile - 1x1' w/ Uniform Pinholes	
					Cellulose	40
					MMVF	30
					Non-Fibers	30
1936455-39	06-Aug-19	Grey	Ceiling Tile	No	Client ID: BS6.3 111 - Acoustic Tile - 1x1' w/ Uniform Pinholes	
					Cellulose	40
					MMVF	30
					Non-Fibers	30
1936455-40.1	06-Aug-19	White	Vinyl Floor Tile	No	Client ID: BS7.1 07 - VFT12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)	
					Non-Fibers	100
1936455-40.2	06-Aug-19	Black	Mastic	Yes	Client ID: BS7.1 07 - VFT12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)	
					Chrysotile	3
					Non-Fibers	97
1936455-40.3	06-Aug-19	Yellow	Mastic	No	Client ID: BS7.1 07 - VFT12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)	
					Non-Fibers	100
1936455-41.1	06-Aug-19	White	Vinyl Floor Tile	No	Client ID: BS7.2 07 - VFT12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)	
					Non-Fibers	100
1936455-41.2	06-Aug-19				Client ID: BS7.2 07 - VFT12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)	
					not analyzed	
1936455-41.3	06-Aug-19	Yellow	Mastic	No	Client ID: BS7.2 07 - VFT12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)	
					Non-Fibers	100
1936455-42.1	06-Aug-19	White	Vinyl Floor Tile	No	Client ID: BS7.3 07 - VFT12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)	
					Non-Fibers	100
1936455-42.2	06-Aug-19				Client ID: BS7.3 07 - VFT12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)	
					not analyzed	

Certificate of Analysis

Report Date: 12-Sep-2019

Client: McIntosh Perry Limited (Concord)

Order Date: 6-Sep-2019

Client PO:
Project Description: Z1920014HZ

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
1936455-42.3	06-Aug-19	Yellow	Mastic	No	Client ID: BS7.3 07 - VFT12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)	
					Non-Fibers	100

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

** Analytes in bold indicate asbestos mineral content.

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	10-Sep-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 :

Z-01: No sample in bag.

Work Order Revisions | Comments

None



Client Name: McIntosh Perry

Contact Name: Diana Banakh

Address: 6240 Highway 7, Suite 200, Concord, Ontario L4K 2A3

Telephone: 905-856-5200

PROJECT REFERENCE: 19-651

Quote #: 19-651

PO #:

Email Address: d.banakh@mcintoshperry.com

Page 1 of 2

Turnaround Time:

☐ Immediate ☐ 1 Day
☐ 4 Hour ☐ 2 Day
☐ 8 Hour ☒ Regular

Date Required:

ASBESTOS & MOLD ANALYSIS

Matrix: ☐ Air ☒ Bulk ☐ Tape Lift ☐ Swab ☐ Other

Regulatory Guideline: ☒ ON ☐ QC ☐ AB ☐ SK ☐ Other:

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

Paracel Order Number:

1936455

Asbestos - Bulk

Sample ID	Sampling Date	Air Volume (L)	Analysis Required	Identify Distinct Building Materials to Be Analyzed	Positive Stop?
BS1.1	02 - Wall Plaster	Aug. 6, 2019	N/A	PLM	
BS1.2	03 - Wall Plaster	Aug. 6, 2019	N/A	PLM	X
BS1.3	04 - Wall Plaster	Aug. 6, 2019	N/A	PLM	X
BS1.4	06 - Wall Plaster	Aug. 6, 2019	N/A	PLM	X
BS1.5	08C - Wall Plaster	Aug. 6, 2019	N/A	PLM	X
BS1.6	010B - Wall Plaster	Aug. 6, 2019	N/A	PLM	X
BS1.7	011 - Wall Plaster	Aug. 6, 2019	N/A	PLM	X
BS1.8	015B - Wall Plaster	Aug. 6, 2019	N/A	PLM	X
BS1.9	100 - Wall Plaster	Aug. 6, 2019	N/A	PLM	X
BS1.10	100 - Wall Plaster	Aug. 6, 2019	N/A	PLM	X
BS1.11	101 - Wall Plaster	Aug. 6, 2019	N/A	PLM	X
BS1.12	113A - Wall Plaster	Aug. 6, 2019	N/A	PLM	X
BS2.1	03 - Drywall Joint Compound	Aug. 6, 2019	N/A	PLM	X
BS2.2	06 - Drywall Joint Compound	Aug. 6, 2019	N/A	PLM	X
BS2.3	07 - Drywall Joint Compound	Aug. 6, 2019	N/A	PLM	X
BS2.4	08A - Drywall Joint Compound	Aug. 6, 2019	N/A	PLM	X
BS2.5	08C - Drywall Joint Compound	Aug. 6, 2019	N/A	PLM	X
BS2.6	010B - Drywall Joint Compound	Aug. 6, 2019	N/A	PLM	X
BS2.7	010C - Drywall Joint Compound	Aug. 6, 2019	N/A	PLM	X
BS2.8	011 - Drywall Joint Compound	Aug. 6, 2019	N/A	PLM	X
BS2.9	013 - Drywall Joint Compound	Aug. 6, 2019	N/A	PLM	X
BS2.10	014 - Drywall Joint Compound	Aug. 6, 2019	N/A	PLM	X
BS2.11	015B - Drywall Joint Compound	Aug. 6, 2019	N/A	PLM	X
BS2.12	103 - Drywall Joint Compound	Aug. 6, 2019	N/A	PLM	X

1936455



BS2.13	113A - Drywall Joint Compound	Aug. 6, 2019	N/A	PLM			x	
BS2.14	115 - Drywall Joint Compound	Aug. 6, 2019	N/A	PLM			x	
BS2.15	116 - Drywall Joint Compound	Aug. 6, 2019	N/A	PLM			x	
BS3.1	07 - Window Caulking (Grey)	Aug. 6, 2019	N/A	PLM			x	
BS3.2	07 - Window Caulking (Grey)	Aug. 6, 2019	N/A	PLM			x	15
BS3.3	07 - Window Caulking (Grey)	Aug. 6, 2019	N/A	PLM			x	16
BS4.1	111 - Acoustic Tile Mastic Puck (Dark Brown)	Aug. 6, 2019	N/A	PLM			x	17
BS4.2	111 - Acoustic Tile Mastic Puck (Dark Brown)	Aug. 6, 2019	N/A	PLM			x	18
BS4.3	111 - Acoustic Tile Mastic Puck (Dark Brown)	Aug. 6, 2019	N/A	PLM			x	19
BS5.1	010 - Ceiling Tile 2x4' - Pinholes & Fissures	Aug. 6, 2019	N/A	PLM			x	20
BS5.2	010 - Ceiling Tile 2x4' - Pinholes & Fissures	Aug. 6, 2019	N/A	PLM			x	21
BS5.3	010 - Ceiling Tile 2x4' - Pinholes & Fissures	Aug. 6, 2019	N/A	PLM			x	22
BS6.1	111 - Acoustic Tile - 1x1' w/ Uniform Pinholes	Aug. 6, 2019	N/A	PLM			x	23
BS6.2	111 - Acoustic Tile - 1x1' w/ Uniform Pinholes	Aug. 6, 2019	N/A	PLM			x	23
BS6.3	111 - Acoustic Tile - 1x1' w/ Uniform Pinholes	Aug. 6, 2019	N/A	PLM			x	23
BS7.1	07 - VFT 12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)	Aug. 6, 2019	N/A	PLM			x	23
BS7.2	07 - VFT 12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)	Aug. 6, 2019	N/A	PLM			x	23
BS7.3	07 - VFT 12"x12" - White w/ Black Flakes & Carpet Mastic (Yellow)	Aug. 6, 2019	N/A	PLM			x	23
							x	23

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

Comments:

Relinquished By (Sign):	Received at Depot:	Received at Lab:	Method of Delivery: Depto
Relinquished By (Print): Diana Banakh		Verified By:	
Date/Time:	Date/Time:	Date/Time: Sept. 6-19 13:30	Date/Time: 6 SEP 19 15:04

Certificate of Analysis

McIntosh Perry Limited (Concord)

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

Client PO:
Project: Z1920014HZ
Custody:

Report Date: 11-Sep-2019
Order Date: 6-Sep-2019

Order #: 1936428

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

Paracel ID	Client ID
1936428-01	Pb.1 - 111 - Maroon Door Paint
1936428-02	Pb.2 - 111 - Beige Wall Paint
1936428-04	Pb.4 - 012 - Pink Wall Paint
1936428-05	Pb.5 - 03 - Light Green Wall Paint
1936428-06	Pb.6 - 014 - Dark Purple Wall Paint

Approved By:



Milan Ralitsch, PhD
Senior Technical Manager

Any use of these results implies your agreement that our total liability 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 circumstances be liable to you in connection with this work

Certificate of Analysis

Client: McIntosh Perry Limited (Concord)

Client PO:

Report Date: 11-Sep-2019

Order Date: 6-Sep-2019

Project Description: Z1920014HZ

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Metals, ICP-MS	EPA 6020 - Digestion - ICP-MS	9-Sep-19	9-Sep-19

Sample and QC Qualifiers Notes

- 1- GEN01 :Elevated Reporting Limits due to limited sample volume.
- 2- QB-02 : The method blank is above MDL but less than 3 X MDL and therefore does not have significant impact on sample results.

Sample Data Revisions

None

Work Order Revisions/Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.

Certificate of Analysis
Client: McIntosh Perry Limited (Concord)
Client PO:

Report Date: 11-Sep-2019
Order Date: 6-Sep-2019
Project Description: Z1920014HZ

Sample Results

Lead				Matrix: Paint
				Sample Date: 06-Aug-19
Paracel ID	Client ID	Units	MDL	Result
1936428-01	Pb.1 - 111 - Maroon Door Paint	%	0.0005	0.0529
1936428-02	Pb.2 - 111 - Beige Wall Paint	%	0.0005	0.0259
1936428-04	Pb.4 - 012 - Pink Wall Paint	%	0.0005	0.0027
1936428-05	Pb.5 - 03 - Light Green Wall Paint	%	0.0005	0.0430
1936428-06	Pb.6 - 014 - Dark Purple Wall Paint	%	0.0005	<0.0009 [1]

Laboratory Internal QA/QC

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Matrix Blank									
Lead	ND	0.0005	%						
Matrix Duplicate									
Lead	0.00097	0.0005	%	ND			0.0	50	
Matrix Spike									
Lead	0.131	0.0005	%	ND	105	70-130			

200 Wilbrod

1936428



TRUSTE
RESPON
RELIAB



e
t. Laurent Blvd.
tario K1G 4J8
9-1947
paracellabs.com

Chain of Custody
(Lab Use Only)

Page 1 of 1

Client Name: McIntosh Perry	Project Reference: Z1920014HZ	Turnaround Time: <input type="checkbox"/> 1 Day o 3 Day <input type="checkbox"/> 2 Day X Regular Date Required: _____
Contact Name: Diana Banakh	Quote #: 19-651	
Address: 6420 Highway 7, Suite 200, Woodbridge Ontario L4H 4G3	PO #	
Telephone: 905-856-5200	Email Address: d.banakh@mcintoshperry.com	

Criteria: ☐ O. Reg. 153/04 (As Amended) Table ☐ RSC Filing ☐ O. Reg. 558/00 ☐ PWQO ☐ CCME ☐ SUB (Storm) ☐ SUB (Sanitary) Municipality: _____ ☐ Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Required Analyses

Parcel Order Number:

1936428

Sample ID/Location Name		Matrix	Air Volume	# of Containers	Sample Taken		Lead in Paint										
					Date	Time											
1	Pb.1 - 111 - Maroon Door Paint	P		1	Aug. 6, 2019		X										
2	Pb.2 - 111 - Beige Wall Paint	P		1	Aug. 6, 2019		X										
3	Pb.3 - 011 - Red Door Paint	P		1	Aug. 6, 2019		X										
4	Pb.4 - 012 - Pink Wall Paint	P		1	Aug. 6, 2019		X										
5	Pb.5 - 03 - Light Green Wall Paint	P		1	Aug. 6, 2019		X										
6	Pb.6 - 014 - Dark Purple Wall Paint	P		1	Aug. 6, 2019		X										

Comments:

Method of Delivery:

Paxo

Relinquished By (Sign):	Received by Driver (Sign):	Received at Lab:	Verified By:
Relinquished By (Print): Diana Banakh	Date/Time: Sept. 6 - 19 13:30	Date/Time: 9 Sept 19 8:45	Date/Time: SEPT 19 13:45
Date/Time:	Temperature: _____ °C	Temperature: _____ °C	pH Verified [] By: _____

Chain of Custody- Lead- 200 Wilbrod.xlsx

APPENDIX D

Site Photographs



Photo 1: Representative view of the subject building located at 200 Willbrod Avenue.



Photo 2: Representative view of the Level 1 main corridor area finishes. No asbestos containing materials were identified in this general area.



Photo 3: Representative view of Room 102 interior finishes, which were observed to be newly renovated. No asbestos materials are suspected to be present.



Photo 4: View of the asbestos-containing VFT 9"x9" - Pink & Dark Grey observed in good condition in Room 114B.



Photo 5: View of the Beige low-level lead wall paint observed in poor condition in Room 111.

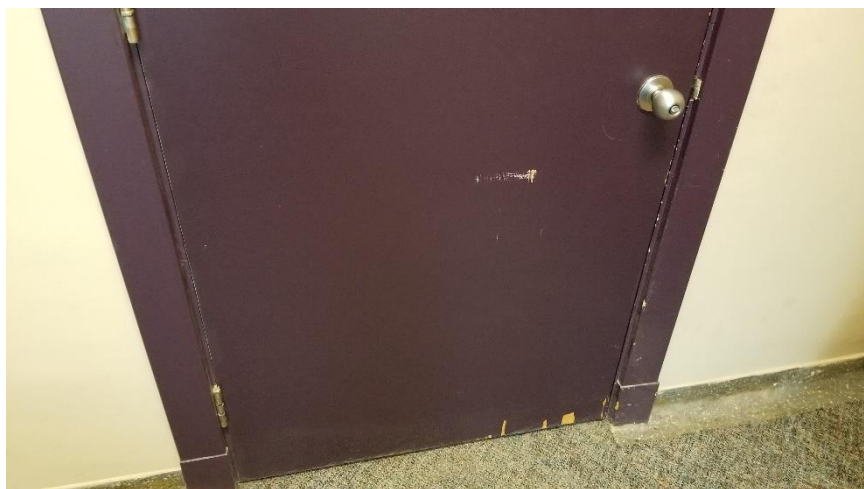


Photo 6: View of the Maroon low-level lead door paint observed in poor condition in Room 111.



Photo 7: View of the non-asbestos acoustic stick-on ceiling tiles observed in Room 113.

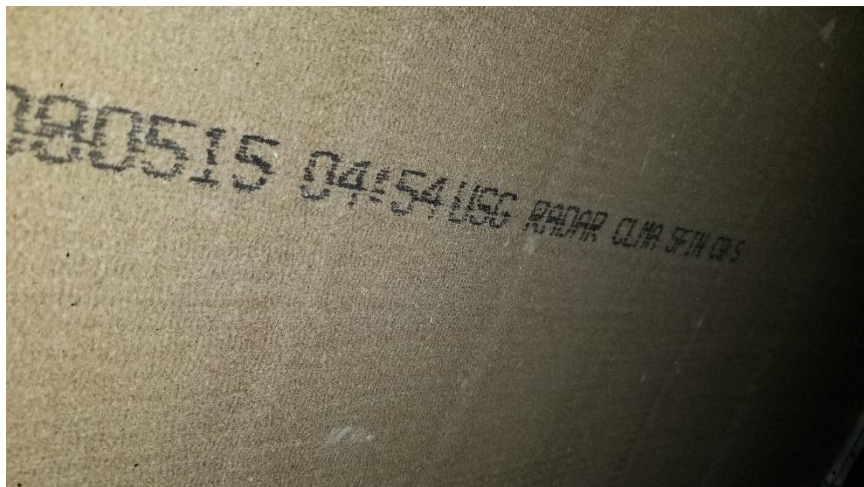


Photo 8: View of the ceiling tiles observed throughout the building with a 2015 date stamp.



Photo 9: Representative view of the ceiling space throughout Level 1, with visible fiberglass mechanical insulation throughout.



Photo 10: Representative view of the stairwell and vestibule area of the subject building.



Photo 11: View of the poor condition low level lead paint (Beige) observed in Room 02A.



Photo 12: View of the ceiling space above the suspended ceiling tiles observed in the Level 0 corridor. Non-asbestos stick on ceiling tiles and mastic (Dark Brown) were visible.



Photo 13: Poor condition asbestos-containing parging cement elbows were observed in Room 010, above suspended ceiling tiles.



Photo 14: Representative view of the Elkey drinking water fountains observed throughout the subject building, containing a R134a refrigerant.

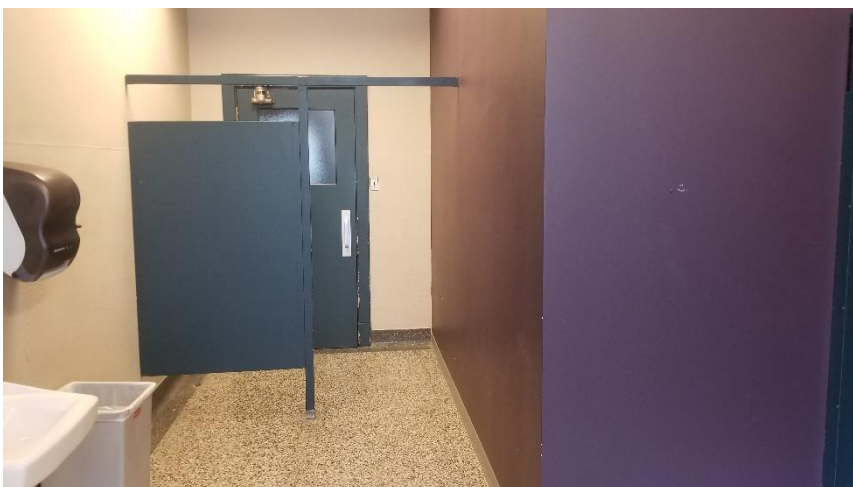


Photo 15: View of the Dark Purple paint observed in Room 013, which was determined to contain a level of lead that was below the limit of detection.



Photo 16: Representative view of the asbestos-containing parging cement elbows observed in good condition in the Women's Washroom Room 013.



Photo 17: Representative view of the asbestos-containing parging cement elbows observed in good condition in Room 03.

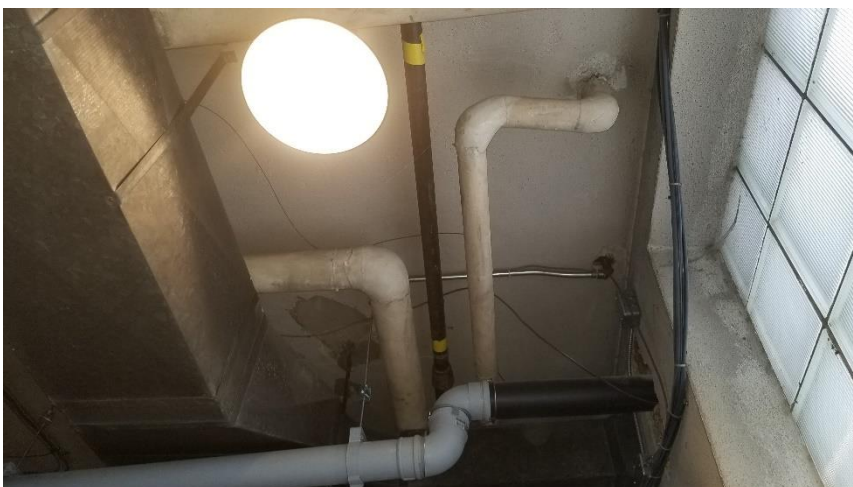


Photo 18: Representative view of the asbestos-containing parging cement elbows observed in good condition in the Furnace Room 011.

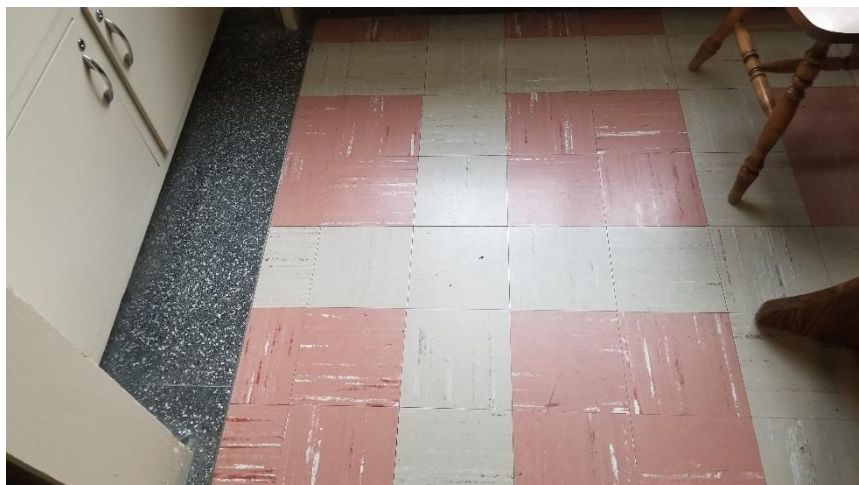


Photo 19: View of the asbestos-containing VFT 9"x9" - Pink & Beige observed in good condition in Room 015A.



Photo 20: View of the non-asbestos wall plaster observed throughout the subject building.



Photo 21: View of the Light Pink paint observed in Room 012, which was determined to contain low levels of lead, and enclosed behind radiator units.



Photo 22: View of asbestos-containing vinyl floor tile mastic (Black) observed to be in good condition on the underside of the carpet in Room 07.



Photo 23: View of Honeywell thermostat containing one ampoule of liquid mercury observed to be in good condition on Room 07.



Photo 24: View of the mould impacted ceiling tile observed in Room 100.

APPENDIX E

Asbestos-Containing Materials Checklists

Hazardous Materials Survey and 2023 Reassessment
200 Willbrod Street, Ottawa, Ontario
Appendix E - Asbestos Containing Materials Checklist

Z1920014HZ

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	Room 015A	Vinyl Floor Tiles (9"x9" – Pink)	Confirmed	Non-Friable	Good Condition	Easy	Low	45	SF	Manage in Place	
0	Room 015	Vinyl Floor Tiles (9"x9" – Pink)	Confirmed	Non-Friable	Good Condition	Easy	Low	45	SF	Manage in Place	
0	Room 015A	Vinyl Floor Tiles (9"x9" – Light Grey w/ Streaks)	Confirmed	Non-Friable	Good Condition	Easy	Low	45	SF	Manage in Place	
0	Room 015C	Vinyl Floor Tiles (9"x9" – Light Grey w/ Streaks)	Confirmed	Non-Friable	Good Condition	Easy	Low	45	SF	Manage in Place	
0	Room 03	Mastic (Black)	Confirmed	Non-Friable	Enclosed	Easy	Low	750	SF	Manage in Place	
0	Room 07	Mastic (Black)	Confirmed	Non-Friable	Enclosed	Easy	Low	250	SF	Manage in Place	
0	Room 03	Mechanical Pipe Straight Insulation	Confirmed	Friable	Good Condition	Easy	Low	50	LF	Manage in Place	
0	Room 05	Mechanical Pipe Straight Insulation	Confirmed	Friable	Good Condition	Easy	Low	12	LF	Manage in Place	
0	Room 010	Mechanical Pipe Straight Insulation	Confirmed	Friable	Good Condition	Easy	Low	20	LF	Manage in Place	
0	Room 011	Mechanical Pipe Straight Insulation	Confirmed	Friable	Good Condition	Easy	Low	30	LF	Manage in Place	
0	Room 014	Mechanical Pipe Straight Insulation	Confirmed	Friable	Good Condition	Easy	Low	15	LF	Manage in Place	
0	Room 013	Mechanical Pipe Straight Insulation	Confirmed	Friable	Good Condition	Easy	Low	10	LF	Manage in Place	
0	Room 015A	Mechanical Pipe Straight Insulation	Confirmed	Friable	Good Condition	Easy	Low	8	LF	Manage in Place	
0	Room 015B	Mechanical Pipe Straight Insulation	Confirmed	Friable	Good Condition	Easy	Low	25	LF	Manage in Place	
0	Room 02A	Parging Cement Pipe/Elbow Insulation	Confirmed	Friable	Good Condition	Easy	Low	1	C	Manage in Place	
0	Room 03	Parging Cement Pipe/Elbow Insulation	Confirmed	Friable	Good Condition	Easy	Low	11	C	Manage in Place	

Hazardous Materials Survey and 2023 Reassessment
200 Willbrod Street, Ottawa, Ontario
Appendix E - Asbestos Containing Materials Checklist

Z1920014HZ

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	Room 05	Parging Cement Pipe/Elbow Insulation	Confirmed	Friable	Good Condition	Easy	Low	6	C	Manage in Place	
0	Room 07	Parging Cement Pipe/Elbow Insulation	Confirmed	Friable	Good Condition	Easy	Low	8	C	Manage in Place	
0	Room 08A	Parging Cement Pipe/Elbow Insulation	Confirmed	Friable	Good Condition	Easy	Low	7	C	Manage in Place	
0	Room 08C	Parging Cement Pipe/Elbow Insulation	Confirmed	Friable	Good Condition	Easy	Low	16	C	Manage in Place	
0	Room 010	Parging Cement Pipe/Elbow Insulation	Confirmed	Friable	Poor Condition	Easy	Low	2	C	Remove Following Type 2 (Glovebag) Abatement Procedures	
0	Room 010	Parging Cement Pipe/Elbow Insulation	Confirmed	Friable	Good Condition	Easy	Low	6	C	Manage in Place	
0	Room 010A	Parging Cement Pipe/Elbow Insulation	Confirmed	Friable	Good Condition	Easy	Low	6	C	Manage in Place	
0	Room 010B	Parging Cement Pipe/Elbow Insulation	Confirmed	Friable	Good Condition	Easy	Low	6	C	Manage in Place	
0	Room 010C	Parging Cement Pipe/Elbow Insulation	Confirmed	Friable	Good Condition	Easy	Low	8	C	Manage in Place	
0	Room 010C	Parging Cement Pipe/Elbow Insulation	Confirmed	Friable	Fair Condition	Easy	Low	2	C	Monitor Condition of Material. Consider Removal or Repair.	
0	Room 011	Parging Cement Pipe/Elbow Insulation	Confirmed	Friable	Good Condition	Easy	Low	18	C	Manage in Place	

Hazardous Materials Survey and 2023 Reassessment
200 Willbrod Street, Ottawa, Ontario
Appendix E - Asbestos Containing Materials Checklist

Z1920014HZ

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	Room 013	Parging Cement Pipe/Elbow Insulation	Confirmed	Friable	Good Condition	Easy	Low	3	C	Manage in Place	
0	Room 014	Parging Cement Pipe/Elbow Insulation	Confirmed	Friable	Good Condition	Easy	Low	3	C	Manage in Place	
0	Room 015B	Parging Cement Pipe/Elbow Insulation	Confirmed	Friable	Good Condition	Easy	Low	3	C	Manage in Place	
0	Room 015	Mastic (Black)	Confirmed	Non-Friable	Enclosed	Easy	Low	90	SF	Manage in Place	
0	Room 015A	Mastic (Black)	Confirmed	Non-Friable	Enclosed	Easy	Low	90	SF	Manage in Place	
0	Throughout Level	Fire Doors	Suspected	-	Good Condition	Easy	Low	-	-	Manage in Place	
1	Room 113A	Vinyl Floor Tiles (9"x9" – Pink)	Confirmed	Non-Friable	Good Condition	Easy	Low	20	SF	Manage in Place	
1	Room 113B	Vinyl Floor Tiles (9"x9" – Pink)	Confirmed	Non-Friable	Good Condition	Easy	Low	110	SF	Manage in Place	
1	Room 114A	Vinyl Floor Tiles (9"x9" – Pink)	Confirmed	Non-Friable	Good Condition	Easy	Low	20	SF	Manage in Place	
1	Room 114B	Vinyl Floor Tiles (9"x9" – Pink)	Confirmed	Non-Friable	Good Condition	Easy	Low	20	SF	Manage in Place	
1	Room 113A	Vinyl Floor Tiles (9"x9" – Dark Grey w/ Streaks)	Confirmed	Non-Friable	Good Condition	Easy	Low	20	SF	Manage in Place	
1	Room 113B	Vinyl Floor Tiles (9"x9" – Dark Grey w/ Streaks)	Confirmed	Non-Friable	Good Condition	Easy	Low	110	SF	Manage in Place	
1	Room 114A	Vinyl Floor Tiles (9"x9" – Dark Grey w/ Streaks)	Confirmed	Non-Friable	Good Condition	Easy	Low	225	SF	Manage in Place	
1	Room 114B	Vinyl Floor Tiles (9"x9" – Dark Grey w/ Streaks)	Confirmed	Non-Friable	Good Condition	Easy	Low	225	SF	Manage in Place	
1	Room 100	Mechanical Pipe Straight Insulation	Confirmed	Friable	Good Condition	Easy	Low	90	LF	Manage in Place	

Hazardous Materials Survey and 2023 Reassessment
200 Willbrod Street, Ottawa, Ontario
Appendix E - Asbestos Containing Materials Checklist

Z1920014HZ

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	Throughout Level	Fire Doors	Suspected	-	Good Condition	Easy	Low	-	-	Manage in Place	
1	Throughout Level	Roofing Materials	Suspected	-	Good Condition	Difficult	Low	-	-	Manage in Place	
1	Room 113A	Mastic (Black)	Confirmed	Non-Friable	Enclosed	Easy	Low	40	SF	Manage in Place	
1	Room 113B	Mastic (Black)	Confirmed	Non-Friable	Enclosed	Easy	Low	220	SF	Manage in Place	
1	Room 114B	Mastic (Black)	Confirmed	Non-Friable	Enclosed	Easy	Low	220	SF	Manage in Place	
1	Room 114A	Mastic (Black)	Confirmed	Non-Friable	Enclosed	Easy	Low	40	SF	Manage in Place	

APPENDIX F

Hazardous Containing Materials Checklists

Hazardous Materials Survey and 2023 Reassessment
200 Willbrod Street, Ottawa, Ontario
Appendix F - Hazardous Containing Materials Checklist

Z1920014HZ

Floor/Level	Location	Type	Component	Colour	Condition	Manufacturer	Approx. Quantity	Unit	Suspected/ Confirmed	Recommended Action	Comments
0	Room 02	Lead	Wall Paint	Beige	Poor Condition	N/A	10	SF	Confirmed	Paint must be removed and/or stabilized following Class 1/2 or Type 1/2 Lead Procedures as per MOL and EACO	
0	Room 013	Lead	Wall Paint	Beige	Poor Condition	N/A	5	SF	Confirmed	Paint must be removed and/or stabilized following Class 1/2 or Type 1/2 Lead Procedures as per MOL and EACO	
0	Room 013	Lead	Wall Paint	Beige	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	
0	Room 02A	Lead	Wall Paint	Beige	Poor Condition	N/A	30	SF	Confirmed	Paint must be removed and/or stabilized following Class 1/2 or Type 1/2 Lead Procedures as per MOL and EACO	
0	Throughout Level	Lead	Wall Paint	Beige	Good Condition	N/A	N/A	N/A	Confirmed	Manage in Place	
0	Room 012	Lead	Wall Paint	Pink	Good Condition	N/A	N/A	N/A	Confirmed	Manage in Place	
0	Room 03	Lead	Wall Paint	Light Green	Not Accessible	N/A	N/A	N/A	Confirmed	Manage in Place	* Enclosed behind window wall
0	Throughout Level	Lead	Door Paint	Beige	Good Condition	N/A	N/A	N/A	Confirmed	Manage in Place	
0	Room 05	Lead	Window Frame Paint	Beige	Poor Condition	N/A	5	SF	Confirmed	Paint must be removed and/or stabilized following Class 1/2 or Type 1/2 Lead Procedures as per MOL and EACO	

Hazardous Materials Survey and 2023 Reassessment
200 Willbrod Street, Ottawa, Ontario
Appendix F - Hazardous Containing Materials Checklist

Z1920014HZ

Floor/Level	Location	Type	Component	Colour	Condition	Manufacturer	Approx. Quantity	Unit	Suspected/ Confirmed	Recommended Action	Comments
0	Room 06	Lead	Window Frame Paint	Beige	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	
0	Room 07	Lead	Window Frame Paint	Beige	Poor Condition	N/A	3	SF	Confirmed	Paint must be removed and/or stabilized following Class 1/2 or Type 1/2 Lead Procedures as per MOL and EACO	
0	Room 08	Lead	Wall Paint	Beige	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	
0	Room 08B	Lead	Wall Paint	Beige	Poor Condition	N/A	3	SF	Confirmed	Paint must be removed and/or stabilized following Class 1/2 or Type 1/2 Lead Procedures as per MOL and EACO	
0	Room 010A	Lead	Window Frame Paint	Beige	Poor Condition	N/A	3	SF	Confirmed	Paint must be removed and/or stabilized following Class 1/2 or Type 1/2 Lead Procedures as per MOL and EACO	
0	Room 010B	Lead	Window Frame Paint	Beige	Poor Condition	N/A	3	SF	Confirmed	Paint must be removed and/or stabilized following Class 1/2 or Type 1/2 Lead Procedures as per MOL and EACO	
0	Room 010B	Lead	Wall Paint	Beige	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	
0	Room 010C	Lead	Window Frame Paint	Beige	Poor Condition	N/A	3	SF	Confirmed	Paint must be removed and/or stabilized following Class 1/2 or Type 1/2 Lead Procedures as per MOL and EACO	

Hazardous Materials Survey and 2023 Reassessment
200 Willbrod Street, Ottawa, Ontario
Appendix F - Hazardous Containing Materials Checklist

Z1920014HZ

Floor/Level	Location	Type	Component	Colour	Condition	Manufacturer	Approx. Quantity	Unit	Suspected/ Confirmed	Recommended Action	Comments
0	Room 010C	Lead	Wall Paint	Beige	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	
0	Room 010E	Lead	Wall Paint	Beige	Poor Condition	N/A	4	SF	Confirmed	Paint must be removed and/or stabilized following Class 1/2 or Type 1/2 Lead Procedures as per MOL and EACO	
0	Room 013	Lead	Wall Paint	Beige	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	
0	Room 015	Lead	Window Frame Paint	Beige	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	
0	Throughout Level	Lead	Window Frame Paint	Beige	Good Condition	N/A	N/A	N/A	Confirmed	Manage in Place	
0	Throughout Level	Mercury	Fluorescent Light Tubes	N/A	Good Condition	Phillips	N/A	N/A	Confirmed	Manage in Place	
0	Room 08	Mercury	Thermostat	N/A	Good Condition	Honeywell	1	C	Confirmed	Manage in Place	
0	Room 015	Mercury	Thermostat	N/A	Good Condition	Honeywell	1	C	Confirmed	Manage in Place	
0	Room 010	Ozone Depleting Substances (ODS)	Water Fountain	N/A	Good Condition	Elkay	1	C	Confirmed	Manage in Place	R134a
0	Room 08C	Mould/Water Damage	Ceiling Tiles	N/A	Good Condition	-	5	SF	Confirmed	Should be replaced as part of regular maintenance.	
0	Room 08C	Mould/Water Damage	Ceiling Tiles	N/A	Good Condition	-	1	SF	Confirmed	Should be replaced as part of regular maintenance.	
1	Room 010C	Mould/Water Damage	Ceiling Tiles	N/A	Good Condition	-	20	SF	Confirmed	Should be replaced as part of regular maintenance.	
2	Room 010B	Mould/Water Damage	Ceiling Tiles	N/A	Good Condition	-	14	SF	Confirmed	Should be replaced as part of regular maintenance.	
3	Room 010	Mould/Water Damage	Ceiling Tiles	N/A	Good Condition	-	1	C	Confirmed	Should be replaced as part of regular maintenance.	

Hazardous Materials Survey and 2023 Reassessment
200 Willbrod Street, Ottawa, Ontario
Appendix F - Hazardous Containing Materials Checklist

Z1920014HZ

Floor/Level	Location	Type	Component	Colour	Condition	Manufacturer	Approx. Quantity	Unit	Suspected/ Confirmed	Recommended Action	Comments
0	Room 011	Mould/Water Damage	Mechanical Pipe Straight Insulation	N/A	Poor Condition	N/A	15	LF	Confirmed	Must be removed following Level I mould remediation procedures, as per EACO Guidelines	
0	Throughout Level	Silica	Concrete, Mortar, Etc.	N/A	Good Condition	N/A	N/A	N/A	Confirmed	Manage in Place	
0	Room 011A	Lead	Battery Pack	N/A	Good Condition	Emergi-Lite	1	C	Confirmed	Manage in Place	
0	Room 015A	Ozone Depleting Substances (ODS)	Refrigerator	N/A	Good Condition	LG	1	C	Confirmed	Manage in Place	R134a
1	Room 111	Lead	Door Paint	Maroon	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	
1	Throughout Level	Lead	Door Paint	Maroon	Good Condition	N/A	N/A	N/A	Confirmed	Manage in Place	
1	Room 111	Lead	Wall Paint	Beige	Poor Condition	N/A	8	SF	Confirmed	Paint must be removed and/or stabilized following Class 1/2 or Type 1/2 Lead Procedures as per MOL and EACO	
1	Throughout Level	Lead	Wall Paint	Beige	Good Condition	N/A	N/A	N/A	Confirmed	Manage in Place	
1	Throughout Level	Lead	Door Paint	Beige	Good Condition	N/A	N/A	N/A	Confirmed	Manage in Place	
1	Throughout Level	Lead	Window Frame Paint	Beige	Good Condition	N/A	N/A	N/A	Confirmed	Manage in Place	
1	Throughout Level	Lead	Window Frame Paint	Black	Good Condition	N/A	N/A	N/A	Confirmed	Manage in Place	
1	Room 100	Lead	Battery Pack	N/A	Good Condition	Emergi-Lite	1	C	Confirmed	Manage in Place	
1	Throughout Level	Mercury	Fluorescent Light Tubes	N/A	Good Condition	Phillips	N/A	N/A	Confirmed	Manage in Place	
1	Room 100	Mould	Ceiling Tiles	N/A	Poor Condition	N/A	1	C	Confirmed	Must be removed following Level I mould remediation procedures, as per EACO Guidelines	

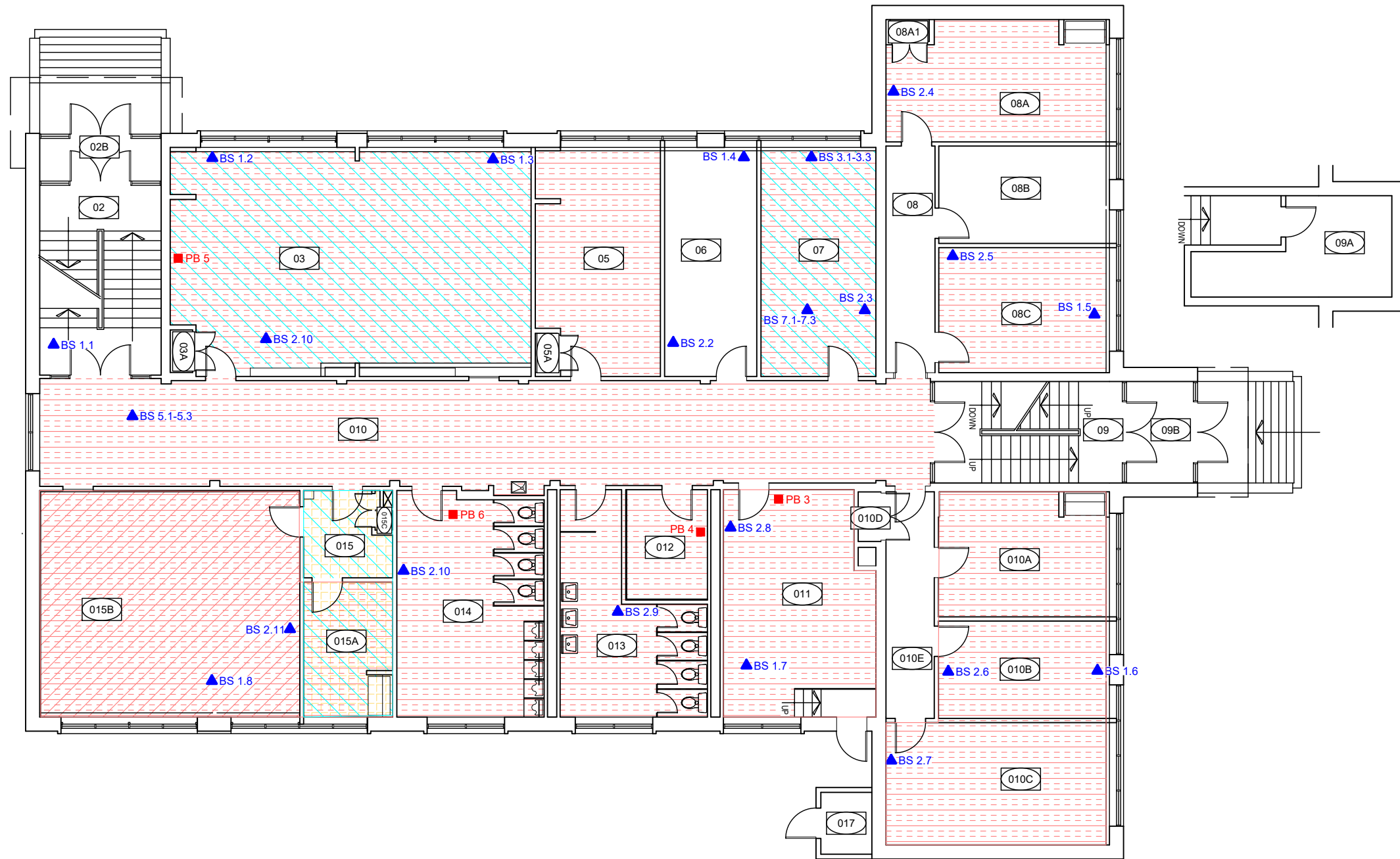
Hazardous Materials Survey and 2023 Reassessment
200 Willbrod Street, Ottawa, Ontario
Appendix F - Hazardous Containing Materials Checklist

Z1920014HZ

Floor/Level	Location	Type	Component	Colour	Condition	Manufacturer	Approx. Quantity	Unit	Suspected/ Confirmed	Recommended Action	Comments
1	Room 100	Water Damage	Ceiling Tiles	N/A	Poor Condition	N/A	1	C	Confirmed	Should be replaced as part of regular maintenace.	
1	Throughout Level	Silica	Concrete, Mortar, Etc.	N/A	Good Condition	N/A	N/A	N/A	Confirmed	Manage in Place	

APPENDIX G

Site Sampling & Location Plans



REV. NO.	DESCRIPTION	DATE	BY	APPD.
DRAWING NUMBER: A-0.1				REV.:

THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS, REPORT ALL ERRORS AND OMISSIONS TO THE CONSULTANTS, PRIOR TO PROCEEDING WITH ANY WORKS.

