



# Asbestos Assessment

Council Building – Print Shop  
510 Main Street, Winnipeg, Manitoba

Prepared for:

**City of Winnipeg**  
4th Floor Administration Building  
Winnipeg, Manitoba R3B 1B9

Attention: Annette Brodbeck

March 17, 2016

Pinchin File: 111454.038

**Asbestos Assessment**

Council Building – Print Shop, 510 Main Street, Winnipeg, Manitoba  
City of Winnipeg

March 17, 2016  
Pinchin File: 111454.038

**Issued to:** City of Winnipeg  
**Contact:** Annette Brodbeck  
**Issued on:** March 17, 2016  
**Pinchin File:** 111454.038  
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2016.03.17

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**Asbestos Assessment**

Council Building – Print Shop, 510 Main Street, Winnipeg, Manitoba  
City of Winnipeg

March 17, 2016  
Pinchin File: 111454.038

**EXECUTIVE SUMMARY**

City of Winnipeg (Client) retained Pinchin Ltd. (Pinchin) to conduct an asbestos building materials assessment of Council Building – Print Shop located at 510 Main Street, Winnipeg, Manitoba. The assessment was performed on March 3, 2016.

The objectives of the assessment were to document the locations of asbestos building materials, evaluate their condition and develop corrective action plans as required prior to planned renovations within the area.

The assessed area was limited to the part of the building, which consisted of the Print Shop Area.

**SUMMARY OF FINDINGS**

Asbestos-containing materials (ACM) were confirmed to be present as follows:

- Spray-on insulation on beams and decking located above the ceiling;
- Parging cement on seams and ends of duct insulation;
- Cementitious firestopping on floor penetration of pipe chase within women's washroom;
- Black mastic on HVAC Insulation (previously tested and found in other areas of the building); and
- Pipe insulation (previously tested and found in other areas of the building), located above the ceilings and in chases.

**SUMMARY OF RECOMMENDATIONS**

The following is a summary of significant recommendations; refer to the body of the report for detailed recommendations:

1. Follow appropriate safe work procedures when handling or disturbing asbestos; and
2. Refer to Section 4.0 of this report for detailed recommendations regarding administrative and remedial actions.

*This Executive Summary is subject to the same standard limitations as contained in the report and must be read in conjunction with the entire report.*

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## Asbestos Assessment

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## 1.0 INTRODUCTION AND SCOPE

City of Winnipeg (Client) retained Pinchin Ltd. (Pinchin) to conduct an asbestos building materials assessment of Council Building – Print Shop, located at 510 Main Street, Winnipeg, Manitoba.

The assessment report was prepared by Dana Shewchuk, based on information provided by Annette Brodbeck of the City of Winnipeg and an assessment on March 3, 2016. The surveyor was accompanied by Annette Brodbeck during the assessment. The building was occupied at the time of the assessment.

The objectives of the assessment were to document the locations of asbestos building materials, evaluate their condition and develop corrective action plans as required prior to planned renovations within the area.

### 1.1 Scope of Assessment

The assessment was performed to establish the location and type of asbestos building materials incorporated in the structure(s) and its finishes. The assessed area consisted of the Print Shop Area.

## 2.0 BACKGROUND INFORMATION

### 2.1 Building Description

Item	Details
Building Use	Civic Offices
Number of Floors/Levels	2 storeys, a Mezzanine Level, plus 2 levels below grade
Total Area of Building (Square Feet)	~33,500
Year of Construction, Significant Additions or Renovations	1962-1963
Structure	Structural steel, concrete
Exterior Cladding	Pre-cast concrete
HVAC	Rooftop AC
Roof	Built-up roofing, modified bitumen, EPDM, No Access
Flooring	Vinyl tile, carpet on concrete
Interior Walls	Drywall, concrete block, plaster
Ceilings	Drywall, acoustic ceiling tiles

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### 3.0 FINDINGS

#### 3.1 Suspect Building Materials Not Found

The following types of building materials may historically contain asbestos but were not observed in the assessed area and are not discussed in the report findings:

- Vermiculite;
- Vinyl sheet flooring; and
- Roofing felts and tar.

#### 3.2 Spray-Applied Fireproofing and Thermal Insulation

The Beams and Cellular Steel Floor Decking was originally sprayed with asbestos-containing sprayed fireproofing that has been removed and replaced, it is not possible to locate minor amounts of residual sprayed asbestos left in these areas after application of new, non-asbestos fireproofing. Such residual materials may be present within cavities, shafts, within walls, or fully or partially covered with new asbestos-free re-spray. To attempt to locate these residual pockets of ACM would require extensive demolition, visual investigation of literally every square meter and likely extensive removal and replacement of the new fireproofing (Samples 0001, 0002, 0003, 0004 and 0005).

Asbestos-containing fireproofing may be present as debris or overspray in pipe chases and wall cavities (including within masonry) where walls extend to the structure/fireproofing.

Sprayed fireproofing is friable and is in good condition.

#### 3.3 Thermal Systems Insulation (TSI)

##### 3.3.1 Pipe Insulation

Parging cement, containing chrysotile asbestos, is present on pipe fittings (elbows, valves, tees, hangers etc.) within ceiling spaces and pipe chases. Parging cement is a friable insulation, jacketed with canvas and is in good condition.

##### 3.3.2 Duct Insulation

Ducts in the assessed area are insulated with fibreglass. Parging cement containing chrysotile asbestos is present over the fibreglass at edges, seams and pins. Parging cement is a friable insulation, jacketed with canvas and is in good condition (Samples 0006 A-C).

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Duct Insulation



Duct Insulation painted black

Remaining ducts are either uninsulated or insulated with non-asbestos fiberglass and jacketed with either canvas or foil.

**3.4 Acoustic Ceiling Tiles**

All ceiling tiles are presumed to be non-asbestos based on the date of manufacture determined from the date stamp applied to the top of the tiles or the age of the materials determined from the age of the building or the renovation. The tiles were manufactured after asbestos stopped being used in acoustic ceiling tiles.

**3.5 Plaster**

Plaster is present on walls. Previous sampling indicates plaster does not contain asbestos.

**3.6 Drywall Joint Compound**

Asbestos in drywall joint compound was banned in Canada in 1980. Drywall joint compound in the assessed area was installed after 1985 (1980 plus a reasonable non-compliance period based on our experience) and is assumed to not contain asbestos.

**3.7 Vinyl Floor Tile and Mastic**

Vinyl floor tiles were presumed to be non-asbestos based on historical knowledge of the date of installation.

**3.8 Firestopping**

Firestopping, cross contaminated with asbestos, is present at pipe penetrations in women's washroom pipe chase (Samples 0008 A-C).

The firestopping is a non-friable material and is in good condition.



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Asbestos Contaminated Firestopping

### 3.9 Sealants, Caulking, and Putty

Black Mastic applied to HVAC insulation within ceiling spaces is suspect to contain asbestos.

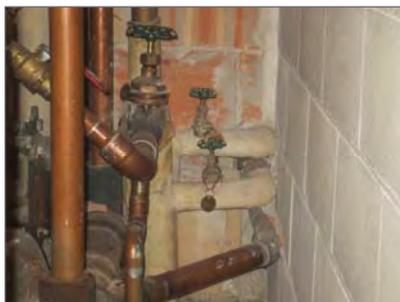
Grey Mastic applied to HVAC insulation within ceiling spaces was determined not to contain asbestos (Samples 0009 A-C).



Grey Mastic, Non-asbestos Containing

### 3.10 Other Building Materials

Fire brick within pipe chase was determined not to contain asbestos (Sample S0007).



Non-Asbestos Firebrick



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## 4.0 RECOMMENDATIONS

### 4.1 General

Perform a detailed intrusive assessment prior to building renovation or demolition operations. The assessment should include destructive testing (i.e. coring and/or removal of building finishes and components), and sampling of other hazardous materials (lead, mercury, PCBs, mould, etc.) and materials not tested in this study (e.g. roofing materials, caulking, mastics).

### 4.2 Remedial Work

No remedial work is required.

### 4.3 On-going Management and Maintenance

The following recommendations are made regarding on-going management and maintenance work involving the asbestos materials identified.

Remove all ACM prior to alteration or maintenance work or if ACM may be disturbed by the work. Follow appropriate asbestos precautions for the classification of work being performed.

Material and Quantity	Location	Recommended Procedure
Duct Insulation	Above Ceilings	Type III
Black Mastic Sealant on HVAC Insulation	Above Ceilings	Type I
Pipe Insulation	Above Ceilings and Pipe Chases	Type II
Cementitious Firestopping	Pipe Chases	Type II
Spray-on Insulation	Structural Beams and Cellular Steel Floor Deck	Type III

Update the asbestos inventory report upon completion of any abatement and removal of ACM.

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## 5.0 LIMITATIONS

Specific limitations related to the legal and financial and limitations to the scope of the current work are outlined in our proposal, the attached Methodology and the Authorization to Proceed which accompanied the proposal.

The work performed by Pinchin was conducted in accordance with generally accepted engineering or scientific practices current in this geographical area at the time the work was performed. No warranty is either expressed or implied by furnishing written reports or findings. The Client acknowledges that subsurface and concealed conditions may vary from those encountered or inspected. Pinchin can only comment on the environmental conditions observed on the date(s) the survey is performed. The work is limited to those materials or areas of concern identified by the Client or outlined in our proposal. Other areas of concern may exist but were not investigated within the scope of this assignment.

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

The liability of Pinchin or our officers, directors, shareholders or staff will be limited to the lesser of the fees paid or actual damages incurred by the Client. Pinchin will not be responsible for any consequential or indirect damages. Pinchin will only be liable for damages resulting from the negligence of Pinchin. Pinchin will not be liable for any losses or damage if the Client has failed, within a period of two years following the date upon which the claim is discovered (Claim Period), to commence legal proceedings against Pinchin to recover such losses or damage unless the laws of the jurisdiction which governs the Claim Period which is applicable to such claim provides that the applicable Claim Period is greater than two years and cannot be abridged by the contract between the Client and Pinchin, in which case the Claim Period shall be deemed to be extended by the shortest additional period which results in this provision being legally enforceable.

Information provided by Pinchin is intended for Client use only. Pinchin will not provide results or information to any party unless disclosure by Pinchin is required by law. Any use by a third party of reports or documents authored by Pinchin or any reliance by a third party on or decisions made by a third party based on the findings described in said documents, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted. No other warranties are implied or expressed.

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**6.0 REFERENCES**

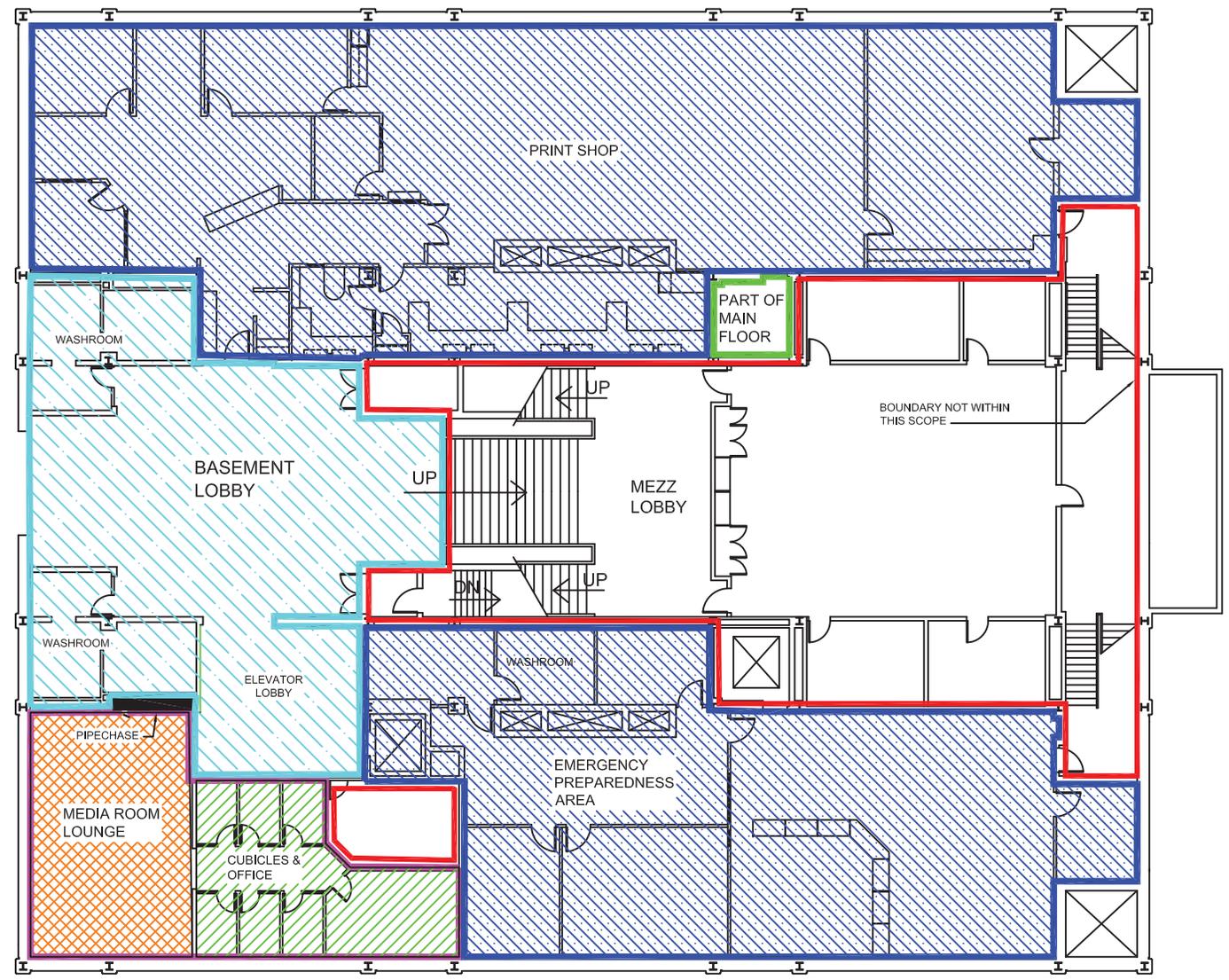
The following legislation and documents were referenced in completing the assessment and this report:

1. General Regulation – Workplace Safety and Health Act W210;
2. Workplace Health Hazard Regulation (Manitoba Regulation 217/2006 Workplace Safety and Health Regulation), under the Workplace Safety and Health Act; and
3. Guideline for Asbestos Operation and Maintenance Program – Workplace Safety and Health Branch – Manitoba Labour and Immigration (2007).

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Template: Master Report for Asbestos Assessment, Haz, February 1, 2016

**APPENDIX I**  
**Drawings**



**ASBESTOS INVENTORY LEGEND**

- ASBESTOS CONTAINING; STIPPLE TEXTURE CEILING; FIREPROOF SPRAY ON INSULATION ON BEAMS AND CONC DECK; MASTIC AND PARGING ON DUCTS; PIPE FITTING INSULATION; FLOOR TILE
- ASBESTOS CONTAINING; STIPPLE TEXTURE CEILING; FIREPROOF SPRAY ON INSULATION ON BEAMS AND CONC. DECK; PIPE FITTING INSULATION; MASTIC AND PARGING ON DUCTS
- ASBESTOS CONTAINING; FIREPROOF SPRAY-ON INSULATION ON BEAMS
- ASBESTOS CONTAINING; FIREPROOF SPRAY-ON INSULATION ON BEAMS AND CELLULAR STEEL FLOOR DECK; PIPE FITTING INSULATION; MASTIC AND PARGING ON DUCTS
- ASBESTOS CONTAINING; STIPPLE TEXTURE CEILING; DRYWALL COMPOUND; FIREPROOF SPRAY-ON INSULATION ON BEAMS; PIPE FITTING; INSULATION; MASTIC AND PARGING ON DUCTS

NOTE: PROCEED WITH CAUTION THRU/IN ALL PIPECHASE/PLBG WALLS, ASBESTOS CONTAINING MATERIAL MAY BE PRESENT

**BASMENT**

- NOTES:**
1. THERE MAY BE ASBESTOS CONTAINING MATERIALS PRESENT THAT WERE NOT LOCATED DURING BUILDING INSPECTIONS
  2. REFER TO THE ASBESTOS INVENTORY SURVEY SHEET FOR MORE INFORMATION
  3. DO NOT DISTURB ASBESTOS. FOR HANDLING PROCEDURES CALL CENTRAL CONTROL AT 986-2382

ASBESTOS INVENTORY			
BUILDING:		CB-60 COUNCIL BUILDING 510 MAIN STREET WINNIPEG, MANITOBA	
REVISED BY:	DATE:	SCALE:	SHEET #:
AB	March 17, 2016	N.T.S.	

**CITY OF WINNIPEG**  
 PLANNING, PROPERTY & DEVELOPMENT DEPARTMENT  
 MUNICIPAL ACCOMMODATIONS DIVISION  
 4th FLOOR - 185 KING STREET  
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**APPENDIX II**  
**Methodology**



**Print Shop**

Council Building, 510 Main Street, Winnipeg, Manitoba  
Methodology Document for Asbestos Assessment

March 17, 2016

Pinchin File: 111454.038

## 1.0 GENERAL

A room-by-room survey (rooms, corridors, service areas, exterior, etc.) to identify the asbestos building materials defined by the scope of the work. All work is conducted in accordance with our own internal Standard Operating Procedures.

Information regarding the location and condition of asbestos building materials encountered and visually estimated quantities are recorded. The locations of any samples collected are recorded on small-scale plans.

As-built drawings and previous reports are referenced where provided.

### 1.1 Scope Limitations

The assessment excludes the following:

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

The assessment is limited to non-intrusive testing. Concealed spaces such as those above solid ceilings and within shafts and pipe chases are accessed via existing access panels only Pinchin does not conduct demolition of walls, solid ceilings, structural items, interior finishes or exterior building finishes, to determine the presence of concealed materials.

### 1.2 Detailed Methodology

An inspection for the presence of friable and non-friable asbestos-containing materials (ACM) was conducted. A friable material is a material that when dry can be crumbled, pulverized or powdered by hand pressure.



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A separate set of samples is collected of each type of homogenous material suspected to contain asbestos. A homogenous material is defined by the US EPA as material that is uniform in texture and appearance, was installed at one time, and is unlikely to consist of more than one type or formulation of material. The homogeneous materials are determined by visual examination and available information on the phases of construction and prior renovations.

Pinchin collects samples at a rate that is in compliance with the requirements of local regulations and guidelines.

The sampling strategy is also based on known ban dates and phase out dates of the use of asbestos; sampling of certain building materials is not conducted after specific construction dates. In addition, to be conservative, several years past these dates are added to account for some uncertainty in the exact start/finish date of construction and associated usage of ACM.

In some cases, manufactured products such as asbestos cement pipe are visually identified without sample confirmation.

Drywall joint compound is sampled at exterior walls, columns or other locations that are unlikely to have been renovated in an attempt to determine the presence of asbestos in the original drywall compound. Delineation of asbestos-containing drywall compound from newer, non-asbestos drywall compound is not conducted.

Flooring mastic or adhesive is sampled and analyzed if present on the underside of flooring samples (vinyl floor tile and vinyl sheet flooring).

If present, the following materials are presumed to be asbestos-containing and are best sampled immediately prior to commencing renovation/disturbance:

- Roofing, felts and tar;
- Concrete floor levelling compound;
- Electrical components or wiring within control centers, breakers, motors or lights, insulation on wiring;
- Vermiculite in concrete block wall cavities;
- Adhesives and duct mastics;
- Caulking; and
- Fibre reinforced paints and coatings.

Pinchin submits the bulk samples to a NVLAP accredited laboratory for analysis. The analysis is performed in accordance with Test Method EPA/600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials, July 1993.



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In Manitoba an ACM is defined as materials containing 0.1% or more asbestos by weight for friable materials, 1% or more asbestos by weight for non-friable materials.

The asbestos analysis is completed using a stop positive approach. Only one result meeting the above regulated criteria is required to determine that a material is asbestos-containing, but all samples must be analyzed to conclusively determine that a material is non-asbestos. The laboratory stops analyzing samples from a homogeneous material once a result equal to or greater than the regulated criteria is detected in any of the samples of that material. All samples of a homogeneous material are analyzed if no asbestos is detected. In some cases, all samples are analyzed in the sample set regardless of result. Where building materials are described in the report as non-asbestos, this means that either no asbestos was detected by the analytical method utilized in any of the multiple samples or, if detected, it is below the lower limit of an asbestos-containing material in the applicable regulation.

Asbestos materials are evaluated in order to make recommendations regarding remedial work. The priority for remedial action is based on several factors:

- Friability (friable or non-friable);
- Condition (good, fair, poor, debris);
- Accessibility (ranking from accessible to all building users to inaccessible);
- Visibility (whether the material is obscured by other building components); and
- Efficiency of the work (for example, if damaged ACM is being removed in an area, it may be most practical to remove all ACM in the area even if it is in good condition).

For a complete description of the Evaluation Criteria and Basis of Recommendations, refer to Annex A.

Master Template: Methodology Document for Asbestos Assessment, HAZ, February 1, 2016

## **METHODOLOGY ANNEX A EVALUATION CRITERIA**



**Print Shop**

Council Building, 510 Main Street, Winnipeg, Manitoba  
Methodology Annex A Evaluation Criteria

March 17, 2016

Pinchin File: 111454.038

## 1.0 EVALUATION CRITERIA AND BASIS OF RECOMMENDATIONS

The detailed asbestos assessment provides information regarding the location, condition, accessibility and friability of the asbestos-containing materials (ACM). In order to make recommendations for compliance with current regulations, Pinchin developed the following criteria.

## 2.0 EVALUATION OF CONDITION

### 2.1 Friable Spray Applied Fireproofing, Insulation and Texture Finishes (Surfacing Materials)

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

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

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

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

### 2.2 Friable Mechanical or Thermal System Insulation (TSI)

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

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

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Methodology Annex A Evaluation Criteria

March 17, 2016

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<b>Poor</b>	Original insulation jacket is missing, damaged, deteriorated or delaminated. Insulation is exposed and significant areas have been dislodged. Damage cannot be readily repaired. Includes components where insulation may have been removed incompletely.
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The evaluation of mechanical insulation may be limited by the number of observations made and building components such as ducts or full height walls that obstruct observations. It is often not possible to observe each foot of mechanical insulation from all angles.

### 2.3 Potentially Friable Materials and Miscellaneous Friable Materials

Potentially friable ACM are products that are basically non-friable while in place, but have the potential to generate friable dust upon removal or if significantly disturbed without appropriate procedures. These products may become friable but may become friable if damaged. Potentially friable materials include materials such as acoustic ceiling tiles and plaster. The use of the description Fair with regard to a potentially friable ACM may reflect their physical condition and not their tendency to release fibres to the air under normal use. To evaluate the condition of potentially friable materials, the following criteria are applied:

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

### 2.4 Non-Friable Materials

Non-friable ACM cover a wide range of products with a wide variation in their tendency to release dust or asbestos fibres to the air. Many of these materials, (particularly where the matrix is an unweathered bitumen, asphalt or tar material) do not release fibres except in very unusual circumstances or during significant disturbance (e.g. use of abrasive power tools). Others with a cementitious matrix (asbestos-cement products) can more readily release dust due to abrasion, demolition, weathering, etc. The potential for asbestos release from non-friable ACM is always lower than from friable ACM. Therefore the use of the descriptions Fair or Poor in regard to a non-friable ACM reflects only their physical condition and not their tendency to release fibres to the air under normal use or when disturbed. To evaluate the condition of non-friable Materials, the following criteria are applied:



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Methodology Annex A Evaluation Criteria

March 17, 2016

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<b>Good</b>	No significant damage or deterioration. Condition is at or near to the condition when it was installed. Still serving its intended use as a building material or finish.
<b>Fair</b>	Showing signs of some cracking or damage but has not deteriorated. Such change in condition may be repairable. The condition is such that it is still serving its intended use as a building material or finish and does not require repair or removal from an asbestos hazard perspective.
<b>Poor</b>	Significant deterioration or breaking apart of the material to the point at which it cannot be repaired and it will require at least local removal. Material has deteriorated to the point it is not serving its intended use as building material or finish. Material may have deteriorated to a point where traffic or disturbance may cause it to become friable. Non-friable ACM in poor condition may, but does not necessarily, indicate the material is friable, or pose a risk of fibre release if disturbed.

## 2.5 Evaluation of ACM Debris

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

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

<b>Debris</b>	Debris may be friable or non-friable, but is always identified as debris.
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## 2.6 Evaluation of Presumed Asbestos-Containing Material (PACM)

Presumed asbestos-containing materials (PACM), are building materials that may contain asbestos but were not sampled or analyzed due to inaccessibility or the need to perform destructive testing to obtain a reasonable sample set. Evaluation of these materials is based on the assumption that these PACM are asbestos-containing.

A list of PACM is provided in the report and they are generally not included in the detailed room by room reports. Typically they are excluded because they are inaccessible or present in very small quantities. If PACM are evaluated, Pinchin uses the criteria that correspond with the type (and friability) of the material listed above.

Master Template: Methodology Document for Asbestos Assessment, HAZ, February 1, 2016

**APPENDIX III**  
**Asbestos Analytical Certificates**



Pinchin Ltd. (Winnipeg)  
ATTN: RODNEY LEGAULT  
54 Terracon Place  
Winnipeg MB R2J 4G7

Date Received: 14-MAR-16  
Report Date: 16-MAR-16 12:58 (MT)  
Version: FINAL REV. 2

Client Phone: 204-452-0983

## Certificate of Analysis

Lab Work Order #: L1744174  
Project P.O. #: NOT SUBMITTED  
Job Reference: 111454.037  
C of C Numbers:  
Legal Site Desc: 510 Main Street, Winnipeg MB

Comments: 16-MAR-2016 Revised report - Fraction 10 reporting

Hua Wo  
Chemistry Laboratory Manager

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1744174-1 0001-SPRAY ON INSULATION-IBEAM-STORAGE B-36 Sampled By: DWS on 14-MAR-16 @ 07:30 Matrix: Bulk  <b>Bulk Asbestos Content</b> Asbestos <1 Other Fibres: Glass 75-99 Other Non Fibrous: Filler 10-25 Note: No asbestos fibres were observed.							
L1744174-2 0002-SPRAY ON INSULATION-DECKING-STORAGE B-36 Sampled By: DWS on 14-MAR-16 @ 07:30 Matrix: Bulk  <b>Bulk Asbestos Content</b> Asbestos <1 Other Fibres: Glass 75-99 Other Non Fibrous: Filler 10-25 Note: No asbestos fibres were observed.	1	%			14-MAR-16	R3419144	
L1744174-3 0003-SPRAY ON INSULATION-IBEAM-OFFICE B-37 Sampled By: DWS on 14-MAR-16 @ 07:30 Matrix: Bulk  <b>Bulk Asbestos Content</b> Asbestos <1 Other Fibres: Glass 75-99 Other Non Fibrous: Filler 10-25 Note: No asbestos fibres were observed.	1	%			14-MAR-16	R3419144	
L1744174-4 0004-SPRAY ON INSULATION-DUCTING-SECURED STORAGE Sampled By: DWS on 14-MAR-16 @ 07:30 Matrix: Bulk  <b>Bulk Asbestos Content</b> Asbestos <1 Other Fibres: Glass 75-99 Other Non Fibrous: Filler 10-25 Note: No asbestos fibres were observed.	1	%			14-MAR-16	R3419144	
L1744174-5 0005-SPRAY ON INSULATION-IBEAM-SECURED STORAGE Sampled By: DWS on 14-MAR-16 @ 07:30 Matrix: Bulk  <b>Bulk Asbestos Content</b> Asbestos: Amosite (Amphibole) <1 Other Fibres: Glass 75-99 Other Non Fibrous: Filler 10-25 Note: A very small bundle of asbestos observed.	1	%			14-MAR-16	R3419144	
L1744174-6 0006A-PARGING-DUCTING-SECURED STORAGE Sampled By: DWS on 14-MAR-16 @ 07:30 Matrix: Bulk  <b>Bulk Asbestos Content</b> Asbestos: Chrysotile (Serpentine) 10-25 Other Fibres: Glass 25-50 Other Non Fibrous: Filler 50-75 Note: Sample contains asbestos	1	%			14-MAR-16	R3419144	

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1744174-6 0006A-PARGING-DUCTING-SECURED STORAGE Sampled By: DWS on 14-MAR-16 @ 07:30 Matrix: Bulk							
L1744174-7 0006B-PARGING-DUCTING-SECURED STORAGE Sampled By: DWS on 14-MAR-16 @ 07:30 Matrix: Bulk <b>Miscellaneous Parameters</b> Sample Comment	Not tested - positive reported above					14-MAR-16	
L1744174-8 0006C-PARGING-DUCTING-SECURED STORAGE Sampled By: DWS on 14-MAR-16 @ 07:30 Matrix: Bulk <b>Miscellaneous Parameters</b> Sample Comment	Not tested - positive reported above					14-MAR-16	
L1744174-9 0007-FIBREBRICK-WOMENS WASHROOM PCHASE Sampled By: DWS on 14-MAR-16 @ 07:30 Matrix: Bulk <b>Bulk Asbestos Content</b> Asbestos Other Non Fibrous: Filler Note: No asbestos fibres were observed.	<1 100		1 1	% %		14-MAR-16 14-MAR-16	R3419144 R3419144
L1744174-10 0008A-MORTAR-FLOOR-WOMENS WASHROOM PCHASE Sampled By: DWS on 14-MAR-16 @ 07:30 Matrix: Bulk <b>Bulk Asbestos Content</b> Asbestos: Amosite (Amphibole) Other Fibres: Glass Other Non Fibrous: Filler Note: Small amount of asbestos observed.	<1 1-5 75-99		1 1 1	% % %		14-MAR-16 14-MAR-16 14-MAR-16	R3419144 R3419144 R3419144
L1744174-11 0008B-MORTAR-FLOOR-WOMENS WASHROOM PCHASE Sampled By: DWS on 14-MAR-16 @ 07:30 Matrix: Bulk <b>Miscellaneous Parameters</b> Sample Comment	Not tested - positive reported above					14-MAR-16	
L1744174-12 0008C-MORTAR-FLOOR-WOMENS WASHROOM PCHASE Sampled By: DWS on 14-MAR-16 @ 07:30 Matrix: Bulk <b>Miscellaneous Parameters</b> Sample Comment	Not tested - positive reported above					14-MAR-16	
L1744174-13 0009A-MASTIC-DUCT INSULATION-OFFICE B37 Sampled By: DWS on 14-MAR-16 @ 07:30 Matrix: Bulk <b>Bulk Asbestos Content</b> Asbestos Other Fibres: Glass	<1 10-25		1 1	% %		14-MAR-16 14-MAR-16	R3419144 R3419144

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1744174-13 0009A-MASTIC-DUCT INSULATION-OFFICE B37 Sampled By: DWS on 14-MAR-16 @ 07:30 Matrix: Bulk <b>Bulk Asbestos Content</b> Other Non Fibrous: Filler and Tar Note: No asbestos fibres were observed.	75-99		1	%		14-MAR-16	R3419144
L1744174-14 0009B-MASTIC-DUCT INSULATION-OFFICE B37 Sampled By: DWS on 14-MAR-16 @ 07:30 Matrix: Bulk <b>Bulk Asbestos Content</b> Asbestos Other Fibres: Cellulose and Glass Other Non Fibrous: Filler and Tar Note: No asbestos fibres were observed.	<1 10-25 75-99		1 1 1	% % %		14-MAR-16 14-MAR-16 14-MAR-16	R3419144 R3419144 R3419144
L1744174-15 0009C-MASTIC-DUCT INSULATION-OFFICE B37 (SAMP NOT SUBMITTED) Sampled By: DWS on 14-MAR-16 @ 07:30 Matrix: Bulk							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## Reference Information

**Qualifiers for Individual Samples Listed:**

Sample Number	Client ID	Qualifier	Description
L1744174-1E	0009C-MASTIC-DUCT INSUI	NR:NR	No Result: Sample Not Received At Laboratory

**Test Method References:**

ALS Test Code	Matrix	Test Description	Method Reference**
ASBESTOS-WP	Bulk	Bulk Asbestos Content	NIOSH 9002-Polarized Light Microscopy
<p>Bulk samples are examined under a stereoscopic microscope. Individual fibers or fibre bundles are mounted in refractive index liquids and are observed under a polarized light microscope with a special dispersion staining objective. The dispersion staining colours are compared to reference samples of known asbestiforms.</p> <p>Polarized microscopy is not a definitive technique for negative results for non-friable organically bound material (i.e.floor tiles).</p>			
STOP-POSITIVE-WP	Misc.	Remaining samples not tested	STOP POSITIVE
<p>As per client request, asbestos analysis is halted after the first positive sample in a work order is reported. A handling charge will be applied to the remaining (not tested) samples.</p>			

\*\* ALS test methods may incorporate modifications from specified reference methods to improve performance.

*The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:*

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA

**Chain of Custody Numbers:**

**GLOSSARY OF REPORT TERMS**

*Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.*

- mg/kg - milligrams per kilogram based on dry weight of sample*
- mg/kg wwt - milligrams per kilogram based on wet weight of sample*
- mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight*
- mg/L - unit of concentration based on volume, parts per million.*
- < - Less than.*
- D.L. - The reporting limit.*
- N/A - Result not available. Refer to qualifier code and definition for explanation.*

*Test results reported relate only to the samples as received by the laboratory.  
 UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.  
 Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.*



## Quality Control Report

Workorder: L1744174

Report Date: 16-MAR-16

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Client: Pinchin Ltd. (Winnipeg)  
54 Terracon Place  
Winnipeg MB R2J 4G7

Contact: RODNEY LEGAULT

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
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# Quality Control Report

Workorder: L1744174

Report Date: 16-MAR-16

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**Legend:**

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Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

**Hold Time Exceedances:**

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

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The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.