



August 8, 2017

CITY OF SASKATOON

Asbestos-Containing Building Materials Assessment Report - Lakewood Civic Centre and Cliff Wright Library



Submitted to:

The City of Saskatoon
1101 Avenue P North
Saskatoon, SK S7L 7K6

Report Number: 1667963

Distribution:

One Copy: City of Saskatoon
One Copy: Golder Associates Ltd.

REPORT





ASBESTOS-CONTAINING BUILDING MATERIALS ASSESSMENT REPORT - LAKEWOOD CIVIC CENTRE AND CLIFF WRIGHT LIBRARY

Table of Contents

1.0 INTRODUCTION.....	1
2.0 SCOPE OF WORK	1
2.1 Asbestos-Containing Materials	1
3.0 RESULTS AND DISCUSSION	2
3.1 Asbestos-Containing Materials	2
3.1.1 List of Identified Asbestos-Containing Materials	2
3.1.2 Non Asbestos-Containing Materials	4
4.0 EXCLUDED AREAS AND MATERIALS	5
5.0 CONCLUSIONS AND RECOMMENDATIONS.....	6
5.1 Asbestos-Containing Materials	6
6.0 SURVEY LIMITATIONS.....	7
7.0 CLOSURE.....	7
 APPENDICES	
APPENDIX A	
Laboratory Certificate of Analysis Report	
APPENDIX B	
Site Photographs	
APPENDIX C	
Room by Room Spreadsheet	
APPENDIX D	
Floor Plans	



ASBESTOS-CONTAINING BUILDING MATERIALS ASSESSMENT REPORT - LAKEWOOD CIVIC CENTRE AND CLIFF WRIGHT LIBRARY

1.0 INTRODUCTION

Golder Associates Ltd. (Golder) was retained by the City of Saskatoon (the Client) to conduct an asbestos-containing building materials assessment of the Lakewood Civic Centre and Cliff Wright Library (the Site) located at 1635 McKercher Drive in Saskatoon, Saskatchewan. This assessment report details our findings, conclusions and recommendations for the Site. A walkthrough of the Site was conducted on April 19, 2017 and the assessment was conducted on June 6 and 7, 2017 by Kody Henderson, OHS Project Manager. Asbestos-containing building materials were identified within the Lakewood Civic Centre and Cliff Wright Library during the assessment. Further information is provided in Section 3.0.

2.0 SCOPE OF WORK

In accordance with Tender 16-0844, Golder's scope of work included conducting an asbestos-containing building materials assessment of the Site to evaluate the quantities, locations, and conditions of asbestos-containing building materials.

Following the field work, Golder prepared this assessment report that includes laboratory analysis results, findings of the assessment, conclusions, and recommendations.

2.1 Asbestos-Containing Materials

The assessment involved a non-destructive inspection of the Site to assess the type and extent of suspect ACMs in the facility. The systems that were reviewed as part of the inspections included, but were not limited to:

- *Structural* - systems including: insulation between solid webbed joists, fireproofing, building envelope, and interior/exterior caulking around windows and doors;
- *Mechanical* - systems insulation including: hot water and steam system, condensate system, chilled water system, glycol system, domestic hot and cold water, emergency generator exhaust, boiler units, heat exchangers, and asbestos cement piping; and
- *Architectural* - systems including: texture coats, sheet flooring, vinyl floor tile, acoustical spray-applied materials, condensation control applications, ceiling tile, wall board, drywall joint compound, and asbestos sheet products.

Systematic sampling of suspect ACMs was conducted as part of the assessment. Samples were submitted under chain of custody to International Asbestos Testing Laboratory Inc. (IATL) and analyzed for asbestos type and percentage content using Polarized Light Microscopy (PLM) in accordance with EPA methodologies (EPA 600/R-93/116).

Further information related to the assessment and sample collection methods can be found in the Golder document *Golder Asbestos Assessment General Survey Plan and Protocol* provided to the Client.



3.0 RESULTS AND DISCUSSION

The Lakewood Civic Centre and Cliff Wright Library were constructed in 1988 and consist of numerous change rooms, office spaces, as well as a playschool area, swimming pool area, auditorium, and library. The Lakewood Civic Centre and Cliff Wright Library consists of two floors; a lower floor and a main floor. During the assessment, the pool area, auditorium, and all associated offices and change rooms on the main floor were treated as one functional space, the library area and associated offices were treated as a second functional space, and the lower level as a third functional space.

- The Laboratory Certificate of Analysis report for the bulk asbestos samples is included in Appendix A.
- Photographs collected during the assessment are provided in Appendix B.
- A room by room spreadsheet outlining the locations, quantities, friability, and condition of identified asbestos-containing materials as well as additional information is provided in Appendix C.
- Floor plans outlining the sample locations and locations of identified asbestos-containing materials is provided in Appendix D.
- Please refer to Sections 4.0 and 6.0 of this report for a summary of the limitations encountered.

3.1 Asbestos-Containing Materials

A total of sixty-three (63) samples of building materials were collected and tested for asbestos content during the assessment of the Lakewood Civic Centre and Cliff Wright Library. Four (4) of the samples were found to contain asbestos.

3.1.1 List of Identified Asbestos-Containing Materials

A list of the identified asbestos-containing materials is provided below.

- Tan Duct Mastic (Painted White);
- Black Window Caulking; and
- Gold Sink Undercoat.

Further information on the identified asbestos-containing materials listed is provided below.

Tan Duct Mastic (Painted White)

Three (3) samples of duct mastic painted white were collected during the assessment. One of the samples collected was found to contain 0.5% Chrysotile asbestos. Based upon observations on site and from the laboratory analysis report, the sample found to contain asbestos was observed to be white paint over tan mastic. The two remaining white duct mastic samples were observed to be white paint over brown mastic. Due to the white paint concealing the color of the duct mastic, all duct mastic painted white within the lower level should be treated as asbestos-containing until further sampling or historical information is provided. The duct mastic painted white sampled on the main floor (a separate functional space) was observed to be white paint over brown mastic, and other duct mastic painted white on the main floor was observed to be white paint over grey duct mastic, however consideration should be given to conduct further sampling to evaluate if asbestos-containing tan mastic is present below the white paint on the main floor.



ASBESTOS-CONTAINING BUILDING MATERIALS ASSESSMENT REPORT - LAKEWOOD CIVIC CENTRE AND CLIFF WRIGHT LIBRARY

Asbestos-containing tan duct mastic (painted white) (see Photograph 1 in Appendix B) was observed in the following locations:

- Room B01 (approximately 40 ft);
- Room B02 (approximately 400 ft); and
- Room B03 (approximately 500 ft).

In addition to the above locations, painted white duct mastic that could not be assessed to determine the color of duct mastic below was observed in the following locations:

- Room 108/116 (approximately 320 ft);
- Room 109 (approximately 100 ft);
- Room 147 (approximately 40 ft); and
- Room 184 (approximately 10 ft).

The grey and red/brown duct mastic were sampled during the assessment and were found to not contain asbestos. Additional duct mastic (all colors) may be located below fibreglass insulation on duct work throughout the Site.

Black Window Caulking

Three (3) samples of interior black window caulking were collected during the assessment. Two of the samples collected were found to contain 4.7% to 5.7% Chrysotile asbestos.

Asbestos-containing interior black window caulking (see Photograph 2 in Appendix B) was observed in the following locations:

- Room 112 (approximately 20 linear feet);
- Vestibule adjacent to Room 122 (approximately 120 linear feet);
- Room 122 (approximately 10 linear feet);
- Corridor 128 (approximately 100 linear feet);
- Room 175 (approximately 65 linear feet);
- Room 187 (approximately 65 linear feet); and
- Room 188 (approximately 200 linear feet).

The remaining interior black window caulking was observed to be rubber and is not suspected to contain asbestos.



ASBESTOS-CONTAINING BUILDING MATERIALS ASSESSMENT REPORT - LAKEWOOD CIVIC CENTRE AND CLIFF WRIGHT LIBRARY

Gold Sink Undercoat

One (1) sample of gold sink undercoat was collected during the assessment. The sample collected was found to contain 0.25% Chrysotile asbestos.

Asbestos-containing gold sink undercoat (see Photograph 3 in Appendix B) was observed in the following location:

- Room 103 (approximately 1 sink).

3.1.2 Non Asbestos-Containing Materials

The following materials were sampled during this assessment and were found to not contain asbestos or were observed to be a non-suspect materials:

- Pipe-fitting insulation;
- Tank insulation;
- Brown duct mastic;
- Grey duct mastic;
- Red/brown duct mastic;
- Brick mortar;
- Red firestop;
- White firestop;
- Spray-applied fireproofing;
- Black firestop;
- Drywall joint compound;
- 1'x1' Off-white floor tile with brown flecks;
- Black floor tile mastic;
- White building caulking;
- 1'x1' Rose floor tile with black dots;
- 2'x4' Ceiling tile with star fissures;
- Grey building caulking;
- 1'x1' Off-white floor tile with rose flecks;
- 1'x1' Turquoise floor tile;
- Grey/white floor levelling compound;
- 1'x1' Off-white floor tile with grey flecks;



ASBESTOS-CONTAINING BUILDING MATERIALS ASSESSMENT REPORT - LAKEWOOD CIVIC CENTRE AND CLIFF WRIGHT LIBRARY

- Grey vinyl sheet flooring with turquoise and red streaks;
- White exterior window frame caulking;
- Black exterior window caulking;
- Black exterior building caulking;
- Light grey exterior base caulking;
- The drain lines throughout the site were not observed to have suspect packing;
- The duct work throughout the site was observed to be uninsulated or insulated with fibreglass insulation;
- The duct connector fabric throughout the site is not suspected to contain asbestos due to the vintage of construction;
- The 2'x4' ceiling tile with circular pattered fissures and the 2'x4' ceiling tile with small pinholes and small divots were date coded to a time period in which asbestos use was not widespread; and
- The boiler exhaust was observed to be insulated with fibreglass.

4.0 EXCLUDED AREAS AND MATERIALS

The following is a list of the areas and/or materials excluded during the assessment.

- During the assessment, approximately six floor locations were assessed for floor levelling compound. Floor levelling compound was encountered and sampled in one location at the time of the assessment and was found to not contain asbestos. If additional floor levelling compound is encountered during renovation or demolition activities, additional sampling should be conducted to evaluate the presence or absence of asbestos.
- Building materials accessible by a ten foot ladder were assessed by Golder during the assessment. Materials located at heights that were inaccessible from a ten foot ladder were not assessed. If materials at heights are to be removed or impacted by future renovation or demolition activities, additional investigation and sampling of suspect materials may be required.
- The confined spaces/crawlspace located throughout the lower level were not assessed by Golder during the assessment as per Tender 16-0844. If materials within the confined spaces/crawlspace are to be removed or impacted by future renovation or demolition activities, additional investigation and sampling of suspect materials may be required.
- The roof and associated components were not assessed by Golder during the assessment as per Tender 16-0844. If the roof and associated components are to be removed or impacted by future renovation or demolition activities, additional investigation and sampling of suspect materials may be required.
- The block wall throughout the Site was not destructively investigated for the absence or presence of potential asbestos-containing vermiculite insulation, however various wall penetrations through block were observed throughout the Site and no suspect asbestos-containing vermiculite insulation was observed. Select coring activities may be required in select portions of block wall should they be scheduled for renovation or demolition activities.



5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the visual assessment and the laboratory analytical results, the following project specific conclusions and recommendations are provided.

5.1 Asbestos-Containing Materials

Asbestos was positively identified within the tan duct mastic (painted white), black interior window caulking, and gold sink undercoat on Site. Asbestos was not identified in the remaining samples collected and analyzed.

If the building is scheduled for renovations that will impact the identified asbestos-containing materials, it must be removed. If additional suspect asbestos-containing building materials are encountered during renovation activities, additional sampling should be undertaken to evaluate asbestos content.

Removal work should be completed by workers that are adequately trained in the hazards and proper methods of working with asbestos. Throughout the abatement activities, appropriate air monitoring and inspections should be conducted by a competent person to document that contamination is contained and that ACM are disposed of appropriately. Ensure asbestos waste is disposed of in accordance with the requirements of the Government of Saskatchewan.

All quantities listed in the report are approximate and are based on the conditions at the time of the assessment. Prior to abatement work it is recommended that a competent person conduct a review of the site to quantify and obtain all measurements of all building materials detailed in this report for cost estimating purposes.

In anticipation of potential abatement, Golder's recommendations for the asbestos-containing materials identified during the assessment are outlined below.

Tan Duct Mastic (Painted White)

If scheduled for impact, asbestos-containing tan duct mastic (painted white) should be abated following low-risk abatement work procedures as outlined in the *Saskatchewan Asbestos Abatement Manual* (2017). Alternatively, as the tan duct mastic (painted white) was observed in good condition, and with a priority rating of 5 (please see the room by room spreadsheet provided in Appendix C for a description of the priority ratings), it can be managed in place if not scheduled for impact.

Black Window Caulking

If scheduled for impact, asbestos-containing black interior window caulking should be abated following low-risk abatement work procedures as outlined in the *Saskatchewan Asbestos Abatement Manual* (2017). Alternatively, as the black interior window caulking was observed in good condition, and with a priority rating of 5 (please see the room by room spreadsheet provided in Appendix C for a description of the priority ratings), it can be managed in place if not scheduled for impact.

Gold Sink Undercoat

If scheduled for impact, asbestos-containing gold sink undercoat should be abated following low-risk abatement work procedures as outlined in the *Saskatchewan Asbestos Abatement Manual* (2017). Alternatively, as the gold sink undercoat was observed in good condition, and with a priority rating of 5 (please see the room by room spreadsheet provided in Appendix C for a description of the priority ratings), it can be managed in place if not scheduled for impact.



6.0 SURVEY LIMITATIONS

This report is based on data and information collected by Golder during the assessment conducted on June 6 and 7, 2017 and is based solely on site conditions encountered at the time of the assessment. Any use of this document or the findings, conclusions or recommendations provided in this report by any person other than the City of Saskatoon is at the sole risk of such user.

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

The data and findings presented in this report are valid as of the dates of the investigations. The passage of time, manifestation of latent conditions or occurrence of future events may warrant further exploration at the properties, analysis of the data, and re-evaluation of the findings, observations, and conclusions expressed in this report. No assurance is made regarding changes in conditions or practices subsequent to the time of the investigation. It was beyond the scope of this assessment to conduct a risk assessment and the potential health risks that may be associated with asbestos exposure for building occupants.

The data reported and the findings, observations and conclusions expressed in this report are limited by the Scope of Work. The Scope of Work was defined by Tender 16-0844 and the initial site walkthrough with the Client, the time and budgetary constraints imposed by the Client, and availability of access to the property.

Because of the limitations stated above, the findings, observations and conclusions expressed by Golder in this report are not, and must not be, considered an opinion concerning compliance of any past or present owner or operator of the site with any federal, provincial or local laws or regulations.

No warranty or guarantee, whether expressed or implied, is made with respect to the data or the reported findings, observations, and conclusions, which are based solely upon site conditions in existence at the time of investigation.

Golder's assessment reports present professional opinions and findings of a scientific and technical nature. While attempts were made to relate the data and findings to applicable environmental laws and regulations, the report shall not be construed to offer legal opinion or representations as to the requirements of, nor compliance with, environmental laws, rules, regulations or policies of federal, provincial, or local governmental agencies. Any use of the survey report constitutes acceptance of the limits of Golder's liability.

Golder's liability extends only to its client and not to other parties who may obtain this survey report. Issues raised by the report must be reviewed by appropriate legal counsel.

7.0 CLOSURE

We trust the information presented in this report meets your requirements. If you have any questions please contact Kody Henderson at (780) 483-3499 or email at kody_henderson@golder.com. Thank you for the opportunity to be of service. We look forward to working with you again in the future.



ASBESTOS-CONTAINING BUILDING MATERIALS ASSESSMENT REPORT - LAKEWOOD CIVIC CENTRE AND CLIFF WRIGHT LIBRARY

Report Signature Page

GOLDER ASSOCIATES LTD.

Prepared by:

Kody Henderson, Dipl. Env. Sci., CRSP
OHS Project Manager

Reviewed by:

Andrew Grant, B.Sc., P.Eng., EP, CRSP
Associate, OHS Project Director

KH/AG/ba

Golder, Golder Associates and the GA globe design are trademarks of Golder Associates Corporation.

\\golder\gall\edmonton\active\2016\3 proj\1667963 cityofsaskatoon_asbsurveys_saskatoon\07 reports\08 - lakewood cc and cwl\city of saskatoon - lakewood cc and cwl - asbestos building material assessment report.docx



APPENDIX A

Laboratory Certificate of Analysis Report

CERTIFICATE OF ANALYSIS

Client: Golder Associates Ltd
16820 107 Ave
Edmonton AB T5P 4C3

Report Date: 6/20/2017
Report No.: 538689 - PLM
Project: City of Saskatoon (Lakewood Civic Centre)
Project No.: 1667963

Client: GOL572

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6260451
Client No.: A-001

Analyst Observation: Grey Insulation
Client Description: Pipe-Fitting Insulation

Location: Room B01
Facility:

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
10 Fibrous Glass

Percent Non-Fibrous Material:
90

Lab No.: 6260452
Client No.: A-002

Analyst Observation: Tan Mastic
Client Description: White Duct Mastic

Location: Room B01
Facility:

Percent Asbestos:
PC 0.5 Chrysotile

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
99.5

Lab No.: 6260453
Client No.: A-003

Analyst Observation: Grey Insulation
Client Description: Pipe-Fitting Insulation

Location: Room B02
Facility:

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
10 Fibrous Glass

Percent Non-Fibrous Material:
90

Lab No.: 6260454
Client No.: A-004

Analyst Observation: Grey Insulation
Client Description: Pipe-Fitting Insulation

Location: Room B02
Facility:

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
2 Cellulose
8 Fibrous Glass

Percent Non-Fibrous Material:
90

Lab No.: 6260455
Client No.: A-005

Analyst Observation: Grey Insulation
Client Description: Pipe-Fitting Insulation

Location: Room B02
Facility:

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
10 Fibrous Glass

Percent Non-Fibrous Material:
90

Lab No.: 6260456
Client No.: A-006

Analyst Observation: Grey Insulation
Client Description: White Tank Insulation

Location: Room B02
Facility:

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
10 Fibrous Glass

Percent Non-Fibrous Material:
90

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

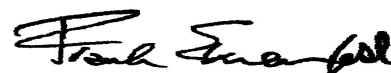
Date Received: 6/13/2017

Date Analyzed: 06/20/2017

Signature:

Analyst: Ellen Smith

Approved By:



Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: Golder Associates Ltd
16820 107 Ave
Edmonton AB T5P 4C3

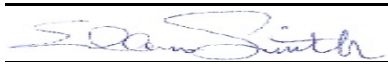
Report Date: 6/20/2017
Report No.: 538689 - PLM
Project: City of Saskatoon (Lakewood Civic Centre)
Project No.: 1667963

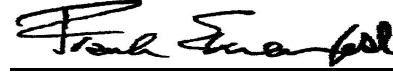
Client: GOL572

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6260457 Client No.: A-007	Analyst Observation: Blue/White Fibrous Client Description: Blue Tank Insulation	Location: Room B02 Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 35 Fibrous Glass	<u>Percent Non-Fibrous Material:</u> 65
Lab No.: 6260458 Client No.: A-008	Analyst Observation: Grey Insulation Client Description: Pipe Fitting Insulation	Location: Room B03 Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 15 Fibrous Glass	<u>Percent Non-Fibrous Material:</u> 85
Lab No.: 6260459 Client No.: A-009	Analyst Observation: Brown Sealant Client Description: White Duct Mastic	Location: Room B03 Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260460 Client No.: A-010	Analyst Observation: Grey Cementitious Client Description: Brick Mortar	Location: Ozone Equipment Rom Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260461 Client No.: A-011	Analyst Observation: Red Sealant Client Description: Red Firestop	Location: Ozone Equipment Rom Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260462 Client No.: A-012	Analyst Observation: Off-White Sealant Client Description: White Firestop	Location: Ozone Equipment Rom Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 1 Fibrous Glass	<u>Percent Non-Fibrous Material:</u> 99

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 6/13/2017
Date Analyzed: 06/20/2017
Signature: 
Analyst: Ellen Smith

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: Golder Associates Ltd
16820 107 Ave
Edmonton AB T5P 4C3

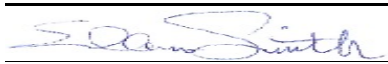
Report Date: 6/20/2017
Report No.: 538689 - PLM
Project: City of Saskatoon (Lakewood Civic Centre)
Project No.: 1667963

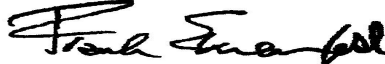
Client: GOL572

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6260463 Client No.: A-013 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Lt Tan Insulation Client Description: Spray-Applied Fireproofing <u>Percent Non-Asbestos Fibrous Material:</u> 80 Fibrous Glass	Location: Room S1 Facility: <u>Percent Non-Fibrous Material:</u> 20
Lab No.: 6260464 Client No.: A-014 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Lt Tan Insulation Client Description: Spray-Applied Fireproofing <u>Percent Non-Asbestos Fibrous Material:</u> 90 Fibrous Glass	Location: Room 110 Facility: <u>Percent Non-Fibrous Material:</u> 10
Lab No.: 6260465 Client No.: A-015 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Dk Grey Sealant Client Description: Black Firestop <u>Percent Non-Asbestos Fibrous Material:</u> 7 Cellulose	Location: Room 110 Facility: <u>Percent Non-Fibrous Material:</u> 93
Lab No.: 6260466 Client No.: A-016 <u>Percent Asbestos:</u> <i>PC 5.7 Chrysotile</i>	Analyst Observation: Grey Sealant Client Description: Black Window Caulking <u>Percent Non-Asbestos Fibrous Material:</u> 5 Cellulose 2 Talc	Location: Room 112 Facility: <u>Percent Non-Fibrous Material:</u> 87.3
Lab No.: 6260467 Client No.: A-017 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Lt Tan Sheetrock Client Description: Drywall Joint Compound <u>Percent Non-Asbestos Fibrous Material:</u> 20 Cellulose	Location: Room 113 Facility: <u>Percent Non-Fibrous Material:</u> 80
Lab No.: 6260467(L2) Client No.: A-017 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: White Joint Compound Client Description: Drywall Joint Compound <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Room 113 Facility: <u>Percent Non-Fibrous Material:</u> 100

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 6/13/2017
Date Analyzed: 06/20/2017
Signature: 
Analyst: Ellen Smith

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

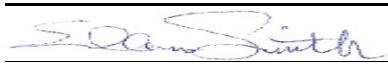
CERTIFICATE OF ANALYSIS

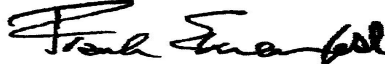
Client: Golder Associates Ltd 16820 107 Ave Edmonton AB T5P 4C3	Report Date: 6/20/2017 Report No.: 538689 - PLM Project: City of Saskatoon (Lakewood Civic Centre) Project No.: 1667963
Client: GOL572	

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6260468 Client No.: A-018 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Tan Insulation Client Description: Spray-Applied Fireproofing <u>Percent Non-Asbestos Fibrous Material:</u> 70 Fibrous Glass	Location: Room 113 Facility: <u>Percent Non-Fibrous Material:</u> 30
Lab No.: 6260469 Client No.: A-019 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Grey Insulation Client Description: Pipe-Fitting Insulation <u>Percent Non-Asbestos Fibrous Material:</u> 10 Fibrous Glass	Location: Room 113 Facility: <u>Percent Non-Fibrous Material:</u> 90
Lab No.: 6260470 Client No.: A-020 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Grey Sealant Client Description: Grey Duct Mastic <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Room 114 Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260471 Client No.: A-021 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: White Joint Compound Client Description: Drywall Joint Compound <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Room 120 Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260472 Client No.: A-022 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Off-White Floor Tile Client Description: 12x12 Off-White Floor Tile With Brown Flecks <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Room 120 Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260472(L2) Client No.: A-022 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Black Mastic Client Description: 12x12 Off-White Floor Tile With Brown Flecks <u>Percent Non-Asbestos Fibrous Material:</u> 1 Cellulose	Location: Room 120 Facility: <u>Percent Non-Fibrous Material:</u> 99

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 6/13/2017
Date Analyzed: 06/20/2017
Signature: 
Analyst: Ellen Smith

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director


CERTIFICATE OF ANALYSIS

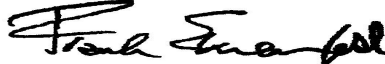
Client: Golder Associates Ltd 16820 107 Ave Edmonton AB T5P 4C3	Report Date: 6/20/2017 Report No.: 538689 - PLM Project: City of Saskatoon (Lakewood Civic Centre) Project No.: 1667963
Client: GOL572	

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6260473 Client No.: A-023 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Black Sealant Client Description: Black Window Caulking <u>Percent Non-Asbestos Fibrous Material:</u> 5 Cellulose	Location: Vestibule Adjacent To Room 122 Facility: <u>Percent Non-Fibrous Material:</u> 95
Lab No.: 6260474 Client No.: A-024 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Grey/Black Sealant Client Description: White Building Caulking <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Vestibule Adjacent To Room 122 Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260475 Client No.: A-025 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Brown Sealant Client Description: Red/Brown Duct Mastic <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Room 124 Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260476 Client No.: A-026 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Tan Floor Tile Client Description: 12x12 Rose Floor Tile With Black Dots <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Room 123 Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260477 Client No.: A-027 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Tan Ceiling Tile Client Description: 2x4 Ceiling Tile With Star Fissures <u>Percent Non-Asbestos Fibrous Material:</u> 30 Cellulose 15 Fibrous Glass	Location: Room 147 Facility: <u>Percent Non-Fibrous Material:</u> 55
Lab No.: 6260478 Client No.: A-028 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Tan Ceiling Tile Client Description: 2x4 Ceiling Tile With Star Fissures <u>Percent Non-Asbestos Fibrous Material:</u> 30 Cellulose 15 Fibrous Glass	Location: Room 147 Facility: <u>Percent Non-Fibrous Material:</u> 55

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 6/13/2017
Date Analyzed: 06/20/2017
Signature: 
Analyst: Ellen Smith

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: Golder Associates Ltd
16820 107 Ave
Edmonton AB T5P 4C3

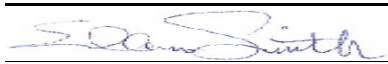
Report Date: 6/20/2017
Report No.: 538689 - PLM
Project: City of Saskatoon (Lakewood Civic Centre)
Project No.: 1667963

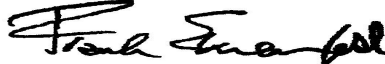
Client: GOL572

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6260479 Client No.: A-029 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Tan Ceiling Tile Client Description: 2x4 Ceiling Tile With Star Fissures <u>Percent Non-Asbestos Fibrous Material:</u> 35 Cellulose 15 Fibrous Glass	Location: Room 147 Facility: <u>Percent Non-Fibrous Material:</u> 50
Lab No.: 6260480 Client No.: A-030 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Grey Grout Client Description: Brick Mortar <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Room 101 Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260480(L2) Client No.: A-030 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Off-White Mortar Client Description: Brick Mortar <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Room 101 Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260481 Client No.: A-031 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Lt Grey Sealant Client Description: Grey Building Caulking <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Room 150 Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260482 Client No.: A-032 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: White Joint Compound Client Description: Drywall Joint Compound <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Room 149 Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260483 Client No.: A-033 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: White Joint Compound Client Description: Drywall Joint Compound <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Room 152 Facility: <u>Percent Non-Fibrous Material:</u> 100

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 6/13/2017
Date Analyzed: 06/20/2017
Signature: 
Analyst: Ellen Smith

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: Golder Associates Ltd
16820 107 Ave
Edmonton AB T5P 4C3

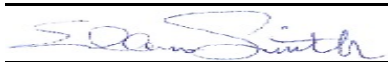
Report Date: 6/20/2017
Report No.: 538689 - PLM
Project: City of Saskatoon (Lakewood Civic Centre)
Project No.: 1667963

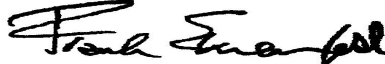
Client: GOL572

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6260484 Client No.: A-034	Analyst Observation: White Joint Compound Client Description: Drywall Joint Compound	Location: Room 101 Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260485 Client No.: A-035	Analyst Observation: White Joint Compound Client Description: Drywall Joint Compound	Location: Room 169 Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260486 Client No.: A-036	Analyst Observation: White Joint Compound Client Description: Drywall Joint Compound	Location: Room 188 Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260487 Client No.: A-037	Analyst Observation: White Joint Compound Client Description: Drywall Joint Compound	Location: Room 188 Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260488 Client No.: A-038	Analyst Observation: Brown Sealant Client Description: White Duct Mastic	Location: Room 188 Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260489 Client No.: A-039	Analyst Observation: Off-White Floor Tile Client Description: 12x12 Off-White Floor Tile With Rose Flecks	Location: Room 188 Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 6/13/2017
Date Analyzed: 06/20/2017
Signature: 
Analyst: Ellen Smith

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: Golder Associates Ltd 16820 107 Ave Edmonton AB T5P 4C3	Report Date: 6/20/2017 Report No.: 538689 - PLM Project: City of Saskatoon (Lakewood Civic Centre) Project No.: 1667963
Client: GOL572	

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6260489(L2) Client No.: A-039	Analyst Observation: Black Mastic Client Description: 12x12 Off-White Floor Tile With Rose Flecks	Location: Room 188 Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 1 Cellulose	<u>Percent Non-Fibrous Material:</u> 99

Lab No.: 6260490 Client No.: A-040	Analyst Observation: Green Floor Tile Client Description: 12x12 Turquoise Floor Tile	Location: Room 188 Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

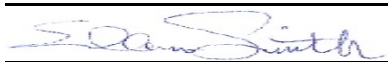
Lab No.: 6260490(L2) Client No.: A-040	Analyst Observation: Black Mastic Client Description: 12x12 Turquoise Floor Tile	Location: Room 188 Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 1 Cellulose	<u>Percent Non-Fibrous Material:</u> 99

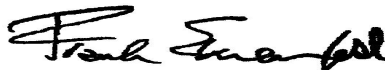
Lab No.: 6260491 Client No.: A-041	Analyst Observation: Black Mastic Client Description: Grey/White Floor Leveling Compound	Location: Room 188 Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

Lab No.: 6260491(L2) Client No.: A-041	Analyst Observation: Lt Tan Compound Material Client Description: Grey/White Floor Leveling Compound	Location: Room 188 Facility:
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

Lab No.: 6260492 Client No.: A-042	Analyst Observation: Grey Sealant Client Description: Black Window Caulking	Location: Room 188 Facility:
<u>Percent Asbestos:</u> <i>PC 4.7 Chrysotile</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 95.3

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 6/13/2017
Date Analyzed: 06/20/2017
Signature: 
Analyst: Ellen Smith

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: Golder Associates Ltd
16820 107 Ave
Edmonton AB T5P 4C3

Report Date: 6/20/2017
Report No.: 538689 - PLM
Project: City of Saskatoon (Lakewood Civic Centre)
Project No.: 1667963

Client: GOL572

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6260493	Analyst Observation: White Joint Compound	Location: Room 183
Client No.: A-043	Client Description: Drywall Joint Compound	Facility:
<u>Percent Asbestos:</u>	<u>Percent Non-Asbestos Fibrous Material:</u>	<u>Percent Non-Fibrous Material:</u>
<i>None Detected</i>	None Detected	100

Lab No.: 6260494	Analyst Observation: Off-White Floor Tile	Location: Room 183
Client No.: A-044	Client Description: 12x12 Off-White Floor Tile With Grey Flecks	Facility:
<u>Percent Asbestos:</u>	<u>Percent Non-Asbestos Fibrous Material:</u>	<u>Percent Non-Fibrous Material:</u>
<i>None Detected</i>	None Detected	100

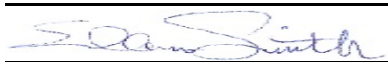
Lab No.: 6260494(L2)	Analyst Observation: Black Mastic	Location: Room 183
Client No.: A-044	Client Description: 12x12 Off-White Floor Tile With Grey Flecks	Facility:
<u>Percent Asbestos:</u>	<u>Percent Non-Asbestos Fibrous Material:</u>	<u>Percent Non-Fibrous Material:</u>
<i>None Detected</i>	1 Cellulose	99

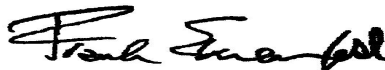
Lab No.: 6260495	Analyst Observation: White Joint Compound	Location: Room 184
Client No.: A-045	Client Description: Drywall Joint Compound	Facility:
<u>Percent Asbestos:</u>	<u>Percent Non-Asbestos Fibrous Material:</u>	<u>Percent Non-Fibrous Material:</u>
<i>None Detected</i>	None Detected	100

Lab No.: 6260496	Analyst Observation: Grey Floor Tile	Location: Room 181
Client No.: A-046	Client Description: Grey Vinyl Sheet Flooring With Turquoise And Red Streaks	Facility:
<u>Percent Asbestos:</u>	<u>Percent Non-Asbestos Fibrous Material:</u>	<u>Percent Non-Fibrous Material:</u>
<i>None Detected</i>	None Detected	100

Lab No.: 6260497	Analyst Observation: Tan Mastic	Location: Room 180
Client No.: A-047	Client Description: White Building Caulking	Facility:
<u>Percent Asbestos:</u>	<u>Percent Non-Asbestos Fibrous Material:</u>	<u>Percent Non-Fibrous Material:</u>
<i>None Detected</i>	1 Cellulose	99

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 6/13/2017
Date Analyzed: 06/20/2017
Signature: 
Analyst: Ellen Smith

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

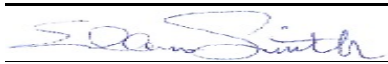
CERTIFICATE OF ANALYSIS

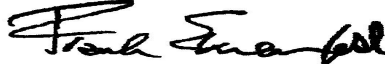
Client: Golder Associates Ltd 16820 107 Ave Edmonton AB T5P 4C3	Report Date: 6/20/2017 Report No.: 538689 - PLM Project: City of Saskatoon (Lakewood Civic Centre) Project No.: 1667963
Client: GOL572	

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6260498 Client No.: A-048 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Lt Tan Sealant Client Description: Drywall Joint Compound <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Room 175 Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260498(L2) Client No.: A-048 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Tan Mastic Client Description: Drywall Joint Compound <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Room 175 Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260499 Client No.: A-049 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Tan Ceiling Tile Client Description: 2x4 Ceiling Tile With Star Fissures <u>Percent Non-Asbestos Fibrous Material:</u> 30 Cellulose 15 Fibrous Glass	Location: Room 175 Facility: <u>Percent Non-Fibrous Material:</u> 55
Lab No.: 6260500 Client No.: A-050 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Tan Ceiling Tile Client Description: 2x4 Ceiling Tile With Star Fissures <u>Percent Non-Asbestos Fibrous Material:</u> 30 Cellulose 15 Fibrous Glass	Location: Room 175 Facility: <u>Percent Non-Fibrous Material:</u> 55
Lab No.: 6260501 Client No.: A-051 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: White Joint Compound Client Description: Drywall Joint Compound <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Room 177 Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260501(L2) Client No.: A-051 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Tan Mastic Client Description: Drywall Joint Compound <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Room 177 Facility: <u>Percent Non-Fibrous Material:</u> 100

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 6/13/2017
Date Analyzed: 06/20/2017
Signature: 
Analyst: Ellen Smith

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: Golder Associates Ltd
16820 107 Ave
Edmonton AB T5P 4C3

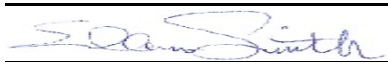
Report Date: 6/20/2017
Report No.: 538689 - PLM
Project: City of Saskatoon (Lakewood Civic Centre)
Project No.: 1667963

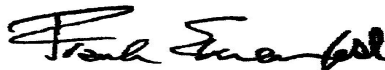
Client: GOL572

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6260502 Client No.: A-052 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Grey Cementitious Client Description: Brick Mortar <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Exterior Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260503 Client No.: A-053 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Grey Cementitious Client Description: Brick Mortar <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Exterior Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260504 Client No.: A-054 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Grey Cementitious Client Description: Brick Mortar <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Exterior Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260505 Client No.: A-055 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Grey Cementitious Client Description: Brick Mortar <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Exterior Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260506 Client No.: A-056 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Grey Cementitious Client Description: Brick Mortar <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Exterior Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260507 Client No.: A-057 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Grey Sealant Client Description: Grey Building Caulking <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Exterior Facility: <u>Percent Non-Fibrous Material:</u> 100

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 6/13/2017
Date Analyzed: 06/20/2017
Signature: 
Analyst: Ellen Smith

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

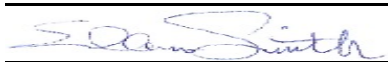
CERTIFICATE OF ANALYSIS

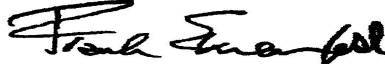
Client: Golder Associates Ltd 16820 107 Ave Edmonton AB T5P 4C3	Report Date: 6/20/2017 Report No.: 538689 - PLM Project: City of Saskatoon (Lakewood Civic Centre) Project No.: 1667963
Client: GOL572	

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6260508 Client No.: A-058 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Lt Tan Sealant Client Description: White Window Frame Caulking <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Exterior Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260509 Client No.: A-059 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Black Sealant Client Description: Black Window Caulking <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Exterior Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260510 Client No.: A-060 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Black Sealant Client Description: Black Window Caulking <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Exterior Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260511 Client No.: A-061 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Black Sealant Client Description: Black Building Caulking <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Exterior Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260512 Client No.: A-062 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Grey Sealant Client Description: Light Grey Base Caulking <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Exterior Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6260513 Client No.: A-063 <u>Percent Asbestos:</u> <i>PC 0.25 Chrysotile</i>	Analyst Observation: Silver/Black Sealant Client Description: Gold Sink Undercoat <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Room 103 Facility: <u>Percent Non-Fibrous Material:</u> 99.75

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 6/13/2017
Date Analyzed: 06/20/2017
Signature: 
Analyst: Ellen Smith

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: Golder Associates Ltd
16820 107 Ave
Edmonton AB T5P 4C3

Report Date: 6/20/2017
Report No.: 538689 - PLM
Project: City of Saskatoon (Lakewood Civic Centre)
Project No.: 1667963

Client: GOL572

Appendix to Analytical Report

Customer Contact:

Analysis: US EPA 600, R93-116

This appendix seeks to promote greater understanding of any observations, exceptions, special instructions, or circumstances that the laboratory needs to communicate to the client concerning the above samples. The information below is used to help promote your ability to make the most informed decisions for you and your customers. Please note the following points of contact for any questions you may have.

iATL Customer Service: customerservice@iatl.com

iATL Office Manager: cdavis@iatl.com

iATL Account Representative: Pete Lesniak

Sample Login Notes: See Batch Sheet Attached

Sample Matrix: Bulk Building Materials

Exceptions Noted: See Following Pages

General Terms, Warrants, Limits, Qualifiers:

General information about iATL capabilities and client/laboratory relationships and responsibilities are spelled out in iATL policies that are listed at www.iATL.com and in our Quality Assurance Manual per ISO 17025 standard requirements. The information therein is a representation of iATL definitions and policies for turnaround times, sample submittal, collection media, blank definitions, quantification issues and limit of detection, analytical methods and procedures, sub-contracting policies, results reporting options, fees, terms, and discounts, confidentiality, sample archival and disposal, and data interpretation.

iATL warrants the test results to be of a precision normal for the type and methodology employed for each sample submitted. iATL disclaims any other warrants, expressed or implied, including warranty of fitness for a particular purpose and warranty of merchantability. iATL accepts no legal responsibility for the purpose for which the client uses test results. Any analytical work performed must be governed by our Standard Terms and Conditions. Prices, methods and detection limits may be changed without notification. Please contact your Customer Service Representative for the most current information.

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA LAP LLC, or any agency of local, state or province governments nor of any agency of the U.S. government.

This report shall not be reproduced except in full, without written approval of the laboratory.

Information Pertinent to this Report:

Analysis by US EPA 600 93-116: Determination of Asbestos in Bulk Building Materials by Polarized Light Microscopy (PLM).

Certifications:

- NIST-NVLAP No. 101165-0
- NY-DOH No. 11021
- AIHA-LAP, LLC No. 100188

Quantification at <0.25% by volume is possible with this method. (PC) Indicates Stratified Point Count Method performed. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed (ex. analyze until positive instructions). Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, PLM is not consistently reliable in detecting asbestos in non-friable organically bound (NOB) materials. Quantitative transmission electron microscopy (TEM) is currently the only method that can pronounce materials as non-asbestos containing.

Analytical Methodology Alternatives: Your initial request for analysis may not have accounted for recent advances in regulatory requirements or advances in technology that are routinely used in similar situations for other qualified projects. You may have the option to explore additional analysis for further information. Below are a few options, listed as the matrix followed by the appropriate methodology. Also included are links to more information on our website.

Bulk Building Materials that are Non-Friable Organically Bound (NOB) by Gravimetric Reduction techniques employing PLM and TEM: ELAP 198.6 (PLM-NOB), ELAP 198.4 (TEM-NOB)

Loose Fill Vermiculite Insulation, Attic Insulation, Zonolite (copyright), etc.: US EPA 600 R-4/004 (multi-tiered analytical process)
Sprayed On Insulation/Fireproofing with Vermiculite (SOF-V): ELAP 198.8 (PLM-SOF-V)>

Soil, sludge, sediment, aggregate, and like materials analyzed for asbestos or other elongated mineral particles (ex. erionite, etc.): ASTM D7521, CARB 435, and other options available

CERTIFICATE OF ANALYSIS

Client: Golder Associates Ltd
16820 107 Ave
Edmonton AB T5P 4C3

Report Date: 6/20/2017
Report No.: 538689 - PLM
Project: City of Saskatoon (Lakewood Civic Centre)
Project No.: 1667963

Client: GOL572

Asbestos in Surface Dust according to one of ASTM's Methods (very dependent on sampling collection technique – by TEM): ASTM D 5755, D5756, or D6480

Various other asbestos matrices (air, water, etc.) and analytical methods are available.

Disclaimers / Qualifiers:

There may be some samples in this project that have a "NOTE:" associated with a sample result. We use added disclaimers or qualifiers to inform the client about something that requires further explanation. Here is a list with highlighted disclaimers that may be pertinent to this project. For a full explanation of these and other disclaimers, please inquire at customerservice@iatl.com.

- 1) Note: No mastic provided for analysis.
- 2) Note: Insufficient mastic provided for analysis.
- 3) Note: Insufficient material provided for analysis.
- 4) Note: Insufficient sample provided for QC reanalysis.
- 5) Note: Different material than indicated on Sample Log / Description.
- 6) Note: Sample not submitted.
- 7) Note: Attached to asbestos containing material.
- 8) Note: Received wet.
- 9) Note: Possible surface contamination.
- 10) Note: Not building material. 1% threshold may not apply.
- 11) Note: Recommend TEM-NOB analysis as per EPA recommendations.
- 12) Note: Asbestos detected but not quantifiable.
- 13) Note: Multiple identical samples submitted, only one analyzed.
- 14) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.080%.
- 15) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.125%.

Recommendations for Vermiculite Analysis:

Several analytical protocols exist for the analysis of asbestos in vermiculite. These analytical approaches vary depending upon the nature of the vermiculite mineral being tested (e.g. un-processed gangue, homogeneous exfoliated books of mica, or mixed mineral composites). Please contact your client representative for pricing and turnaround time options available.

iATL recommends initial testing using the EPA 600/R-93/116 method. This method is specifically designed for the analysis of asbestos in bulk building materials. It provides an acceptable starting point for primary screening of vermiculite for possible asbestos.

Results from this testing may be inconclusive. EPA suggests proceeding to a multi-tiered analysis involving wet separation techniques in conjunction with PLM and TEM gravimetric analysis (EPA 600/R-04/004).

Further information on this method and other vermiculite and asbestos issues can be found at the following: Agency for Toxic Substances and Disease Registry (ATSDR) www.atsdr.cdc.gov, United States Geological Survey (USGS) www.minerals.usgs.gov/minerals/, US EPA www.epa.gov/asbestos. The USEPA also has an informative brochure "Current Best Practices for Vermiculite Attic Insulation" EPA 747F03001 May 2003, that may assist the health and remediation professional.

The following is a summary of the analytical process outlines in the EPA 600/R-04/004 Method:

- 1) **Analytical Step/Method:** Initial Screening by PLM, EPA 600R-93/116
Requirements/Comments: Minimum of 0.1 g of sample. ~0.25% LOQ for most samples.
- 2) **Analytical Step/Method:** Wet Separation by PLM Gravimetric Technique, EPA R-04/004
Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Sinks" only.
- 3) **Analytical Step/Method:** Wet Separation by PLM Gravimetric Technique, EPA R-04/004
Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Floats" only.
- 4) **Analytical Step/Method:** Wet Separation by TEM Gravimetric Technique, EPA R-04/004
Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Sinks" only.
- 5) **Analytical Step/Method:** Wet Separation by TEM Gravimetric Technique, EPA R-04/004
Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Suspension" only.

LOQ, Limit of Quantitation estimates for mass and volume analyses.

*With advance notice and confirmation by the laboratory.

**Approximately 1 Liter of sample in double-bagged container (~9x6 inch bag of sample).



APPENDIX B

Site Photographs



APPENDIX B

Site Photographs



Photograph 1: Asbestos-Containing Tan Duct Mastic (Painted White).



Photograph 2: Asbestos-Containing Black Window Caulking.



APPENDIX B

Site Photographs



Photograph 3: Asbestos-Containing Gold Sink Undercoat.

\\golder\gal\edmonton\active\2016\3 proj\1667963 cityofsaskatoon_asbsurveys_saskatoon\07 reports\08 - lakewood cc and cw\appendix b - site photographs.docx



APPENDIX C

Room by Room Spreadsheet

Appendix C
Lakewood Civic Centre and Cliff Wright Library
ACM Inventory

Included/Excluded	Floor	Room #	Area Description	Elements	Subelements	Material Description	Accessibility	Suspect?	Sampled?	Asbestos Containing Material?	Condition	Field Notes	Sample Type	Sample ID	Sample Date	Asbestos Type	ACM Product	% of asbestos	Friable	Sprayed-on	Maintenance	Inspection	Priority	Potential for Disturbance	Recommended Action	Quantity	Photograph ID	Labelling Type
Included	All	All	Throughout	Doors	Regular Door	Non Suspect Door	High	No	No	No	Good	Non-suspect doors.																
Included	All	All	Throughout	Mechanical	Duct Work	Duct Connector Fabric	High	No	No	No	Good	Non-suspect fabric.																
														VS A-001, A-003, A-004, A-005, A-008, A-019														
Included	All	All	Throughout	Mechanical	Piping	Pipe-Fitting Insulation	High	No	Yes	No	Good																	
Included	B	B01	Mechanical Room	Walls	Walls	Concrete	High	No	No	No	Good																	
Included	B	B01	Mechanical Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	B	B01	Mechanical Room	Floor	Floor	Concrete	High	No	No	No	Good																	
Included	B	B01	Mechanical Room	Ceiling	Ceiling	Concrete	High	No	No	No	Good																	
Included	B	B01	Mechanical Room	Mechanical	Duct Work	Tan Duct Mastic (Painted White)	High	Yes	Yes	Yes	Good		Bulk	A-002	6-Jun-17	Chrysotile	Duct Mastic	0.50%	No	No	No	Annually	5	Moderate	Manage in place.	40 ft	Photograph 1	Door Jamb
Included	B	B01	Mechanical Room	Mechanical	Piping	Pipe-Fitting Insulation	High	No	Yes	No	Good		Bulk	A-001	6-Jun-17													
Included	B	B02	Mechanical Room	Walls	Walls	Concrete	High	No	No	No	Good																	
Included	B	B02	Mechanical Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	B	B02	Mechanical Room	Floor	Floor	Concrete	High	No	No	No	Good																	
Included	B	B02	Mechanical Room	Ceiling	Ceiling	Concrete	High	No	No	No	Good																	
Included	B	B02	Mechanical Room	Mechanical	Duct Work	Tan Duct Mastic (Painted White)	High	Yes	Yes	Yes	Good			VS A-002		Chrysotile	Duct Mastic	0.50%	No	No	No	Annually	5	Moderate	Manage in place.	400 ft	Photograph 1	Door Jamb
Included	B	B02	Mechanical Room	Mechanical	Piping	Pipe-Fitting Insulation	High	No	Yes	No	Good		Bulk	A-004, A-005	6-Jun-17													
Included	B	B02	Mechanical Room	Mechanical	Tank	Tank Insulation	High	No	Yes	No	Good		Bulk	A-006, A-007	6-Jun-17													
Included	B	B02	Mechanical Room	Mechanical	Piping	Drain Lines	High	No	No	No	Good	Observed to be non-suspect PVC																
Included	B	B02	Mechanical Room	Electrical	Electrical Panels and Components	Electrical Panels and Components	High	Yes	No	Potential	Good	Not sampled due to safety concerns.												Inspect and sample if scheduled for removal.				
Included	B	B03	Mechanical Room	Walls	Walls	Concrete	High	No	No	No	Good																	
Included	B	B03	Mechanical Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	B	B03	Mechanical Room	Floor	Floor	Concrete	High	No	No	No	Good																	
Included	B	B03	Mechanical Room	Ceiling	Ceiling	Concrete	High	No	No	No	Good																	
Included	B	B03	Mechanical Room	Mechanical	Duct Work	Brown Duct Mastic (Painted White)	High	No	Yes	No	Good		Bulk	A-009	6-Jun-17													
Included	B	B03	Mechanical Room	Mechanical	Duct Work	Tan Duct Mastic (Painted White)	High	Yes	Yes	Yes	Good			VS A-002		Chrysotile	Duct Mastic	0.50%	No	No	No	Annually	5	Moderate	Manage in place.	500 ft	Photograph 1	Door Jamb
Included	B	B03	Mechanical Room	Mechanical	Piping	Pipe-Fitting Insulation	High	No	Yes	No	Good		Bulk	A-008	6-Jun-17													
Included	B	B03	Mechanical Room	Electrical	Electrical Panels and Components	Electrical Panels and Components	High	Yes	No	Potential	Good	Not sampled due to safety concerns.												Inspect and sample if scheduled for removal.				
														VS A-010, A-030, A-052, A-053, A-054, A-055, A-056														
Included	B	B04	Mechanical Room	Walls	Walls	Brick	High	No	Yes	No	Good																	
Included	B	B04	Mechanical Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	B	B04	Mechanical Room	Floor	Floor	Metal Grating	High	No	No	No	Good																	
Included	B	B04	Mechanical Room	Ceiling	Ceiling	Concrete	High	No	No	No	Good																	
Included	B	B04	Mechanical Room	Mechanical	Piping	Pipe-Fitting Insulation	High	No	No	No	Good	Observed to be non-suspect PVC																
Included	B	O ₃ Equip Rm	Mechanical Room	Walls	Walls	Brick	High	No	Yes	No	Good		Bulk	A-010	6-Jun-17													
Included	B	O ₃ Equip Rm	Mechanical Room	Walls	Walls	Concrete	High	No	No	No	Good																	
Included	B	O ₃ Equip Rm	Mechanical Room	Floor	Floor	Concrete	High	No	No	No	Good																	
Included	B	O ₃ Equip Rm	Mechanical Room	Ceiling	Ceiling	Metal Grating	High	No	No	No	Good																	
												Date coded to a time period in which asbestos use was not widespread.																
Included	B	O ₃ Equip Rm	Mechanical Room	Ceiling	Ceiling	Loose Stack of Ceiling Tiles	High	No	No	No	Good																	
Included	B	O ₃ Equip Rm	Mechanical Room	Mechanical	Firestop	Red Firestop	High	No	Yes	No	Good		Bulk	A-011	6-Jun-17													
Included	B	O ₃ Equip Rm	Mechanical Room	Mechanical	Firestop	White Firestop	High	No	Yes	No	Good		Bulk	A-012	6-Jun-17													
Included	M	S1	Stairwell	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	S1	Stairwell	Floor	Floor	Rubber	High	No	No	No	Good																	
Included	M	S1	Stairwell	Ceiling	Ceiling	Spray-Applied Fireproofing	High	No	Yes	No	Good		Bulk	A-013	6-Jun-17													
Included	M	101	Lobby	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good		Bulk	A-034	6-Jun-17													
Included	M	101	Lobby	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	101	Lobby	Walls	Walls	Brick	High	No	Yes	No	Good		Bulk	A-030	6-Jun-17													
Included	M	101	Lobby	Floor	Floor	Rubber	High	No	No	No	Good																	
Included	M	101	Lobby	Ceiling	Ceiling	Metal Deck	High	No	No	No	Good																	
														VS A-024, A-047														
Included	M	101	Lobby	Walls	Caulking	White Building Caulking	High	No	Yes	No	Good																	
Included	M	102	Café	Walls	Block Wall	Block Wall	High	No	No	No	Good																	
Included	M	102	Café	Floor	Floor	Rubber	High	No	No	No	Good																	
Included	M	102	Café	Ceiling	Ceiling	Metal Deck	High	No	No	No	Good																	
														VS A-031, A-057														
Included	M	102	Café	Walls	Caulking	Grey Building Caulking	High	No	Yes	No	Good																	
														VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	103/106	Kitchen	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good																	
Included	M	103/106	Kitchen	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	103/106	Kitchen	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	103/106	Kitchen	Ceiling	Ceiling	Metal Ceiling Tiles	High	No	No	No	Good																	
Included	M	103/106	Kitchen	Plumbing	Sink	Gold Sink Undercoat	High	Yes	Yes	Yes	Good		Bulk	A-063	7-Jun-17	Chrysotile	Sink Undercoat	0.25%	No	No	No	Annually	5	Moderate	Manage in place.	1 Sink	Photograph 3	Door Jamb
														VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	104	Storage Room	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good																	
Included	M	104	Storage Room	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	104	Storage Room	Ceiling	Ceiling	Metal Ceiling Tiles	High	No	No	No	Good																	
Included	M	104	Mechanical Room	Electrical	Electrical Panels and Components	Electrical Panels and Components	High	Yes	No	Potential	Good	Not sampled due to safety concerns.												Inspect and sample if scheduled for removal.				
														VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	105	Washroom	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good																	
Included	M	105	Washroom	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	105	Washroom	Ceiling	Ceiling	Metal Ceiling Tiles	High	No	No	No	Good																	
Included	M	108/116	Pool	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	108/116	Pool	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	108/116	Pool	Ceiling	Ceiling	Fibreglass Sound Dampeners	High	No	No	No	Good																	
Included	M	108/116	Pool	Ceiling	Ceiling	Metal Deck	High	No	No	No	Good																	
												Unable to access the duct mastic to evaluate if it is white painted over lan.													Inspect if scheduled for removal.			
Included	M	108/116	Pool	Mechanical	Duct Work	White Duct Mastic	High	Yes	No	Potential	Good																	

Appendix C
Lakewood Civic Centre and Cliff Wright Library
ACM Inventory

Included/Excluded	Floor	Room #	Area Description	Elements	Subelements	Material Description	Accessibility	Suspect?	Sampled?	Asbestos Containing Material?	Condition	Field Notes	Sample Type	Sample ID	Sample Date	Asbestos Type	ACM Product	% of asbestos	Friable	Sprayed-on	Maintenance	Inspection	Priority	Potential for Disturbance	Recommended Action	Quantity	Photograph ID	Labelling Type
Included	M	Above O ₃	Storage Room	Walls	Walls	Brick	High	No	Yes	No	Good			VS A-010, A-030, A-052, A-053, A-054, A-055, A-056														
Included	M	Above O ₃	Storage Room	Floor	Floor	Metal Grating	High	No	No	No	Good																	
Included	M	Above O ₃	Storage Room	Ceiling	Ceiling	Metal Deck	High	No	No	No	Good																	
Included	M	Above O ₃	Storage Room	Mechanical	Piping	Pipe-Fitting Insulation	High	No	Yes	No	Good			VS A-001, A-003, A-004, A-005, A-008, A-019														
Included	M	Above O ₃	Storage Room	Mechanical	Duct Work	Red/Brown Duct Mastic	High	No	Yes	No	Good			VS A-025														
Included	M	112	Chemical Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	112	Chemical Room	Floor	Floor	Rubber	High	No	No	No	Good																	
Included	M	112	Chemical Room	Ceiling	Ceiling	Spray-Applied Fireproofing	High	No	Yes	No	Good			VS A-013, A-014, A-018														
Included	M	112	Chemical Room	Mechanical	Piping	Pipe-Fitting Insulation	High	No	Yes	No	Good			VS A-001, A-003, A-004, A-005, A-008, A-019														
Included	M	112	Chemical Room	Windows	Caulking	Black Window Caulking	High	Yes	Yes	Yes	Good		Bulk	A-016	6-Jun-17	Chrysotile	Window Caulking	5.70%	No	No	No	Annually	5	Moderate	Manage in place.	20 ft	Photograph 2	Door Jamb
Included	M	113	Mechanical Room	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good																	
Included	M	113	Mechanical Room	Floor	Floor	Concrete	High	No	No	No	Good		Bulk	A-017	6-Jun-17													
Included	M	113	Mechanical Room	Ceiling	Ceiling	Spray-Applied Fireproofing	High	No	Yes	No	Good		Bulk	A-018	6-Jun-17													
Included	M	113	Mechanical Room	Mechanical	Piping	Pipe-Fitting Insulation	High	No	Yes	No	Good		Bulk	A-019	6-Jun-17													
Included	M	113	Mechanical Room	Mechanical	Boilers	Boilers and Associated Components	High	Yes	No	Potential	Good	Not sampled due to safety concerns.													Inspect if scheduled for removal.			
Included	M	114	Electrical Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	114	Electrical Room	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good			VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	114	Electrical Room	Floor	Floor	Concrete	High	No	No	No	Good																	
Included	M	114	Electrical Room	Ceiling	Ceiling	Metal Deck	High	No	No	No	Good																	
Included	M	114	Electrical Room	Mechanical	Piping	Pipe-Fitting Insulation	High	No	Yes	No	Good			VS A-001, A-003, A-004, A-005, A-008, A-019														
Included	M	114	Electrical Room	Mechanical	Duct Work	Grey Duct Mastic	High	No	Yes	No	Good		Bulk	A-020	6-Jun-17													
Included	M	114	Electrical Room	Electrical	Electrical Panels and Components	Electrical Panels and Components	High	Yes	No	Potential	Good	Not sampled due to safety concerns.													Inspect and sample if scheduled for removal.			
Included	M	115	Sauna	Walls	Walls	Wood	High	No	No	No	Good																	
Included	M	115	Sauna	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	115	Sauna	Ceiling	Ceiling	Wood	High	No	No	No	Good																	
Included	M	117	Office	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	117	Office	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good			VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	117	Office	Floor	Floor	Carpet	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	117	Office	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good																	
Included	M	118	Office	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good			VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	118	Office	Floor	Floor	Carpet	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	118	Office	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good			VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	119	Office	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good																	
Included	M	119	Office	Floor	Floor	Carpet	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	119	Office	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good																	
Included	M	120	Storage Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	120	Storage Room	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good																	
Included	M	120	Storage Room	Floor	Floor	1'x1' Off-White Floor Tile with Brown Flecks	High	No	Yes	No	Good		Bulk	A-021	6-Jun-17													
Included	M	120	Storage Room	Ceiling	Ceiling	Metal Deck	High	No	No	No	Good																	
Included	M	Vestibule Adj 122	Vestibule	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	Vestibule Adj 122	Vestibule	Floor	Floor	Rubber	High	No	No	No	Good																	
Included	M	Vestibule Adj 122	Vestibule	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	Vestibule Adj 122	Vestibule	Walls	Walls	White Building Caulking	High	No	Yes	No	Good		Bulk	A-024	6-Jun-17													
Included	M	Vestibule Adj 122	Vestibule	Windows	Caulking	Black Window Caulking	High	Yes	Yes	Yes	Good	Sample was not found to contain asbestos, however due to visually similarities with asbestos-containing black window caulking this material should be treated as asbestos.	Bulk	A-023/ VS A-016	6-Jun-17	Chrysotile	Window Caulking	5.70%	No	No	No	Annually	5	Moderate	Manage in place.	120 ft	Photograph 2	Door Jamb
Included	M	122	Multi-Purpose Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	122	Multi-Purpose Room	Floor	Floor	New Vinyl Flooring	High	No	No	No	Good	New flooring not suspected to contain asbestos.																
Included	M	122	Multi-Purpose Room	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	122	Multi-Purpose Room	Windows	Caulking	Black Window Caulking	High	Yes	Yes	Yes	Good			VS A-016		Chrysotile	Window Caulking	5.70%	No	No	No	Annually	5	Moderate	Manage in place.	10 ft	Photograph 2	Door Jamb
Included	M	122	Multi-Purpose Room	Walls	Caulking	White Building Caulking	High	No	Yes	No	Good			VS A-024, A-047														
Included	M	122	Multi-Purpose Room	Windows	Caulking	Rubber Exterior Window																						

Appendix C
Lakewood Civic Centre and Cliff Wright Library
ACM Inventory

Included/Excluded	Floor	Room #	Area Description	Elements	Subelements	Material Description	Accessibility	Suspect?	Sampled?	Asbestos Containing Material?	Condition	Field Notes	Sample Type	Sample ID	Sample Date	Asbestos Type	ACM Product	% of asbestos	Friable	Sprayed-on	Maintenance	Inspection	Priority	Potential for Disturbance	Recommended Action	Quantity	Photograph ID	Labelling Type
Included	M	124	Washroom	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	124	Washroom	Mechanical	Duct Work	Red/Brown Duct Mastic	High	No	Yes	No	Good	Observed to be insulated with fiberglass.	Bulk	A-025	6-Jun-17													
Included	M	125	Washroom	Walls	Block Wall		High	No	No	No	Good																	
Included	M	125	Washroom	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	125	Washroom	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	128	Corridor	Walls	Block Wall		High	No	No	No	Good																	
Included	M	128	Corridor	Floor	Floor	Rubber	High	No	No	No	Good																	
Included	M	128	Corridor	Ceiling	Ceiling	Drywall Joint Compound	High	No	Yes	No	Good			VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	128	Corridor	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	128	Corridor	Windows	Caulking	Black Window Caulking	High	Yes	Yes	Yes	Good		VS A-016			Chrysotile	Window Caulking	5.70%	No	No	No	Annually	5	Moderate	Manage in place.	100 ft	Photograph 2	Door Jamb
Included	M	129	Locker Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	129	Locker Room	Floor	Floor	Cementitious Finish	High	No	No	No	Good																	
Included	M	129	Locker Room	Ceiling	Ceiling	Plastic Panels	High	No	No	No	Good																	
Included	M	130	Washroom	Walls	Walls	Ceramic Tile	High	No	No	No	Good																	
Included	M	130	Washroom	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	130	Washroom	Ceiling	Ceiling	Plastic Panels	High	No	No	No	Good																	
Included	M	131	Dry Off Area	Walls	Walls	Ceramic Tile	High	No	No	No	Good																	
Included	M	131	Dry Off Area	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	131	Dry Off Area	Ceiling	Ceiling	Plastic Panels	High	No	No	No	Good																	
Included	M	132	Shower	Walls	Walls	Plastic Panels	High	No	No	No	Good																	
Included	M	132	Shower	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	132	Shower	Ceiling	Ceiling	Plastic Panels	High	No	No	No	Good																	
Included	M	133	Vestibule	Walls	Walls	Ceramic Tile	High	No	No	No	Good																	
Included	M	133	Vestibule	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	133	Vestibule	Ceiling	Ceiling	Plastic Panels	High	No	No	No	Good																	
Included	M	134	Shower	Walls	Walls	Plastic Panels	High	No	No	No	Good																	
Included	M	134	Shower	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	134	Shower	Ceiling	Ceiling	Plastic Panels	High	No	No	No	Good																	
Included	M	135	Dry Off Area	Walls	Walls	Ceramic Tile	High	No	No	No	Good																	
Included	M	135	Dry Off Area	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	135	Dry Off Area	Ceiling	Ceiling	Plastic Panels	High	No	No	No	Good																	
Included	M	136	Washroom	Walls	Walls	Ceramic Tile	High	No	No	No	Good																	
Included	M	136	Washroom	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	136	Washroom	Ceiling	Ceiling	Plastic Panels	High	No	No	No	Good																	
Included	M	137	Locker Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	137	Locker Room	Floor	Floor	Cementitious Finish	High	No	No	No	Good																	
Included	M	137	Locker Room	Ceiling	Ceiling	Plastic Panels	High	No	No	No	Good																	
Included	M	138	Corridor	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	138	Corridor	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	138	Corridor	Ceiling	Ceiling	Drywall Joint Compound	High	No	Yes	No	Good			VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	139	Washroom	Walls	Walls	Ceramic Tile	High	No	No	No	Good																	
Included	M	139	Washroom	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	139	Washroom	Ceiling	Ceiling	Drywall Joint Compound	High	No	Yes	No	Good			VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	140	Change Room	Walls	Walls	Plastic Panels	High	No	No	No	Good																	
Included	M	140	Change Room	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	140	Change Room	Ceiling	Ceiling	Plastic Panels	High	No	No	No	Good																	
Included	M	141	Change Room	Walls	Walls	Plastic Panels	High	No	No	No	Good																	
Included	M	141	Change Room	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	141	Change Room	Ceiling	Ceiling	Plastic Panels	High	No	No	No	Good																	
Included	M	142	Change Room	Walls	Walls	Plastic Panels	High	No	No	No	Good																	
Included	M	142	Change Room	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	142	Change Room	Ceiling	Ceiling	Plastic Panels	High	No	No	No	Good																	
Included	M	143	Change Room	Walls	Walls	Plastic Panels	High	No	No	No	Good																	
Included	M	143	Change Room	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	143	Change Room	Ceiling	Ceiling	Plastic Panels	High	No	No	No	Good																	
Included	M	147	Storage Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	147	Storage Room	Floor	Floor	Rubber	High	No	No	No	Good																	
Included	M	147	Storage Room	Ceiling	Ceiling	2'x4' Ceiling Tile with Star Fissures	High	No	Yes	No	Good		Bulk	A-027, A-028, A-029	6-Jun-17													
Included	M	147	Storage Room	Mechanical	Duct Work	White Duct Mastic	High	Yes	No	Potential	Good	Unable to access the duct mastic to evaluate if it is white painted over tan.												Inspect if scheduled for removal.				
Included	M	148	Gymnasium	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	148	Gymnasium	Floor	Floor	New Flooring	High	No	No	No	Good																	
Included	M	148	Gymnasium	Ceiling	Ceiling	Metal Deck	High	No	No	No	Good																	
Included	M	148	Gymnasium	Mechanical	Duct Work	Bare Duct Work	High	No	No	No	Good																	
Included	M	149	Janitor Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	149	Janitor Room	Floor	Floor	Rubber	High	No	No	No	Good																	
Included	M	149	Janitor Room	Ceiling	Ceiling	Drywall Joint Compound	High	No	Yes	No	Good		Bulk	A-032	6-Jun-17													
Included	M	150	Exercise Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	150	Exercise Room	Floor	Floor	Rubber	High	No	No	No	Good																	
Included	M	150	Exercise Room	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	150	Exercise Room	Walls	Caulking	Grey Building Caulking	High	No	Yes	No	Good		Bulk	A-031	6-Jun-17													
Included	M	151	First Aid	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	151	First Aid	Walls	Walls	Pre-Fabricated Drywall Walls	High	No	No	No	Good																	
Included	M	151	First Aid	Floor	Floor	Rubber	High	No	No	No	Good																	
Included	M	151	First Aid	Ceiling	Ceiling	2'x4' Ceiling Tile with Star Fissures	High	No	Yes	No	Good			VS A-027, A-028, A-029, A-049, A-050														
Included	M	151	First Aid	Walls	Caulking	Grey Building Caulking	High	No	Yes	No	Good			VS A-031, A-057														
Included	M	152	Shower	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	152	Shower	Walls	Walls	Ceramic Tile	High	No	No	No	Good																	
Included	M	152	Shower	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	152	Shower	Ceiling	Ceiling	Drywall Joint Compound	High	No	Yes	No	Good		Bulk	A-033	6-Jun-17													
Included	M	153	Office	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	153	Office	Walls	Walls	Pre-Fabricated Drywall Walls	High	No	No	No	Good																	
Included	M	153	Office	Floor	Floor	R																						

Appendix C
Lakewood Civic Centre and Cliff Wright Library
ACM Inventory

Included/Excluded	Floor	Room #	Area Description	Elements	Subelements	Material Description	Accessibility	Suspect?	Sampled?	Asbestos Containing Material?	Condition	Field Notes	Sample Type	Sample ID	Sample Date	Asbestos Type	ACM Product	% of asbestos	Friable	Sprayed-on	Maintenance	Inspection	Priority	Potential for Disturbance	Recommended Action	Quantity	Photograph ID	Labelling Type
Included	M	154	Office	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	155	Office	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	155	Office	Walls	Walls	Pre-Fabricated Drywall Walls	High	No	No	No	Good																	
Included	M	155	Office	Floor	Floor	Carpet	High	No	No	No	Good																	
Included	M	155	Office	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	156	Office	Walls	Walls	Pre-Fabricated Drywall Walls	High	No	No	No	Good																	
Included	M	156	Office	Floor	Floor	Carpet	High	No	No	No	Good																	
Included	M	156	Office	Ceiling	Ceiling	2'x4' Ceiling Tile with Star Fissures	High	No	Yes	No	Good			VS A-027, A-028, A-029, A-049, A-050														
Included	M	157	Office	Walls	Walls	Pre-Fabricated Drywall Walls	High	No	No	No	Good																	
Included	M	157	Office	Floor	Floor	Carpet	High	No	No	No	Good																	
Included	M	157	Office	Ceiling	Ceiling	2'x4' Ceiling Tile with Star Fissures	High	No	Yes	No	Good			VS A-027, A-028, A-029, A-049, A-050														
Included	M	158	Office	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	158	Office	Walls	Walls	Pre-Fabricated Drywall Walls	High	No	No	No	Good																	
Included	M	158	Office	Floor	Floor	Rubber	High	No	No	No	Good																	
Included	M	158	Office	Ceiling	Ceiling	2'x4' Ceiling Tile with Star Fissures	High	No	Yes	No	Good			VS A-027, A-028, A-029, A-049, A-050														
Included	M	159	Office	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	159	Office	Floor	Floor	Carpet	High	No	No	No	Good																	
Included	M	159	Office	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	160	Office	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	160	Office	Walls	Walls	Pre-Fabricated Drywall Walls	High	No	No	No	Good																	
Included	M	160	Office	Floor	Floor	Carpet	High	No	No	No	Good																	
Included	M	160	Office	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	161	Office	Walls	Walls	Pre-Fabricated Drywall Walls	High	No	No	No	Good																	
Included	M	161	Office	Floor	Floor	Carpet	High	No	No	No	Good																	
Included	M	161	Office	Ceiling	Ceiling	Drywall Joint Compound	High	No	Yes	No	Good			VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	162	Vestibule	Walls	Walls	Windows	High	No	No	No	Good																	
Included	M	162	Vestibule	Floor	Floor	Rubber	High	No	No	No	Good																	
Included	M	162	Vestibule	Ceiling	Ceiling	Metal Deck	High	No	No	No	Good																	
Included	M	162	Vestibule	Mechanical	Piping	Pipe-Fitting Insulation	High	No	Yes	No	Good			VS A-001, A-003, A-004, A-005, A-008, A-019														
Included	M	163	Storage Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	163	Storage Room	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	163	Storage Room	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	165	Washroom	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	165	Washroom	Floor	Floor	Ceramic Tile	High	No	No	No	Good																	
Included	M	165	Washroom	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	166	Pre-School Area	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	166	Pre-School Area	Floor	Floor	Rubber	High	No	No	No	Good																	
Included	M	166	Pre-School Area	Ceiling	Ceiling	Metal Deck	High	No	No	No	Good																	
Included	M	166	Pre-School Area	Mechanical	Piping	Pipe-Fitting Insulation	High	No	Yes	No	Good			VS A-001, A-003, A-004, A-005, A-008, A-019														
Included	M	169	Auditorium	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good		Bulk	A-035	6-Jun-17													
Included	M	169	Auditorium	Floor	Floor	Carpet	High	No	No	No	Good																	
Included	M	169	Auditorium	Ceiling	Ceiling	Metal Deck	High	No	No	No	Good																	
Included	M	169	Auditorium	Mechanical	Duct Work	Grey Duct Mastic	High	No	Yes	No	Good			VS A-020														
Included	M	170	Auditorium	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good			VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	170	Auditorium	Floor	Floor	Carpet	High	No	No	No	Good																	
Included	M	170	Auditorium	Ceiling	Ceiling	Drywall Joint Compound	High	No	Yes	No	Good			VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	171	Storage Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	171	Storage Room	Floor	Floor	Rubber	High	No	No	No	Good																	
Included	M	171	Storage Room	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	172	Vestibule	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	172	Vestibule	Floor	Floor	Rubber	High	No	No	No	Good																	
Included	M	172	Vestibule	Ceiling	Ceiling	Metal Deck	High	No	No	No	Good																	
Included	M	173	Vestibule	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	173	Vestibule	Floor	Floor	Rubber	High	No	No	No	Good																	
Included	M	173	Vestibule	Ceiling	Ceiling	Metal Deck	High	No	No	No	Good																	
Included	M	173	Vestibule	Walls	Caulking	Grey Building Caulking	High	No	Yes	No	Good			VS A-031, A-057														
Included	M	174	Meeting Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	174	Meeting Room	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good			VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	174	Meeting Room	Floor	Floor	Carpet	High	No	No	No	Good																	
Included	M	174	Meeting Room	Ceiling	Ceiling	2'x4' Ceiling Tile with Star Fissures	High	No	Yes	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	174	Meeting Room	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good																	
Included	M	175	Work Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	175	Work Room	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good		Bulk	A-048	6-Jun-17													
Included																												

Appendix C
Lakewood Civic Centre and Cliff Wright Library
ACM Inventory

Included/Excluded	Floor	Room #	Area Description	Elements	Subelements	Material Description	Accessibility	Suspect?	Sampled?	Asbestos Containing Material?	Condition	Field Notes	Sample Type	Sample ID	Sample Date	Asbestos Type	ACM Product	% of asbestos	Friable	Sprayed-on	Maintenance	Inspection	Priority	Potential for Disturbance	Recommended Action	Quantity	Photograph ID	Labelling Type
Included	M	175	Work Room	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	175	Work Room	Windows	Caulking	Black Window Caulking	High	Yes	Yes	Yes	Good			VS A-016		Chrysotile	Window Caulking	5.70%	No	No	No	Annually	5	Moderate	Manage in place.	65 ft	Photograph 2	Door Jamb
Included	M	175	Work Room	Mechanical	Duct Work	Fibreglass Insulated Duct Work	High	No	No	No	Good																	
Included	M	176	Storage Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
														VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	176	Storage Room	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good																	
Included	M	176	Storage Room	Floor	Floor	Carpet	High	No	No	No	Good																	
														VS A-027, A-028, A-029, A-049, A-050														
Included	M	176	Storage Room	Ceiling	Ceiling	2'x4' Ceiling Tile with Star Fissures	High	No	Yes	No	Good																	
Included	M	177	Storage Room	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	177	Storage Room	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good		Bulk	A-051	6-Jun-17													
Included	M	177	Storage Room	Floor	Floor	Grey Vinyl Sheet Flooring with Turquoise and Red Streaks	High	No	Yes	No	Good			VS A-046														
														VS A-027, A-028, A-029, A-049, A-050														
Included	M	177	Storage Room	Ceiling	Ceiling	2'x4' Ceiling Tile with Star Fissures	High	No	Yes	No	Good																	
Included	M	178	Vestibule	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	178	Vestibule	Floor	Floor	1'x1' Off-White Floor Tile	High	No	Yes	No	Good			VS A-022														
														VS A-027, A-028, A-029, A-049, A-050														
Included	M	178	Vestibule	Ceiling	Ceiling	2'x4' Ceiling Tile with Star Fissures	High	No	Yes	No	Good																	
												Not sampled due to safety concerns.													Inspect and sample if scheduled for removal.			
Included	M	178	Vestibule	Electrical	Electrical Panels and Components	Electrical Panels and Components	High	Yes	No	Potential	Good																	
Included	M	179	Vestibule	Walls	Walls	Block Wall	High	No	No	No	Good																	
														VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	179	Vestibule	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good																	
Included	M	179	Vestibule	Floor	Floor	Grey Vinyl Sheet Flooring with Turquoise and Red Streaks	High	No	Yes	No	Good			VS A-046														
														VS A-027, A-028, A-029, A-049, A-050														
Included	M	179	Vestibule	Ceiling	Ceiling	2'x4' Ceiling Tile with Star Fissures	High	No	Yes	No	Good																	
Included	M	179	Vestibule	Walls	Caulking	White Building Caulking	High	No	Yes	No	Good			VS A-024, A-047														
														VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	180	Lunch Room	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good																	
Included	M	180	Lunch Room	Floor	Floor	Grey Vinyl Sheet Flooring with Turquoise and Red Streaks	High	No	Yes	No	Good			VS A-046														
												Date coded to a time period in which asbestos use was not widespread.																
Included	M	180	Lunch Room	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good																	
Included	M	180	Lunch Room	Walls	Caulking	White Building Caulking	High	No	Yes	No	Good		Bulk	A-047	6-Jun-17													
														VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	181	Washroom	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good																	
Included	M	181	Washroom	Floor	Floor	Grey Vinyl Sheet Flooring with Turquoise and Red Streaks	High	No	Yes	No	Good		Bulk	A-046	6-Jun-17													
												Date coded to a time period in which asbestos use was not widespread.																
Included	M	181	Washroom	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good																	
														VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	182	Activity Room	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good																	
Included	M	182	Activity Room	Floor	Floor	Carpet	High	No	No	No	Good																	
														VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	182	Activity Room	Ceiling	Ceiling	Drywall Joint Compound	High	No	Yes	No	Good																	
Included	M	183	Storage Room	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good		Bulk	A-043	6-Jun-17													
Included	M	183	Storage Room	Floor	Floor	1'x1' Off-White Floor Tile with Grey Flecks	High	No	Yes	No	Good		Bulk	A-044	6-Jun-17													
														VS A-027, A-028, A-029, A-049, A-050														
Included	M	183	Storage Room	Ceiling	Ceiling	2'x4' Ceiling Tile with Star Fissures	High	No	Yes	No	Good																	
Included	M	184	Janitor Room	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good		Bulk	A-045	6-Jun-17													
Included	M	184	Janitor Room	Floor	Floor	1'x1' Off-White Floor Tile with Grey Flecks	High	No	Yes	No	Good			VS A-044														
Included	M	184	Janitor Room	Ceiling	Ceiling	Metal Deck	High	No	No	No	Good																	
												Unable to access the duct mastic to evaluate if it is white painted over tan.													Inspect if scheduled for removal.			
Included	M	184	Janitor Room	Mechanical	Duct Work	White Duct Mastic	High	Yes	No	Potential	Good																	
														VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	185	Corridor	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good																	
Included	M	185	Corridor	Floor	Floor	Carpet	High	No	No	No	Good																	
														VS A-027, A-028, A-029, A-049, A-050														
Included	M	185	Corridor	Ceiling	Ceiling	2'x4' Ceiling Tile with Star Fissures	High	No	Yes	No	Good																	
														VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	186	Office	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good																	
Included	M	186	Office	Floor	Floor	Carpet	High	No	No	No	Good																	
														VS A-027, A-028, A-029, A-049, A-050														
Included	M	186	Office	Ceiling	Ceiling	2'x4' Ceiling Tile with Star Fissures	High	No	Yes	No	Good																	

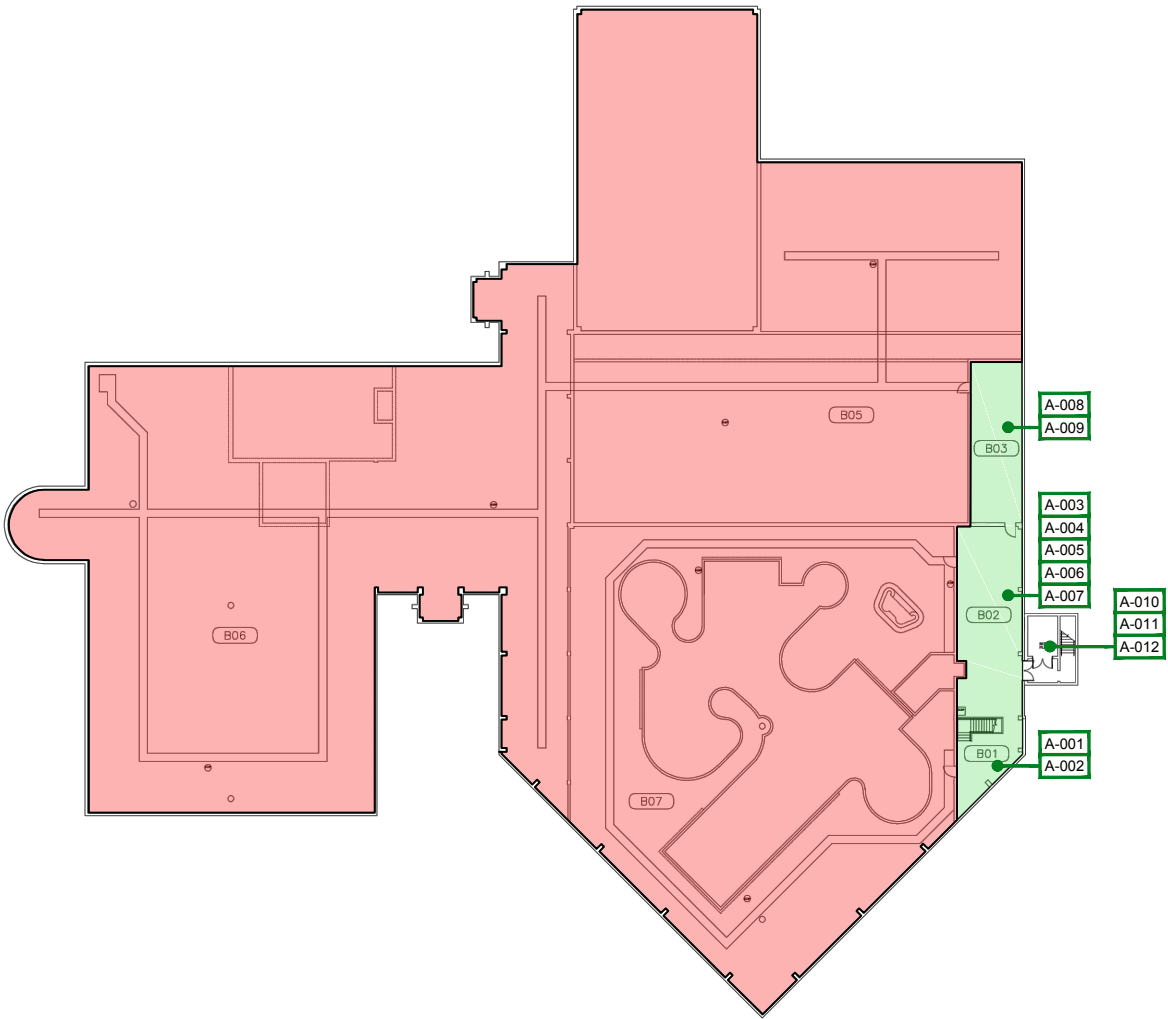
Appendix C
Lakewood Civic Centre and Cliff Wright Library
ACM Inventory

Included/Excluded	Floor	Room #	Area Description	Elements	Subelements	Material Description	Accessibility	Suspect?	Sampled?	Asbestos Containing Material?	Condition	Field Notes	Sample Type	Sample ID	Sample Date	Asbestos Type	ACM Product	% of asbestos	Friable	Sprayed-on	Maintenance	Inspection	Priority	Potential for Disturbance	Recommended Action	Quantity	Photograph ID	Labelling Type
														VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	187	Office	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good																	
Included	M	187	Office	Floor	Floor	Carpet	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	187	Office	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good	Observed to be insulated with fibreglass.		VS A-016		Chrysotile	Window Caulking	5.70%	No	No	No	Annually	5	Moderate	Manage in place.	65 ft	Photograph 2	Door Jamb
Included	M	187	Office	Windows	Caulking	Black Window Caulking	High	Yes	Yes	Yes	Good																	
Included	M	187	Office	Mechanical	Roof Drain	Roof Drain	High	No	No	No	Good																	
Included	M	188	Library	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good		Bulk	A-036, A-037	6-Jun-17													
Included	M	188	Library	Floor	Floor	Carpet	High	No	No	No	Good																	
Included	M	188	Library	Floor	Floor	1'x1' Off-White Floor Tile with Turquoise and Rose Flecks	High	No	Yes	No	Good		Bulk	A-039	6-Jun-17													
Included	M	188	Library	Floor	Floor	1'x1' Turquoise Floor Tile	High	No	Yes	No	Good		Bulk	A-040	6-Jun-17													
Included	M	188	Library	Floor	Floor	Grey/White Floor Levelling Compound	High	No	Yes	No	Good		Bulk	A-041	6-Jun-17													
												Date coded to a time period in which asbestos use was not widespread.																
Included	M	188	Library	Ceiling	Ceiling	Ceiling Tiles	High	No	No	No	Good																	
Included	M	188	Library	Mechanical	Duct Work	Brown Duct Mastic (Painted White)	High	No	Yes	No	Good		Bulk	A-038	6-Jun-17													
Included	M	188	Library	Windows	Caulking	Black Window Caulking	High	Yes	Yes	Yes	Good		Bulk	A-042	6-Jun-17	Chrysotile	Window Caulking	4.70%	No	No	No	Annually	5	Moderate	Manage in place.	200 ft	Photograph 2	Door Jamb
														VS A-017, A-021, A-032, A-033, A-034, A-035, A-036, A-037, A-043, A-045, A-048, A-051														
Included	M	Mezz Mechanical	Mezz Mechanical	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good																	
Included	M	Mezz Mechanical	Mezz Mechanical	Walls	Walls	Block Wall	High	No	No	No	Good																	
Included	M	Mezz Mechanical	Mezz Mechanical	Floor	Floor	Concrete	High	No	No	No	Good	Date coded to a time period in which asbestos use was not widespread.																
Included	M	Mezz Mechanical	Mezz Mechanical	Ceiling	Ceiling	Metal Deck	High	No	No	No	Good																	
Included	M	Mezz Mechanical	Mezz Mechanical	Mechanical	Duct Work	Grey Duct Mastic (Painted White)	High	No	Yes	No	Good			VS A-020														
													Bulk	A-052, A-053, A-054, A-055, A-056	7-Jun-17													
Included	E	Exterior	Exterior	Walls	Walls	Brick Mortar	High	No	Yes	No	Good		Bulk	A-056	7-Jun-17													
Included	E	Exterior	Exterior	Walls	Walls	Grey Building Caulking	High	No	Yes	No	Good		Bulk	A-057	7-Jun-17													
Included	E	Exterior	Exterior	Walls	Windows	Black Window Caulking	High	No	Yes	No	Good		Bulk	A-059, A-060	7-Jun-17													
Included	E	Exterior	Exterior	Walls	Walls	Black Building Caulking	High	No	Yes	No	Good		Bulk	A-061	7-Jun-17													
Included	E	Exterior	Exterior	Walls	Walls	Light Grey Base Caulking	High	No	Yes	No	Good		Bulk	A-062	7-Jun-17													
Included	E	Exterior	Exterior	Walls	Windows	White Window Frame Caulking	High	No	Yes	No	Good		Bulk	A-058	7-Jun-17													
Excluded	B	Crawlspaces	Crawlspaces	Crawlspaces	Crawlspaces							Not assessed as they were labelled confined spaces.																
Excluded		Exterior	Roof	Exterior Roof	Exterior Roof							Not assessed due to scope of work.																



APPENDIX D

Floor Plans



LEGEND

- ASBESTOS SAMPLE LOCATION
- ASBESTOS - CONTAINING DUCT MASTIC
- NO ACCESS

NOTE(S)

- ASBESTOS IS A CARCINOGEN. DO NOT BREATHE ASBESTOS DUST.
- ASBESTOS-CONTAINING TAN DUCT MASTIC (PAINTED WHITE) MAY BE LOCATED IN ADDITIONAL CEILING SPACES AND CONCEALED AREAS THROUGHOUT THE SITE.

REFERENCE(S)

PLAN OBTAINED FROM INFRASTRUCTURE SERVICES DEPARTMENT CITY OF SASKATOON. DATED: 09/12/2005.

CLIENT
CITY OF SASKATOON

CONSULTANT



YYYY-MM-DD	2017-08-04
DESIGNED	KH
PREPARED	YW
REVIEWED	KH
APPROVED	AG

SCHEMATIC ONLY, NOT TO SCALE

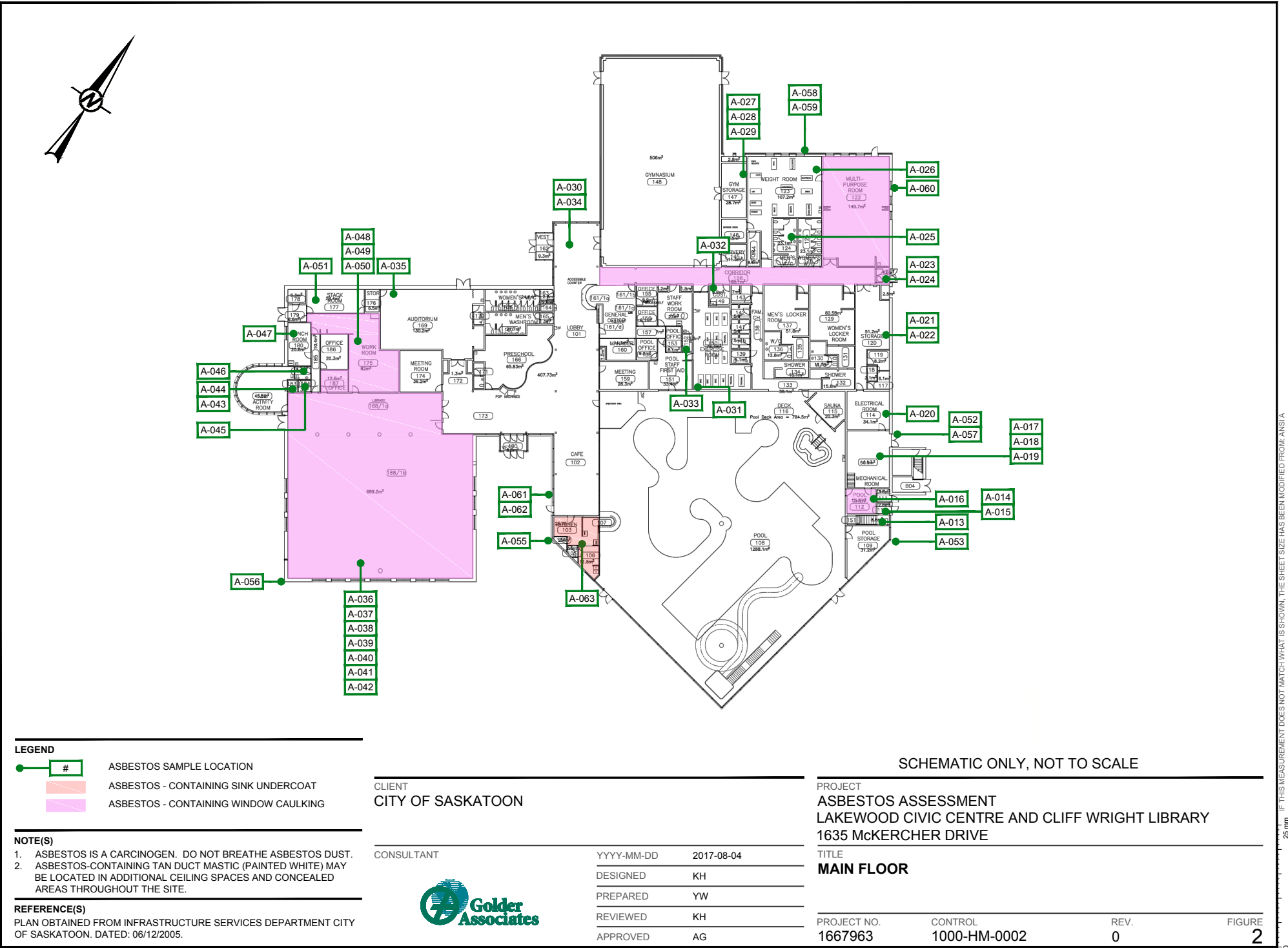
PROJECT
ASBESTOS ASSESSMENT
LAKEWOOD CIVIC CENTRE AND CLIFF WRIGHT LIBRARY
1635 McKERCHER DRIVE

TITLE
BASEMENT

PROJECT NO.	CONTROL	REV.	FIGURE
1667963	1000-HM-0003	0	1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A

26 mm



As a global, employee-owned organisation with over 50 years of experience, Golder Associates is driven by our purpose to engineer earth's development while preserving earth's integrity. We deliver solutions that help our clients achieve their sustainable development goals by providing a wide range of independent consulting, design and construction services in our specialist areas of earth, environment and energy.

For more information, visit golder.com

Africa	+ 27 11 254 4800
Asia	+ 86 21 6258 5522
Australasia	+ 61 3 8862 3500
Europe	+ 356 21 42 30 20
North America	+ 1 800 275 3281
South America	+ 56 2 2616 2000

solutions@golder.com
www.golder.com

Golder Associates Ltd.
16820 107 Avenue
Edmonton, Alberta, T5P 4C3
Canada
T: +1 (780) 483 3499



August 28, 2019

City of Saskatoon
3130 Laurier Drive
Saskatoon, SK
S7L 5J7

ATTENTION: Brent Anderson

SUBJECT: Bulk Sample Analysis Report – Lakewood Civic Centre

Please find attached the laboratory results for the bulk samples collected on August 20, 2019 from the Lakewood Civic Centre located at 1635 McKercher Drive, Saskatoon, Saskatchewan. The samples were analyzed for the identification of asbestos. Asbestos **was not** detected within any of the samples.

The results for the samples submitted were obtained by examination in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as less than 1% by volume.

This test report relates only to the materials sent for examination and any use or extension of the information by the client of these results is the responsibility of the client.

If any questions arise on the results of the attached information, please contact our office. Thank you for this opportunity of service.

Sincerely,



Tyneal Knackstedt
Bersch Consulting Ltd.
B67BLH20I-Lakewood Civic Centre

Bulk Sample Analysis Report

August 28, 2019

Project Number: B67.19

Client: City of Saskatoon

Contact: Brent Anderson

Location: Lakewood Civic Centre

File Number: B67BAH20I

Sample Number	Sample Date	Sample Material	Sample Location and Information	Asbestos	%	Analyst
1	2019/08/20	Backing Board	Between SW windows and floor.	No asbestos detected		EMSL/WB
2	2019/08/20	Window Caulking	SW interior window.	No asbestos detected		EMSL/WB
3a	2019/08/20	Tile Grout	SW corner near pool. White.	No asbestos detected		EMSL/WB
3b	2019/08/20	Tile Grout	SW corner near pool. Grey.	No asbestos detected		EMSL/WB
4	2019/08/20	Tile Grout	South radiator. White.	No asbestos detected		EMSL/WB
5	2019/08/20	Window Caulking	SW exterior window. Black.	No asbestos detected		EMSL/WB

Note: The results for the samples submitted were obtained by examination in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as less than 1% by volume.

Sample Number	Sample Date	Sample Material	Sample Location and Information	Asbestos	%	Analyst
6	2019/08/20	Ground Caulking	South exterior wall/sidewalk. Grey.	No asbestos detected		EMSL/WB
7	2019/08/20	Window Caulking	South exterior wall/sidewalk. Black.	No asbestos detected		EMSL/WB

Note: The results for the samples submitted were obtained by examination in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as less than 1% by volume.

Site Photos

Photo ID

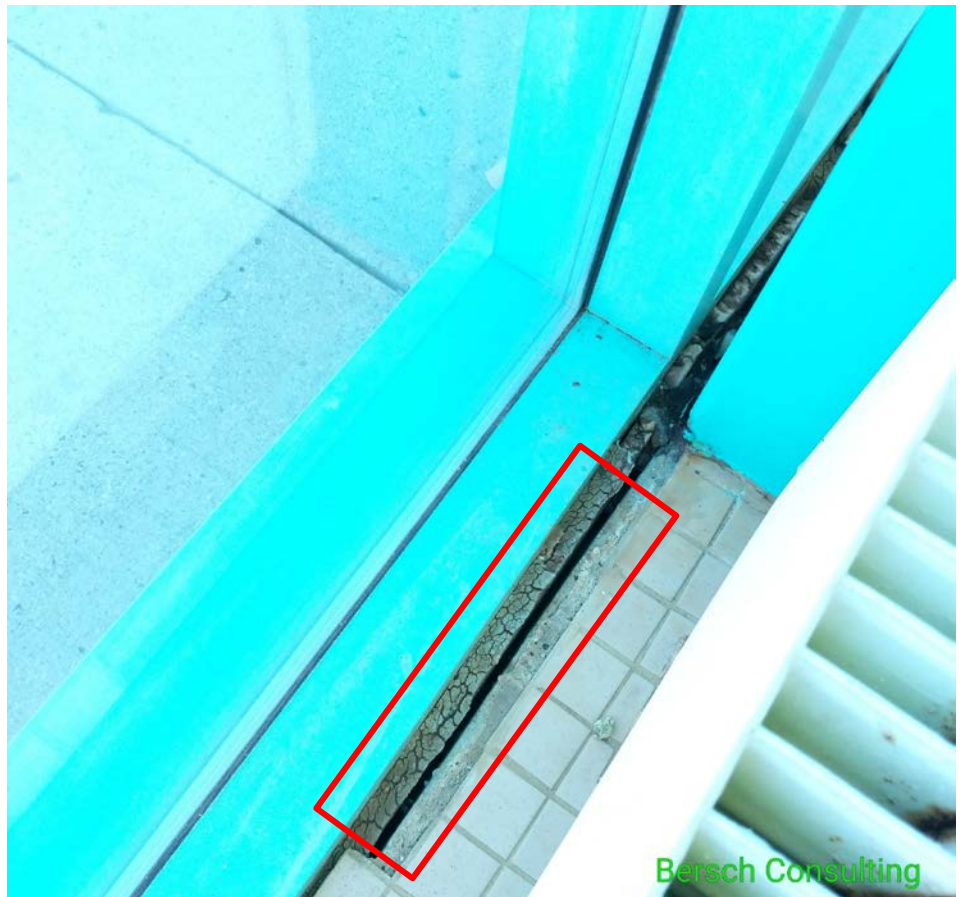
B67BLH20I - 001

Sample Number

B67BAH20I - 1

Description

Backing Board.
Between South Windows & Floor.

**Photo ID**

B67BLH20I - 002

Sample Number

B67BAH20I - 2

Description

Window caulking.
SW interior window.



Photo ID

B67BLH20I – 003

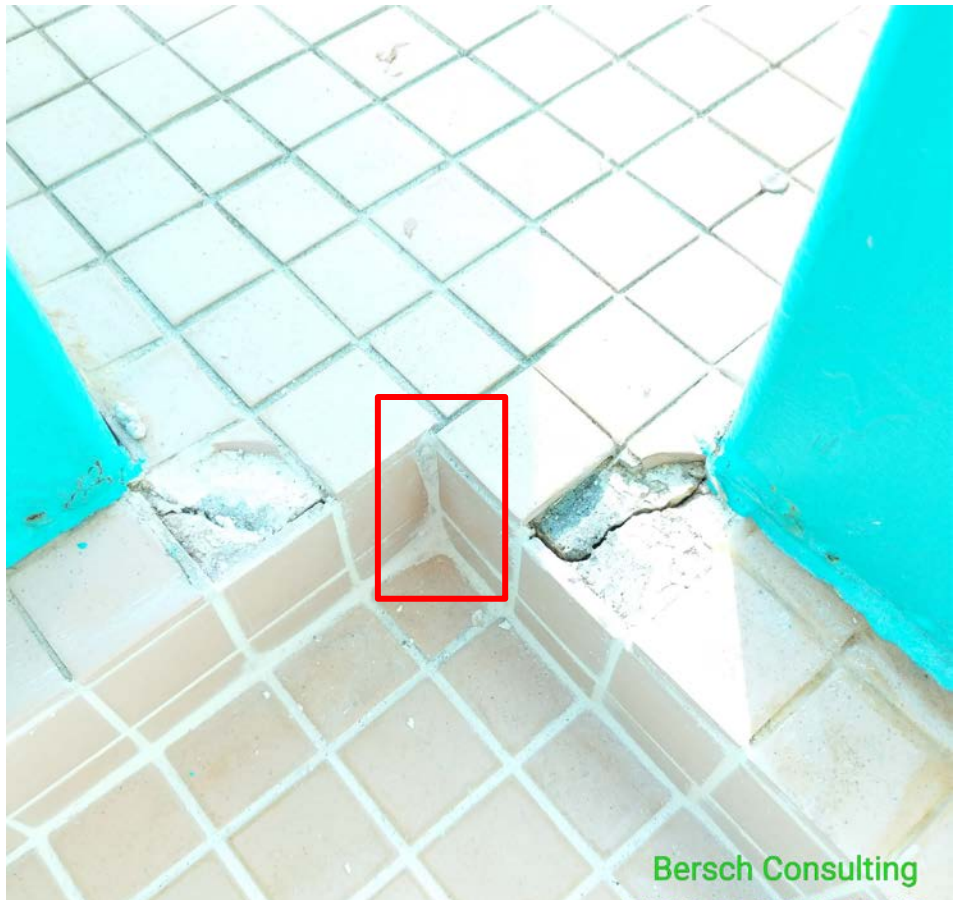
Sample Number

B67BAH20I – 3a

Description

White tile grout.

SW corner near pool.

**Photo ID**

B67BLH20I – 004

Sample Number

B67BAH20I – 3b

Description

Grey tile grout

SW corner near pool.



Photo ID

B67BLH20I - 005

Sample Number

B67BAH20I - 4

Description

White tile grout.

South radiator

**Photo ID**

B67BLH20I - 006

Sample Number

B67BAH20I - 5

Description

Black window caulking.

SW exterior window.



Photo ID

B67BLH20I - 007

Sample Number

B67BAH20I - 6

Description

Grey caulking.

On sidewalk south exterior wall.



BERSCH & ASSOCIATES LTD.

November 1, 2016

City of Saskatoon
Facilities and Fleet Management
3130 Laurier Drive
Saskatoon, Sk
S7L 5J7


ATTENTION: John Hiltz

SUBJECT: Asbestos Site Investigation – Lakewood Civic Centre, Gymnasium Flooring Replacement Project.

Brad Berschiminsky of Bersch & Associates Ltd. conducted a site visit on October 6, 2016 to conduct an investigation including the bulk analysis collection of flooring materials as well as the concrete beneath the floor. The purpose of the investigation was to address any asbestos concerns that may be present prior to the Flooring Replacement Project commencing.

As a result, no asbestos material was detected. Please reference the attached bulk analysis report. If any questions arise on the results of the attached information, please contact our office 306 222 7477. Thank you for this opportunity of service!

Sincerely,



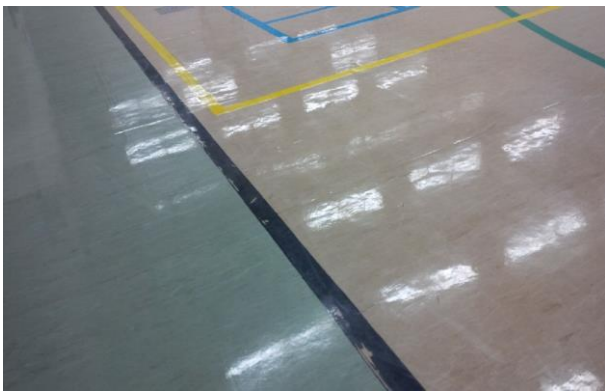
Brad Berschiminsky
Bersch & Associates Ltd.
File: B67BLJ06F

BULK SAMPLE LOCATIONS

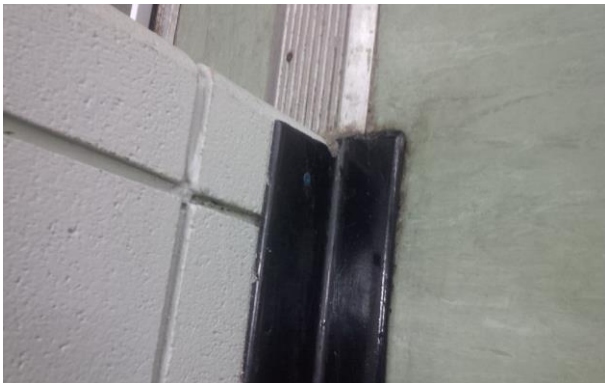
SAMPLE 1



SAMPLE 2 & 3



SAMPLE 4



Bersch & Associates Ltd.

B67BAJ06F

Box 3568

Humboldt, Sask. S0K 2A0

BULK SAMPLE ANALYSIS REPORT**PROJECT NO: B67.16****CLIENT: CITY OF SASKATOON****CONTACT: JOHN HILTZ****LOCATION: LAKEWOOD CIVIC CENTRE - GYM FLOOR REPLACEMENT**

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1	6-Oct-16	Gymnasium - Northeast Corner - Concrete Below The 4-inch Circular Inspection Cover.	No Asbestos Detected		WB
2	6-Oct-16	Gymnasium - Green Marble Pattern Sheet Flooring.	No Asbestos Detected		WB
3	6-Oct-16	Gymnasium - Beige Marble Pattern Sheet Flooring.	No Asbestos Detected		WB
4	6-Oct-16	Gymnasium - Black Baseboard Around Perimeter.	No Asbestos Detected		WB

BERSCH & ASSOCIATES LTD.

November 21st, 2016

The City of Saskatoon
222 3rd Avenue North
Saskatoon, SK
S7K 0J5

ATTENTION: Hazel Fernandez

SUBJECT: Bulk Sample Analysis Report – Lakewood Civic Centre

Hazel Fernandez with the City of Saskatoon had requested Bersch & Associates to perform some bulk sample testing prior to some renovations that are planned for the Men's, Women's, Family and Staff Shower Areas (Replacing the Shower Heads and Push Buttons.) Samples were collected to determine the presence/absence of asbestos prior to renovations commencing. The walls were tested for Vermiculite Block Wall Insulation and no Vermiculite was found in the walls slated for the renovations. Below are the results for the samples taken.

Please find attached our laboratory's results for the bulk samples collected November 18th, 2016 from Lakewood Civic Centre located in Saskatoon, SK. The samples were analyzed in our laboratory for the identification of asbestos. Asbestos **was not** detected within the samples.

The results for the samples submitted were obtained by examination in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as less than 1% by volume.

This test report relates only to the materials sent for examination and any use or extension of the information by the client of these results is the responsibility of the client.

If any questions arise on the results of the attached information please contact our office. Thank you for this opportunity of service!

Sincerely,



Brad Berschminsky
Bersch & Associates Ltd.

File No. – B67BLK17F – Lakewood Civic Centre

Bersch & Associates Ltd.

B67BAK17F

244-2002 Quebec Avenue
Saskatoon, SK S7K 1W4

BULK SAMPLE ANALYSIS REPORT**PROJECT NO: B67.16****CLIENT: CITY OF SASKATOON****CONTACT: HAZEL FERNANDEZ / DARREN DOUGAN****LOCATION: LAKEWOOD CIVIC CENTRE - 1635 MCKERCHER DRIVE, SASKATOON, SK**

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1	18-Nov-16	Family Change Room #1 (2nd Right After Entering Area) - Shower Tile Grout	No Asbestos Detected		WB
2	18-Nov-16	Family Change Room #1 - 1" x 1" Ceramic Shower Tile	No Asbestos Detected		WB