



December 7, 2017

CITY OF SASKATOON

Asbestos-Containing Building Materials Assessment Report - Lathey Pool



REPORT

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.





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 3

4.0 EXCLUDED AREAS AND MATERIALS 3

5.0 CONCLUSIONS AND RECOMMENDATIONS..... 4

 5.1 Asbestos-Containing Materials 4

6.0 SURVEY LIMITATIONS..... 5

7.0 CLOSURE..... 5

APPENDICES

APPENDIX A

Laboratory Certificate of Analysis Report

APPENDIX B

Site Photographs

APPENDIX C

Lathey Pool Room by Room Spreadsheet

APPENDIX D

Floor Plans



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 Lathey Pool (the Site) located at 815 Taylor Street in Saskatoon, Saskatchewan. This assessment report details our findings, conclusions and recommendations for the Site. A walkthrough of the Site was conducted on September 13, 2017 and the assessment was conducted on October 17, 2017 by Kody Henderson, OHS Project Manager. Asbestos-containing building materials were identified within the Lathey Pool 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 Lathey Pool consists of staff rooms, change rooms, washrooms, and mechanical rooms and was constructed in 1988. During the assessment, the entire building was treated as one 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 seventeen (17) samples of building materials were collected and tested for asbestos content during the assessment of the Lathey Pool. Four (4) of the samples were found to contain asbestos.

Potential asbestos-containing components may be located within the electrical panels on Site. Potential asbestos-containing materials may be located within the fire door in Room 1. Additionally, potential loose asbestos-containing gaskets were observed within Room 1.

3.1.1 List of Identified Asbestos-Containing Materials

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

- Concrete Texture Coat; and
- Gold Sink Undercoat.

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

Concrete Texture Coat

Three (3) samples of concrete texture coat were collected during the assessment. The three samples collected were found to contain 10% Chrysotile asbestos. Asbestos-containing concrete texture coat (see Photograph 1 in Appendix B) was observed in the following location:

- Exterior (approximately 1,600 ft²).

Gold Sink Undercoat

One (1) sample of gold sink undercoat was collected during the assessment. The sample collected was found to contain 1.5% Chrysotile asbestos. Asbestos-containing gold sink undercoat (see Photograph 2 in Appendix B) was observed in the following locations:

- Room 103 (approximately 1 sink);
- Room 105 (approximately 1 sink); and
- Room 114 (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 non-suspect materials:

- Grey building caulking;
- Drywall joint compound;
- White window frame caulking;
- Dark brown duct mastic;
- White sink caulking;
- Concrete floor coating;
- Grey sink caulking;
- Pipe-fitting insulation;
- The drain lines were observed to have clamps and are not suspected to have an asbestos-containing packing;
- The duct work was observed to be un-insulated;
- The attic was observed to be un-insulated with wood structural trusses; and
- The walls were observed to be constructed of concrete, concrete block, and drywall with non-asbestos-containing drywall joint compound and a non-asbestos-containing concrete floor coating with drywall ceilings.

4.0 EXCLUDED AREAS AND MATERIALS

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

- 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 concrete block walls were not inspected by Golder during the assessment. If the concrete block walls are to be removed or impacted by future renovation or demolition activities, additional investigation and sampling of suspect materials may be required.
- The loose gaskets were not sampled by Golder during the assessment. If the gaskets are to be removed or impacted by future renovation or demolition activities, additional investigation and sampling may be required.
- The electrical panels and associated components were not inspected by Golder during the assessment. If the panels are to be removed or impacted by future renovation or demolition activities, additional investigation and sampling of suspect materials may be required.



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 concrete texture coat 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 or potential 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.

Concrete Texture Coat

If scheduled for impact, asbestos-containing concrete texture coat should be abated following high-risk abatement work procedures as outlined in the *Saskatchewan Asbestos Abatement Manual (2017)*. Alternatively, as the concrete texture coat 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 October 17, 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.



Report Signature Page

GOLDER ASSOCIATES LTD.

Prepared by:

Reviewed by:

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KH/AG/ba

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APPENDIX A

Laboratory Certificate of Analysis Report

CERTIFICATE OF ANALYSIS

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

Report Date: 11/1/2017
Report No.: 550472 - PLM
Project: Lathey Pool
Project No.: 1667963

Client: GOL572

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6372400 **Analyst Observation:** Grey Cementitious **Location:** Exterior
Client No.: A-001 **Client Description:** Concrete Texture Coat **Facility:**
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
10 Chrysotile None Detected 90

Lab No.: 6372401 **Analyst Observation:** Grey Cementitious **Location:** Exterior
Client No.: A-002 **Client Description:** Concrete Texture Coat **Facility:**
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
10 Chrysotile None Detected 90


Lab No.: 6372402 **Analyst Observation:** Grey Cementitious **Location:** Exterior
Client No.: A-003 **Client Description:** Concrete Texture Coat **Facility:**
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
10 Chrysotile None Detected 90

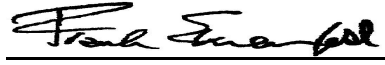
Lab No.: 6372403 **Analyst Observation:** Grey Caulk **Location:** Exterior
Client No.: A-004 **Client Description:** Grey Bldg Caulking **Facility:**
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected None Detected 100

Lab No.: 6372404 **Analyst Observation:** White Joint Compound **Location:** Rm 115
Client No.: A-005 **Client Description:** Drywall Joint Compound **Facility:**
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected None Detected 100

Lab No.: 6372405 **Analyst Observation:** Brown Caulk **Location:** Rm 115
Client No.: A-006 **Client Description:** White Window Frame Caulking **Facility:**
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected None Detected 100

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

Date Received: 10/24/2017
Date Analyzed: 11/01/2017
Signature: 
Analyst: Nick Daigle

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

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

Report Date: 11/1/2017
Report No.: 550472 - PLM
Project: Lathey Pool
Project No.: 1667963

Client: GOL572

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6372406 **Analyst Observation:** White Caulk **Location:** Rm 115
Client No.: A-007 **Client Description:** Dk Brown Duct Mastic **Facility:**
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected None Detected 100

Lab No.: 6372407 **Analyst Observation:** White Joint Compound **Location:** Rm 102
Client No.: A-008 **Client Description:** Drywall Joint Compound **Facility:**
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected None Detected 100


Lab No.: 6372408 **Analyst Observation:** Black/Gold Mastic **Location:** Rm 103
Client No.: A-009 **Client Description:** Gold Sink Undercoat **Facility:**
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
PC 1.5 Chrysotile None Detected 98.5

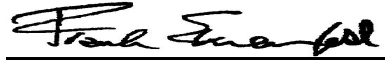
Lab No.: 6372409 **Analyst Observation:** White Joint Compound **Location:** Rm 103
Client No.: A-010 **Client Description:** Drywall Joint Compound **Facility:**
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected None Detected 100

Lab No.: 6372410 **Analyst Observation:** White Sheetrock **Location:** Rm 105
Client No.: A-011 **Client Description:** Drywall Joint Compound **Facility:**
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected None Detected 100

Lab No.: 6372411 **Analyst Observation:** White Caulk **Location:** Rm 105
Client No.: A-012 **Client Description:** White Sink Caulking **Facility:**
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected None Detected 100

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

Date Received: 10/24/2017
Date Analyzed: 11/01/2017
Signature: 
Analyst: Nick Daigle

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

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

Report Date: 11/1/2017
Report No.: 550472 - PLM
Project: Lathey Pool
Project No.: 1667963

Client: GOL572

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6372412 **Analyst Observation:** White Joint Compound **Location:** Rm 107
Client No.: A-013 **Client Description:** Drywall Joint Compound **Facility:**
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected None Detected 100


Lab No.: 6372413 **Analyst Observation:** Lt Blue Flooring **Location:** Rm 107
Client No.: A-014 **Client Description:** Flooring **Facility:**
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected None Detected 100

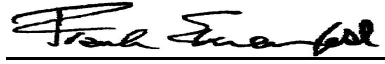
Lab No.: 6372414 **Analyst Observation:** Grey Caulk **Location:** Rm 114
Client No.: A-015 **Client Description:** Grey Sink Caulking **Facility:**
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected None Detected 100

Lab No.: 6372415 **Analyst Observation:** White Insulation **Location:** Rm 1
Client No.: A-016 **Client Description:** Pipe-Fitting Insualtion **Facility:**
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected 5 Fibrous Glass 95

Lab No.: 6372416 **Analyst Observation:** White Insulation **Location:** Rm 1
Client No.: A-017 **Client Description:** Pipe-Fitting Insualtion **Facility:**
Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:
None Detected 10 Fibrous Glass 90

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

Date Received: 10/24/2017
Date Analyzed: 11/01/2017
Signature: 
Analyst: Nick Daigle

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

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

Report Date: 11/1/2017
Report No.: 550472 - PLM
Project: Lathey Pool
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)>

CERTIFICATE OF ANALYSIS

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16820 107 Ave
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Client: GOL572

Report Date: 11/1/2017
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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

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 gange, 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

CERTIFICATE OF ANALYSIS

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

Client: GOL572

Report Date: 11/1/2017
Report No.: 550472 - PLM
Project: Lathey Pool
Project No.: 1667963

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 Concrete Texture Coat.



Photograph 2: Asbestos-Containing Gold Sink Undercoat.

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APPENDIX C

Lathey Pool Room by Room Spreadsheet

Appendix C
Lathey Pool
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 | All | All | Doors | Regular Door | Non Suspect Door | High | No | No | No | Good | Non-suspect doors throughout, with the exception of the Fire Door within Room 1. | | | | | | | | | | | | | | | | |
| Included | B | 1 | Mechanical Room | Walls | Walls | Concrete | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | B | 1 | Mechanical Room | Floor | Floor | Concrete | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | B | 1 | Mechanical Room | Ceiling | Ceiling | Concrete | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | B | 1 | Mechanical Room | Mechanical | Piping | Pipe-Fitting Insulation | High | No | Yes | No | Good | | Bulk | A-016, A-017 | 17-Oct-17 | | | | | | | | | | | | | |
| Included | B | 1 | Mechanical Room | Mechanical | Piping | PVC and Fibreglass Pipe Insulation | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | B | 1 | Mechanical Room | Mechanical | Piping | Clamped Drain Lines | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | B | 1 | Mechanical Room | Mechanical | Duct | Bare Duct Work | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | B | 1 | Mechanical Room | Mechanical | Tanks | Fibreglass Tanks | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | B | 1 | Mechanical Room | Doors | Fire Door | Fire Door | High | Yes | No | Potential | Good | Not sampled due to the destructive requirements of sampling doors. | | | | | | | No | No | | Annually | | Low | Inspect and sample if scheduled for removal. | | | |
| Included | B | 1 | Mechanical Room | Mechanical | Gaskets | Loose Gaskets | High | Yes | No | Potential | Good | Not sampled due to the destructive requirements of sampling gaskets. | | | | | | | No | No | | Annually | | Low | Inspect and sample if scheduled for removal. | | | |
| Included | B | 1 | Mechanical Room | Electrical | Electrical | Electrical Panel and Components | High | Yes | No | Potential | Good | Not sampled due to safety concerns. | | | | | | | No | No | | Annually | | Low | Inspect and sample if scheduled for removal. | | | |
| Included | M | 101 | Admission Office | Walls | Walls | Concrete Block | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 101 | Admission Office | Floor | Floor | Concrete Coating | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 101 | Admission Office | Ceiling | Ceiling | Drywall Joint Compound | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 101 | Admission Office | Windows | Caulking | Rubber Window Caulking | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 102 | Halfway | Walls | Walls | Concrete Block | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 102 | Halfway | Walls | Walls | Drywall Joint Compound | High | No | Yes | No | Good | | Bulk | A-008 | 17-Oct-17 | | | | | | | | | | | | | |
| Included | M | 102 | Halfway | Floor | Floor | Concrete Coating | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 102 | Halfway | Ceiling | Ceiling | Drywall Joint Compound | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 103 | First Aid | Walls | Walls | Concrete Block | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 103 | First Aid | Walls | Walls | Drywall Joint Compound | High | No | Yes | No | Good | | Bulk | A-010 | 17-Oct-17 | | | | | | | | | | | | | |
| Included | M | 103 | First Aid | Floor | Floor | Concrete Coating | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 103 | First Aid | Ceiling | Ceiling | Drywall Joint Compound | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 103 | First Aid | Plumbing | Sink | Gold Sink Undercoat | High | Yes | Yes | Yes | Good | | Bulk | A-009 | 17-Oct-17 | Chrysotile | Gold Sink Undercoat | 1.50% | No | No | No | Annually | 5 | Moderate | Manage in place. | 1 Sink | Photograph 2 | Door Jamb |
| Included | M | 104 | Manager's Office | Walls | Walls | Concrete Block | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 104 | Manager's Office | Walls | Walls | Drywall Joint Compound | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 104 | Manager's Office | Floor | Floor | Concrete Coating | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 104 | Manager's Office | Ceiling | Ceiling | Drywall Joint Compound | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 105 | Staff Room | Walls | Walls | Concrete Block | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 105 | Staff Room | Walls | Walls | Drywall Joint Compound | High | No | Yes | No | Good | | Bulk | A-011 | 17-Oct-17 | | | | | | | | | | | | | |
| Included | M | 105 | Staff Room | Floor | Floor | Concrete Coating | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 105 | Staff Room | Ceiling | Ceiling | Drywall Joint Compound | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 105 | Staff Room | Plumbing | Caulking | White Sink Caulking | High | No | Yes | No | Good | | Bulk | A-012 | 17-Oct-17 | | | | | | | | | | | | | |
| Included | M | 105 | Staff Room | Walls | Caulking | Silicone Caulking | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 105 | Staff Room | Plumbing | Sink | Gold Sink Undercoat | High | Yes | Yes | Yes | Good | | Bulk | A-009 | 17-Oct-17 | Chrysotile | Gold Sink Undercoat | 1.50% | No | No | No | Annually | 5 | Moderate | Manage in place. | 1 Sink | Photograph 2 | Door Jamb |
| Included | M | 105A | Washroom | Walls | Walls | Concrete Block | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 105A | Washroom | Walls | Walls | Drywall Joint Compound | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 105A | Washroom | Floor | Floor | Concrete Coating | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 105A | Washroom | Ceiling | Ceiling | Drywall Joint Compound | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 106 | Change Room | Walls | Walls | Concrete Block | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 106 | Change Room | Floor | Floor | Concrete Coating | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 106 | Change Room | Ceiling | Ceiling | Wood | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 107 | Janitor Closet | Walls | Walls | Concrete Block | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 107 | Janitor Closet | Walls | Walls | Drywall Joint Compound | High | No | Yes | No | Good | | Bulk | A-013 | 17-Oct-17 | | | | | | | | | | | | | |
| Included | M | 107 | Janitor Closet | Floor | Floor | Concrete Coating | High | No | Yes | No | Good | | Bulk | A-014 | 17-Oct-17 | | | | | | | | | | | | | |
| Included | M | 107 | Janitor Closet | Ceiling | Ceiling | Drywall Joint Compound | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 108 | Showers | Walls | Walls | Concrete Block | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 108 | Showers | Walls | Walls | Plastic Panels | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 108 | Showers | Floor | Floor | Concrete Coating | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 108 | Showers | Ceiling | Ceiling | Wood | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 109 | Washroom | Walls | Walls | Concrete Block | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 109 | Washroom | Floor | Floor | Concrete Coating | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 109 | Washroom | Ceiling | Ceiling | Wood | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 110 | Showers | Walls | Walls | Concrete Block | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 110 | Showers | Floor | Floor | Concrete Coating | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 110 | Showers | Ceiling | Ceiling | Wood | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 111 | Janitor Closet | Walls | Walls | Concrete Block | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 111 | Janitor Closet | Floor | Floor | Concrete Coating | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 111 | Janitor Closet | Ceiling | Ceiling | Drywall Joint Compound | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 111 | Janitor Closet | Plumbing | Sink | White Sink Caulking | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 112 | Change Room | Walls | Walls | Concrete Block | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 112 | Change Room | Floor | Floor | Concrete Coating | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 112 | Change Room | Ceiling | Ceiling | Wood | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 113 | Washroom | Walls | Walls | Concrete Block | High | No | No | No | Good | | | | | | | | | | | | | | | | | |
| Included | M | 113 | Washroom | Floor | Floor | Concrete Coating | High | No | Yes | No | Good | | | | | | | | | | | | | | | | | |

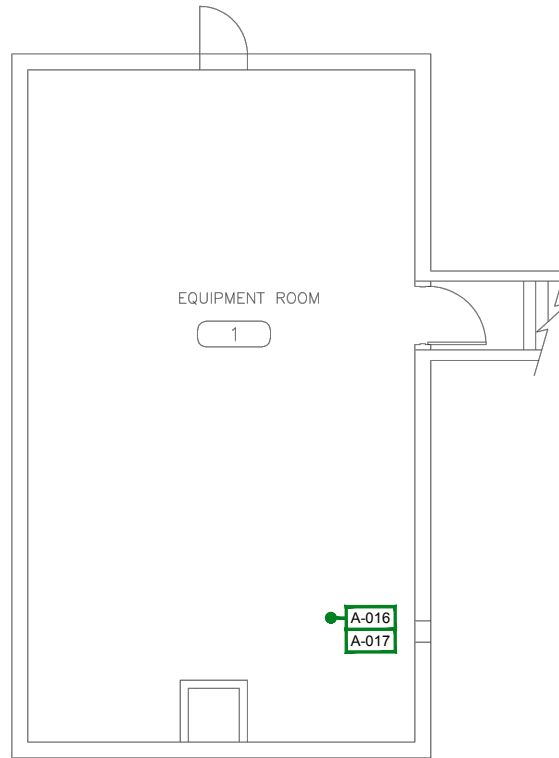
Appendix C
Lathey Pool
ACM Inventory

| 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 | E | Exterior | Exterior | Walls | Walls | Concrete Texture Coat | High | Yes | Yes | Yes | Good | Located on the upper walls and overhangs along the exterior of the building at heights. | Bulk | VS A-001, A-002, A-003 | 17-Oct-17 | Chrysotile | Concrete Texture Coat | 10.00% | No | No | No | Annually | 5 | Moderate | Manage in place. | 1,600 ft ² | Photograph 1 | Door Jamb | |
| Included | E | Exterior | Exterior | Overhang | Overhang | Concrete Texture Coat | High | Yes | Yes | Yes | Good | Located on the upper walls and overhangs along the exterior of the building at heights. | Bulk | A-001, A-002, A-003 | 17-Oct-17 | Chrysotile | Concrete Texture Coat | 10.00% | No | No | No | Annually | 5 | Moderate | Manage in place. | Included above. | Photograph 1 | Door Jamb | |
| Included | E | Exterior | Exterior | Walls | Caulking | Grey Building Caulking | High | No | Yes | No | Good | | Bulk | A-004 | 17-Oct-17 | | | | | | | | | | | | | | |
| Excluded | | Exterior | Roof | Exterior Roof | Exterior Roof | | | | | | | Not assessed due to scope of work. | | | | | | | | | | | | | | | | | |



APPENDIX D

Floor Plans



LEGEND

- ASBESTOS SAMPLE LOCATION
- ASBESTOS - CONTAINING SINK UNDERCOAT

NOTE(S)

1. ASBESTOS IS A CARCINOGEN. DO NOT BREATHE ASBESTOS DUST.
2. ASBESTOS-CONTAINING CONCRETE TEXTURE COAT IS LOCATED ON THE WALLS AND OVERHANGS ALONG THE EXTERIOR OF THE BUILDING AT HEIGHTS.

REFERENCE(S)

PLAN OBTAINED FROM INFRASTRUCTURE SERVICES DEPARTMENT CITY OF SASKATOON. DATED: 18/01/01

CLIENT
 CITY OF SASKATOON

CONSULTANT



YYYY-MM-DD 2017-12-07

DESIGNED KH

PREPARED VI

REVIEWED KH

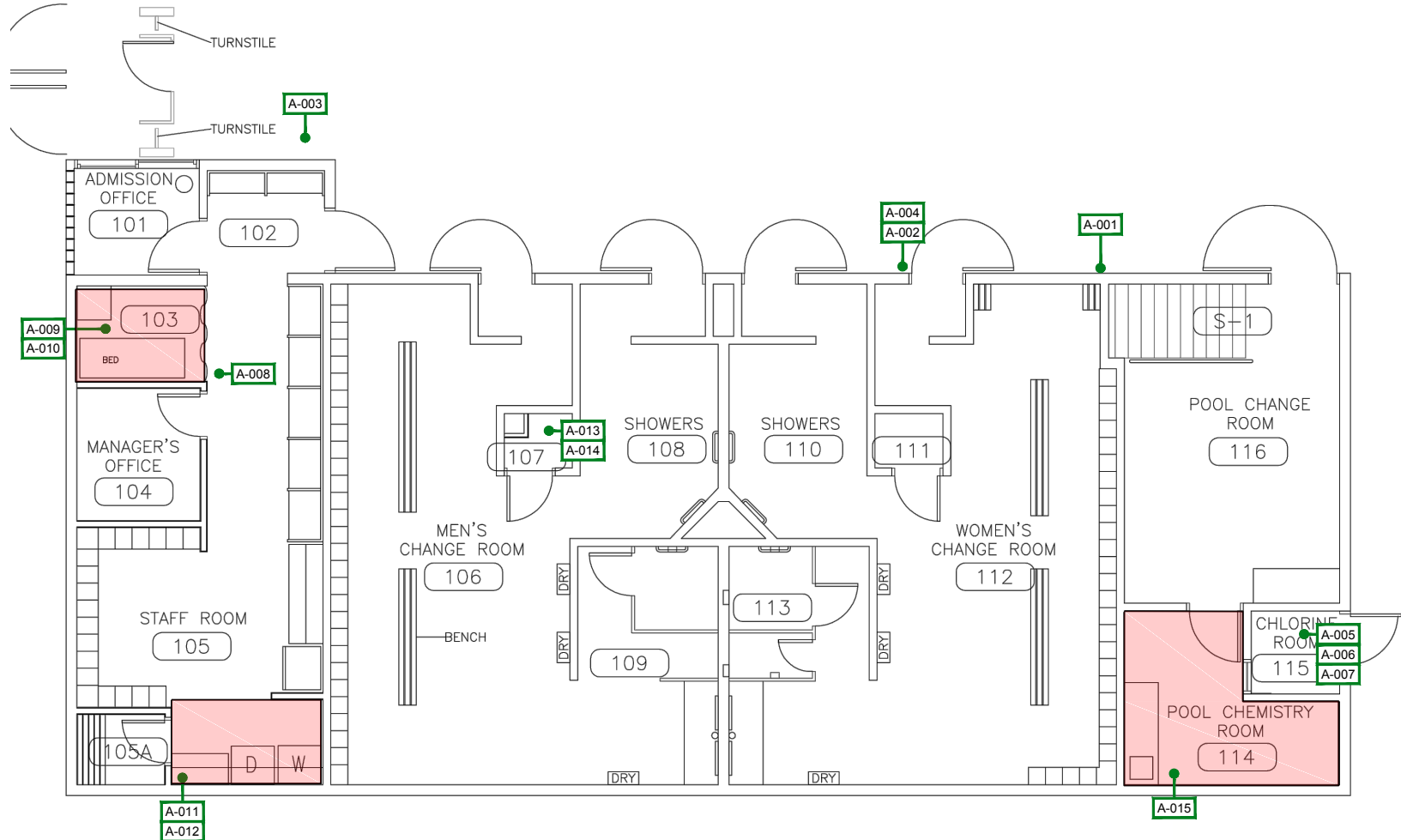
APPROVED AG

SCHEMATIC ONLY, NOT TO SCALE

PROJECT
 ASBESTOS ASSESSMENT
 LATHEY POOL
 815 TAYLOR STREET

TITLE
LOWER FLOOR

| | | | |
|------------------------|-------------------------|-----------|-------------|
| PROJECT NO. 1667963 | CONTROL 1000-HM-0002 | REV. 0 | FIGURE 1 |
|------------------------|-------------------------|-----------|-------------|



- LEGEND**
- # ASBESTOS SAMPLE LOCATION
 - ASBESTOS - CONTAINING SINK UNDERCOAT

- NOTE(S)**
1. ASBESTOS IS A CARCINOGEN. DO NOT BREATHE ASBESTOS DUST.
 2. ASBESTOS-CONTAINING CONCRETE TEXTURE COAT IS LOCATED ON THE WALLS AND OVERHANGS ALONG THE EXTERIOR OF THE BUILDING AT HEIGHTS.

REFERENCE(S)
 PLAN OBTAINED FROM INFRASTRUCTURE SERVICES DEPARTMENT CITY OF SASKATOON. DATED: 12/07/2001

CLIENT
 CITY OF SASKATOON

CONSULTANT



YYYY-MM-DD 2017-12-07
 DESIGNED KH
 PREPARED VI
 REVIEWED KH
 APPROVED AG

PROJECT
 ASBESTOS ASSESSMENT
 LATHEY POOL
 815 TAYLOR STREET

TITLE
MAIN FLOOR

PROJECT NO. 1667963 CONTROL 1000-HM-003 REV. 0 FIGURE 2

SCHEMATIC ONLY, NOT TO SCALE

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

26 mm

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Pre- Renovation Assessment

September 20, 2019

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

Attention: Nathan Sommerfeld

File Number: B67PRI11I

Subject: Pre-Renovation Assessment – Lathey Pool

Blake Berschminsky of Bersch Consulting Ltd. conducted a site visit on September 11, 2019, to the Lathey Pool located at 815 Taylor Street East, Saskatoon, Saskatchewan. The purpose of the visit was to investigate and collect bulk samples to determine the presence/absence of asbestos. Four (4) bulk samples were collected and analyzed for the identification of asbestos. Asbestos **was not** detected within any of the samples.

The results for the bulk samples collected 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. Please reference to ***Appendix I*** for the ***Bulk Sample Analysis Results***.

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.

Site Observations and Information

The Lathey Pool located at 815 Taylor Street East, Saskatoon, Saskatchewan was surveyed with the intent of identifying all asbestos-containing materials within the facility prior to any renovations.

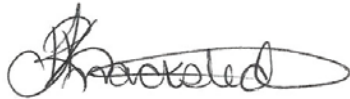
- 1) All samples collected were identified as non-asbestos.

Based on the site investigation and bulk sample results there are no asbestos concerns regarding the renovation of the Lathey Pool located at 815 Taylor Street East, Saskatoon, Saskatchewan.

Please reference to **Appendix I** for the **Bulk Sample Analysis Results** and **Appendix II** for the **Site Photos**.

If any questions arise on the results of the attached information, please contact our office at (306) 978-6665. Thank you for this opportunity of service.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tyneal Knackstedt', with a large, sweeping flourish extending to the right.

Tyneal Knackstedt
Bersch Consulting Ltd.
B67PRI11I – Lathey Pool

Appendix I

Bulk Sample Analysis Results

Bulk Sample Analysis Report

September 20, 2019

Project Number: B67.19

Client: City of Saskatoon

Contact: Nathan Sommerfeld

Location: Lathey Pool – 815 Taylor Street East, Saskatoon, SK

File Number: B67BAI111

| Sample Number | Sample Date | Sample Material | Sample Location and Information | Asbestos | % | Analyst |
|---------------|-------------|---------------------|---------------------------------|----------------------|---|---------|
| 1 | 2019/09/11 | White Caulking | Waterslide Section Joint | No Asbestos Detected | | EMSL/WB |
| 2 | 2019/09/11 | Waterslide Material | Waterslide | No Asbestos Detected | | EMSL/WB |
| 3 | 2019/09/11 | Gray Caulking | Stair Edge | No Asbestos Detected | | EMSL/WB |
| 4 | 2019/09/11 | Concrete | Waterslide Support Column | 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.

Appendix II

Site Photos

Photo ID

B67PRI11I - 001

Sample Number

B67BAI11I - 1

Description

White Caulking

Waterslide Section Joint

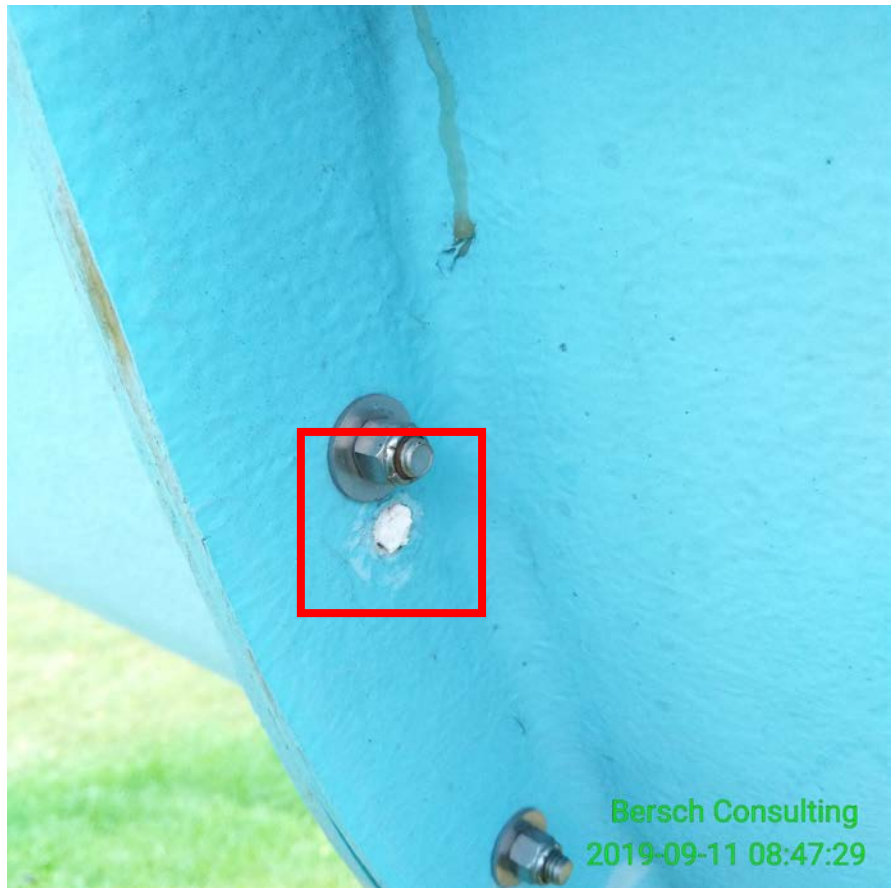


Photo ID

B67PRI11I - 002

Sample Number

B67BAI11I - 2

Description

Waterslide Material

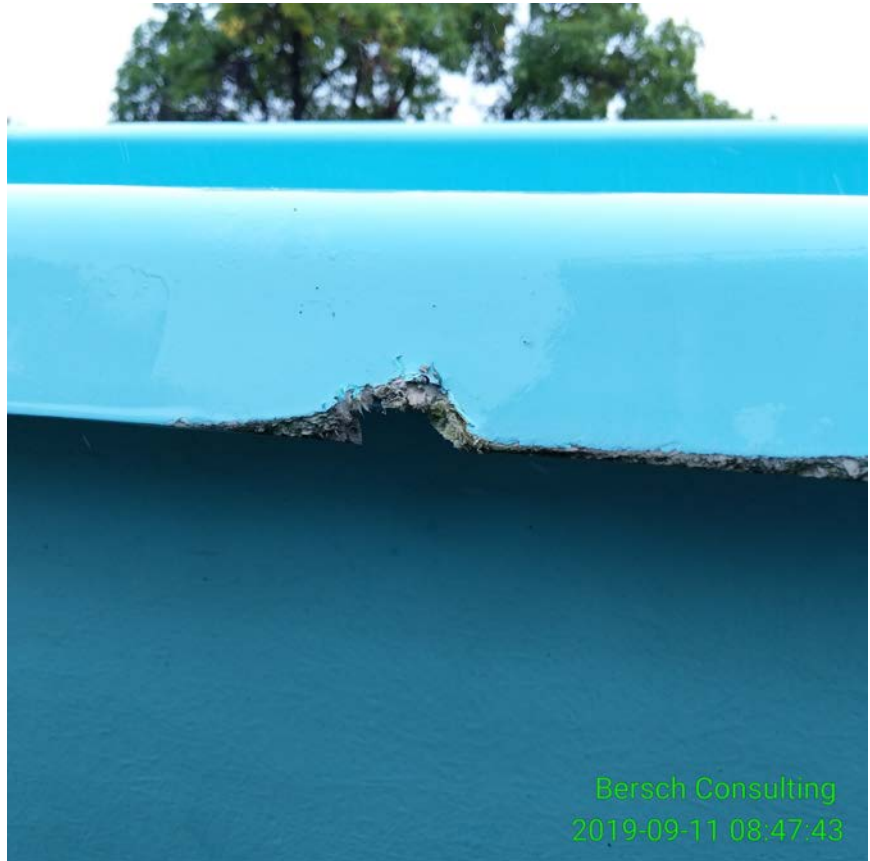


Photo ID

B67PRI11I - 003

Sample Number

B67BAI11I - 3

Description

Gray Caulking

Stair Edge



Photo ID

B67PRI11I - 004

Sample Number

B67BAI11I - 4

Description

Concrete

Waterslide Support Column

