

# **CITY OF SASKATOON**

# Asbestos-Containing Building Materials Assessment Report - Lathey Pool



#### 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.







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### 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 <a href="mailto:kody\_henderson@golder.com">kody\_henderson@golder.com</a>. 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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Andrew Grant, B.Sc., P.Eng., EP, CRSP Associate, OHS Project Director

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KH/AG/ba

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# **APPENDIX A**

**Laboratory Certificate of Analysis Report** 





Email: customerservice@iatl.com

#### CERTIFICATE OF ANALYSIS

Client: Golder Associates Ltd Report Date: 11/1/2017

16820 107 Ave Report No.: 550472 - PLM Edmonton AB T5P 4C3 Project: Lathey Pool

Edmonton AB T5P 4C3 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 9

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 9

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 9

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 10

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

Dated: 11/1/2017 2:42:25

Approved By:

Frank E. Ehrenfeld, III Laboratory Director

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Email: customerservice@iatl.com

#### CERTIFICATE OF ANALYSIS

Client: Golder Associates Ltd Report Date: 11/1/2017

16820 107 Ave Report No.: 550472 - PLM Edmonton AB T5P 4C3 Project: Lathey Pool

Project No.: 1667963

Client: GOL572

### PLM BULK SAMPLE ANALYSIS SUMMARY

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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 10

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 10

Lab No.: 6372408 Analyst Observation: Black/Gold Mastic Location: Rm 103

Client No.: A-009 Client Description: Gold Sink Undercoat Facility:

<u>Percent Asbestos:</u> <u>Percent Non-Asbestos Fibrous Material:</u> <u>Percent Non-Fibrous Material:</u>

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 10

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: Wishes Day

Analyst: Nick Daigle

Approved By:

Frank E. Ehrenfeld, III Laboratory Director

Dated: 11/1/2017 2:42:26 Page 2 of 6



Email: customerservice@iatl.com

#### CERTIFICATE OF ANALYSIS

Client: Golder Associates Ltd Report Date: 11/1/2017

16820 107 Ave Report No.: 550472 - PLM

Edmonton AB T5P 4C3 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 Description: Drywall Joint Compound Client No.: A-013 **Facility:** 

Percent Non-Asbestos Fibrous Material: Percent Asbestos: Percent Non-Fibrous Material:

None Detected None Detected

**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

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

**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:

5 Fibrous Glass None Detected

**Analyst Observation:** White Insulation Location: Rm 1 **Lab No.:** 6372416 Client No.: A-017 **Client Description:** Pipe-Fitting Insualtion **Facility:** 

Percent Asbestos: Percent Non-Asbestos Fibrous Material: Percent Non-Fibrous Material:

10 Fibrous Glass 90 None Detected

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

10/24/2017 Date Received:

11/01/2017 Date Analyzed:

Dated: 11/1/2017 2:42:26

Signature: Analyst:

Nick Daigle

Approved By:

Frank E. Ehrenfeld, III Laboratory Director

Page 3 of 6



Email: customerservice@iatl.com

#### **CERTIFICATE OF ANALYSIS**

Client: Golder Associates Ltd Report Date: 11/1/2017

16820 107 Ave Report No.: 550472 - PLM

Edmonton AB T5P 4C3 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 ir 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)>

Dated: 11/1/2017 2:42:26 Page 4 of 6



Email: customerservice@iatl.com

#### CERTIFICATE OF ANALYSIS

Client: Golder Associates Ltd Report Date: 11/1/2017

16820 107 Ave Report No.: 550472 - PLM

Edmonton AB T5P 4C3 Project: Lathey Pool Project No.: 1667963

Client: GOL572

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

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Email: customerservice@iatl.com

#### 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.

Dated: 11/1/2017 2:42:26 Page 6 of 6

<sup>\*\*</sup>Approximately 1 Liter of sample in double-bagged container (~9x6 inch bag of sample).



# **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** 



Included/ Excluded Floor	Room #	Area Description	n Elements	Subelements	Material Description	Accessibility	Suspect?	Sampled?	Asbestos Containing	Condition	Field Notes	Sample	Sample ID	Sample Asbesto	ACM Product	% of asbestos	Friable	Sprayed-on	Maintenance	Inspection	Priority	Potential for	Recommended	Quantity	Photograph ID	Labelling Type
Excluded		,				,		•	Material?		Non-suspect doors throught, with	Туре		Date Type				. ,		·		Disturbance	Action		• •	
Included M	All	All	Doors	Regular Door	Non Suspect Door	High	No	No	No	Good	the exception of the Fire Door within Room 1.															
Included M Included B Included B	1	Mechanical Room Mechanical Room	Walls Floor	Walls Floor	Concrete Concrete	High High	No No	No No	No No	Good Good																
Included B	1	Mechanical Room		Ceiling Piping	Concrete Pipe-Fitting Insulation	High High	No No	No Yes		Good Good		Bulk	A-016, A-017 1	7-Oct-17												
Included B	1	Mechanical Room	Mechanical	Piping	PVC and Fibreglass Pipe Insulation Clamped Drain Lines	High High	No No	No No	No No																	
Included B Included B	1	Mechanical Room Mechanical Room Mechanical Room	Mechanical	Duct	Bare Duct Work Fibreglass Tanks	High High	No No	No	No																	
						<u> </u>					Not sampled due to the												Inspect and sample			
Included B	1	Mechanical Room	Doors	Fire Door	Fire Door	High	Yes	No	Potential	Good	destructive requirements of sampling doors.						No	No		Annually		Low	if scheduled for removal.			
						g					Not sampled due to the												Inspect and sample			
Included B	1	Mechanical Room	Machanical	Gaskets	Loose Gaskets	High	Yes	No	Potential	Good	destructive requirements of sampling gaskets.						No	No		Annually		Low	if scheduled for removal.			
inolados B		Woord Hour Toom	Moortamour	Cuchoto	Ecoso Casanoto	riigii	100	110	1 Otomudi	Cood	Not sampled due to safety						110	110		Zundany		2011	Inspect and sample			
Included P	1	Mechanical Room	Electrical	Electrical	Electrical Panel and Components	High	Voc	No	Potential	Cood	concerns.						No	No		Annually		Low	if scheduled for removal.			
Included M Included M	101	Admission Office Admission Office	Walls Floor	Walls	Concrete Block Concrete Coating	High	No No	No Yes	No No	Good Good			VS A-014				INU	NO		Aillually		LOW				
included ivi	101	Admission Office	FIOOI	Piddi	Concrete Coating	High	NO	165	NO	Good			VS A-005, A- 008, A-010, A-													
Included M	101	Admission Office	Ceiling	Ceiling	Drywall Joint Compound	High	No	Yes	No	Good			011, A-013													
Included M Included M Included M	101	Hallway	Windows Walls	Caulking Walls	Rubber Window Caulking Concrete Block	High High	No No	No No	No No	Good Good																
Included M Included M	102 102	Hallway Hallway	Walls Floor	Walls Floor	Drywall Joint Compound Concrete Coating	High High	No No		No No	Good Good		Bulk	A-008 1 VS A-014	7-Oct-17												
													VS A-005, A- 008, A-010, A-													
Included M Included M	102 103	Hallway First Aid	Ceiling Walls	Ceiling Walls	Drywall Joint Compound Concrete Block	High High	No No		No No	Good Good			011, A-013													
Included M Included M	103 103	First Aid First Aid	Walls Floor	Walls Floor	Drywall Joint Compound Concrete Coating	High High	No No	Yes Yes	No No	Good Good		Bulk	A-010 1 VS A-014	7-Oct-17												
								-					VS A-005, A- 008, A-010, A-													
Included M Included M	103 103	First Aid First Aid	Ceiling Plumbing	Ceiling Sink	Drywall Joint Compound Gold Sink Undercoat	High High	No Yes	Yes Yes	No Yes	Good Good		Bulk	011, A-013 A-009 1	7-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	First Aid Manager's Office	Walls	Walls	Concrete Block	High	No	No	No	Good Good			VS A-005, A-													
Included M	104	Manager's Office	Walls	Walls	Drywall Joint Compound	High	No	Yes	No	Good			008, A-010, A- 011, A-013													
Included M	104	Manager's Office Manager's Office	Floor	Floor	Concrete Coating	High	No		No				VS A-014 VS A-005, A-													
Included M	104	Manager's Office	Ceiling	Ceiling	Drywall Joint Compound	High	No	Yes	No	Good			008, A-010, A- 011, A-013													
Included M Included M Included M	105	Staff Room	Walls Walls	Walls Walls	Concrete Block Drywall Joint Compound	High	No No	No	No	Good		Bulk	A-011 1	7-Oct-17												
Included M	105	Staff Room	Floor	Floor	Concrete Coating	High High	No	Yes	No	Good		Duik	VS A-014 VS A-005, A-	7 000 17												
Included M	105	Staff Room	Coiling	Cailing	Drywall Joint Compound	High	No	Yes	No	Cood			008, A-010, A- 011, A-013													
Included M	105	Staff Room	Ceiling Plumbing Walls	Ceiling Caulking	White Sink Caulking	High High	No	Yes	No	Good Good Good		Bulk	A-012 1	7-Oct-17												
Included M Included M Included M	105	Staff Room	Plumbing	Caulking Sink	Silicone Caulking Gold Sink Undercoat	High High	Yes	No Yes	Yes No	Good			VS A-009	Chrysotile	Gold Sink Undercoat	1.50%	No	No	No	Annually	5	Moderate	Manage in place.	1 Sink	Photograph 2	Door Jamb
Included IVI	103A	wasiiiooiii	Walls	Walls	Concrete Block	riigii	NO	INO	NO	Good			VS A-005, A-													
Included M Included M	105A		Walls Floor	Walls Floor	Drywall Joint Compound	High High	No No	Yes	No	Good			011, A-013 VS A-014													
included M	IUSA	washroom	FIOOI	FIOOI	Concrete Coating	nigri	NO	Yes	NO	Good			VS A-005, A- 008, A-010, A-													
Included M	105A	Washroom	Ceiling Walls	Ceiling	Drywall Joint Compound	High	No	Yes	No	Good			011, A-013													
Included M Included M	106	Change Room	Floor	Walls Floor	Concrete Block Concrete Coating	High High	No No	No Yes	No No	Good			VS A-014													
Included M Included M	107	Janitor Closet	Ceiling Walls	Ceiling Walls	Wood Concrete Block	High High	No No	No No	No No	Good Good																
Included M Included M	107	Janitor Closet  Janitor Closet	Walls Floor	Walls Floor	Drywall Joint Compound Concrete Coating	High High	No No		No No	Good Good		Bulk Bulk	A-013 1 A-014 1	7-Oct-17 7-Oct-17												
													VS A-005, A- 008, A-010, A-													
Included M Included M	400	Janitor Closet Showers	Ceiling Walls	Ceiling Walls	Drywall Joint Compound Concrete Block	High High	No No	Yes No	No No				011, A-013													
Included M Included M	108 108	Showers Showers	Walls Floor	Walls Floor	Plastic Panels Concrete Coating	High High	No No	Yes	No No	Good Good			VS A-014													
Included M Included M	108 109	Showers Washroom	Ceiling Walls	Ceiling Walls	Wood Concrete Block	High High	No No		No No																	
Included M Included M			Floor Ceiling	Floor Ceiling	Concrete Coating Wood	High High	No No	Yes No	No No	Good Good			VS A-014													
Included M	110	Showers	Walls Floor	Walls Floor	Concrete Block Concrete Coating	High High	No No	No Yes	No No	Good Good			VS A-014													
Included M Included M Included M Included M	110 111	Showers Janitor Closet	Ceiling Walls	Ceiling Walls	Wood Concrete Block	High High	No No	No No		Good																
Included M	111	Janitor Closet	Floor	Floor	Concrete Coating	High	No	Yes	No	Good			VS A-014 VS A-005, A-													
Included M	111	Janitor Closet	Ceiling	Ceiling	Drywall Joint Compound	High	No	Yes	No	Good			008, A-010, A- 011, A-013													
Included M Included M Included M Included M	111 112	Janitor Closet Change Room	Plumbing Walls	Sink Walls	White Sink Caulking Concrete Block	High High	No No	Yes No	No No	Good Good			VS A-012													
			Floor Ceiling	Floor Ceiling	Concrete Coating Wood	High High	No No	Yes No	No No	Good Good			VS A-014													
Included M Included M	113	Washroom Washroom	Walls Floor	Walls Floor	Concrete Block Concrete Coating	High High	No No	No Yes	No No	Good Good			VS A-014													
Included M	113	Washroom Pool Chemistry Roor	Ceiling	Ceiling Walls	Wood Concrete Block	High High	No No	No	No	Good Good																
Included M	114	Pool Chemistry Roor	n Floor	Floor	Concrete Coating	High	No	Yes	No	Good			VS A-014 VS A-005, A-													
Included M	114	Pool Chemistry Room	n Ceilina	Ceiling	Drywall Joint Compound	High	No	Yes	No	Good			008, A-010, A- 011, A-013													
Included M	114	Pool Chemistry Roor Pool Chemistry Roor Pool Chemistry Roor	n Plumbing	Caulking Caulking	White Sink Caulking Grey Sink Caulking	High High	No No	Yes Yes	No No No Yes	Good		Bulk	VS A-012 A-015 1	7-Oct-17												
Included M	114	Pool Chemistry Roon	n Plumbing	Sink	Gold Sink Undercoat			Yes	Yes	Good		Suin	A-009		Gold Sink Undercoat	1.50%	No	No	No	Annually	5	Moderate	Manage in place.	1 Sink	Photograph 2	Door Jamb
											Not sampled due to safety concerns.												Inspect and sample if scheduled for			
Included M		Pool Chemistry Room		Electrical	Electrical Panel and Components	High	Yes	No No	Potential	Good	concerns.						No	No		Annually		Low	removal.			
Included M Included M	115	Chlorine Room Chlorine Room	Floor	Walls Floor	Concrete Block Concrete Concrete	High	No No	No	No No No	Good		Bulk	A-005 1	7-Oct-17												
Included M	115	Chlorine Room	Ceiling Windows	Ceiling Caulking	Drywall Joint Compound White Window Frame Caulking	High High	No	Yes Yes	No			Bulk	A-006 1	7-Oct-17												
Included M Included M	115	Chlorine Room	Windows	Duct Caulking	Dark Brown Duct Mastic Silicone Window Caulking	High High	No No	No	No	Good		Bulk	A-007 1	/-UCT-1/												
Included M Included M	116 116	Pool Change Room Pool Change Room	Walls Floor	Walls Floor	Concrete Block Concrete Coating	High High	No No	No Yes	No No	Good Good			VS A-014													
													VS A-005, A- 008, A-010, A-													
Included M Included A Included A	116 Attic	Pool Change Room Attic	Ceiling Attic	Ceiling Structure	Drywall Joint Compound Wood	High High	No No		No No	Good Good			011, A-013													
Included A Included E	Attic Exterior	Attic Exterior	Attic Walls	Insulation Walls	Not Observed Concrete Block	High High	No	No	No No	Good																
			•		•					•				-												

#### Appendix C Lathey Pool ACM Inventory

Included Exclude	l/ d Floor	r Ro	oom# Are	ea 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
														Located on the upper walls and																
														overhangs along the exterior of the		VS A-001, A-														
Included	E	Ex	xterior Exterio	or	Walls	Walls	Concrete Texture Coat		High	Yes	Yes	Yes	Good	building at heights.	Bulk	002, A-003	17-Oct-17	Chrysotile	Concrete Texture Coat	10.00%	No	No	No	Annually	5	Moderate	Manage in place.	1,600 ft <sup>2</sup>	Photograph 1	Door Jamb
														Located on the upper walls and																
														overhangs along the exterior of the		A-001, A-002	,											Included		
Included	E	Ex	xterior Exterio	or	Overhang	Overhang	Concrete Texture Coat		High	Yes	Yes	Yes	Good	building at heights.	Bulk	A-003	17-Oct-17	Chrysotile	Concrete Texture Coat	10.00%	No	No	No	Annually	5	Moderate	Manage in place.	above.	Photograph 1	Door Jamb
Included	E	Ex	xterior Exterio	or	Walls	Caulking	Grey Building Caulking		High	No	Yes	No	Good		Bulk	A-004	17-Oct-17													
														Not assessed due to scope of																
Excluded		Ex	xterior Roof		Exterior Roof	Exterior Roof								work.																

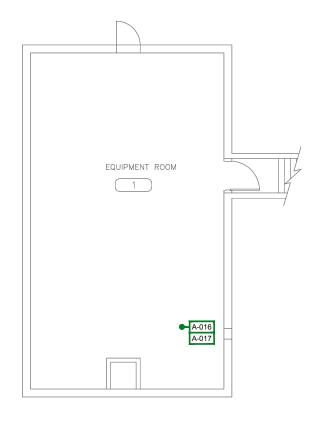


# **APPENDIX D**

**Floor Plans** 







#### LEGEND



ASBESTOS SAMPLE LOCATION

ASBESTOS - CONTAINING SINK UNDERCOAT

CLIENT

#### CITY OF SASKATOON

#### NOTE(S)

- 1. ASBESTOS IS A CARCINOGEN. DO NOT BREATHE ASBESTOS DUST.
- 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

CONSULTANT



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

#### SCHEMATIC ONLY, NOT TO SCALE

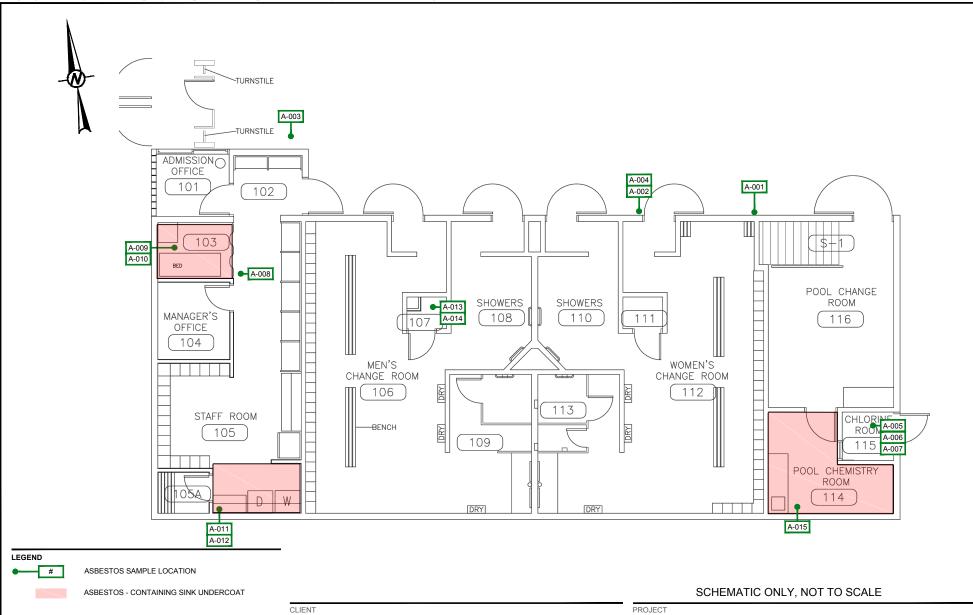
PROJECT
ASBESTOS ASSESSMENT
LATHEY POOL
815 TAYLOR STREET

TITLE

#### **LOWER FLOOR**

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

25 mm IT THIS INTERSOREMENT DOES NOT



#### NOTE(S)

- 1. ASBESTOS IS A CARCINOGEN. DO NOT BREATHE ASBESTOS DUST.
- 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

# CITY OF SASKATOON

CONSULTANT

YYYY-MM-	-DD 20	17-12-07
DESIGNED	) KH	ı
PREPARE	D VI	
REVIEWE	) KH	ı
APPROVE	D AG	

PROJECT
ASBESTOS ASSESSMENT
LATHEY POOL
815 TAYLOR STREET

TITLE

#### MAIN FLOOR

- <u> </u>			
PROJECT NO.	CONTROL	REV.	FIGURE
1667963	1000-HM-003	0	2

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.

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# Bersch Consulting Ltd.

# **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 Berschiminsky 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 <u>was not</u> 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.

# **Bersch Consulting Ltd.**

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,

Tyneal Knackstedt Bersch Consulting Ltd.

B67PRI11I – Lathey Pool

# **Appendix I**

**Bulk Sample Analysis Results** 

3

# **Bersch Consulting Ltd.**

# **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: B67BAI11I

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

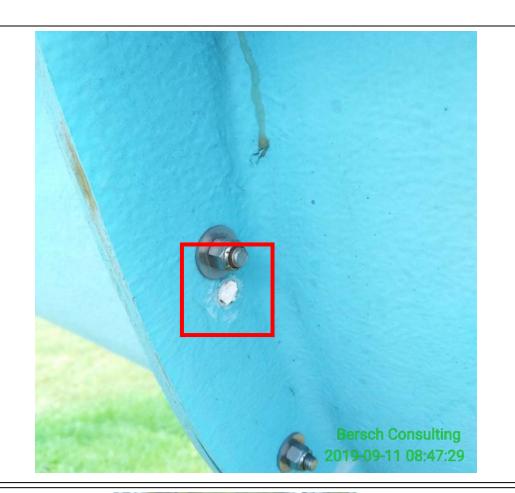
# **Sample Number**

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

