

Pre- Renovation Assessment

December 18, 2018

Client: City of Saskatoon
222 3rd Avenue N
Saskatoon, SK
S7K 0J5

Attention: Dave Schultenkamper

File Number: B67PRL10H- Old Bunkhouse

Project: Forestry Farm – Old Bunkhouse – Investigation of Main Floor Living Room

Evan Westad of Bersch Consulting Ltd. conducted a site visit on December 10, 2018, to the Saskatoon Forestry Farm located at 1903 Forestry Farm Park Drive, Saskatoon, Saskatchewan. The purpose of the visit was to investigate and collect bulk samples to determine the presence/absence of asbestos. Six (6) bulk samples were collected and analyzed for the identification of asbestos. Asbestos **was** detected within three (3) of the samples.

The results for the bulk samples 1, 2, 3 & 5 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. for samples 4 & 6 were obtained by examination in accordance with the EPA/600/R-04/004 Polarized Light Microscope and Filtration Technique. Please reference Appendix I for the bulk 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 scope of this investigation involved the main floor living room, basement under the living room and one small area on the second floor. The purpose of the investigation was to determine the hazard associated with asbestos-containing materials involved in the replacement and relocation of electrical outlets and lights. The current layout includes several outlets within the floor and wall. These outlets are to be removed and relocated. Both the floor and basement below the area of concern were investigated. Some concerns were noted regarding asbestos labels on supply air ducts within the basement. The asbestos associated with these labels is an asbestos wrap on the outside of the duct within the wall cavity. The asbestos is enclosed within the wall space; the gaps around the ducts have been sealed using spray foam insulation. There are no asbestos concerns regarding the removal of the electrical outlets from the floor. Please see **Appendix II** for site photos pertaining to this area. The walls and ceiling in this area were originally plaster on lathe, and have since been recovered with drywall. Samples of drywall mud compound were collected from both the walls and ceiling of the area and analyzed for the presence/absence of asbestos. Asbestos was detected within the samples. Work involving the drywall mud compound should be performed following low-risk asbestos work procedures. Plaster samples from both the walls and ceilings were collected and

analyzed for the presence/absence of asbestos. Asbestos was not detected within the samples. In order to determine the contents of the ceiling space, one light fixture was removed. The ceiling space adjacent the electrical outlet was observed to be void and empty of any insulation. Please see **Appendix II** for site photos pertaining to this area. In order to investigate the wall insulation one electrical box was removed from the wall. The wall is largely insulated with wood (cellulose) shavings, however trace amounts of vermiculite were identified on the wall socket. Asbestos was not detected within the wall insulation however the potential does remain for asbestos-containing vermiculite to have contaminated the wall insulation in small amounts. Please see **Appendix II** for site photos pertaining to this area. This vermiculite likely originated in the attic and “settled” through penetrations in the walls and ceilings. Vermiculite in the walls of the old bunkhouse may be present in small amounts, unpredictably, throughout the building.

The second area of investigation was on the second floor, southeast bedroom. While the floor was being refinished, workers complained about a small amount of debris draining from a corner. The material was identified as vermiculite insulation and one sample was collected for analysis. Asbestos **was** detected within the sample. This vermiculite was present in an interior wall; like the vermiculite on the main floor this vermiculite is likely a result of attic insulation settling into wall cavities through penetrations. This insulation may be present sporadically and unpredictably throughout wall spaces and ceiling space.

While performing work that involves drilling into walls or ceilings, behind which is a cavity, workers should be made aware of the possibility of vermiculite insulation and be equipped with the proper PPE, such as Niosh approved half-mask respirator.

Drywall within the main floor living room should be abated following modified low risk work procedures.

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

Sincerely,



Evan Westad
Bersch Consulting Ltd.
File No.: B67PRL10H – Old Bunkhouse

Appendix I

Bulk Sample Analysis Report

Bulk Sample Analysis Report

December 17, 2018

Project Number: B67.18

Client: City of Saskatoon

Contact: Dave Schultenkamper

Location: Forestry Farm – Old Bunkhouse

File Number: B67BAL10H

Sample Number	Sample Date	Sample Material	Sample Location and Information	Asbestos	%	Analyst
1a	2018/12/10	Plaster – Skim Coat	Main Floor Living Room North Electrical Box	No Asbestos Detected		WB/EMSL
1b	2018/12/10	Plaster – Base Coat	Main Floor Living Room North Electrical Box	No Asbestos Detected		WB/EMSL
2	2018/12/10	Drywall Mud Compound	Main Floor Living Room Ceiling	Chrysotile	2%	WB/EMSL
3	2018/12/10	Wall Plaster	Main Floor Living Room Open Return Air Duct on East Wall	No Asbestos Detected		WB/EMSL
4	2018/12/10	Wall Insulation/ Vermiculite	Main Floor Living Room- Electrical Outlet	No Asbestos Detected		WB/EMSL
5	2018/12/10	Drywall Mud Compound	Main Floor Living Room Drywall Mud Compound Compilation Sample	Chrysotile	2%	WB/EMSL

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

Sample Number	Sample Date	Sample Material	Sample Location and Information	Asbestos	%	Analyst
6	2018/12/10	Vermiculite	2 nd Floor South East Bedroom	Actinolite/ Tremolite	>0.1%	WB/EMSL

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 001- The main floor living room, investigated for the relocation of electrical sockets.



Photo 002- The basement below the main floor living room. No insulation or asbestos containing materials were identified within the truss spaces.



Photo 003- The basement below the main floor living room. No insulation or asbestos containing materials were identified within the truss spaces.



Photo 004- The basement below the main floor living room. Asbestos labels refer to asbestos duct wrap within the wall cavity above the floor.



Photo 005- Trace amounts of vermiculite in wall insulation.



Photo 006- Vermiculite draining from wall in upstairs bedroom.

BERSCH

CONSULTING LTD.

PRE-RENOVATION ASSESSMENT

August 22, 2017

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

ATTENTION: Hazel Fernandez

**PROJECT: Saskatoon Forestry Farm- Old Bunkhouse – 1903 Forestry Farm Park Drive–
Identifying Sheet Flooring**

FILE NUMBER: B67PRH17G

Evan Westad of Bersch Consulting Ltd. conducted a site visit on August 17, 2017 to the Old Bunkhouse at the Saskatoon Forestry Farm located at 1903 Forestry Farm Park Drive, Saskatoon, Saskatchewan. The purpose of the visit was to investigate and determine the extent of sheet flooring underlying carpet throughout the building. By comparing samples previously collected to site observations it was determined that the sheet flooring found underneath the carpet was previously tested and determined to not contain asbestos. Please reference Appendix I for the bulk analysis results.

SITE OBSERVATION AND INFORMATION:

- 1) The flooring on the second floor of the bunkhouse consists of a layer of blue carpet overlying sheet flooring on top of the original hardwood flooring. The sheet flooring is beige with green and orange streaks. It consists of three different layers, a vinyl surface, a black tar-paper, and a fibrous backing. The sheet floor covering in the stairway leading to the attic and in the southwest bedroom has been previously been tested by Bersch Consulting. The same flooring is present under the carpet in the southwest and northwest bedrooms as well as the corridors on the second floor. A red sheet flooring with the same layered composition as found in the other bedrooms, is in the northeast and southeast bedrooms. Bersch Consulting has determined that this red sheet flooring is identical in composition to the beige with orange and green streaks and is not containing asbestos. The bathroom floor is finished with a grey flecked pattern sheet flooring directly overlying the hardwood floor. This flooring has been tested in the kitchen of the first floor and has been determined to not contain asbestos. The stairs and landing have also been covered with carpet which directly overlies the hardwood.

- 2) The same beige with green and orange streak sheet flooring is found throughout the main floor as well, except for the bedroom immediately adjacent the stairs to the second floor and a small area in the living room near the basement stairs. This flooring is also in the kitchen below a particle board subfloor and a non-acm grey flecked sheet flooring.

In conclusion, there are no asbestos concerns regarding the removal of the carpet and sheet flooring from the Bunkhouse at the Saskatoon Forestry Farm. If any questions arise on the results of the attached information, please contact me at 306.222.7477 or our office at 306.978.6665. Thank you for this opportunity of service!

Sincerely,



Evan Westad
Bersch Consulting Ltd.
File No.: B67PRH17G- Saskatoon Forestry Farm Bunkhouse

APPENDIX I

BULK SAMPLE ANALYSIS

Bersch Consulting Ltd.

B67BAH17G

244-2002 Quebec Avenue
Saskatoon, SK S7K 1W4

BULK SAMPLE ANALYSIS REPORT

PROJECT NO: B67.17
CLIENT: CITY OF SASKATOON
CONTACT: HAZEL FERNANDEZ
LOCATION: FORESTRY FARM BUNKHOUSE

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
25	14/Sep/16	SW Room Attic Stairwell (Old Bunkhouse) - Sheet Flooring Brown W/ Green	No Asbestos Detected		EMSL
26	14/Sep/16	Basement Cellar Room (Old Bunkhouse) - Sheet Flooring Orange	No Asbestos Detected		EMSL

BERSCH & ASSOCIATES LTD.

September 21st, 2016

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

ATTENTION: Hazel Fernandez

SUBJECT: Bulk Sample Analysis Report – Forest Farm Park and Zoo

Please find attached the laboratory results for the bulk samples collected from the Forestry Farm Park and Zoo on September 14th, 2016 located at 1903 Forestry Farm Park Dr, Saskatoon, SK. The samples were analyzed for the identification of asbestos. Asbestos **was not** detected in the samples.

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

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

If any questions arise on the results of the attached information, please contact our office 306 222 7477. Thank you for this opportunity of service!

Sincerely,



Brad Berschiminsky
Bersch & Associates Ltd.

File: B67BLI14F

Bersch & Associates Ltd.

B67BAI14F

Box 3568

Humboldt, Sask. S0K 2A0

BULK SAMPLE ANALYSIS REPORT**PROJECT NO: B67.16****CLIENT: CITY OF SASKATOON****CONTACT: HAZEL FERNANDEZ****LOCATION: FORESTRY FARM ZOO**

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1	14-Sep-16	Storage Room (Old Bunkhouse) - Stipple Ceiling Texture	No Asbestos Detected		WB
2	14-Sep-16	Office Room (Old Bunkhouse) - 1' x 1' Ceiling Tile	No Asbestos Detected		WB
3	14-Sep-16	Kitchen (Old Bunkhouse) - Sheet Flooring Grey W/ Fleck Pattern	No Asbestos Detected		WB
4	14-Sep-16	NE Room 2nd Floor (Old Bunkhouse) - Corkboard	No Asbestos Detected		WB
5	14-Sep-16	SW Room 2nd Floor (Old Bunkhouse) - Ceiling Plaster	No Asbestos Detected		WB
6	14-Sep-16	SW Room Attic Stairwell (Old Bunkhouse) - Ceiling Plaster	No Asbestos Detected		WB
7	14-Sep-16	SW Room Attic Stairwell (Old Bunkhouse) - Sheet Flooring Brown W/ Green	No Asbestos Detected		WB

Bersch & Associates Ltd.

B67BAI14F

Box 3568

Humboldt, Sask. S0K 2A0

BULK SAMPLE ANALYSIS REPORT**PROJECT NO: B67.16****CLIENT: CITY OF SASKATOON****CONTACT: HAZEL FERNANDEZ****LOCATION: FORESTRY FARM ZOO**

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
8	14-Sep-16	Basement Cellar Room (Old Bunkhouse) - Sheet Flooring Orange	No Asbestos Detected		WB
9	14-Sep-16	Basement Chimney (Old Bunkhouse) - Brick Mortar	No Asbestos Detected		WB
10	14-Sep-16	Straw Storage Quonset - Shingle	No Asbestos Detected		WB
11	14-Sep-16	Basement Piller (Lunchroom) - Brick Mortar	No Asbestos Detected		WB
12	14-Sep-16	Blacksmith Shed - Chimney Brick Mortar	No Asbestos Detected		WB
13	14-Sep-16	Basement Stairwell (Superintendent Residence) - Brick Mortar	No Asbestos Detected		WB
14	14-Sep-16	Basement Stairwell (Superintendent Res.) - Chimney Brick Mortar	No Asbestos Detected		WB

Bersch & Associates Ltd.

B67BAI14F

Box 3568

Humboldt, Sask. S0K 2A0

BULK SAMPLE ANALYSIS REPORT**PROJECT NO: B67.16****CLIENT: CITY OF SASKATOON****CONTACT: HAZEL FERNANDEZ****LOCATION: FORESTRY FARM ZOO**

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
15	14-Sep-16	Attic Middle (Superintendent Res.) - Insulation	No Asbestos Detected		WB
16	14-Sep-16	Attic East Wall (Superintendent Res.) - Insulation	No Asbestos Detected		WB
17	14-Sep-16	2nd Floor (Superintendent Res.) - Plaster Wall	No Asbestos Detected		WB
18	14-Sep-16	Basement Mens Washroom (Lunchroom) - Ceiling Tile	No Asbestos Detected		WB
19	14-Sep-16	Concession Booth - Linoleum	No Asbestos Detected		WB
20	14-Sep-16	Stairwell (Horse Barn) - Linoleum	No Asbestos Detected		WB
21	14-Sep-16	Shed (West of Quarantine) - Tar Paper	No Asbestos Detected		WB

To:

Riley Baudais
 JB Environmental
 170 East Hampton Boulevard
 Saskatoon, Saskatchewan
 S7R 0A7

EMC LAB REPORT NUMBER: A18824
Job/Project Name: Forestry Farm
Job/Project No: 2078CS **No. of Samples:** 3
Sample Type: PCM **Date Received:** May 14/15
Analysis Method: Phase Contrast Microscopy/NIOSH 7400
Date Analyzed: May 14/15 **Date Reported:** May 14/15
Analyst: Banu Gurgen-Keough, *Laboratory Manager*



Client's Sample ID	CO795956	CO657898	CO795698		
EMC Lab Sample No.	A18824-1	A18824-2	A18824-3		
Sampling Date	May 13/15	May 13/15	May 13/15		
Description/Location	Blacksmith shop	Concession storage	Field blank		
Air Volume (L)	2400	2400	N/A		
RESULTS					
Number of Fibres Counted	5.0	5.0	2.0		
Number of Fields Analyzed	100	100	100		
Fibre Density (fibres/mm ²)	3.8	3.8	2.5		
Fibre Concentration (fibres/cc)	<0.001	<0.001	N/A		

Note:

1. The analytical procedures are in accordance with NIOSH-7400 method, and the "A" counting rules are used.
2. The limit of detection (LOD) is 7 fibres/mm².
3. Fibre density and fibre concentration are blank corrected, when applicable.
4. These results are only related to the sample(s) analyzed.