Bersch & Associates Ltd.

City of Saskatoon
#2 – 450 Ontario Avenue
Asbestos Survey Report

March 2016

Prepared For: City of Saskatoon –Support Services
City Yards
222 3rd Avenue North, Saskatoon, SK.
Attn: Lana Dodds

Prepared By: Bersch & Associates Ltd.
Project No: B67SRC08

1.0 EXECUTIVE SUMMARY

The survey of the Hydrant Shop Steam and Wash Bay Building located at #2 – 450 Ontario Avenue in Saskatoon, Saskatchewan entailed the inspection of all accessible suspect asbestos containing material (ACM) located throughout the facility. The material inspected consisted of wall insulation as a result of no additional material suspected of containing asbestos.

Bulk sample analysis results did not indicate the presence of asbestos within the Hydrant Shop Steam and Wash Bay Building. Please refer to ***Appendix I* for Bulk Sample Analysis** results. ***Prior to any major renovation/demolition activity, a destructive investigation is recommended to identify any inaccessible ACM that is physically concealed or isolated in areas such as enclosed wall/ceiling/floor cavities and pipe chases***. ***Further testing of drywall mud compound may also be required prior to renovation.*** Asbestos was not detected in the facility. Vermiculite insulation was not observed in the dividing block wall partition.

2.0 INTRODUCTION

Bersch & Associates Ltd. was retained by the City of Saskatoon to conduct an Asbestos Survey and Hazard Assessment of the Hydrant Shop, Steam and Wash Bay Building located in Saskatoon, SK. The survey entailed the inspection of all accessible areas of the facility. The purpose of the survey was to locate, identify and assess the condition of all Asbestos Containing Materials (ACM) located throughout the facility.

As a result of the site inspection, asbestos containing material was not identified within the building. The construction of the building consists of concrete block wall, concrete floor, metal sheeting and insulated with fiberglass.

3.0 METHODOLOGY

Bersch & Associates Ltd. conducted the survey of the Hydrant Shop, Steam and Wash Bay Building located in Saskatoon, SK. The primary documents for guidance and criteria in this survey were the Province of Saskatchewan "Occupational Health and Safety Act and Regulations, 1996", Province of Saskatchewan "Managing Asbestos", and the U.S. Environmental Protection Agency "Guidance for Controlling Asbestos Containing Materials in Buildings". The USEPA document identifies factors associated with the "condition" and the "potential for disturbance or erosion" of asbestos containing materials (ACM). These factors help to determine potential for exposure to ACM and were used to make a qualitative evaluation of the material. It should be noted that the recommendation of "Management" Asbestos Abatement Action is based upon the premise that renovations are not scheduled in that area that will require disturbing or violating the asbestos containing material. In the event that renovations are scheduled that impact upon the areas that may contain asbestos material then pre-removal of the asbestos containing materials may be necessary.

In total, one (1) bulk sample of suspect asbestos-containing material was collected throughout the facility. Asbestos was not identified within the sample collected. Refer to Appendix I for a copy of the Bulk Sample Analysis Report. The bulk sample collected was analyzed by Bersch & Associates Ltd. laboratory 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 <1% by volume.

4.0 RECOMMENDATIONS:

As a result of the building survey there was no asbestos identified. Prior to any renovation/demolition activity a destructive investigation is recommended to identify any inaccessible ACM that is physically concealed or isolated in areas such as enclosed wall/ceiling/floor cavities and pipe chases.

5.0 ASBESTOS ABATEMENT DISCUSSION

Asbestos is a known carcinogen and is listed in the Province of Saskatchewan under the Occupational Health and Safety Appendix, Part V as a Hazardous Chemical Substance and any release of asbestos fibres into the atmosphere creates a potential health hazard. Although the mechanism and epidemiology of asbestos carcinogenesis is not yet well defined, accumulating evidence suggests the significance of exposure at even very low fibre concentrations and hence human exposure should be kept to a minimum. It should be noted however that asbestos is a natural mineral and a measurable background concentration can be detected in any location sampled (inside buildings, outside buildings, urban, rural, etc.). The recommendations of the report are therefore intended to keep the potential exposure to an absolute minimum with the knowledge that a zero exposure is not possible.

Asbestos containing materials have been used in a wide variety of applications. Of particular concern, is the group of so called friable products. A friable product is one that can be crumbled or reduced to powder or smaller fragments by hand pressure. Publications from the U.S.E.P.A. as early as 1977 have indicated the potential hazard of asbestos exposure in buildings containing these friable products. The two main uses of friable asbestos products are as spray insulation (thermal, acoustic or fireproofing) on deck and/or beams or as thermal insulation on piping or mechanical equipment. A large amount of non-friable asbestos-containing materials have also been used in building construction such as asbestos cement board and asbestos containing vinyl flooring.

The mere presence of a friable asbestos containing material does not imply that there is an actual presence of elevated airborne fibre. As numerous studies have indicated, elevated asbestos fibre levels are generally found when settled dust or the actual asbestos containing material itself is disturbed by maintenance, renovation, inadvertent contact or vibration. The factors considered in the Environmental Protection Agency (USEPA) exposure assessment (condition of material, water damage, activity, movement, exposed surface area, accessibility, friability and presence in an air stream) often give some indication of the likelihood of fibre release but are not in any way

definitive in determining whether a hazard exists or not. That is, even if the most friable product exists in a building, elevated fibre levels will not likely occur unless there is some disturbance by physical contact, vibration or an air stream.

There are four possible approaches to control exposure to airborne asbestos once a friable material is identified in a building. These methods briefly are as follows:

A) Removal - Asbestos material is removed and disposed of by burial and replaced by non-asbestos materials.

B) Encapsulation - Asbestos material is coated with a bridging or penetrating sealant.

C) Enclosure - Asbestos containing materials are separated from the building environment by barriers such as suspended ceilings or cladding materials.

D) Deferred Action or Management and Custodial Control - The Province of Saskatchewan Human Resources, Labor and Employment Branch under the Occupational health and Safety Regulations publish a document outlining "The Management of Asbestos". In the guide for compliance, an action plan is outlined for management of the asbestos materials identified and in summary is:

1. Identification, which has been accomplished by this report.

2. Development of Written Handling Procedures for maintenance personnel or often arrangements are made for a qualified contractor to conduct the necessary removal or spot maintenance prior to the regular staff conducting maintenance.

3. Asbestos Abatement Awareness and Process Training if the regular maintenance personnel are required to conduct asbestos related activities.

4. Inspection on regular basis is conducted to determine the ongoing condition of the material. Sask. Occupational Health & Safety Regulations require an "annual" inspection of all "friable" asbestos materials by a competent person.

In the event renovations or maintenance is performed within areas containing asbestos materials, written procedures must be developed to conduct the activity or prior removal if the situation warrants.

6.0 REFERENCES

.1 Province of Saskatchewan “The Occupational Health and Safety Act and The Occupational Health and Safety Regulations" Office Consolidation, January 1996.

.2 Province of Saskatchewan Human Resources, Labor, and Employment “The Management of Asbestos" January, 1991.

.3 USEPA, 1985. U.S. Environmental Protection Agency, "Guidance for Controlling Asbestos-Containing Materials in Buildings". Washington, DC: Office of Toxic Substances, USEPA.

.4 Midwest Centre for Occupational Health & Safety St. Paul’s, Minnesota – Asbestos Training For Inspectors & Management Planners

.5 McCrone Research Institute Course Hayward California " Asbestos Identification"

.6 Environment Management and Protection Act, Saskatchewan Environment, October 2002

.7 Hazardous Substances and waste Dangerous Goods Regulations, Saskatchewan Environment, April 1989

APPENDIX I

BULK SAMPLE ANALYSIS REPORT

BERSCH & ASSOCIATES LTD.

July 22, 2015

City of Saskatoon – Support Services
222 3rd Avenue North
Saskatoon, Sk.
S7K 0J5

ATTENTION: Lana Dodds

SUBJECT: Bulk Sample Analysis Report

Please find attached the laboratory results for the bulk analysis of the sample collected within the Hydrant Shop Steam and Wash Bay Building located at #2 – 450 Ontario Avenue Saskatoon, SK. The sample was analyzed in our laboratory for the identification of asbestos.

The results for the bulk sample was 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 me at 306.222.7477. Thank you for this opportunity of service!

Sincerely,

Brad Berschiminsky
Bersch & Associates Ltd.
File: B67BLG22

Bersch & Associates Ltd.
Box 3568
Humboldt, Sask. S0K 2A0

B67BAG22

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.15
CLIENT: City of Saskatoon
Support Services
Contact: Lana Dodds
Location: Hydrant Shop Steam & Wash Bay
#2 - 450 Ontario Avenue, Saskatoon, SK.

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1	22-Jul-15	Insulation Behind Metal Cladding On South Exterior Wall	No Asbestos Detected		WB