



**CITY OF SASKATOON – FIRE MAINTENANCE BUILDING
ASBESTOS SURVEY REPORT**



MAY 2013

Prepared For: City of Saskatoon – Infrastructure Services Department
1101 Avenue P North, Saskatoon SK, Canada S7L 7K6
Attn: Brent Anderson

Prepared By: Bersch & Associates Ltd.
Project No. : B67SRE01FM

1.0 EXECUTIVE SUMMARY

The asbestos audit of the Fire Maintenance Building located at 125 Idylwyld Drive South in Saskatoon, SK. entailed the inspection of all accessible suspect asbestos-containing materials (ACM). Materials inspected included brick mortar and transite board. The bulk sample analysis results indicate the presence of “Chrysotile” asbestos within the building. Please refer to *Appendix I for Bulk Sample Analysis* results.

- Asbestos containing **transite board** has been identified as ACM on the exterior west side of the building. This material has been identified on the floor plans in appendix II.
- **Any material located within ceilings, wall cavities, pipe chases or other inaccessible areas or areas of limited access shall be considered asbestos-containing until testing of the material can determine the presence or absence of asbestos.**

Included in *Appendix II* of this report is a Floor Plan of the facility identifying the bulk sample locations and Appendix III photographs of the bulk material sampled.

2.0 INTRODUCTION

Bersch & Associates Ltd. was retained by the City of Saskatoon to conduct bulk sampling to verify the presence or absence of asbestos content within the Fire Maintenance Building to satisfy the government registry. Brad Berschinsky of Bersch & Associates Ltd. completed the survey on May 1, 2013. Due to the findings and size of the facilities a full asbestos audit was completed so further investigation would not be required. The purpose of the survey was to identify all accessible Asbestos-Containing Materials (ACM) located throughout the building and note any concerns relating to the ACM identified. This report gives an account of the inspection and our firm’s recommendations on control options to be implemented to bring the facility in compliance with the Province of Saskatchewan Occupational Health and Safety Act and Regulations. A review of this report shall be conducted with all trades that are entering the facilities to perform maintenance or renovation activity. This will ensure they are familiar with the types and locations of asbestos-containing materials present within each facility and prevent any uncontrolled disturbance and/or possible exposure to asbestos.

3.0 METHODOLOGY

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 further testing may be necessary.

Two (2) bulk samples of suspect asbestos-containing materials were collected. Refer to Appendix I for a copy of the Bulk Sample Analysis Report, Appendix II floor plan for the bulk sample locations and Appendix III for the photographs of the bulk material sampled. All bulk samples collected were analyzed by Bersch & Associates Ltd. laboratory in accordance with the current U.S. 40 CFR Part 763, Vol. 52, No.210 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%.

4.0 RECOMMENDATIONS

As a result of the survey of the Fire Maintenance Building the Asbestos Containing Materials were assessed and given a Priority Rating of One, Two or Three, with Priority One being the items requiring the most immediate attention. As a result, a Priority Three rating was assigned to the Transite Board identified on the west exterior wall surface of the building. The asbestos material may be managed. *Consider all rooms, besides the ones mentioned in this report, to have No Accessible Asbestos Containing Materials (ACM).*

A. West Exterior Wall

Transite asbestos board was identified as containing asbestos. This material was observed to be in good condition with a low potential for disturbance. The material is the black board surrounding the overhead doors on the exterior wall surface. The material may be managed.

PRIORITY:	THREE
CONDITION:	GOOD
POTENTIAL FOR DISTURBANCE:	LOW
ACTION:	MANAGE

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 which 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.

For the specifics of this report Management of the asbestos containing materials is the recommended planned activity. In the event of renovations or maintenance to 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, December 1996.
- .2 Province of Saskatchewan Human Resources, Labor, and Employment "The Management of Asbestos" January, 1991.
- .3 USEPA, 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 Inspectors & Management Planners
- .5 McCrone Research Institute Course Hayward California " Asbestos Identification"

APPENDIX I

BULK SAMPLE ANALYSIS REPORT

BERSCH & ASSOCIATES LTD.

May 8, 2013

City of Saskatoon
Infrastructure Services Department
1101 Avenue P North
Saskatoon, SK.
S7L 7K6

ATTENTION: Brent Anderson

SUBJECT: Fire Maintenance Building – Bulk Material Analysis

Please find attached our laboratory's results for the bulk material samples collected from the Fire Maintenance Building located at 125 Idylwyld Drive South, Saskatoon SK. The samples were analyzed in our laboratory for the identification of asbestos.

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: B67BLE01FM

Bersch & Associates Ltd.

B67BAE01FM

Box 3568

Humboldt, Sask. S0K 2A0

BULK SAMPLE ANALYSIS REPORT**PROJECT NO. B67.13****CLIENT: City of Saskatoon****Infrastructure Services - Facilities Branch****Contact: Brent Anderson****Location: Fire Maintenance Building -125 Idylwyld Drive South, Saskatoon SK.**

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
B1	1-May-13	Room B02 - Brick mortar above the doorway cutout to the west of the stairwell	None detected		WB
B2	1-May-13	Building Exterior - Black transite board on the exterior west wall surrounding the overhead doors	Chrysotile	30	WB

APPENDIX II

FLOOR PLANS



Infrastructure Services
Department

Facilities Branch
306-975-3300

NOTE:
THESE DRAWINGS HAVE BEEN PREPARED
BASED ON INFORMATION PROVIDED BY
OTHERS. THE CITY HAS TAKEN STEPS
TO VERIFY THE ACCURACY AND/OR
COMPLETENESS OF THIS INFORMATION
BUT SHALL NOT BE RESPONSIBLE FOR
AND ERRORS OR OMISSIONS THAT
MAY BE INCORPORATED AS A RESULT
OF ERRONEOUS INFORMATION PROVIDED
BY OTHERS THAT WAS NOT ABLE TO BE
VISUALLY CONFIRMED.

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES
2. DRAWINGS ARE NOT TO BE SCALED.
3. ALL DRAWINGS TO BE READ IN CON-
JUNCTION WITH THE SPECIFICATIONS
UNLESS OTHERWISE NOTED.
4. VERIFY SITE CONDITIONS, DIMENSIONS
AND LOCATION OF ALL UTILITIES PRIOR
TO THE START OF CONSTRUCTION.
5. REPORT ALL DISCREPANCIES TO THE
CONSULTANT.

REV. ISSUED FOR: DATE:

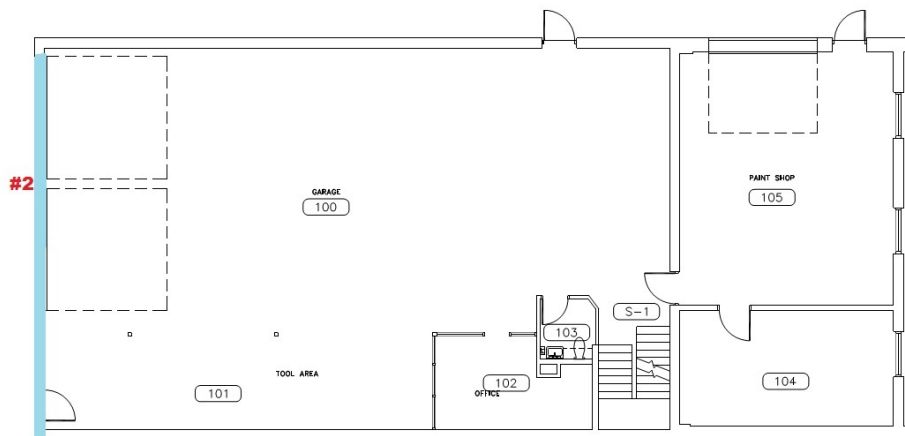
DESIGNED BY: DRAWN BY: CHECKED BY: PREPARED BY:

DATE: 11/10/00 DATE:

SHEET NAME: Main Floor Base Plan

PROJECT TITLE: 828 Fire Maint. Bldg.
125 Idylwyld Dr.S

PROJECT NO.: SHEET: REV. NO.:



- Sample # Location
Transite Board



Infrastructure Services
Department

Facilities Branch
306-979-3300

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REV. ISSUED FOR: DATE:

DESIGNED BY: DRAWN BY: CHECKED BY: PREPARED BY:

SCALE: 1:100 DATE: 08/06/2001

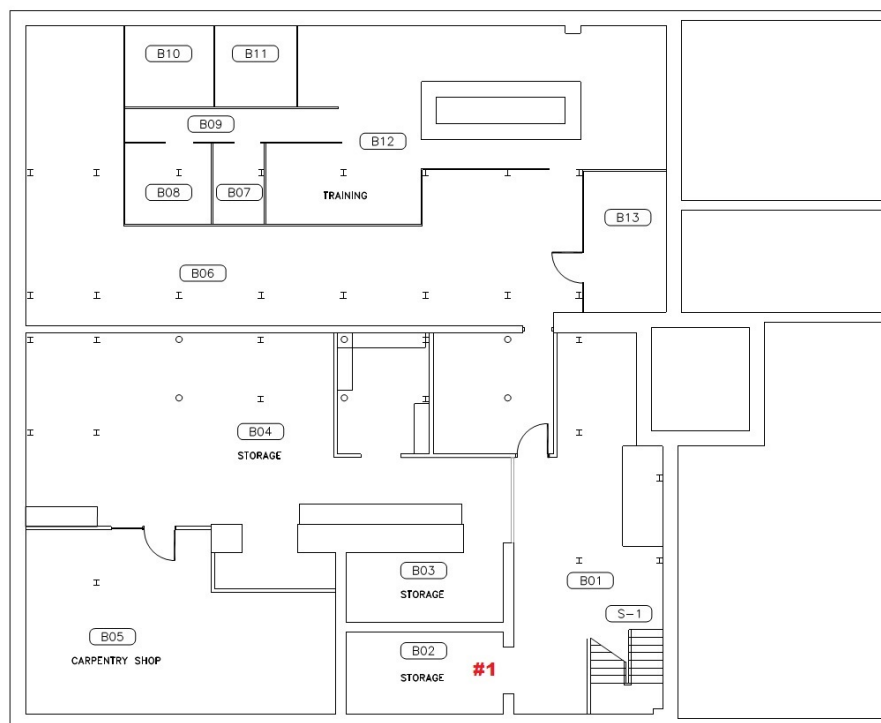
SHEET NAME: Asbuilt

Lower Floor
Base Plan

PROJECT FILE
828
Fire Maint.
Building

PROJECT NO.: SHEET:

REV. NO. 1



#_ - Sample # Location

APPENDIX III

BULK SAMPLE PHOTOS

BULK SAMPLE PHOTOS

#1) Brick Mortar



#2) Transite Board

