



WOODLAWN CEMETERY OFFICE ASBESTOS SURVEY REPORT



February 2014

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. : B67SRB04

1.0 EXECUTIVE SUMMARY

The asbestos audit of the Woodlawn Cemetery Office located at 1502 2nd Avenue North Saskatoon, SK. entailed the inspection of all accessible suspect asbestos-containing materials (ACM) located within the facility. Materials inspected included insulation materials, floor covering materials, mechanical insulation materials, ceiling tiles and expansion gaskets. Please refer to *Appendix I for Bulk Sample Analysis* results.

- No accessible asbestos-containing materials were identified within Woodlawn Cemetery Office building.
- **Although it is unlikely due to sample results, 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.

2.0 INTRODUCTION

Bersch & Associates Ltd. was retained by the City of Saskatoon to conduct an Asbestos Survey and Hazard Assessment of the Woodlawn Cemetery Office building located at 1502 2nd Avenue North. The survey entailed the inspection of all accessible areas of the facility; including ceiling spaces, pipe chases, and attics. The purpose of the survey was to locate, identify and assess the condition of all Asbestos Containing Materials (ACM) located throughout the facility. Due to the facility having no asbestos containing materials found to be present within it, the facility will be in compliance with the Province of Saskatchewan Occupational Health and Safety Act and Regulations pertaining to ACM within a building. Dustin Fraess of Bersch & Associates Ltd. completed the survey in February 2014.

3.0 METHODOLOGY

Bersch & Associates Ltd. conducted the survey of the Woodlawn Cemetery Office in February 2014. 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.

In total, seventeen (17) bulk samples of suspect asbestos-containing materials were collected within the Woodlawn Cemetery Office. As a result no asbestos was detected within the materials sampled. Refer to Appendix I for a copy of the Bulk Sample Analysis Report. 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

No accessible asbestos-containing materials were identified within the Woodlawn Cemetery Office therefore there are no recommendations to mention. Although unlikely due to bulk sample results, please note that any material located within ceiling spaces, wall cavities, pipe chases or other inaccessible areas or areas of limited access should be treated as asbestos-containing until testing of the material can determine the presence or absence of asbestos.

5.0 ASBESTOS ABATEMENT DISCUSSION

Although no accessible asbestos was identified within the facility, the following is provided for informational purposes.

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.

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 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.

February 7, 2014

City of Saskatoon

Infrastructure Services Department
1101 Avenue P North
Saskatoon, Sk.
S7L 7K6

ATTENTION: Brent Anderson

SUBJECT: Woodlawn Cemetery Office – Bulk Sample Report

Please find attached our laboratory's results for the bulk material samples taken from the Woodlawn Cemetery Office building located at 1502 2nd Avenue North, 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. Thank you for this opportunity of service to your firm.

Sincerely,

Wes Berschiminsky
Bersch & Associates Ltd.
File: B67BLB04

Bersch & Associates Ltd.

B67BAE13

Box 3568

Humboldt, Sask. S0K 2A0

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.14**CLIENT: City of Saskatoon****Infrastructure Services - Facilities Branch****Contact: Brent Anderson****Location: Woodlawn Cemetery Office & Admin - 1502 - 2nd Avenue North, Saskatoon, SK.**

| NO. | DATE | SAMPLE INFORMATION | ASBESTOS | % | ANALYST |
|-----|-----------|---|---------------|---|---------|
| 1 | 13-May-13 | 106 - Furnace Room - Pipeline fitting on small hot line adjacent water heater | None detected | | WB |
| 2 | 13-May-13 | 106 - Furnace Room - Duct insulation | None detected | | WB |
| 3 | 13-May-13 | 101 - Front Entrance - Sheet flooring, white/ tan with faded stone pattern | None detected | | WB |
| 4 | 4-Feb-14 | 106 - Furnace Room - Brown duct taping on furnace exhaust | None detected | | WB |
| 5 | 4-Feb-14 | 106 - Furnace Room - Fresh air duct insulation | None detected | | WB |
| 6 | 4-Feb-14 | 106 - Furnace Room - Pipeline fitting on small cold line adjacent water heater | None detected | | WB |
| 7 | 4-Feb-14 | 106 - Furnace Room - Fire-stop material at pipe penetration into ceiling adjacent south wall | None detected | | WB |

Bersch & Associates Ltd.

B67BAE13

Box 3568

Humboldt, Sask. S0K 2A0

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.14**CLIENT: City of Saskatoon****Infrastructure Services - Facilities Branch****Contact: Brent Anderson****Location: Woodlawn Cemetery Office & Admin - 1502 - 2nd Avenue North, Saskatoon, SK.**

| NO. | DATE | SAMPLE INFORMATION | ASBESTOS | % | ANALYST |
|-----|----------|--|---------------|---|---------|
| 8 | 4-Feb-14 | 105 - Shop - Board at base of walls | None detected | | WB |
| 9 | 4-Feb-14 | 105 - Shop - Pipeline insulation on line adjacent west wall adjacent Mechanical room entry | None detected | | WB |
| 10 | 4-Feb-14 | 105 - Shop - Duct expansion gasket on overhead MAU1 unit | None detected | | WB |
| 11 | 4-Feb-14 | 105 - Shop - Roof drain pipe insulation | None detected | | WB |
| 12 | 4-Feb-14 | 110 - Storage - Small pipeline fitting in northeast corner | None detected | | WB |
| 13 | 4-Feb-14 | 110 - Storage - Medium pipeline fitting in southwest corner | None detected | | WB |
| 14 | 4-Feb-14 | 110 - Storage - Small pipeline fitting adjacent water heater, adjacent south wall | None detected | | WB |

Bersch & Associates Ltd.

B67BAE13

Box 3568
Humboldt, Sask. S0K 2A0**BULK SAMPLE ANALYSIS REPORT****PROJECT NO. B67.14****CLIENT: City of Saskatoon****Infrastructure Services - Facilities Branch****Contact: Brent Anderson****Location: Woodlawn Cemetery Office & Admin - 1502 - 2nd Avenue North, Saskatoon, SK.**

| NO. | DATE | SAMPLE INFORMATION | ASBESTOS | % | ANALYST |
|------------|-------------|---|-----------------|----------|----------------|
| 15 | 4-Feb-14 | 107 - Corridor - Duct insulation above suspended ceiling adjacent 105 Shop entry | None detected | | WB |
| 16 | 4-Feb-14 | 107 - Corridor - Lineal pipeline insulation on small line above suspended ceiling adjacent 105 Shop entry | None detected | | WB |
| 17 | 4-Feb-14 | 107 - Corridor - 2' x 4' suspended ceiling tile, two size pin hole pattern | None detected | | WB |

APPENDIX II

FLOOR PLANS

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: | REQUESTED BY: |
|--------------|-----------|-------------|---------------|
| | MSB | | |

| SCALE: | DATE: |
|--------|------------|
| 1:100 | 19/11/2013 |

| SHEET NAME | Asbuilt |
|------------|---------|
| | |

Main Floor
Base Plan

PROJECT TITLE
**931
Office / Admin
Woodlawn**

| PROJECT NO. | SHEET |
|-------------|-------|
| | |

| REV. NO. | |
|----------|--|
| | |

