



**Kinsmen Arena
Saskatoon, SK.**



**Asbestos Survey Report
January 2014**

Prepared For: City Of Saskatoon- Infrastructure Services Department
1101 Avenue P North, Saskatoon, SK.
Attn: Brent Anderson

Prepared By: Bersch & Associates Ltd.
Project No. : B67SRE21

1.0 EXECUTIVE SUMMARY

The asbestos audit of the Kinsmen Arena located in Saskatoon, SK. entailed the inspection of all accessible suspect asbestos-containing materials (ACM) located within the facility. Materials inspected included mechanical insulation, fire-stop material and floor coverings.

- No accessible asbestos-containing materials were identified within the Kinsmen Arena.
- **Due to the year of the facilities construction, type of materials used and having found no suspect asbestos materials, the entire facility can be considered to have no ACM within it.**

Please refer to *Appendix I* for **Bulk Sample Analysis** results

2.0 INTRODUCTION

Bersch & Associates Ltd. was retained by the City of Saskatoon to conduct an Asbestos Survey and Hazard Assessment of the Kinsmen Arena located in Saskatoon, SK. The survey entailed the inspection of all accessible areas of the facility; including crawlspaces, 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 arena 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. Jared Leier of Bersch & Associates Ltd. completed the survey in January 2014.

3.0 METHODOLOGY

Bersch & Associates Ltd. began conducting the survey of the Kinsmen Arena in Saskatoon, SK in May of 2013. 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 no Asbestos Containing Materials were found to be present within the facility. Bulk material testing was minimal due to the year of the facilities construction and the type of materials used.

In total, four (4) bulk samples of suspect asbestos-containing materials were collected throughout the arena. 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 Bersch & Associates Ltd. 2014

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:

No accessible asbestos-containing materials were identified within the Kinsmen Arena. **Consider the entire facility to be an asbestos-free facility and no actions or requirements pertaining to ACM are required.**

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 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.

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, 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

January 29, 2014

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

ATTENTION: Brent Anderson

SUBJECT: Bulk Sample Analysis Report

Please find attached the laboratory results for the bulk analysis of the samples collected throughout the Kinsmen Arena located in Saskatoon, SK. The samples were analyzed in our laboratory for the identification of asbestos.

The results for the bulk samples 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 me at 306 222 7477. Thank you for this opportunity of service!

Sincerely,

Brad Berschiminsky
Bersch & Associates Ltd.
File: B67BLE21

Bersch & Associates Ltd.

B67BAE21

Box 3568

Humboldt, Sask. S0K 2A0

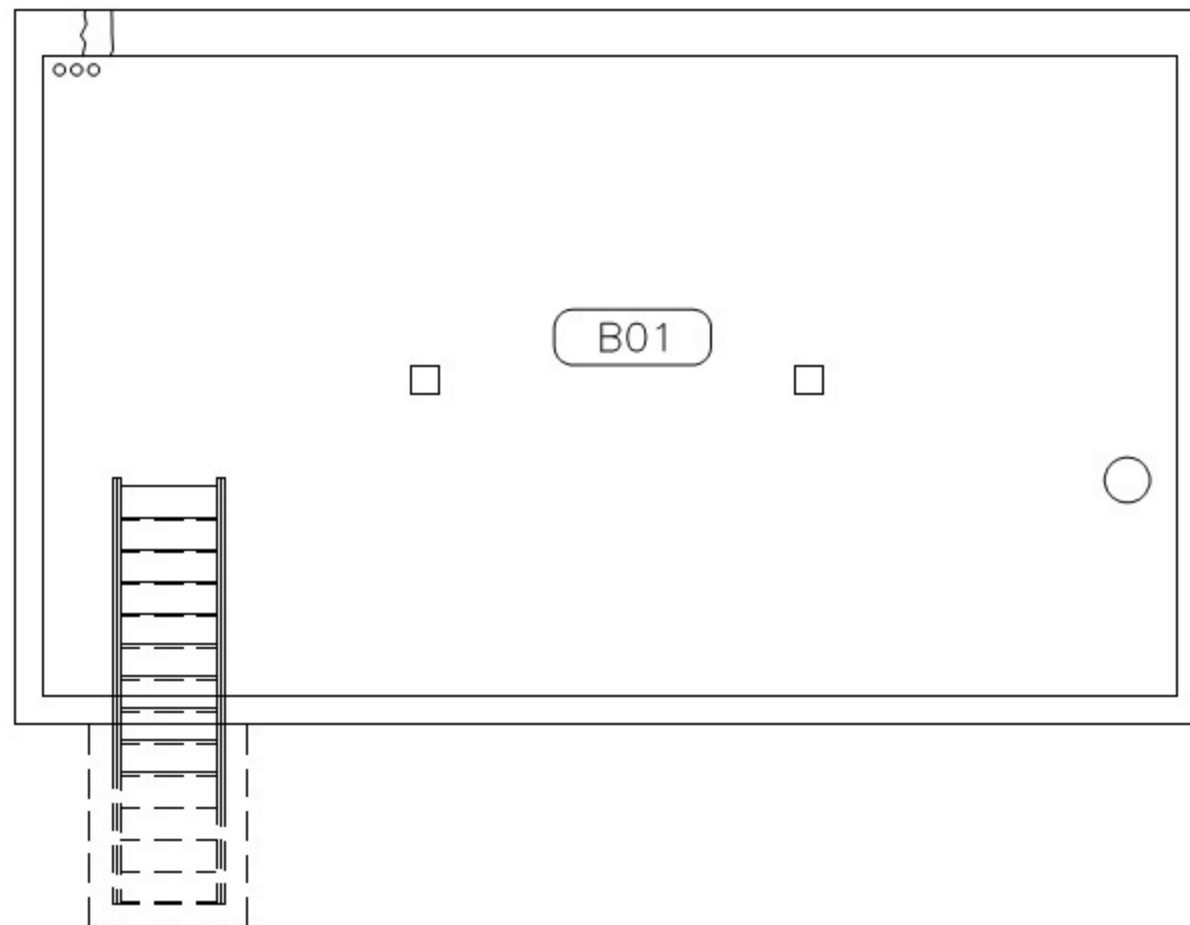
BULK SAMPLE ANALYSIS REPORT**PROJECT NO. B67.14****CLIENT: City of Saskatoon****Infrastructure Services - Facilities Branch****Contact: Brent Anderson****Location: Kinsmen Arena - 1405 Avenue P South, Saskatoon, SK.**

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1	21-May-13	B01 - Lineal pipeline insulation on medium Heating Water Supply line adjacent stairs	None detected		WB
2	21-May-13	B01 - Duct insulation	None detected		WB
3	21-May-13	118 - Fire-stop material at electrical conduit penetration into wall	None detected		WB
4	29-Jan-14	Dressing Room 1- 1' x 2' rubber-like flooring	None detected		WB

APPENDIX II
FLOOR PLANS

GENERAL NOTES:

1. All dimensions are in millimetres.
2. Drawings are not to be scaled.
3. All drawings to be read in conjunction with the specifications, unless otherwise noted.
4. Verify site conditions and location of all utilities prior to the start of construction.
5. Report all discrepancies to the Consultant.
6. If in doubt, ask.



REV	ISSUED FOR	DATE

DRAWN BY:	CHECKED BY:	DESIGNED BY:	REVIEWED BY:
MSB			

SCALE:	DATE:
1:50	01 FEB 2012

PROJECT NAME

Basement Floor
Base Plan

PROJECT TITLE

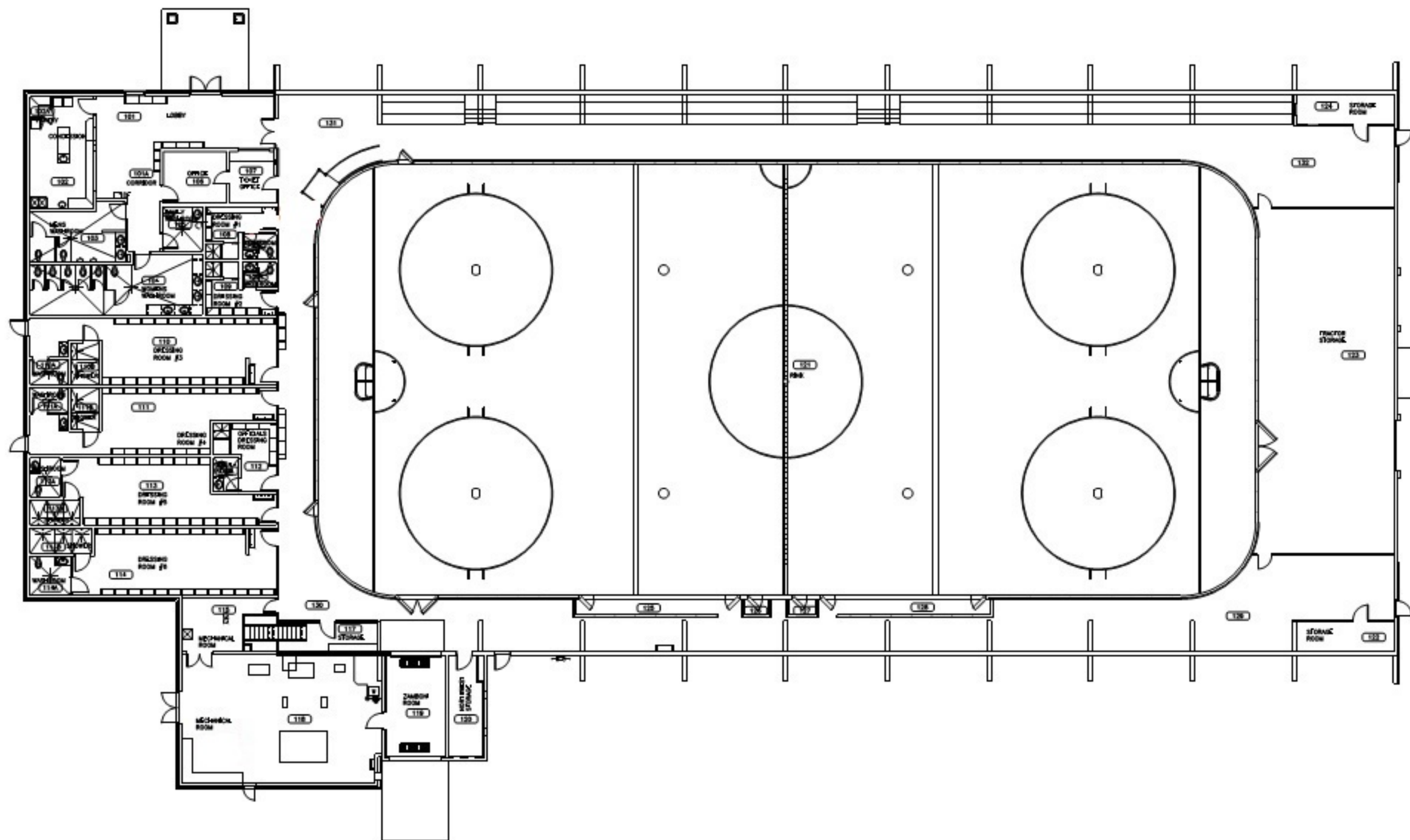
642
Kinsmen Arena

PROJECT NO.	SHEET

REV. NO.

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REV. ISSUED FOR DATE

DESIGNED BY: DRAWN BY: CHECKED BY: PROJECT NO.:

SCALE: 1:250 DATE: 01 FEB 2012

DRAWN NAME:

Main Floor
Base Plan

PROJECT TITLE:

642
Kinsmen Arena

PROJECT NO. SHEET