

John Deere Building Saskatoon, SK.



Asbestos Survey Report February 2015

Prepared For: City of Saskatoon Infrastructure Services - Facilities Branch 3130 Laurier Drive, Saskatoon, SK. Attn: Brent Anderson

Prepared By: Bersch & Associates Ltd. Project No. : B67SRB05

1.0 EXECUTIVE SUMMARY

The survey of the John Deere Building located at 450 Ontario Avenue in Saskatoon, Saskatchewan entailed the inspection of all accessible suspect asbestos containing material (ACM) located throughout the facility. Materials inspected included mechanical insulating material, cement drain pipe, fire stop material, brick cement mortar, vinyl sheet flooring, wallboard, vinyl floor tile, ceiling tile, stipple ceiling texture and wall insulation material.

Bulk sample analysis results indicate the presence of "Chrysotile" asbestos within the John Deere Building located in Saskatoon, SK. Please refer to *Appendix I* for Bulk Sample Analysis results.

The recommended actions to be implemented in reference to the ACM identified are Repair, Remove and Management. Refer to Section 5 Asbestos Abatement Discussion for definitions. It should be noted that the recommendation of "Management" as part of the asbestos action plan is based upon the premise that renovations are not scheduled throughout the area that would impact the asbestos containing material present. *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 detected in the following forms throughout the facility:

- **Pipeline Fitting Asbestos Mud Compound and Lineal Asbestos Pipe Insulation** were identified within various locations of the John Deere Building. Several areas were observed in poor condition which require remediation.
- Asbestos Cement (Transite) Drain Pipe was identified within Room 001 located on the Basement Level of the facility. Removal of the remaining one-foot section is recommended.
- Vinyl Asbestos Sheet Flooring is located on the Main Floor of the facility. Due to the poor condition of the sheet flooring in several areas, remediation is required. Please refer to Appendix III for the locations on the floor plans.
- 9" x 9" Vinyl Asbestos Floor Tile was identified within Storage Room 114. The flooring was observed in good condition with no further action required. Please refer to Appendix III for the location on the floor plans.
- The Block Walls throughout the facility were inspected for Vermiculite content as some forms of Vermiculite do contain asbestos. No Vermiculite was observed during the asbestos inspection activity. However, a thorough destructive investigation is recommended prior to demolition activity to ensure the absence of vermiculite asbestos material.

Throughout the survey of the John Deere 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. See the **Survey Spreadsheet Database** in *Appendix II* for a room-by-room account.

Bersch & Associates Ltd. implemented the use of doorjamb labels that are applied to all the doorjambs of the rooms containing asbestos within the facility. This permits anyone accessing the room to easily identify the ACM present without having to reference the written report. Legends providing explanation of the abbreviations used on doorjambs were placed on the backside of all maintenance/custodial doors within the facility. Employees and contractors will use the legend as a reference to identify ACM within the areas they are working.

2.0 INTRODUCTION

Bersch & Associates Ltd. was retained by the City of Saskatoon to conduct an Asbestos Survey and Hazard Assessment of the John Deere Building located in Saskatoon, SK. The survey entailed the inspection of all accessible areas of the facility; including ceiling spaces and pipe chases. The purpose of the survey was to locate, identify and assess the condition of all Asbestos Containing Materials (ACM) located throughout the facility. This report gives a detailed account of the inspection results 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. Bersch & Associates Ltd. conducted the survey in February 2015. A review of this report shall be conducted with all trades that are entering the facility to perform maintenance or renovation activity. This will ensure they are familiar with the types and locations of asbestos-containing materials present and prevent any uncontrolled disturbance and/or possible exposure to asbestos.

3.0 METHODOLOGY

Bersch & Associates Ltd. conducted the survey of the John Deere Building located at 450 Ontario Avenue, Saskatoon, Saskatchewan in February of 2015. 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 of asbestos containing material then pre-removal of the asbestos containing materials may be necessary.

In total, twenty-nine (29) bulk samples of suspect asbestos-containing materials were collected throughout the facility. Chrysotile asbestos was identified in eleven (11) of the samples collected. 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 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:

Throughout the survey of the John Deere 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, "Priority One" items were identified in the forms of Pipeline Fitting compound, Lineal Pipe Insulation and Vinyl Asbestos Sheet Flooring located within the facility. Future planning should begin to address these areas as per the recommendations provided in the attached **Asbestos Survey Database found in** *Appendix II*. Priority Ratings for all other ACM identified is also found in the database on a room-by-room account.

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 carcinogenisis 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, February 1996.
- .2 Province of Saskatchewan Human Resources, Labor, and Employment "The Management of Asbestos" February, 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.

February 6, 2015

City Of Saskatoon Infrastructure Services Department 3130 Laurier Drive Saskatoon, Sk. S7L 5J7

ATTENTION: Brent Anderson

SUBJECT: Bulk Sample Analysis Report

Please find attached the laboratory results for the bulk analysis of the samples collected throughout the John Deere Building located at 450 Ontario Avenue in Saskatoon, Saskatchewan. The samples were analyzed in our laboratory for the identification of asbestos. Chrysotile asbestos was identified in several of the samples submitted for analysis.

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: B67BLB05

Box 3568 Humboldt, Sask. S0K 2A0

BULK SAMPLE ANALYSIS REPORT

B67BAB05

PROJECT NO. B67.15

CLIENT: City of Saskatoon

Infrastructure Services - Facilities Branch

Contact: Brent Anderson

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1	8-May-13	246 Corridor - Lineal Pipeline Insulation	Chrysotile	70	WB
2	8-May-13	101 Vestibule - Sheet Flooring, Tan/Brown Various Size Squares Pattern	Chrysotile	30	WB
3	8-May-13	237 Corridor - 1' x 1' Acoustical Ceiling Tile	None Detected		WB
4	5-Feb-15	003 Storage/Boiler Room - Lineal Pipeline Insulation On Line Label "2"	None Detected		WB
5	5-Feb-15	003 Storage/Boiler Room - Fire-Stop Material At Pipe Penetration	None Detected		WB
6	5-Feb-15	003 Storage/Boiler Room - Insulation At Damaged Valve	None Detected		WB
7	5-Feb-15	004 Maintenance Office - Brick Mud/Mortar	None Detected		WB

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BULK SAMPLE ANALYSIS REPORT

B67BAB05

PROJECT NO. B67.15

CLIENT: City of Saskatoon

Infrastructure Services - Facilities Branch

Contact: Brent Anderson

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
8	5-Feb-15	001 Basement - Small Pipeline Fitting Adjacent Boiler Room Entrance	Chrysotile	45	WB
9	5-Feb-15	001 Basement - Damaged Pipeline Fitting From Valve On The Back Side Of 004 Office	Chrysotile	60	WB
10	5-Feb-15	001 Basement - Lineal Pipeline Insulation From Large Line In Northwest Corner	Chrysotile	70	WB
11	5-Feb-15	001 Basement - Lineal Pipeline Insulation On Small Line Adjacent Vault	Chrysotile	70	WB
12	5-Feb-15	001 Basement - Lineal Pipeline Insulation On Medium Line In Southwest Corner	Chrysotile	70	WB
13	5-Feb-15	001 Basement - Transite Drain Pipe 1' Piece Hanging On Hanger Adjacent Vault	Chrysotile	30	WB
14	5-Feb-15	S-2 Stairwell - Wall Board	None Detected		WB

Box 3568 Humboldt, Sask. S0K 2A0

BULK SAMPLE ANALYSIS REPORT

B67BAB05

PROJECT NO. B67.15

CLIENT: City of Saskatoon

Infrastructure Services - Facilities Branch

Contact: Brent Anderson

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
15	5-Feb-15	003 Storage/Boiler Room - Duct Insulation	None Detected		WB
16	5-Feb-15	111 WarehouseLineal Pipeline Insulation On Grey Line RunningVertical Adjacent Washroom	Chrysotile	70	WB
17	5-Feb-15	110b Inventory Disposal - Sheet Flooring Cream and Green Colored Pattern	None Detected		WB
18	5-Feb-15	110b Inventory Disposal - Ceiling Tile Square Pattern	None Detected		WB
19	5-Feb-15	114 Storage - 9' x 9' Floor Tile Brown	Chrysotile	1 to 5	WB
20	5-Feb-15	115 Women's WashroomSheet Flooring White Stone Pattern With Teal And Pink Coloring	None Detected		WB
21	6-Feb-15	116 Roadways Office - Sheet Flooring White Tiny Irregular Stone Pattern	None Detected		WB

Box 3568 Humboldt, Sask. S0K 2A0

BULK SAMPLE ANALYSIS REPORT

B67BAB05

PROJECT NO. B67.15

CLIENT: City of Saskatoon

Infrastructure Services - Facilities Branch

Contact: Brent Anderson

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
22	6-Feb-15	112 Cafeteria - Lineal Pipeline Insulation Adjacent Windows	None Detected		WB
23	6-Feb-15	301 - Damaged Lineal Pipeline Insulation Adjacent Column Nearest Southeast Corner Of E-1	Chrysotile	70	WB
24	6-Feb-15	117 Meeting Room - Lineal Pipeline Insulation	None Detected		WB
25	6-Feb-15	205 Washroom - Sheet Flooring White With Pink And Brown Color	None Detected		WB
26	6-Feb-15	204 Washroom - Sheet Flooring 3-Toned Brown Color	None Detected		WB
27	6-Feb-15	215 Meeting Room - Ceiling Material	None Detected		WB
28	6-Feb-15	223 Corridor - Duct Insulation	None Detected		WB

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Box 3568					
Humboldt, Sask. S	0K 2A0			BULK SAMPLE	ANALYSIS REPORT
PROJECT NO.	. B67.15				
CLIENT: City	of Saskatoon				
Infra	structure Servi	ices - Facilities Branch			
Contact: Brent	Anderson				
Location: John	Deere Building	g - 450 Ontario Ave, Saskatoon, SK.			
NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
29	6-Feb-15	233 Operations Manager - Wall Insulation	None Detected		WB

APPENDIX II

ASBESTOS SURVEY DATABASE

	Bersch Associates Ltd.														
John	Deere Buil	ding													
						•	SAN	IPLE DATA			•				-
	Room		SAMPLE	Sample	Date	Asbestos	% of	Tradename			Description of	Asbestos Content	Potential for		
Flooi	Number	Use	SAMPLE REP	ID	DD/MM/YY	Туре	Asbestos	ACM Product	Condition	Priority	Sample Location	In Area	Disturbance	Action	Comments
В	001	Basement	Sample	B67-ASB.8	05-Feb-15	Chrysotile	45%	Pipeline Fitting Compound	Poor	1	001 Basement - Small Pipeline Fitting Adjacent Boiler Room Entrance	Pipeline Fitting Compound, Lineal Pipeline Insulation, Transite Pipe	Moderate	Repair	Repair approximately 80 damaged pipeline fittings or exposed areas on lineal pipeline insulation throughout basement. Consider removing all Lineal pipeline insulation. Consider all gray lineal pipeline insulation to be ACM. No door jamb to label.
в	001	Basement	Sample	B67-ASB.9	05-Feb-15	Chrysotile	60%	Pipeline Fitting Compound	Poor	1	001 Basement - Damaged Pipeline Fitting From Valve On The Back Side Of 004 Office	Pipeline Fitting Compound, Lineal Pipeline Insulation, Transite Pipe	Moderate	Repair	Repair approximately 80 damaged pipeline fittings or exposed areas on lineal pipeline insulation throughout basement. Consider removing all Lineal pipeline insulation. Consider all gray lineal pipeline insulation to be ACM. No door jamb to label.
В	001	Basement	Sample	B67-ASB.10	05-Feb-15	Chrysotile	70%	Lineal Pipe Insulation	Poor	1	001 Basement - Lineal Pipeline Insulation From Large Line In Northwest Corner	Pipeline Fitting Compound, Lineal Pipeline Insulation, Transite Pipe	Moderate	Repair	Repair approximately 80 damaged pipeline fittings or exposed areas on lineal pipeline insulation throughout basement. Consider removing all Lineal pipeline insulation. Consider all gray lineal pipeline insulation to be ACM. No door jamb to label.
В	001	Basement	Sample	B67-ASB.11	05-Feb-15	Chrysotile	70%	Lineal Pipe Insulation	Poor	1	001 Basement - Lineal Pipeline Insulation On Small Line Adjacent Vault	Pipeline Fitting Compound, Lineal Pipeline Insulation, Transite Pipe	Moderate	Repair	Repair approximately 80 damaged pipeline fittings or exposed areas on lineal pipeline insulation throughout basement. Consider removing all Lineal pipeline insulation. Consider all gray lineal pipeline insulation to be ACM. No door jamb to label.
в	001	Basement	Sample	B67-ASB.12	05-Feb-15	Chrysotile	70%	Lineal Pipe Insulation	Poor	1	001 Basement - Lineal Pipeline Insulation On Medium Line In Southwest Corner	Pipeline Fitting Compound, Lineal Pipeline Insulation, Transite Pipe	Moderate	Repair	Repair approximately 80 damaged pipeline fittings or exposed areas on lineal pipeline insulation throughout basement. Consider removing all Lineal pipeline insulation. Consider all gray lineal pipeline insulation to be ACM. No door jamb to label.
В	001	Basement	Sample	B67-ASB.13	05-Feb-15	Chrysotile	30%	Transite Pipe	Good	2	001 Basement - Transite Drain Pipe 1' Piece Hanging On Hanger Adjacent Vault	Pipeline Fitting Compound, Lineal Pipeline Insulation, Transite Pipe	Low	Remove	Remove piece of Transite pipe adjacent vault. No door jamb to label.
В	002	Safe										No Accessible ACM			Door is welded shut, room is inaccessible.
В	003	Storage/Boiler Room	Sample	B67-ASB.4	05-Feb-15	None Detected		Lineal Pipe Insulation			003 Storage/Boiler Room - Lineal Pipeline Insulation On Line Label "2" 003 Storage/Boiler Room	No Accessible ACM			
В	003	Storage/Boiler Room	Sample	B67-ASB.5	05-Feb-15	None Detected		Fire-Stop Material			- Fire-Stop Material At Pipe Penetration	No Accessible ACM			
В	003	Storage/Boiler Room	Sample	B67-ASB.6	05-Feb-15	None Detected		Insulation			003 Storage/Boiler Room - Insulation At Damaged Valve	No Accessible ACM			
в	003	Storage/Boller Room	Sample	B67-ASB 15	05-Eeb-15	None		Duct Insulation			- Duct Insulation	No Accessible ACM			
В	004	Maintenance Office	Sample	B67-ASB.7	05-Feb-15	None Detected		Brick Mud/Mortar			004 Maintenance Office - Brick Mud/Mortar	No Accessible ACM			
В	E-1	Elevator #1										No Accessible ACM			
в	S-2	Stairwell #2	Sample	B67-ASB.14	05-Feb-15	None Detected		Wall Board			S-2 Stairwell - Wall Board	No Accessible ACM			
1	101	Vestibule	Sample	B67-ASB.2	08-May-13	Chrysotile	30%	Asbestos Sheet Flooring	Poor/Mod	1	101 Vestibule - Sheet Flooring, Tan/Brown Various Size Squares Pattern	Asbestos Sheet Flooring	Low/Mod	Repair	Repair damaged flooring adjacent men's washroom
1	102	Locker Room	Sample Rep	B67-ASB.2	08-May-13	Chrvsotile	30%	Asbestos Sheet Flooring	Good	3	101 Vestibule - Sheet Flooring, Tan/Brown Various Size Squares Pattern	Asbestos Sheet Flooring	Low	Manage	

	Bersch Associates Ltd.														
John	Deere Bui	ding													
							SAM	PLE DATA							
	Room		SAMPLE	Sample	Date	Asbestos	% of	Tradename			Description of	Asbestos Content	Potential for		
Floor	Number	Use	SAMPLE REP	ID	DD/MM/YY	Туре	Asbestos	ACM Product	Condition	Priority	Sample Location	In Area	Disturbance	Action	Comments
1	103	Storage										No Accessible ACM			
1	104	Washroom										No Accessible ACM			
1	105	Change Room										No Accessible ACM			
1	105	Washroom										No Accessible ACM			Poom was inaccessible at the time of the survey
1	100	Corridor										No Accessible ACM			room was inaccessible at the time of the survey.
- 1	107	Lost & Found													
4	100	Storago													
1	100	Stoff Lunch Boom										No Accessible ACM			
1	109	Stall Lulicit Rooli										NO ACCESSIBLE ACIVI			
1	110a	LOSI & FOUND										NO ACCESSIBLE ACIVI			
						Nama		View I Object			1100 Inventory Disposal				
	440		• •	D07 400 47	05 5 1 45	None		Vinyi Sneet			- Sheet Flooring Cream and				
1	1100	Inventory Disposal	Sample	B67-ASB.17	05-Feb-15	Detected		Flooring			Green Colored Pattern	NO ACCESSIBLE ACM			
			- ·			None					110b Inventory Disposal				
1	110b	Inventory Disposal	Sample	B67-ASB.18	05-Feb-15	Detected		Ceiling Tiles			- Ceiling Tile Square Pattern	No Accessible ACM			
															Repair damaged areas on vertical Lineal Pipeline
															Insulation at ceiling adjacent washroom column 'F'.
											111 Warehouse				Enclose 2 exposed ends & repair 2 fittings above column
											- Lineal Pipeline Insulation On				'G'. Remove 2 lines of Lineal pipeline insulation running
								Lineal Pipe			Grey Line Running Vertical	Lineal Pipeline		Repair &	vertical adjacent Southeast corner of E-1 and unit heater
1	111	Warehouse	Sample	B67-ASB.16	05-Feb-15	Chrysotile	70%	Insulation	Poor	1	Adjacent Washroom	Insulation	Moderate	Remove	adjacent North Garage Door
						-					112 Cafeteria				
						None		Lineal Pipe			- Lineal Pipeline Insulation				
1	112	Cafeteria	Sample	B67-ASB.22	06-Feb-15	Detected		Insulation			Adjacent Windows	No Accessible ACM			
											101 Vestibule				
								Asbestos Sheet			- Sheet Flooring, Tan/Brown	Asbestos Sheet			
1	112	Cafeteria	Sample Rep	B67-ASB 2	08-May-13	Chrysotile	30%	Flooring	Good	з	Various Size Squares Pattern	Flooring	Low	Manage	
1	112	Roadways Office	oumpie rep	BOT TIOD.2	00 May 10	Onlysourc	5070	riconing	0000	0			LOW	Manage	
	110	rtoudinayo onnoo						Vinul Ashestos			11/ Storage				
1	11/	Storage	Sample	B67-ASB 10	05-Eeb-15	Chrysotile	1_5%	Tilo	Good	з		Vinvl Ashestos Tile	Low	Manage	
	114	Storage	Sample	D07-A0D.19	00-1 60-10	ChirySoule	1-570	THE	0000	5	115 Womon's Washroom	VIII VIII ASDESIUS TIIE	LOW	Manage	
		Womon's									Shoot Elegring White Stone				
		Wonten's				Nana		Vinul Chaot			- Sheet Flooring White Stone				
	445	washroom/	0	D07 4 0D 00		None Data ata d		Vinyi Sheet							
	115	LOCKEI ROOM	Sample	B07-ASB.20	05-Feb-15	Delected		Flooring				NO ACCESSIBLE ACIVI			
											The Roadways Office				
						None					- Sheet Flooring White Tiny				
1	116	Roadways Office's	Sample	B67-ASB.21	06-Feb-15	Detected					Irregular Stone Pattern	No Accessible ACM			
						None		Lineal Pipe			117 Meeting Room	Asbestos Sheet			
1	117	Meeting Room	Sample	B67-ASB.24	06-Feb-15	Detected		Insulation			- Lineal Pipeline Insulation	Flooring			
											101 Vestibule				
								Asbestos Sheet			- Sheet Flooring, Tan/Brown	Asbestos Sheet			
1	117	Meeting Room	Sample Rep	B67-ASB.2	08-May-13	Chrysotile	30%	Flooring	Poor	1	Various Size Squares Pattern	Flooring	Low	Repair	Repair area that is patched with duct tape.
1	118	Gym										No Accessible ACM			
1	119	Storage										No Accessible ACM			
1	E-1	Elevator #1										No Accessible ACM			
											101 Vestibule				
								Asbestos Sheet			- Sheet Flooring, Tan/Brown	Asbestos Sheet			
1	S-1	Stairwell #1	Sample Rep	B67-ASB.2	08-Mav-13	Chrysotile	30%	Flooring	Good	3	Various Size Squares Pattern	Flooring	Low	Manage	Flooring is only located at bottom floor landing
		Public Works				,		~~				Ĭ	1		
l l		Administration -													
2	201	Solid Waste										No Accessible ACM			
	201	Environmental											1	1	
l l		Services - Solid													
2	2022	Wasta										No Accessible ACM			
<u> </u>	202d	Environmentel										NO ACCESSINE ACIN	+		
	000	Services - Solid													
2	202b	Waste		1	1	1						NO ACCESSIBLE ACM	1		

John Deere Building SAMPLE DATA Description of SAMPLE Tradename Asbestos Content Room Sample Date Asbestos % of Potential for ACM Product Sample Location DD/MM/YY In Area Floor Number Use SAMPLE REP ID Туре Asbestos Condition Priority Disturbance Action Comments Environmental Services - Solid 2 202c Waste No Accessible ACM 2 203 Office No Accessible ACM 204 Washroom None Vinyl Sheet Sheet Flooring 3-Toned Brown B67-ASB.26 06-Feb-15 No Accessible ACM 2 204 Washroom Sample Detected Flooring Color 205 Washroom Vinyl Sheet - Sheet Flooring White With None B67-ASB.25 06-Feb-15 Detected Pink And Brown Color 2 205 Washroom Sample Floorina No Accessible ACM 2 206 Water & Sewer No Accessible ACM PW-Water & 2 207 Sewer No Accessible ACM 2 No Accessible ACM 208 Water & Sewer 2 209 Water & Sewer No Accessible ACM 2 210 Water & Sewer No Accessible ACM 2 Drafting Room No Accessible ACM 211a 2 211b Drafting Room No Accessible ACM 2 211c Drafting Room No Accessible ACM 2 Drafting Room No Accessible ACM 211d 2 Drafting Room No Accessible ACM 212a 2 212b Drafting Room No Accessible ACM 2 213a Drafting Room No Accessible ACM 2 213b Drafting Room No Accessible ACM Drafting Room No Accessible ACM 2 213c No Accessible ACM 2 213d Drafting Room No Accessible ACM 2 214 Water & Sewer None Stipple Ceiling 215 Meeting Room 2 215 Meeting Room B67-ASB.27 06-Feb-15 Detected Texture Ceiling Material No Accessible ACM Sample 2 216 Janitorial Supplies No Accessible ACM 2 217 Janitor No Accessible ACM 2 218a Office No Accessible ACM No Accessible ACM 2 218b Office 2 219a Office No Accessible ACM 2 219b Office No Accessible ACM Roadways 220a No Accessible ACM 2 Workstations Operations 2 220b Assistant No Accessible ACM Superintendant . Roadways 2 220c No Accessible ACM 2 221a Conference Room No Accessible ACM No Accessible ACM 2 221b Conference Room 2 221c Conference Room No Accessible ACM Operations Assistant/Support 2 222 Services No Accessible ACM 223 Corridor None 2 223 Plan Files B67-ASB.28 06-Feb-15 Detected Duct Insulation Duct Insulation No Accessible ACM Sample Roadways 2 224 Workstations No Accessible ACM Roadways 2 225 Workstations No Accessible ACM Roadways Workstations No Accessible ACM 2 226a

Bersch Associates Ltd.

John	Deere Bui	lding													
							SAM	IPLE DATA							
	Room		SAMPLE	Sample	Date	Asbestos	% of	Tradename			Description of	Asbestos Content	Potential for		
Floor	Number	Use	SAMPLE REP	ID	DD/MM/YY	Туре	Asbestos	ACM Product	Condition	Priority	Sample Location	In Area	Disturbance	Action	Comments
2	226b	System Engineer										No Accessible ACM			
		Roadwavs													
2	226c	Workstations										No Accessible ACM			
_		Roadways													
2	226d	Workstations										No Accessible ACM			
-	2200	Roadways													
2	2266	Workstations										No Accessible ACM			
2	2272	Fleet Control										No Accessible ACM			
2	227a	Fleet Control													
~	2210	Solid Wasto													
2	228	Managomont													
2	220	Roadways Office													
2	229	Office													
2	230	Office													
2	201d	Office													
2	2310	Slorage										NO ACCESSIBLE ACIVI			
2	000	Solid Waste													
2	232	Management				Nerre					000 On anothing a Manager	NO ACCESSIBLE ACIVI			
~	000	Operations	Osmala		00 5-6 45	None		la sul sti su			233 Operations Manager				
2	233	Manager	Sample	B67-ASB.29	06-Feb-15	Detected		Insulation			- wail insulation	NO ACCESSIBLE ACIVI	-		
~	004	Dispatch													
2	234a	vvorkstation										NO ACCESSIBLE ACM	-		
		Dispatch													
2	234b	Workstation										No Accessible ACM			
		Dispatch													
2	234c	Workstation										No Accessible ACM			
		Roadways Office -													
2	235	Solid Waste										No Accessible ACM			
2	236a	Corridor										No Accessible ACM			
2	236b	Waiting Room										No Accessible ACM			
						None					237 Corridor				
2	237	Corridor	Sample	B67-ASB.3	08-May-13	Detected		Ceiling Tiles			- 1' x 1' Acoustical Ceiling Tile	No Accessible ACM			
2	238	Locker Room										No Accessible ACM			
2	239	Kitchen										No Accessible ACM			
2	240	Office										No Accessible ACM			
2	241	Office										No Accessible ACM			
2	242	Office										No Accessible ACM			
2	243	Corridor										No Accessible ACM			
2	244	Office										No Accessible ACM			
2	245	Office										No Accessible ACM			
								Lineal Pipe			246 Corridor	Lineal Pipeline			Running vertically adjacent elevator shaft. No door jamb
2	246	Corridor	Sample	B67-ASB.1	08-May-13	Chrysotile	70%	Insulation	Good	3	 Lineal Pipeline Insulation 	Insulation	Low	Manage	to label.
2	247	Corridor										No Accessible ACM			
2	E-1	Elevator #1										No Accessible ACM			
											301				
											- Damaged Lineal Pipeline				Remove 5' of lineal pipe insulation adjacent column near
											Insulation Adjacent Column				Southeast corner of E-1 & repair 2 fittings on large line
								Lineal Pipe			Nearest Southeast Corner Of E-	Lineal Pipeline			and clean up debris. Consider removing all 50' of Lineal
3	301		Sample	B67-ASB.23	06-Feb-15	Chrysotile	70%	Insulation	Poor	1	1	Insulation	High	Remove	pipe insulation in this area.
3	302	Storage										No Accessible ACM	- J		
3	303	Storage										No Accessible ACM	1		
3	304	Storage										No Accessible ACM	1		
3	E-1	Elevator #1										No Accessible ACM	1		
4	401											No Accessible ACM	1		
4	402											No Accessible ACM			

John	ohn Deere Building														
	SAMPLE DATA														
	Room		SAMPLE	Sample	Date	Asbestos	% of	Tradename			Description of	Asbestos Content	Potential for		
Floor	Number	Use	SAMPLE REP	ID	DD/MM/YY	Туре	Asbestos	ACM Product	Condition	Priority	Sample Location	In Area	Disturbance	Action	Comments
		Mezzanine													
4	403	Storage										No Accessible ACM			
		Mezzanine													
4	404	Storage										No Accessible ACM			
4	407											No Accessible ACM			
4	E-1	Elevator #1										No Accessible ACM			



"Fireproof doors on all levels which are located around elevator shaft and interior stairwell contain asbestos."

APPENDIX III

FLOOR PLANS











	City of Saskatoon
-4	Facilities Branch 306-975-3300
	 GENERAL NOTES: All dimensions are in millimetres Drawings are not to be scaled. All drawings to be read in con- junction with the specifications. unless otherwise noted. Verify site conditions and location of all utilities prior to the start of construction. Report all discrepancies to the Consultant. If in doubt, ask.
	REV ISSUED FOR DATE
	Data Date: Date: 08/06/2001 SHEET NAME Asbuilt Third Floor Base Plan PROJECT TITLE 847
	John Deere Building PROJECT NO. SHEET REV. NO.



<i>City of</i> Saskatoon
Facilities Branch
 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 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
DESIGNED BY: DRAWN BY: CHECKED BY: LG SCALE: 1:150 DATE: 08/06/2001 SHEET NAME Asbuilt Fourth Floor Base Plan
PROJECT TITLE 847 John Deere Building

City of Saskatoon Asbestos Containing Material (ACM) Building Overview

Building: John Deere Building Address: 330 Ontario Avenue

This building contains the following occurrences of ACM \boxtimes Confirmed \square Suspect:

$\boxtimes V$	Valls							
	Plaster	Drywall joint compound	Ceiling tile					
	Texture Coat	Fireproofing	Transite Board					
	☑ Vermiculite Block	Walls						
	Ceiling							
	Drywall	Plaster	Ceiling tile					
	Texture Coat	Fireproofing	Transite Board					
	□ Insulation							
$\boxtimes F$	looring							
	Vinyl tile	Sheet Flooring – Tan/brown	Levelling Compound					
	□ Mastic							
\boxtimes Ii	nsulation							
	Pipe Fittings	☑ Lineal Pipe Insulation	🛛 Transite Pipe					
	🛛 Pipe Elbows	Joint Mastic	Parging Cement					
	□ Transite Duct	Mechanical Insulation	☑ Firestopping					
$\boxtimes C$	Other							
	□Tar Paper	□Mastic	□ Caulking					
	☐ Fire Doors – refer to next page for locations							

Building asbestos report is available on the Occupational Health Committee board and on the City of Saskatoon Asbestos Registry: <u>https://www.saskatoon.ca/business-development/development-regulation/city-facility-reports.</u>

Do not disturb materials without proper training, equipment, and authorization.

An Asbestos Pre-Renovation Assessment (PRA) for ACM and written approval from the <u>Facility Superintendent</u> is required prior to any work that will or may disturb any materials.

- ✓ All known Asbestos Containing Material is labelled, inspected, and maintained in good condition.
- ✓ The purpose of taking these actions is to prevent asbestos from becoming an airborne hazard. Intact and undisturbed asbestos presents no direct health hazard. Asbestos fibres must be inhaled to cause diseases

Report any damaged or suspect material to the Supervisor immediately. For information, contact Facilities & Fleet Management at **306-975-3300**.

Saskatoon Asbestos Containing Material (ACM) Building Overview

John Deere Asbestos Fire Doors

All doorways into the S2 stairwell and all Large doors into the E1 area are asbestos containing as well as the Basement boiler room door (into room 003). Refer to the following description.

Lower Level:

- E1 Freight door
- S2 mandoor
- 003 mandoor into boiler room

Main Level:

- E1 large door X 2 There are 2 doors on this level into E1 (On the west wall of room 118 and the door on the west side of the E1 shaft).
- S2 mandoor

Second Level:

- E1 Freight door
- S2 mandoor The inserts, within the door leading to the office area from the stairwell, contains asbestos fire-rated material.

Third Level:

- E1 Freight door
- S2 mandoor

Fourth Level:

- E1 Freight door
- S2 mandoor

BERSCH & ASSOCIATES LTD.

November 1, 2016

City of Saskatoon Facilities and Fleet Management 330 Ontario Avenue Saskatoon, SK S7K 1S3

ATTENTION: Carla Figg / Jim Gray

SUBJECT: Asbestos Site Investigation - Pre-Renovation Project - John Deere Building

Brad Berschiminsky of Bersch & Associates Ltd. conducted a site visit on November 1, 2016 to investigated various walls, floors and ceilings to determine asbestos content. The results of the site visit verify asbestos sheet flooring and asbestos floor tile is present in room 112 as identified in the February 2015 asbestos survey report. The remainder of the areas examined consist of plywood, wood paneling, brick and mortar and metal materials on the ceiling, wall, and floor surfaces inspected. Please refer to the attached photos and description of the select areas reviewed.

The floor surface in room 112 at the location the electrical services are routed may involve an area removal if the services are brought through the existing floor as part of the kitchenette addition. The floor composition consists of fir lumber on edge, as viewed from the basement level, with the asbestos floor tile and asbestos sheet floor covering above that.

One area not presented with a photo is the 2^{nd} level corridor adjacent Room 3A. The paneling on the north wall of the corridor at the penetration of the yellow cable servicing the PA System, consists of 1/8-inch panel board. The paneling does not contain asbestos.

The results for the samples submitted 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.

Please reference the attached bulk analysis report. 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: B67SIK01F

P.O BOX 3568 HUMBOLDT, SK. S0K 2A0 Ph: (306) 231-5818 Fax: (306) 682-4509

Box 3568 Humboldt, Sask. S0K 2A0

BULK SAMPLE ANALYSIS REPORT

PROJECT NO: B67.16

- CLIENT: CITY OF SASKATOON
- CONTACT: CARLA FIGG / JIM GRAY

LOCATION: 330 ONTARIO AVENUE - JOHN DEERE BUILDING

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
32	1-Nov-16	2S2 Stairwell - Terracotta Brick In The Stairwell Above The 2A Electrical Panel.	No Asbestos Detected		WB
33	1-Nov-16	2S2 Stairwell - Mortar In The Terracotta Brick In The Stairwell Above The 2A Electrical Panel.	No Asbestos Detected		WB
34	1-Nov-16	Exterior Of Building - Mortar In The Beige Brick On The North Wall.	No Asbestos Detected		WB
35	1-Nov-16	Exterior Of Building - Mortar In The Reddish / Yellow Brick Below The Level Glazing Units On The North Wall.	No Asbestos Detected		WB

B67BAK01F

LOCATIONS EXAMINED

AREA 1: Basement Level Room 001 Looking Up Through the Penetration at the Column Adjacent the Training Room 112 Projector Screen. Fir Timber on Edge, Plywood Floor, Asbestos Floor Tile and Asbestos Sheet Flooring in the 112 Floor Composition.



AREA 2: First Level – Room 112 Asbestos Detected in Floor Covering. The floor composition consists of asbestos sheet floor covering and asbestos floor tile above the fir lumber on edge viewed in the above area 1.



AREA 3: First Level – Room 112, No Asbestos Detected in Bulk Head Surface. The Surface Consists of Painted 3/8" Plywood.



AREA 4: First Level – Room 112, No Asbestos Detected in Bulk Head Surface. This Photo is at the Pipe Hanger to the South of the Projector. The Surface Consists of Painted 3/8" Plywood.



AREA 5: First Level – Room 112, No Asbestos Detected on West Wall Surface Where the Projector Screen is Mounted to. The Surface Consists of Painted 3/8" Plywood.



AREA 6: First Level – Room 118, No Asbestos Detected on North Wall Surface Where the Conduit is Mounted to. The Surface Consists of Painted 3/8" Plywood.



AREA 7: First Level – Room 118, No Asbestos Detected on Overhead Fir Beam Surface the Fan is Mounted to.



AREA 8: Second Level – 2S2 Stairwell Upper Northeast Corner Adjacent 2A Electrical Panel. No Asbestos Material Detected in #32 Clay Brick or #33 Brick Mortar Bulk Samples. Refer to the Attached Bulk Analysis Report.



AREA 9: Second Level – 236A South Upper Wall Above 2S2 Stairwell Doorway. The Surface Consists of Painted 3/8" Plywood.



AREA 10: Second Level – 236A Upper Southeast Corner. The Surface Consists of Painted 3/8" Plywood.





AREA 11: Second Level – Room 30 Hardwood Floor Continues Beneath Carpet.

AREA 12: Second Level – Room 30 Lower Southwest Corner Wall Composition. Panel Board and Wall Cavity Directly Behind. No Asbestos Material Observed on the Surface or Directly Behind the Paneling on all Four Walls.



AREA 13: Second Level – Room 35B West Upper Wall. The Surface Consists of Painted 3/8" Plywood, an Empty Wall Cavity and 3/8" Plywood on the Opposite Side of the Wall (236A Corridor).



AREA 14: Second Level – Room 35B Decorative Ceiling. The Surface Consists of Painted Rolled Metal. (Presumed to be Lead).





AREA 15: North Exterior Wall. Mortar Within Either Brick Does Not Contain Asbestos.



March 14, 2017

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

ATTENTION: Natalie Scott

SUBJECT: Bulk Sample Analysis Report – John Deere Building – Room 110A

Please find attached the laboratory results for the bulk samples collected March 13th, 2017 from John Deere Building located at 450 Ontario Avenue in Saskatoon, SK. The samples were analyzed for the identification of asbestos. Asbestos **was** detected within 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.

The disruption from the renovation activity throughout the area would not have resulted in an elevated fibre level. The floor tile is a non-friable material, whereas the fibre generation from the removal of the bottom wall plate is very low to almost no measurable level. If any questions arise on the results of the attached information, please contact our office. Thank you for this opportunity of service!

Sincerely,

Brad Berschiminsky Bersch Consulting Ltd. File No. – B67BLC13G



April 4, 2017

City of Saskatoon Facilities and Fleet Management 330 Ontario Avenue Saskatoon, SK. S7K 1S3

ATTENTION: Jim Gray

SUBJECT: Asbestos Site Investigation – Pre -Renovation Project - John Deere Building – Basement North Wall & Main Floor South Wall.

Brad Berschiminsky of Bersch Consulting Ltd. conducted a site visit on April 4, 2017 to investigate two areas to determine whether asbestos is a concern. 1) North Basement wall – SaskEnergy Gas Connection Upgrade and 2) The Main Floor South wall - Access Card Reader Installation. The site investigation confirms there is no asbestos concerns observed in the 2 areas mentioned above.

The location of the hole(s) that will be drilled through the exterior wall on the 25th street side of the building consists of drilling through brick and mortar. A hole was drilled several inches from the inside at a crack in the mortar to verify no other material such as vermiculite wall insulation is present. The second location on the main floor south wall was viewed by pulling the interior wall panel away from the wall. The brick and mortar was observed behind the wall panel with no other insulation present. Samples were previously collected of the mortar on November 1, 2016 resulting in no asbestos detected. Please refer to the attached photos and description of the select areas reviewed.

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

Sincerely,

Brad Berschiminsky Bersch Consulting Ltd. File No. – B67SID04G

LOCATIONS EXAMINED

AREA 1: Basement Level Room 001 in the Northeast Corner Adjacent the Boiler Room Wall at the Location of the SaskEnergy Gas Connection Upgrade.



AREA 2: Main Level South Wall of Room 10B – Brick Wall Behind the Poly and Interior Panel at the Location of the Access Card Reader.



Bersch Consulting Ltd. 244-2002 Quebec Avenue Saskatoon, SK S7K 1W4

BULK SAMPLE ANALYSIS REPORT

PROJECT NO: B67.17

CLIENT: CITY OF SASKATOON

CONTACT: NATALIE SCOTT

LOCATION: JOHN DEERE BUILDING - 450 ONTARIO AVE., SASKATOON, SK.

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1	13-Mar-17	110A East Wall - Brown/Black Mastic On The Vapour Barrier Of The Fiberglass Insulation.	No Asbestos Detected		WB
2a	13-Mar-17	110A - 9" x 9" Brown / White & Dark Brown Streak Floor Tile Underneath The Bottom Wall Plate At The Counter Location.	Chrysotile	1-5%	WB
2b	13-Mar-17	110A - Black, Floor Tile Mastic From Sample 2a.	Chrysotile	1-5%	WB
3	13-Mar-17	110A - Beige, Irregular Shape Pattern, Bottom Layer Of Sheet Flooring.	No Asbestos Detected		WB