



May 11, 2021

Department of Health and Safety
Memorial University of Newfoundland
208 Elizabeth Avenue
St. John's, NL A1C 5S7

Attention: Barbara Battcock

**Re: Airborne Fibre Monitoring
Memorial University of Newfoundland, St. John's, NL
Pinchin File: 289556**

Memorial University of Newfoundland; Department of Health & Safety (MUN) retained Pinchin Ltd. to conduct Airborne Fibre Monitoring in various buildings located on the MUN campus. Sample locations were determined by Pinchin Ltd. in conjunction with the previous locations as identified in the 2020 annual sampling report entitled MUN Airborne Fibre Monitoring Report June 2020. As various buildings and tunnels known to contain asbestos or have previously contained asbestos, residences were not included as part of the sampling. Sampling was conducted in March, April and May 2021.

1.0 BACKGROUND

The results of the airborne fibre monitoring were evaluated against the applicable occupational exposure limits outlined in the Occupational Health and Safety Regulations under the Occupational Health and Safety Act (O.C. 2012-005), Consolidated Newfoundland and Labrador Regulation 5/12. The Regulation has adopted for use, the American Conference of Governmental Industrial Hygienists (ACGIH). In the act, under the heading Hazardous Substances, in section 42 (7) sub section (c) it states that "An employer shall ensure that (c) exposure of a worker to hazardous substances is as minimal as is reasonably practicable, and where a threshold limit value has been established by the ACGIH, exposure shall not exceed the threshold limit value". The TLV-TWA as published for all forms of asbestos is 0.1 fibres/cc.

2.0 SAMPLE METHODOLOGY

A total of eighty-six (86) airborne fibre samples were collected at fixed locations in various areas throughout the MUN campus.

Sampling for airborne fibres was conducted by collecting a known volume of air through cellulose mixed ester filters, 0.8 micrometers pore size, held open-faced in 3-piece conductive cassettes. The filters were 25 mm in diameter. The sampling equipment used was direct flow high volume air sample pumps and BDX II low volume sampling pumps. The sample pumps were calibrated with a TSI Model 4199 flow meter calibrator.

Airborne Fibre Monitoring Results

Memorial University of Newfoundland, St. John's, NL
MUN Department of Health and Safety

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Pinchin inspectors/technicians are enrolled in the IRSST (Institut de recherche Robert-Sauvé en santé et en sécurité du travail), a comprehensive quality assurance programme. Each analyst/technician who completed the analysis participated in round robin proficiency testing on a set basis in order to remain certified with IRSST.

Analysis was completed following the NIOSH 7400 method and utilizing "A" set of counting rules.

It should be noted that analysis of PCM air samples using this method, is on a quantitative basis. The "A" set of rules counts all types of fibres collected from the ambient air, which meet the analysis criteria, regardless of the type of fibres counts.

3.0 SUMMARY OF DATA

The attached table listing the locations and results of the airborne fibre sampling.

Should you have any questions or require additional information, please contact either of the undersigned.

Yours truly,

Pinchin Ltd.

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Building	Location	Date	Sample ID	Duration (min)	Flow Rate (L/min)	Volume (L)	Reported Result* (f/cc)
Health Science Centre	Outside H-1612	April 27	01-H-289556-A001	60	15.0	900	<0.04
	Outside H-1823	April 27	02-H-289556-A002	60	15.0	900	<0.04
	Outside H-2847	April 27	03-H-289556-A003	60	15.0	900	<0.04
	Outside H-2860	April 27	04-H-289556-A004	60	15.0	900	<0.04
	Outside H-3432	April 27	05-H-289556-A005	60	15.0	900	<0.04
	Outside H-4347	April 27	06-H-289556-A006	60	15.0	900	<0.04
	Outside H-5312	April 27	07-H-289556-A007	60	15.0	900	<0.04
Spencer Hall	Outside SP-2014	March 29	01-SP-289556-A008	60	15.0	900	<0.04
	SP-3C05	March 29	02-SP-289556-A009	60	15.0	900	<0.04
Coughlan College	Outside CL-1011	April 13	01-CL-289556-A010	60	15.0	900	<0.04
	Outside CL-2010	April 13	02-CL-289556-A011	60	15.0	900	<0.04
Business & Administration	Outside BN-1017	April 12	01-BN-289556-A012	60	15.0	900	<0.04
	Outside BN-2035	April 12	02-BN-289556-A013	60	15.0	900	<0.04
	Outside BN-3034	April 12	03-BN-289556-A014	60	15.0	900	<0.04
	Outside BN-4024A	April 12	04-BN-289556-A015	60	15.0	900	<0.04
Field Hall	GH-1V08	April 12	01-GH-289556-A016	60	15.0	900	<0.04
	GH-2C07	April 12	02-GH-289556-A017	60	15.0	900	<0.04
	GH-3C08	April 12	03-GH-289556-A018	60	15.0	900	<0.04
	GH-4C08	April 12	04-GH-289556-A019	60	15.0	900	<0.04
Queens College	QC-2014	March 29	01-QC-289556-A020	60	15.0	900	<0.04
	QC-1C00	March 29	02-QC-289556-A021	60	15.0	900	<0.04
	QC-3C01	March 29	03-QC-289556-A022	60	15.0	900	<0.04
	QC-4C24	March 29	04-QC-289556-A023	60	15.0	900	<0.04
Ocean Science Centre	OS-1007	April 30	01-OS-289556-A024	60	15.0	900	<0.04
Ocean Science Centre Annex	Outside AX-2002	April 30	01-AX-289556-A025	60	15.0	900	<0.04
Vivarium	V-1C01	April 13	01-AX-289556-A026	60	15.0	900	<0.04
Utilities Annex	UA-1002	April 16	01-UA-289556-A027	60	15.0	900	<0.04
South Campus Boiler Plant	Outside BR-1002A	April 21	01-SB-289556-A028	60	15.0	900	<0.04
Physical Education	Outside PE-1010	April 9	01-PE-289556-A029	60	15.0	900	<0.04
	Outside PE-2008B	April 9	02-PE-289556-A030	60	15.0	900	<0.04
	Outside PE-3005	April 9	03-PE-289556-A031	60	15.0	900	<0.04

Building	Location	Date	Sample ID	Duration (min)	Flow Rate (L/min)	Volume (L)	Reported Result* (f/cc)
Facilities Management	Outside FM-2C04	April 13	01-FM-289556-A032	60	15.0	900	<0.04
	Outside FM-1C05	April 13	02-FM-289556-A033	60	15.0	900	<0.04
Education	Outside ED-2017	April 12	01-ED-289556-A034	60	15.0	900	<0.04
	Outside ED-3033	April 12	02-ED-289556-A035	60	15.0	900	<0.04
	Outside ED-4020	April 12	03-ED-289556-A036	60	15.0	900	<0.04
	Outside ED-1018	April 12	04-ED-289556-A037	60	15.0	900	<0.04
Library	Outside L-2017	March 29	01-L-289556-A038	60	15.0	900	<0.04
4 Clark Place	Outside CK-2000	April 20	01-CK-289556-A039	60	15.0	900	<0.04
202 Elizabeth Avenue	CE-2003	April 21	01-CE-289556-A040	60	15.0	900	<0.04
Science	Outside SN-1046	March 30	01-SN-289556-A041	60	15.0	900	<0.04
	Outside SN-1014	March 30	02-SN-289556-A042	60	15.0	900	<0.04
	Outside SN-2027	March 30	03-SN-289556-A043	60	15.0	900	<0.04
	Outside SN-2046	March 30	04-SN-289556-A044	60	15.0	900	<0.04
	Outside SN-3033	March 30	05-SN-289556-A045	60	15.0	900	<0.04
	Outside SN-3060	March 30	06-SN-289556-A046	60	15.0	900	<0.04
	Outside SN-4069	March 30	07-SN-289556-A047	60	15.0	900	<0.04
	Outside SN-4083	March 30	08-SN-289556-A048	60	15.0	900	<0.04
Chemistry-Physics	Outside C-1020	April 12	01-C-289556-A049	60	15.0	900	<0.04
	Outside C-2027	April 12	02-C-289556-A050	60	15.0	900	<0.04
	Outside C-3045	April 12	03-C-289556-A051	60	15.0	900	<0.04
	Outside C-4036	April 12	04-C-289556-A052	60	15.0	900	<0.04
Biotechnology	BT-3S01	April 19	01-BT-289556-A053	60	15.0	900	<0.04
	BT-2S01	April 19	02-BT-289556-A054	60	15.0	900	<0.04
Printing Services	Outside PS-1004	March 29	01-PS-289556-A055	60	15.0	900	<0.04
Computer Services	CS-1006	April 19	01-CS-289556-A056	60	15.0	900	<0.04
Global Learning Centre-Corte Real	Outside CA-1008	April 19	01-CA-289556-A057	60	15.0	900	<0.04
6 Clark Place	CM-2C00	April 20	01-CM-289556-A058	60	15.0	900	<0.04

Building	Location	Date	Sample ID	Duration (min)	Flow Rate (L/min)	Volume (L)	Reported Result* (f/cc)
Arts & Administration	Outside A-1004	March 31	01-A-289556-A059	60	15.0	900	<0.04
	Outside A-1026	March 31	02-A-289556-A060	60	15.0	900	<0.04
	Outside A-2020	March 31	03-A-289556-A061	60	15.0	900	<0.04
	Outside A-3021	March 31	04-A-289556-A062	60	15.0	900	<0.04
	Outside A-4025	March 31	05-A-289556-A063	60	15.0	900	<0.04
Dining Hall	Outside DH-1000	April 20	01-DH-289556-A064	60	15.0	900	<0.04
	DH-2002	April 20	02-DH-289556 -A065	60	15.0	900	<0.04
Engineering	Outside EN-1037	April 14	01-EN-289556-A066	60	15.0	900	<0.04
	Outside EN-2040	April 14	02-EN-289556-A067	60	15.0	900	<0.04
	Outside EN-3040	April 14	03-EN-289556-A068	60	15.0	900	<0.04
	Outside EN-4002A	April 14	04-EN-289556-A069	60	15.0	900	<0.04
Mathematics	HH-1C15	April 13	01-HH-289556-A070	60	15.0	900	<0.04
	HH-1S00 (above ceiling)	April 13	02-HH-289556-A071	150	3.0	450	<0.09
	HH-2C11	April 13	03-HH-289556-A072	60	15.0	900	<0.04
	HH-2S11 (above ceiling)	April 13	04-HH-289556-A073	150	3.0	450	<0.09
	HH-3C06	April 13	05-HH-289556-A074	60	15.0	900	<0.04
	HH-3C06 (above ceiling)	April 13	06-HH-289556-A075	150	3.0	450	<0.09
	HH-3018	April 13	05-HH-289556-A076	60	15.0	900	<0.04
	HH-3042	April 13	05-HH-289556-A077	60	15.0	900	<0.04
Earth Science	ER-4C00 Lobby	March 31	01-ER-289556-A078	60	15.0	900	<0.04

Building	Location	Date	Sample ID	Duration (min)	Flow Rate (L/min)	Volume (L)	Reported Result* (f/cc)
Tunnels	Patton College Tunnel (Back B1)	April 30	01-T-289556-A079	150	3.0	450	<0.09
	Arts-Library Main Tunnel	April 30	02-T-289556-A080	150	3.0	450	<0.09
	Dining Hall Tunnel	April 30	03-T-289556-A081	150	3.0	450	<0.09
	Physical Education-Arts Tunnel	May 7	04-T-289556-A082	150	3.0	450	<0.09
	Library Tunnel	April 30	05-T-289556-A083	150	3.0	450	<0.09
	Patton College Tunnel (Main between B7 & B8)	April 30	06-T-289556-A084	150	3.0	450	<0.09
	Science-Math Tunnel	May 7	07-T-289556-A085	150	3.0	450	<0.09
	Main Tunnel near Bruneau and Patton College (B4)	April 30	08-T-289556-A086	150	3.0	450	<0.09
<p>* Airborne fibre calculated results less than the detection limit for the volume sampled is reported as less than the detection limit. For example, the detection limit for 428 to 482 L of air is 0.09 fibres/cc – a result below this value is reported as <0.09 fibres/cc.</p>							