



June 30, 2020

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: 270209**

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 2019 annual sampling report entitled MUN Airborne Fibre Monitoring December 2019. 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 February and March 2020.

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 File No.: 270209

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 at our office (709-754-4490).

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-1614	March 6	01-H-270209-A001	60	15.0	900	<0.02
	Outside H-1821	March 6	02-H-270209-A002	60	15.0	900	<0.02
	Outside H-2849	March 9	03-H-270209-A003	60	15.0	900	<0.02
	Outside H-2862	March 9	04-H-270209-A004	60	15.0	900	<0.02
	Outside H-3440	March 9	05-H-270209-A005	60	15.0	900	<0.02
	Outside H-4349	March 9	06-H-270209-A006	60	15.0	900	<0.02
	Outside H-5314B	March 9	07-H-270209-A007	60	15.0	900	<0.02
Spencer Hall	Outside SP-2017	March 5	01-SP-270209-A008	60	15.0	900	<0.02
	SP-3C01	March 5	02-SP-270209-A009	60	15.0	900	<0.02
Coughlan College	Outside CL-1035	March 5	01-CL-270209-A010	60	15.0	900	<0.02
	Outside CL-2015	March 5	02-CL-270209-A011	60	15.0	900	<0.02
Business & Administration	Outside BN-1010	March 5	01-BN-270209-A012	60	15.0	900	<0.02
	Outside BN-2006	March 5	02-BN-270209-A013	60	15.0	900	<0.02
	Outside BN-3003	March 5	03-BN-270209-A014	60	15.0	900	<0.02
	Outside BN-4034	March 5	04-BN-270209-A015	60	15.0	900	<0.02
Field Hall	GH-1V01	February 27	01-GH-270209-A016	60	15.0	900	<0.02
	GH-2C02	February 27	02-GH-270209-A017	60	15.0	900	<0.02
	GH-3C02	February 27	03-GH-270209-A018	60	15.0	900	<0.02
	GH-4C02	February 27	04-GH-270209-A019	60	15.0	900	<0.02
Queens College	QC-2011	March 5	01-QC-270209-A020	60	15.0	900	<0.02
	QC-1C09	March 5	02-QC-270209-A021	60	15.0	900	<0.02
	QC-3C04	March 5	03-QC-270209-A022	60	15.0	900	<0.02
	QC-4C14	March 5	04-QC-270209-A023	60	15.0	900	<0.02
Ocean Science Centre	OS-1013	March 5	01-OS-270209-A024	60	15.0	900	<0.02
Ocean Science Centre Annex	Outside AX-2002A	March 5	01-AX-270209-A025	60	15.0	900	<0.02
Vivarium	V-1C02	March 3	01-AX-270209-A026	60	15.0	900	<0.02
Utilities Annex	UA-1002	February 26	01-UA-270209-A027	60	15.0	900	<0.02
South Campus Boiler Plant	Outside BR-1002	February 28	01-SB-270209-A028	60	15.0	900	<0.02
Physical Education	Outside PE-1007	March 6	01-PE-270209-A029	60	15.0	900	<0.02
	Outside PE-2006	February 26	02-PE-270209-A030	60	15.0	900	<0.02
	Outside PE-3012	March 6	03-PE-270209-A031	60	15.0	900	<0.02

Building	Location	Date	Sample ID	Duration (min)	Flow Rate (L/min)	Volume (L)	Reported Result* (f/cc)
Facilities Management	Outside FM-2C03	February 28	01-FM-270209-A032	60	15.0	900	<0.02
	Outside FM-1C03	February 28	02-FM-270209-A033	60	15.0	900	<0.02
Education	ED-2C01	February 26	01-ED-270209-A034	60	15.0	900	<0.02
	ED-3C05	February 26	02-ED-270209-A035	60	15.0	900	<0.02
	ED-4C03	February 26	03-ED-270209-A036	60	15.0	900	<0.02
	ED-1C05	February 26	04-ED-270209-A037	60	15.0	900	<0.02
Library	Outside L-2018	March 6	01-L-270209-A038	60	15.0	900	<0.02
4 Clark Place	Outside CK-2005	March 3	01-CK-270209-A039	60	15.0	900	<0.02
202 Elizabeth Avenue	CE-2002	February 27	01-CE-270209-A040	60	15.0	900	<0.02
Science	Outside SN-1033	February 20	01-SN-270209-A041	60	15.0	900	<0.02
	Outside SN-1019	February 20	02-SN-270209-A042	60	15.0	900	<0.02
	Outside SN-2030	February 20	03-SN-270209-A043	60	15.0	900	<0.02
	Outside SN-2041	February 20	04-SN-270209-A044	60	15.0	900	<0.02
	Outside SN-3042	February 20	05-SN-270209-A045	60	15.0	900	<0.02
	Outside SN-3058	February 20	06-SN-270209-A046	60	15.0	900	<0.02
	Outside SN-4058	February 20	07-SN-270209-A047	60	15.0	900	<0.02
	Outside SN-4083	February 20	08-SN-270209-A048	60	15.0	900	<0.02
Chemistry-Physics	Outside C-1026	February 28	01-C-270209-A049	60	15.0	900	<0.02
	Outside C-2024	February 28	02-C-270209-A050	60	15.0	900	<0.02
	Outside C-3040	February 28	03-C-270209-A051	60	15.0	900	<0.02
	Outside C-4046	February 28	04-C-270209-A052	60	15.0	900	<0.02
Biotechnology	BT-3S01	March 6	01-BT-270209-A053	60	15.0	900	<0.02
	BT-2S01	March 6	02-270209-A054	60	15.0	900	<0.02
Printing Services	Outside PS-1006	March 6	01-PS-270209-A055	60	15.0	900	<0.02
Computing Services	CS-1002	March 6	01-CS-270209-A056	60	15.0	900	<0.02
Global Learning Centre-Corte Real	Outside CA-1002	February 27	01-CA-270209-A057	60	15.0	900	<0.02
6 Clark Place	CM-2000A	March 3	01-CM-270209-A058	60	15.0	900	<0.02

Building	Location	Date	Sample ID	Duration (min)	Flow Rate (L/min)	Volume (L)	Reported Result* (f/cc)
Arts & Administration	Outside A-1003	March 3	01-A-270209-A059	60	15.0	900	<0.02
	Outside A-1023	March 3	02-A-270209-A060	60	15.0	900	<0.02
	Outside A-2027	March 3	03-A-270209-A061	60	15.0	900	<0.02
	Outside A-3017	March 3	04-A-270209-A062	60	15.0	900	<0.02
	Outside A-4017	March 3	05-A-270209-A063	60	15.0	900	<0.02
Dining Hall	Outside DH-1001A	March 5	01-DH-270209-A064	60	15.0	900	<0.02
	DH-2C01	March 5	02-DH-270209 -A065	60	15.0	900	<0.02
Engineering	Outside EN-1038	February 26	01-EN-270209-A066	60	15.0	900	<0.02
	Outside EN-2048	February 26	02-EN-270209-A067	60	15.0	900	<0.02
	Outside EN-3029	February 26	03-EN-270209-A068	60	15.0	900	<0.02
	Outside EN-4009	February 26	04-EN-270209-A069	60	15.0	900	<0.02
Mathematics	HH-1C03	March 2	01-HH-270209-A070	60	15.0	900	<0.02
	HH-1S01 (above ceiling)	March 2	02-HH-270209-A071	150	3.0	450	<0.04
	HH-2C04	March 2	03-HH-270209-A072	60	15.0	900	<0.02
	HH-2S01 (above ceiling)	March 2	04-HH-270209-A073	150	3.0	450	<0.04
	HH-3C03	March 2	05-HH-270209-A074	60	15.0	900	<0.02
	HH-3C03 (above ceiling)	March 2	06-HH-270209-A075	150	3.0	450	<0.04
	HH-3017	March 2	05-HH-270209-A076	60	15.0	900	<0.02
	HH-3059	March 2	05-HH-270209-A077	60	15.0	900	<0.02
Earth Science	ER-4C00 Lobby	March 3	01-ER-270209-A078	60	15.0	900	<0.02

Building	Location	Date	Sample ID	Duration (min)	Flow Rate (L/min)	Volume (L)	Reported Result* (f/cc)
Tunnels	Patton College Tunnel (Back B1)	February 24	01-T-270209-A079	150	3.0	450	<0.04
	Arts-Library Main Tunnel	February 20	02-T-2700209-A080	150	3.0	450	<0.04
	Dining Hall Tunnel	February 20	03-T-270209-A081	150	3.0	450	<0.04
	Physical Education-Arts Tunnel	February 20	04-T-270209-A082	150	3.0	450	<0.04
	Library Tunnel	February 22	05-T-270209-A083	150	3.0	450	<0.04
	Patton College Tunnel (Main between B7 & B8)	February 24	06-T-270209-A084	150	3.0	450	<0.04
	Science-Math Tunnel	February 20	07-T-270209-A085	150	3.0	450	<0.04
	Main Tunnel near Bruneau and Patton College (B4)	February 24	08-T-270209-A086	150	3.0	450	<0.04

* 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 360 to 449 L of air is 0.05 fibres/cc – a result below this value is reported as <0.05 fibres/cc.