



February 28, 2023

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

Attention: Wanda Wilcox

**Re: Airborne Fibre Monitoring
Memorial University of Newfoundland, St. John's, NL
Pinchin File: 320273**

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 2022 annual sampling report entitled Airborne Fibre Monitoring Report February 14, 2022. 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 2023.

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-three (83) 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

February 24, 2023
Pinchin File: 320273

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-1855	February 9	01-H-320273-A001	65	15.0	975	<0.04
	Outside H-1750	February 9	02-H-320273-A002	65	15.0	975	<0.04
	Outside H-2816	February 10	03-H-320273-A003	65	15.0	975	<0.04
	Outside H-2957	February 10	04-H-320273-A004	65	15.0	975	<0.04
	Outside H-3459	February 10	05-H-320273-A005	65	15.0	975	<0.04
	Outside H-4335	February 10	06-H-320273-A006	65	15.0	975	<0.04
	Outside H-5357	February 10	07-H-320273-A007	65	15.0	975	<0.04
Spencer Hall	Outside SP-1012	February 8	01-SP-320273-A008	65	15.0	975	<0.04
	Outside SP-3017	February 8	02-SP-320273-A009	65	15.0	975	<0.04
Coughlan College	Outside CL-1035	February 8	01-CL-320273-A010	65	15.0	975	<0.04
	Outside CL-2010	February 24	02-CL-320273-A011	65	15.0	975	<0.04
Business & Administration	Outside BN-1013	February 7	01-BN-320273-A012	65	15.0	975	<0.04
	Outside BN-2024	February 7	02-BN-320273-A013	65	15.0	975	<0.04
	Outside BN-3035	February 7	03-BN-320273A014	65	15.0	975	<0.04
	Outside BN-4012	February 7	04-BN-320273A015	65	15.0	975	<0.04
Field Hall	Outside GH-1007	February 8	01-GH-320273-A016	65	15.0	975	<0.04
	Outside GH-2015	February 8	02-GH-320273-A017	65	15.0	975	<0.04
	Outside GH-3001	February 8	03-GH-320273-A018	65	15.0	975	<0.04
	Outside GH-4012	February 8	04-GH-320273-A019	65	15.0	975	<0.04
Queens College	Inside QC-2011	February 6	01-QC-320273-A020	65	15.0	975	<0.04
	Outside QC-1015	February 6	02-QC-320273-A021	65	15.0	975	<0.04
	Outside QC-3010	February 6	03-QC-320273-A022	65	15.0	975	<0.04
	Outside QC-4014	February 6	04-QC-320273-A023	65	15.0	975	<0.04
Ocean Science Centre	Outside OS-1013	February 7	01-OS-320273-A024	65	15.0	975	<0.04
Ocean Science Centre Annex	Outside AX-4023	February 7	01-AX-320273-A025	65	15.0	975	<0.04
Vivarium	V-1C01	February 9	01-AX-320273-A026	65	15.0	975	<0.04
Utilities Annex	Outside UA-1002	February 8	01-UA-320273-A027	65	15.0	975	<0.04
South Campus Boiler Plant	Outside BR-1002C	February 9	01-SB-320273-A028	65	15.0	975	<0.04
Physical Education	Outside PE-1004	February 6	01-PE-320273-A029	65	15.0	975	<0.04
	Outside PE-2023	February 6	02-PE-320273-A030	65	15.0	975	<0.04
	Outside PE-3005	February 6	03-PE-320273-A031	65	15.0	975	<0.04

Building	Location	Date	Sample ID	Duration (min)	Flow Rate (L/min)	Volume (L)	Reported Result* (f/cc)
Facilities Management	Outside FM-1009	February 13	01-FM-320273-A032	65	15.0	975	<0.04
	Outside FM-2022	February 13	02-FM-320273-A033	65	15.0	975	<0.04
Education	Outside ED-2C01	February 6	01-ED-320273-A034	65	15.0	975	<0.04
	Outside ED-3033	February 6	02-ED-320273-A035	65	15.0	975	<0.04
	Outside ED-1017	February 6	03-ED-320273-A036	65	15.0	975	<0.04
Library	Outside L-1000	February 8	01-L-320273-A037	65	15.0	975	<0.04
202 Elizabeth Avenue	Main Entrance	February 9	01-CE-320273-A038	65	15.0	975	<0.04
Science	Outside SN-1076	February 8	01-SN-320273-A039	65	15.0	975	<0.04
	Outside SN-1016	February 8	02-SN-320273-A040	65	15.0	975	<0.04
	Outside SN-2013	February 8	03-SN-320273-A041	65	15.0	975	<0.04
	Outside SN-2065	February 8	04-SN-320273-A042	65	15.0	975	<0.04
	Outside SN-3025	February 8	05-SN-320273-A043	65	15.0	975	<0.04
	Outside SN-3069	February 8	06-SN-320273-A044	65	15.0	975	<0.04
	Outside SN-4043	February 8	07-SN-320273-A045	65	15.0	975	<0.04
	Outside SN-4085	February 8	08-SN-320273-A046	65	15.0	975	<0.04
Chemistry-Physics	Outside C-1026	February 9	01-C-320273-A047	65	15.0	975	<0.04
	Outside C-2031A	February 9	02-C-320273-A048	65	15.0	975	<0.04
	Outside C-3055	February 9	03-C-320273-A049	65	15.0	975	<0.04
	Outside C-4046	February 9	04-C-320273-A050	65	15.0	975	<0.04
Biotechnology	BT-3S01	February 9	01-BT-320273-A051	65	15.0	975	<0.04
	BT-2S01	February 9	02-BT-320273-A052	65	15.0	975	<0.04
Printing Services	Outside PS-1004	February 9	01-PS-320273-A053	65	15.0	975	<0.04
Computer Services	Outside CS-1018	February 13	01-CS-320273-A054	65	15.0	975	<0.04
Global Learning Centre-Corte Real	Outside CA-1008	February 13	01-CA-320273-A055	65	15.0	975	<0.04
Arts & Administration	Outside A-1037	February 6	01-A-320273-A056	65	15.0	975	<0.04
	Outside A-1012	February 6	02-A-320273-A057	65	15.0	975	<0.04
	Outside A-2069	February 6	03-A-320273-A058	65	15.0	975	<0.04
	Outside A-3017	February 6	04-A-320273-A059	65	15.0	975	<0.04
	Outside A-4032	February 6	05-A-320273-A060	65	15.0	975	<0.04
Dining Hall	Outside DH-1000	February 10	01-DH-320273-A061	65	15.0	975	<0.04

Building	Location	Date	Sample ID	Duration (min)	Flow Rate (L/min)	Volume (L)	Reported Result* (f/cc)
	DH-2006	February 10	02-DH-320273-A062	65	15.0	975	<0.04
Engineering	Outside EN-1051	February 8	01-EN-320273-A063	65	15.0	975	<0.04
	Outside EN-2039A	February 8	02-EN-320273-A064	65	15.0	975	<0.04
	Outside EN-3009	February 8	03-EN-320273-A065	65	15.0	975	<0.04
	Outside EN-4009	February 8	04-EN-320273-A066	65	15.0	975	<0.04
Mathematics	Outside HH-1021C	February 15	01-HH-320273-A067	65	15.0	975	<0.04
	Outside HH-1001 (above ceiling)	February 16	02-HH-320273-A068	180	2.5	450	<0.09
	Outside HH-2011	February 15	03-HH-320273-A069	65	15.0	975	<0.04
	Outside HH-2011 (above ceiling)	February 16	04-HH-320273-A070	180	2.5	450	<0.09
	Outside HH-3041	February 15	05-HH-320273-A071	65	15.0	975	<0.04
	Outside HH-3041 (above ceiling)	February 16	06-HH-320273-A072	180	2.5	450	<0.09
	Outside HH-3004	February 15	07-HH-320273-A073	65	15.0	975	<0.04
	Outside HH-3012	February 15	08-HH-320273-A074	65	15.0	975	<0.04
Earth Science	ER-4C00 Lobby	February 10	01-ER-320273-A075	65	15.0	975	<0.04
Tunnels	Patton College Tunnel (Back B1)	February 16	01-T-320273-A076	180	2.5	450	<0.09
	Arts-Library Main Tunnel	February 13	02-T-320273-A077	180	2.5	450	<0.09
	Dining Hall Tunnel	February 16	03-T-320273-A078	180	2.5	450	<0.09
	Physical Education-Arts Tunnel	February 13	04-T-320273-A079	180	2.5	450	<0.09
	Library Tunnel	February 15	05-T-320273-A080	180	2.5	450	<0.09
	Patton College Tunnel (Main between B7 & B8)	February 16	06-T-320273-A081	180	2.5	450	<0.09
	Science-Math Tunnel	February 13	07-T-320273-A082	180	2.5	450	<0.09
	Main Tunnel near Bruneau and Patton College (B4)	February 16	08-T-320273-A083	180	2.5	450	<0.09

* 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.