



February 14, 2022

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: 304874**

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 2021 annual sampling report entitled MUN Airborne Fibre Monitoring Report May 11, 2021. 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 January and February, 2022.

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-1621	February 10	01-H-304874-A001	65	15.0	975	<0.04
	Outside H-1758	February 10	02-H-304874-A002	65	15.0	975	<0.04
	Outside H-2830E	February 10	03-H-304874-A003	65	15.0	975	<0.04
	Outside H-2848	February 10	04-H-304874-A004	65	15.0	975	<0.04
	Outside H-3438	February 10	05-H-304874-A005	65	15.0	975	<0.04
	Outside H-4349	February 10	06-H-304874-A006	65	15.0	975	<0.04
	Outside H-5340	February 10	07-H-304874-A007	65	15.0	975	<0.04
Spencer Hall	SP-1S01	February 2	01-SP-304874-A008	65	15.0	975	<0.04
	SP-3004	February 2	02-SP-304874-A009	65	15.0	975	<0.04
Coughlan College	Outside CL-1014	February 8	01-CL-304874-A010	65	15.0	975	<0.04
	Outside CL-2001	February 8	02-CL-304874-A011	65	15.0	975	<0.04
Business & Administration	Outside BN-1012	January 31	01-BN-304874-A012	65	15.0	975	<0.04
	Outside BN-2004	January 31	02-BN-304874-A013	65	15.0	975	<0.04
	Outside BN-3008	January 31	03-BN-304874-A014	65	15.0	975	<0.04
	Outside BN-4013	January 31	04-BN-304874-A015	65	15.0	975	<0.04
Field Hall	Outside GH-1007	February 8	01-GH-304874-A016	65	15.0	975	<0.04
	Outside GH-2010	February 8	02-GH-304874-A017	65	15.0	975	<0.04
	Outside GH-3001	February 9	03-GH-304874-A018	65	15.0	975	<0.04
	Outside GH-4020	February 9	04-GH-304874-A019	65	15.0	975	<0.04
Queens College	Outside QC-2005	February 2	01-QC-304874-A020	65	15.0	975	<0.04
	Outside QC-1009	February 2	02-QC-304874-A021	65	15.0	975	<0.04
	Outside QC-3002	February 2	03-QC-304874-A022	65	15.0	975	<0.04
	Outside QC-4001	February 2	04-QC-304874-A023	65	15.0	975	<0.04
Ocean Science Centre	OS-1000	February 3	01-OS-304874-A024	65	15.0	975	<0.04
Ocean Science Centre Annex	Outside AX-3010	February 3	01-AX-304874-A025	65	15.0	975	<0.04
Vivarium	V-1C03	February 3	01-AX-304874-A026	65	15.0	975	<0.04
Utilities Annex	UA-1001A	February 3	01-UA-304874-A027	65	15.0	975	<0.04
South Campus Boiler Plant	Outside BR-1002D	February 9	01-SB-304874-A028	65	15.0	975	<0.04
Physical Education	Outside PE-1007	February 1	01-PE-304874-A029	65	15.0	975	<0.04
	Outside PE-2015	February 1	02-PE-304874-A030	65	15.0	975	<0.04
	Outside PE-3012	February 1	03-PE-304874-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-2C02	February 1	01-FM-304874-A032	65	15.0	975	<0.04
	Outside FM-1C03	February 1	02-FM-304874-A033	65	15.0	975	<0.04
Education	Outside ED-2007	February 1	01-ED-304874-A034	65	15.0	975	<0.04
	Outside ED-3011A	February 1	02-ED-304874-A035	65	15.0	975	<0.04
	Outside ED-4015	February 1	03-ED-304874-A036	65	15.0	975	<0.04
	Outside ED-1005	February 1	04-ED-304874-A037	65	15.0	975	<0.04
Library	Outside L-2017	February 2	01-L-304874-A038	65	15.0	975	<0.04
4 Clark Place	Outside CK-1000	February 8	01-CK-304874-A039	65	15.0	975	<0.04
202 Elizabeth Avenue	CE-2003	February 11	01-CE-304874-A040	65	15.0	975	<0.04
Science	Outside SN-1064	February 1	01-SN-304874-A041	65	15.0	975	<0.04
	Outside SN-1004	February 1	02-SN-304874-A042	65	15.0	975	<0.04
	Outside SN-2032	February 1	03-SN-304874-A043	65	15.0	975	<0.04
	Outside SN-2090	February 1	04-SN-304874-A044	65	15.0	975	<0.04
	Outside SN-3042	February 1	05-SN-304874-A045	65	15.0	975	<0.04
	Outside SN-3099	February 1	06-SN-304874-A046	65	15.0	975	<0.04
	Outside SN-4095	February 1	07-SN-304874-A047	65	15.0	975	<0.04
	Outside SN-4017	February 1	08-SN-304874-A048	65	15.0	975	<0.04
Chemistry-Physics	Outside C-1042	February 2	01-C-304874-A049	65	15.0	975	<0.04
	Outside C-2018	February 2	02-C-304874-A050	65	15.0	975	<0.04
	Outside C-3026	February 2	03-C-304874-A051	65	15.0	975	<0.04
	Outside C-4014	February 2	04-C-304874-A052	65	15.0	975	<0.04
Biotechnology	BT-3S01	February 2	01-BT-304874-A053	65	15.0	975	<0.04
	BT-2S01	February 2	02-BT-304874-A054	65	15.0	975	<0.04
Printing Services	Outside PS-1002	February 9	01-PS-304874-A055	65	15.0	975	<0.04
Computer Services	CS-1009	February 9	01-CS-304874-A056	65	15.0	975	<0.04
Global Learning Centre-Corte Real	Outside CA-1008	February 11	01-CA-304874-A057	65	15.0	975	<0.04
6 Clark Place	CM-2006	February 8	01-CM-304874-A058	65	15.0	975	<0.04

Building	Location	Date	Sample ID	Duration (min)	Flow Rate (L/min)	Volume (L)	Reported Result* (f/cc)
Arts & Administration	Outside A-1002	January 31	01-A-304874-A059	65	15.0	975	<0.04
	Outside A-1017	January 31	02-A-304874-A060	65	15.0	975	<0.04
	Outside A-2026	January 31	03-A-304874-A061	65	15.0	975	<0.04
	Outside A-3028	January 31	04-A-304874-A062	65	15.0	975	<0.04
	Outside A-4017	January 31	05-A-304874-A063	65	15.0	975	<0.04
Dining Hall	Outside DH-1000	February 7	01-DH-304874-A064	65	15.0	975	<0.04
	DH-2006	February 7	02-DH-304874 -A065	65	15.0	975	<0.04
Engineering	Outside EN-1035E	January 31	01-EN-304874-A066	65	15.0	975	<0.04
	Outside EN-2013	January 31	02-EN-304874-A067	65	15.0	975	<0.04
	Outside EN-3003	January 31	03-EN-304874-A068	65	15.0	975	<0.04
	Outside EN-4021	January 31	04-EN-304874-A069	65	15.0	975	<0.04
Mathematics	Outside HH-1021A	February 9	01-HH-304874-A070	65	15.0	975	<0.04
	Outside HH-1021A (above ceiling)	February 9	02-HH-304874-A071	150	3.0	450	<0.09
	Outside HH-2017	February 9	03-HH-304874-A072	65	15.0	975	<0.04
	Outside HH-2017 (above ceiling)	February 9	04-HH-304874-A073	150	3.0	450	<0.09
	Outside HH-3007	February 9	05-HH-304874-A074	65	15.0	975	<0.04
	Outside HH-3007 (above ceiling)	February 9	06-HH-304874-A075	150	3.0	450	<0.09
	HH-3020	February 15	07-HH-304874-A076	65	15.0	975	<0.04
	HH-3033	February 9	08-HH-304874-A077	65	15.0	975	<0.04
Earth Science	ER-4C00 Lobby	February 9	01-ER-304874-A078	65	15.0	975	<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)	February 11	01-T-304874-A079	150	3.0	450	<0.09
	Arts-Library Main Tunnel	February 11	02-T-304874-A080	150	3.0	450	<0.09
	Dining Hall Tunnel	February 11	03-T-304874-A081	150	3.0	450	<0.09
	Physical Education-Arts Tunnel	February 11	04-T-304874-A082	150	3.0	450	<0.09
	Library Tunnel	February 10	05-T-304874-A083	150	3.0	450	<0.09
	Patton College Tunnel (Main between B7 & B8)	February 10	06-T-304874-A084	150	3.0	450	<0.09
	Science-Math Tunnel	February 10	07-T-304874-A085	150	3.0	450	<0.09
	Main Tunnel near Bruneau and Patton College (B4)	February 10	08-T-304874-A086	150	3.0	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.