ALL-TECH
ENVIRONMENTAL SERVICES LIMITED
162 Trider Crescent
Dartmouth, Nova Scotia, B3B 1R6
Web: www.toalltech.com
Phone: 902.835.3727
Fax: 902.835.5266
Email: email@toalltech.com

Background Air Monitoring Report

Client: Gary Mannette
HRCE
Dartmouth, Nova Scotia
B3B 1X7

Project: 30171
Location: Bicentennial School
Date: December 11th, 2022
Report #: 002

1 Details to be Noted:

On December 9th, 2022 and December 10th, 2022, Steve Wells and Robert Gardner of ALL-TECH Environmental Services Limited collected thirty-six (36) environmental background air samples from classrooms throughout Bicentennial School for airborne asbestos analysis. The air samples were collected to demonstrate that the airborne fiber concentration was less than 0.01 f/cc at the time of testing. Please refer to the table below for results.

2 Regulations and Guidelines

2.1 American Conference of Governmental Industrial Hygienists Threshold Limit Value for Asbestos

Occupational airborne exposure limits set by the Province of Nova Scotia follow airborne standards set by the American Conference of Governmental Industrial Hygienists (ACGIH) when dealing with asbestos. Their limit for asbestos exposure is asbestos, all forms 0.1 f/cc (2022). The limit of 0.1 f/cc is known as a Threshold Limit Value (TLV) and is based on a time weighted average (TWA) exposure of 8 hours as determined by air sampling following the NIOSH 7400 Asbestos and Other Fibres by Phase Contrast Microscopy.

2.2 Canada Occupational Health and Safety Regulations SOR/84-304

The Canada Occupational Health and Safety Regulations (SOR/84-304) states that final clearance air samples must be as close to zero as possible, and in any event shall not exceed the ACGIH TLV (0.1 f/cc).

2.3 Asbestos in the Workplace: A Guide to Removal of Friable Asbestos Containing Material - Nova Scotia Code of Practice

Where dry or wet asbestos removal is conducted, a glove bag is not used, and the air from inside the enclosure is exhausted to an indoor area that is outside of the enclosure, daily sampling for airborne asbestos fibres must be conducted outside of the enclosure and immediate action must be taken if the concentration of airborne asbestos is found to exceed 0.01 f/cc of air in an indoor area that is outside the enclosure. **Final clearance air samples must be <0.01 f/cc**.

3 Sample Protocol:

During sample collection, the NIOSH 7400 Method was followed. The samples were collected on a 3-piece, 25mm cellulose-ester sampling cassettes with a pore size of 0.8µm. The air-sampling pumps used to collect the air samples were Medium Volume Air Sampling Pumps. Prior to air sampling, the pumps were calibrated using a TSI® Primary Calibrator Model #4146, Serial No. 41461602006 (NIST Traceable).

4 Air Monitoring Results:

Table 1.0
Environmental Background Samples Prior to Abatement
Bicentennial School
85 Victoria Rd, Dartmouth, Nova Scotia
December 9th, 2022 and December 10th, 2022

Sample Number	Date of Collection	Time of Collection	Sample Duration (Minutes)	Flow Rate (LPM)	Sample Volume (Litres)	Sample Location / Description	Results (F/cc)
43-212	Dec. 9th, 2022	11:14 am	207	15.0	3105	**Background Air Sample** Gym	**< 0.01***
43-213	Dec. 9th, 2022	11:19 am	193	15.0	2895	**Background Air Sample** Principal's Office	**< 0.01***
43-214	Dec. 9th, 2022	11:23 am	192	15.0	2880	**Background Air Sample** Room 1	**< 0.01***
43-215	Dec. 9th, 2022	11:26 am	191	15.0	2865	**Background Air Sample** Room 2	**< 0.01***
43-216	Dec. 9th, 2022	11:28 am	201	15.0	3015	**Background Air Sample** Room 3	**< 0.01***
43-217	Dec. 9th, 2022	11:31 am	189	15.0	2835	**Background Air Sample** Room 4	**< 0.01***
43-218	Dec. 9th, 2022	2:48 pm	178	15.0	2670	**Background Air Sample** Room 15	**< 0.01***
43-219	Dec. 9th, 2022	11:16 am	196	15.0	2940	**Background Air Sample** Secretary's Office	**< 0.01***
43-220	Dec. 9th, 2022	11:18 am	194	15.0	2910	**Background Air Sample** Vice Principal's Office	**< 0.01***
43-221	Dec. 9th, 2022	11:26 am	188	15.0	2820	**Background Air Sample** Room 8	**< 0.01***
43-222	Dec. 9th, 2022	11:29 am	186	15.0	2790	**Background Air Sample** Room 7	**< 0.01***
43-223	Dec. 9th, 2022	11:32 am	185	15.0	2775	**Background Air Sample** Room 6	**< 0.01***
43-224	Dec. 9th, 2022	2:51 pm	182	15.0	2730	**Background Air Sample** Front Entry	**< 0.01***
43-225	Dec. 9th, 2022	2:46 pm	180	15.0	2700	**Background Air Sample** Room 5	**< 0.01***
43-226	Dec. 9th, 2022	2:52 pm	182	15.0	2730	**Background Air Sample** Room 18	**< 0.01***
43-227	Dec. 9th, 2022	2:58 pm	178	15.0	2670	**Background Air Sample** Library	**< 0.01***
43-228	Dec. 9th, 2022	3:01 pm	175	15.0	2625	**Background Air Sample** Room 19	**< 0.01***
43-229	Dec. 9th, 2022	3:08 pm	172	15.0	2580	**Background Air Sample** Movement Room (Off of Room 19)	**< 0.01***
43-230	Dec. 9th, 2022	6:12 pm	181	15.0	2775	**Background Air Sample** Basement by Home Ec (Pre K, Room 31)	**< 0.01***
43-231	Dec. 9th, 2022	6:10 pm	185	15.0	2775	**Background Air Sample** Home Ec (Room 31A)	**< 0.01***
43-232	Dec. 9th, 2022	6:08 pm	190	15.0	2850	**Background Air Sample** Excel – Basement (Room 32A)	**< 0.01***

Sample Number	Date of Collection	Time of Collection	Sample Duration (Minutes)	Flow Rate (LPM)	Sample Volume (Litres)	Sample Location / Description	Results (F/cc)
43-233	Dec. 10th, 2022	9:44 am	180	15.0	2700	**Background Air Sample** Room 24B	**< 0.01***
43-234	Dec. 10th, 2022	9:49 am	180	15.0	2700	**Background Air Sample** Tech Ed (Room 32)	**< 0.01***
43-235	Dec. 10th, 2022	9:58 am	180	15.0	2700	**Background Air Sample** Room 15B	**< 0.01***
43-237	Dec. 9th, 2022	2:56 pm	182	15.0	2730	**Background Air Sample** Room 22	**< 0.01***
43-238	Dec. 9th, 2022	2:54 pm	185	15.0	2775	**Background Air Sample** Music Room (Room 21)	**< 0.01***
43-239	Dec. 9th, 2022	3:02 pm	180	15.0	2700	**Background Air Sample** Room 23	**< 0.01***
43-240	Dec. 9th, 2022	3:06 pm	172	15.0	2580	**Background Air Sample** Room 20	**< 0.01***
43-241	Dec. 9th, 2022	6:09 pm	191	15.0	2865	**Background Air Sample** Room 26	**< 0.01***
43-242	Dec. 9th, 2022	6:16 pm	188	15.0	2820	**Background Air Sample** Room 29	**< 0.01***
43-243	Dec. 9th, 2022	6:13 pm	190	15.0	2850	**Background Air Sample** Room 28	**< 0.01***
43-244	Dec. 9th, 2022	6:11 pm	187	15.0	2805	**Background Air Sample** Room 25	**< 0.01***
43-245	Dec. 9th, 2022	6:21 pm	185	15.0	2775	**Background Air Sample** Room 14	**< 0.01***
43-246	Dec. 9th, 2022	9:28 am	180	15.0	2700	**Background Air Sample** Room 13	**< 0.01***
43-247	Dec. 9th, 2022	6:26 pm	185	15.0	2775	**Background Air Sample** Science Lab (Room 27)	**< 0.01***
43-248	Dec. 9th, 2022	6:22 pm	185	15.0	2775	**Background Air Sample** Room 30	**< 0.01***

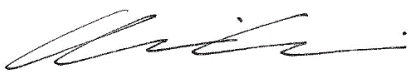
Note: "*" indicates sample was below limit of detection as defined by the NIOSH 7400 Analytical Method.

The above noted samples were analyzed using the **NIOSH 7400 Method, (Asbestos and Other Fibres by PCM), following "A" Counting Rules**. NIOSH states in section titled APPLICABILITY that "This method gives an index of airborne fibres. It is primarily used for estimating asbestos concentrations, though PCM does not differentiate between asbestos and other fibres. This method will not detect fibres <0.25µm in diameter".

Results of air testing indicate airborne levels of fibres to be below 0.01 F/cc, or Fibres per Cubic Centimetre as set by the Province of Nova Scotia's Department of Labour and Advanced Education, Code of Practice "A Guide to Removal of Friable Asbestos Containing Material", Section 8, Sub-section 5 (Nov. 21, 2013).

If you have any questions or comments regarding the above noted results, please contact our office at your convenience.

Thank you and have a great day,



Alisha Glogowski, B.Sc.
Environmental Scientist
ALL-TECH Environmental Services Ltd.