



November 25, 2009

Pinchin File No. 02-03-00077

Eastern School District  
Suite 601, Atlantic Place  
215 Water Street  
St. John's, NL  
A1C 6C9

**Attention: Mr. Jim Sinnott**

**Re: St Bernard's Elementary School, Witless Bay, NL  
Airborne Mould Sampling (Spore Trap)**

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### **Introduction**

Pinchin LeBlanc Environmental Limited (Pinchin) was commissioned by Mr. Jim Sinnott of Eastern School District to conduct airborne mould sampling (spore trap) in St. Bernard's Elementary School located in Witless Bay, NL.

The air sampling was conducted in Rooms 125, 120, 117, 116, 122, 104 and 109.

### **Sample Methodology**

Spore trap sampling collects both viable and non-viable mould spores, but there is no distinction during analysis. Non-viable refers to spores being incapable of life or living, whereas viable is capable of living. Spore trap sampling is only capable of determining the presence of mould spores identified at the genera level and cannot identify the species of the mould spores recovered.

Spore trap air samples were collected using Micro5 sampling cassettes and a calibrated pump. The pump was calibrated using a primary standard electronic meter at a flow rate of 5 litres per minute. Samples were collected for duration of 5 minutes for a total of 25 litres.

The samples were analyzed at Mycotaxon Consulting Ltd., Microbiology Laboratory, located in Halifax, Nova Scotia. The laboratory is a Public Works Canada Accredited Mycology laboratory that participates in the American Industrial Hygiene Association (AIHA)

Environmental Microbiology Proficiency Analytical Testing Program and is accredited as a Reference Mycologist by the AIHA Environmental Microbiology Laboratory Accreditation Program (EMPAT).

## Results

A total of seven (7) air samples were collected inside the school. Samples were collected in Rooms 125, 120, 117, 116, 122, 104 and 109. One (1) outside reference air sample was also collected for comparison purposes.

The following table will provide the results of the spore trap air sampling in table format, detailing for each sample the total spore concentration measured, in spores per cubic metre of air (spore/m<sup>3</sup>) and the types of mould spores identified.

| <b>Fungal Spores Identified (spores/m<sup>3</sup>)</b> | <b>Outdoor Reference (1667080)</b> | <b>Room 109 (1667087)</b> | <b>Room 104 (1667079)</b> | <b>Room 116 (1667078)</b> |
|--|------------------------------------|---------------------------|---------------------------|---------------------------|
| <i>Fusarium</i> species spores                         | 40                                 | -                         | -                         | -                         |
| <i>Cladosporium</i> species spores                     | 320                                | -                         | -                         | -                         |
| Non-specified fungal spores                            | 40                                 | 40                        | 40                        | -                         |
| basidiospores  | 80                                 |                           | 80                        | -                         |
| <b>TOTAL SPORES/m<sup>3</sup></b>                      | <b>480</b>                         | <b>40</b>                 | <b>120</b>                | <b>None Detected</b>      |

| <b>Fungal Spores Identified (spores/m<sup>3</sup>)</b> | <b>Room 117 (1667088)</b> | <b>Room 120 (1667025)</b> | <b>Room 122 (1667090)</b> | <b>Room 125 (1667077)</b> |
|--|---------------------------|---------------------------|---------------------------|---------------------------|
| <i>Cladosporium</i> species spores                     | 320                       | -                         | -                         | -                         |
| Non-specified fungal spores                            | -                         | -                         | 40                        | -                         |
| <b>TOTAL SPORES/m<sup>3</sup></b>                      | <b>320</b>                | <b>None Detected</b>      | <b>40</b>                 | <b>None Detected</b>      |

Generally, the composition and concentration of mould recovered from indoor samples should be similar to the composition and concentration of the mould recovered from the outdoor reference sample. Many elements inside a building can affect the concentration and composition of indoor mould samples. These elements include occupant activities, furnishings and the amount of air exchange.

The concentration of the outdoor reference sample on the sampling day was 480 spores/m<sup>3</sup>, recovering *Cladosporium* sp. spores, basidiospores, non-specified fungal spores and a *Fusarium* sp. spore. Indoor spore concentrations ranged from None Detected to 320 spores/m<sup>3</sup>. The concentrations of the indoor spore trap samples were all lower than the concentration of the outdoor reference sample. The compositions of the indoor samples were similar to the composition of the outdoor reference sample.

The analytical certificate is enclosed with this letter.

### **Conclusion**

Indoor airborne spore trap results suggest that airborne mould levels were acceptable in all of the sample locations on the sampling day.

### **Limitations**

The work performed by Pinchin was conducted in accordance with industry standards. The Client acknowledges that concealed conditions may vary from those encountered or inspected. Pinchin can only comment on the environmental conditions observed on the date(s) the assessment is performed. The air sampling results will apply only to the time and conditions of the testing and may not be used to reliably predict conditions on other days. Pinchin will not provide comment as to the presence or absence of contaminants other than those that were surveyed or sampled for, and at the locations investigated.

No warranty is either expressed or implied, or intended by this agreement or by furnishing oral or written reports or findings. The liability of Pinchin or its staff is limited to the lesser of the fees paid or actual damages incurred by the Client. Pinchin will not be responsible for any consequential or indirect damages. Pinchin will only be liable for damages resulting from negligence of Pinchin. All claims by the Client shall be deemed relinquished if not made within one year after last date of services provided.

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Should you have any questions or require additional information, please contact either of the undersigned at our office (709-754-4490).

Yours truly,

**PINCHIN LEBLANC ENVIRONMENTAL LIMITED**

Prepared by,



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Enclosure: Analytical Results

**MYCOTAXON CONSULTING LTD.**

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Mr. C. Hollett  
Pinchin LeBlanc Environmental Ltd.  
27 Austin Street, 2<sup>nd</sup> Floor  
St. John's, NL  
A1B 4C3

November 24, 2009

Dear Mr. Hollett:

Herewith is the list of spore types recovered from the microcell samples from your project 02-03-00077 which were received by this laboratory on November 24, 2009.

| SAMPLE       | spores/m <sup>3</sup> | GENERA  |
|--------------|-----------------------|---|
| M01 outside  | 480                   | <u>Cladosporium</u> sp. spores (8)*<br>basidiospores (2)<br>non-specified fungal spore (1)<br><u>Fusarium</u> sp. spore (1) |
| M02 room 109 | 40                    | non-specified fungal spore (1)  |
| M03 room 104 | 120                   | basidiospores (2)<br>non-specified fungal spore (1)   |
| M04 room 116 |                       | none detected   |
| M05 room 117 | 320                   | <u>Cladosporium</u> sp. spores (8)  |
| M06 room 120 |                       | none detected   |
| M07 room 122 | 40                    | non-specified fungal spore (1)  |
| M08 room 125 |                       | none detected   |

\*Numbers in parenthesis are spore counts for each taxon recovered in sample.

Note:

1. Aspergillus/Penicillium-like spores may include those of Acremonium, Paecilomyces, and Trichoderma
2. Non-specified fungal spores are those lacking distinguishable characteristics for correct identification

I hope this is helpful. If you have any questions concerning this report, please do not hesitate to contact me.

Sincerely yours,  
Mycotaxon Consulting Ltd.  
AIHA (EMPAT) Proficient Laboratory

Per: Thomas G. Rand, Ph.D. Mycology