

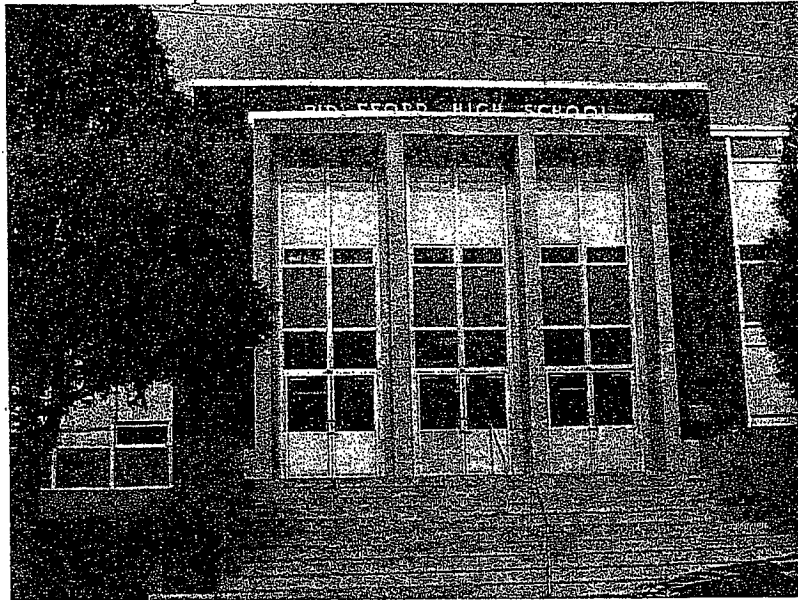


Air Quality Management Services, Inc.
"Discovering Solutions for Healthier Living"

INDOOR AIR QUALITY EVALUATION

Biddeford High School

20 Maplewood Avenue – Biddeford, Maine



PREPARED FOR

Biddeford School Department
C/o Mr. Phil Radding – Director of Facilities
PO Box 586
Biddeford, Maine 04005

Date of Inspection

October 29th, 2010

AQM PROJECT #10-455B

Nick Ferrala, CIEC
Industrial Hygienist

TABLE OF CONTENTS

- PROJECT SUMMARY REPORT
 - Testing
 - Recommended Guidelines
 - Testing Method
 - Findings
 - Fungal Growth
 - Recommendations

- GENERAL INDOOR AIR QUALITY GUIDELINES & TESTING METHODOLOGIES

- ASSESSMENT LIMITATIONS

- SUPPORTING DOCUMENTATION (If Collected)
 - Air and/or Surface Sample Analysis

AQM SUMMARY REPORT: Project # 10-455B Report Type: IAQ

Inspection Date: October 29th, 2010 **Onsite Industrial Hygienist:** Nick Ferrala, CIEC
Client: Biddeford School Department **Property Owner:** City of Biddeford
Mailing Address: C/o Mr. Phil Radding, PO Box 586 - Biddeford, Maine **Location:** High School, 20 Maplewood Ave, Biddeford, ME

Concern: Unknown / Not specified; Client requested samples (types noted below) in Room 203 before and after opening all windows. Windows were reportedly kept closed for at least several hours prior to initial sampling.

- Actions to Date:**
- | | |
|--|---|
| <input type="checkbox"/> No Actions To Date | <input type="checkbox"/> Carpeting Cleaned / Extracted / Treated |
| <input type="checkbox"/> Installed Fresh-air Source and/or Air Exchange Unit | <input type="checkbox"/> Area(s) HEPA Vacuumed and Damp Dusted |
| <input type="checkbox"/> Cleaned Mechanical System - including Ductwork | <input type="checkbox"/> HEPA Air Cleaners Installed - Portable |
| <input type="checkbox"/> Mechanical System Filter(s) Changed | <input type="checkbox"/> Water-damaged Materials Removed - See Comments |

Comments: Unknown actions to date

TESTING

Sampling Decision Logic

<input checked="" type="checkbox"/> Air samples were collected to determine airborne influences.
<input type="checkbox"/> Surface samples were collected to characterize suspect contamination.
<input checked="" type="checkbox"/> Health Issues reported <input checked="" type="checkbox"/> None <input type="checkbox"/> Allergies <input type="checkbox"/> Asthma <input type="checkbox"/> Other:

Comments: No health issues reported to AQM.

RECOMMENDED GUIDELINES **TESTING METHOD**

Carbon Dioxide (CO ₂)	ASHRAE	Not Applicable	Gray Wolf DirectSense 100	<input checked="" type="checkbox"/>	Airborne Mold	Allergenco-D	<input checked="" type="checkbox"/>
	OSHA	5000 ppm	Colorimetric	<input type="checkbox"/>		N6	<input type="checkbox"/>
Carbon Monoxide (CO)	ASHRAE	9 ppm	Gray Wolf DirectSense 100	<input checked="" type="checkbox"/>	Surface Mold	Tape	<input type="checkbox"/>
	OSHA	50 ppm	Colorimetric	<input type="checkbox"/>		Swab	<input type="checkbox"/>
Relative Humidity (%)	ASHRAE	30 - 60%	Gray Wolf DirectSense 100	<input checked="" type="checkbox"/>	Airborne Particulate	Lighthouse IAQ 3016	<input checked="" type="checkbox"/>
			Extech RH-401 Pen	<input type="checkbox"/>		NIOSH/EPA	<input type="checkbox"/>
Optimal Recommended Temperatures (°F)	Summer	72 - 78 °F	Gray Wolf DirectSense 100	<input checked="" type="checkbox"/>	Total Volatile Organic Compounds (TVOC)	ppb-RAE	<input type="checkbox"/>
			Extech RH-401 Pen	<input type="checkbox"/>		Detector Tube	<input type="checkbox"/>
	Winter	68 - 76 °F	WBGT	<input type="checkbox"/>			

of Air Samples: 3 **# of Surface Samples:** 0 **# of Bulk Samples:** 0 **# of Swab Samples:** 0

Other Testing: None

FINDINGS

Air Quality Monitoring Readings					TPM (Total Particulate Matter), ug / m ³						TVOC
Location	CO ₂ (ppm)	CO (ppm)	Temp (°F)	RH%	Sampled for 1 minute						
					0.3um	0.5um	1.0um	2.5um	5um	10um	
Instrument Zero	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	---
Outdoor	240	0.0	63.6	38.5	0.70	0.85	1.38	4.57	13.15	14.54	---
Room 203, windows Closed	340	0.1	72.2	38.6	0.86	1.53	7.37	71.58	461.0	554.0	---
Room 203, windows Open	310	0.1	72.5	33.4	1.12	1.83	5.22	32.59	148.8	178.4	---
EPA Criteria	---	---	---	---	---	---	---	15.0	---	150.0	---

Comments: EPA Criteria = National Ambient Air Quality Standards (NAAQS). AQM sample times are 1 minute; EPA criteria based on 24hrs (10um) and annual average (2.5um). Particulate levels determined by AQM are a screening and use methodology different than that required by EPA. NAAQS values are for outdoor air - there are no standards for indoor air.

OBSERVATIONS / FINDINGS

Comments

- ▶ Carbon monoxide and carbon dioxide readings were within published Guidelines, and for carbon dioxide, indoor levels were not significantly higher than outdoor levels - no risks anticipated.
- ▶ Temperature and relative humidity readings were within the ASHRAE Comfort Guidelines - no risks anticipated.
- ▶ With windows open and closed, Total Particulate Matter (TPM) exceeded outdoor levels marginally for the smaller particulate sizes (0.3 and 0.5um) and substantially for the other sizes (1.0 - 10um). Levels for the mid to larger particle sizes were substantially higher with the windows closed vs. open, suggesting an indoor source of the particulates.
- ▶ Substantial accumulation of dust was observed in the heating units along the exterior wall, and this is the likely source of the particulates.

AQM SUMMARY REPORT: Project # 10-455B**FUNGAL GROWTH - See laboratory results for details**

Results are as follows:

Air Samples: Concentrations similar to outdoor control (Sample A1) and / or typical levels for an occupied indoor location – no immediate risks anticipated
 Concentrations above background (outdoor control) Trace Low Moderate High
 Air sample analysis suggests surface contamination is influencing the overall airborne fungal burden.

Surface Samples: Surface samples were not collected: Not authorized / requested No visible Fungi
 No active fungi detected for surfaces tested
 Fungal Growth Detected Trace Low Moderate High
 Personal contents have visible fungal growth or impact.
 Fungal contamination appears to be isolated to surfaces with minimal airborne influences.

Comments: ► Air sample results indicate that indoor spore levels were below those of the outdoor reference sample. There were low levels of spores of concern (Aspergillus/Penicillium-like, commonly associated with water / moisture issues and indoor growth) detected in Room 203 with the windows open and closed (no significant difference due to window position and exposure to outdoor air).

RECOMMENDATIONS

- Ensure adequate fresh air source to mechanical system with per current applicable ASHRAE Standards.
- Ensure the system filters are pleated with an efficiency rating of at least 40% (or greater) and properly sized for the system.
- Consult a Professional Engineer or Qualified Contractor to determine the appropriate mechanical system modifications.
- The HVAC system should be cleaned (including the ductwork) based on the report that the system has not been cleaned since the original install and / or airborne mold spore levels. The HVAC system should be part of a maintenance plan that includes monthly inspections of the filters and total system cleanings every three (3) to five (5) years, based on location and environmental influences.
- Enlist the services of an HVAC Cleaning Contractor that is competent / knowledgeable with NADCA ACR-2005 Cleaning Standards.
- Upgrade Housekeeping - Detail clean (HEPA vacuum & damp dust) to control dust / particulate levels in the hard to reach areas.
- A resilient floor covering (vinyl tile / linoleum) or like product should be considered as a finished floor covering to afford ease of maintenance and resists moisture influences.
- Control water intrusion into area / space.
- Mold Remediation should be undertaken by a qualified Contractor in accordance with the IICRC S520 Standard or other similarly recognized protocols. See Comments.
- Areas of immediate impact should be isolated from the unaffected areas of the building to prevent contaminant communications thus limiting damages and exposure risks.
- High Temperature Steam Clean and Treat all carpeting and ensure areas are rapidly dried to reduce microbial influences.

Comments: ► Based on analytical results and observations, the likely source for the elevated particulates and mold spores of concern is the accumulated dust in the heating units.
► Detail Clean the heating units to remove accumulated dust. Cleaning should include all accessible sections of the units with particular emphasis on the floor area (within / under units) where dust accumulation was observed.

END OF SECTION

**GENERAL INDOOR AIR QUALITY GUIDELINES
& TESTING METHODOLOGIES**

General Indoor Air Quality Guidelines and Testing Methodologies

AQM evaluates carbon monoxide, carbon dioxide, temperature and relativity using a Gray Wolf DirectSense100 to evaluate general air quality parameters. These parameters are evaluated to determine fresh air exchange efficiencies and building purge rates as well as background ambient moisture levels.

The data collected was compared to standards outlined by the American Society of Heating, Refrigeration, and Air conditioning Engineers (ASHRAE), American Conference of Governmental Industrial Hygienist (ACGIH), and the Occupational Safety and Health Administration (OSHA).

Airborne Total Mold and Non-viable Particulates

AQM collects airborne fungi samples using Allergenco-D air sampling cassettes designed for evaluating total airborne fungi and non-viable particulates. Samples are collected at 15-liters per minute over 5-minute or 10-minute sampling periods each depending on site conditions. The samples are analyzed using direct microscopy examination.

The Allergenco-D is a direct read total particulate air sampling device. It works using the inertial impaction principle similar to other spore trap devices. It is designed for the rapid collection and analysis of airborne particulate including bioaerosols. The particulate includes fibers (e.g. fiberglass, cellulose, clothing fibers) opaque particles (e.g. fly ash, combustion particles, copy toner, oil droplets, paint), and bioaerosols (e.g. mold spores, pollen, insect parts, skin cell fragments).

Typical Indoor Levels (collected using Allergenco-D)

Particulates	Average Concentrations	Rating 0 - 5
Skin Cell Fragments	7,500 to 10,000	2 - 3
Fiberglass Fibers	50 to 75	n.d. - 2
Other Fibers	1,000 to 2,500	n.d. - 2
Black Opaque Particles	2,500 to 5,000	n.d. - 1
Insect Parts	< 27	n.d. - 1
Pollen Grains	< 27	n.d. - 1
Background Debris Rating	1+ to 4+ (low to high)	n.d. - 2

n.d. - None Detected

Airborne Particulate Assessment

AQM conducts testing in representative areas to determine airborne particulate influences and assess general indoor air quality parameters. Testing is conducted to assess airborne particulates using a Lighthouse IAQ 3016 Laser Particle Counter. This unit quantifies particulates by size (microns 0.3 to 10.0). Results are comparatively evaluated to determine particulate concentrations by size and evaluate the efficiencies of the air filtering systems and to identify areas with elevated particulate concerns.

Fungal influences are usually suspected when predominantly high concentrations are noted between 1.0 microns to 10 microns respectively.

Airborne Bacteria and Fungi

Currently there are no set standards or guidelines for bioaerosol / non-aerosolized microbial exposure levels which suggest dose response risks associated with a specific exposure level to airborne environmental bacteria or fungi. Most important, sensitivities to microbial exposures vary widely between individuals with the immuno-compromised population being the most susceptible.

Current studies suggest indoor airborne microbial levels in mechanically ventilated buildings should be less than the levels identified in outdoor air. Building without mechanical ventilations should be either similar in concentration to the outdoor air or less than the outdoor concentrations.

The data also suggests that indoor microbial concentrations that exceed outdoor concentrations by 30% or more should be considered elevated. Additionally, identification of specific microorganisms indoors not identified in the outdoor samples collected suggests an indoor source and should be considered a potential risk based on genera or species isolated. It is important for determining health risk associated with bioaerosols and non-aerosolized microbials to keep in mind that the colony count alone is not the only determining factor. The species of organism(s) identified is sometimes more important than the colony count (number of organisms). The World Health Organization (WHO) and the Indoor Air Quality Association recommends fungi levels not exceed 50 CFUs m³ (for any single species) or 150 to a max of 300 CFUs m³ (for total species) when compared to the outdoor samples collected, considering species and/or other risk factors that might be present.

Fungi Bulk Dusts (Carpet Vacuum Samples)

The current Industry Guidelines suggest the following:

< 5,000 CFU / Ft ²	Normal
< 25,000 CFU / Ft ²	Moderate Risk
< 75,000 CFU / Ft ²	High Risk
> 75,000 CFU / Ft ²	Very Active Growth

General Indoor Air Quality Testing

Carbon Dioxide

The OSHA Permissible Exposure Limit (PEL) for carbon dioxide is 5000 ppm. These OSHA standards were designed for industrial settings and not office or school settings.

The ASHRAE 62 comfort guidelines for indoor air recommends levels be maintained below 1000 parts of carbon dioxide per million parts of air (ppm) or no more than 700

ppm greater than the outdoor readings. Elevated carbon dioxide concentrations can cause symptoms such as headaches, nausea, dizziness, fatigue, and drowsiness.

Carbon Monoxide

OSHA's Permissible Exposure Limit (PEL) for carbon monoxide is 50 ppm. These OSHA standards were designed for industrial settings and not office or school settings.

ASHRAE guidelines for indoor air quality comfort limits recommend levels be maintained below 9 ppm. Elevated carbon monoxide concentrations can cause symptoms such as; severe headaches, nausea, dizziness, fatigue, and drowsiness, and in high concentrations, death.

Relative Humidity

Relative Humidity levels should be maintained between 30% to 60%. AQM recommends levels be maintained between 35% to 55% optimally. When relative humidity levels are below these guidelines, symptoms can occur causing discomfort such as; dry eyes, nose, throat, and irritated upper respiratory tract. Low relative humidity dries the mucus membranes, which prohibits the body's normal ability to rid our body of certain contaminants increasing the potential for discomforts associated with eyes, noses, and throats. Elevated relative humidity can contribute to a conducive environment for microbial growth associated with moisture damage.

Temperature

Temperatures can affect people psychologically; they may assume there is a problem when it is too warm or when there is no air movement in their work area, even in the absence of an air contaminant.

ASHRAE Recommended Comfort Guidelines

Relative Humidity %	Winter Season °F	Summer Season °F
30	68.5 to 76.0	74.0 to 80.0
40	68.5 to 75.5	73.5 to 79.5
50	68.5 to 74.5	73.0 to 79.0
60	68.0 to 74.0	72.5 to 78.0

Applies for persons clothed in typical summer and winter clothing, at light, mainly sedentary activity.

END OF SECTION

ASSESSMENT LIMITATIONS

AQM

ASSESSMENT LIMITATIONS

The observations, conclusions and recommendations described in this assessment report were made under the conditions stated herein, taking into account any information / concerns provided or reported to AQM, and were arrived at in accordance with generally accepted standards related to indoor air quality investigations and good industrial hygiene practice. The conclusions presented in the report were based solely upon the services described herein, and not on scientific tasks or procedures beyond the scope of described services, time and / or any budgetary constraints. Assessments were made at the request of the Client based on information provided at the time of authorization to proceed with the evaluation. This report is prepared for the Client's use only and in accordance with scope of services requested, and should not be distributed to other parties for review and reliance.

The findings relating to this assessment were not intended to be exhaustive in nature, nor do they attempt to identify all possible sources of indoor contaminants, chemicals or even mold throughout the entire structure. Building materials may contain asbestos. In the event that asbestos building materials are suspected, further evaluation should be made prior to renovations in accordance with Federal, State, and Local regulations – as applicable. **Note:** Effective April 22nd, 2010 Environmental Protection Agency's (EPA) Renovation, Repair, and Painting (RRP) rule is in effect. This means that any renovation, repair and painting activities on target housing or child-occupied facility built before 1978 performed for compensation after April 22nd, 2010 falls under this rule. It is mandatory that any renovation impacting painted surfaces in a facility built before 1978 be tested for presence of lead-based paints. A Contractor (or Firm) trained and certified under this rule shall perform removal of lead-based painted surfaces, **ONLY** if lead-based paints are present and renovation / remediation of the structure falls under the definition of EPA's new rule. You can find EPA's RRP rule and definitions at their website: <http://www.epa.gov/lead/pubs/renovation.htm>. The chosen contractor to perform activities disturbing lead-based painted surfaces will comply with all State, Federal, Local Health and Safety Regulatory Requirements (which ever is more stringent).

Any measured results, analysis data, and / or physical conditions observed are only valid for the period in which this inspection / testing was conducted. Certain assumptions can be made based on information provided to AQM on or before the time of the assessment coupled with analytical data and observations made at the time of the inspection / testing.

Where such quantitative laboratory analyses have been conducted by an outside laboratory, AQM has relied upon the data provided, and has not conducted an independent evaluation of the reliability of the data. This data have been reviewed and interpretations made as presented in the report.

Historical events or ambient air conditions that may have existed prior to this assessment cannot be correlated in any way with the enclosed data. No warranty, real or implied, is made as to what was or is the exact cause or source that may have adversely affected the indoor air quality prior to the date of this assessment.

The report is based on AQM's professional opinion and on our experience in conjunction with information gathered during the assessment and laboratory data provided. Information and recommendations set forth in this report are intended to characterize current conditions based on the reported concerns and discoveries made at the time of the inspection and testing period. Information is being provided to aid in the development of corrective actions or remediation that may improve overall conditions identified and/or to improve the overall air quality.

SUPPORTING DOCUMENTATION

AQM

1-800-244-8378 Phone
1-207-873-7022 FAX
227 China Rd., Winslow, ME 04891
SOP 4.3.24

Client: Air Quality Management
Address: 18B Portland Road
Gray ME 04039
Project Number: 10-456B

Date Sampled: 10/28/2010
Date Received: 11/1/2010
Date Reported: 11/2/2010



Sample Type:	Volume Sampled (L):	Sample Description	Lab Number	Sample Condition	Background Debris Rating, 0-5 (2)
Allergenco-D	150	Room 203 Windows Closed	A2	Good	5
	150	Room 203 Windows Open	A3	Good	5
	150	Outdoors	A1	Good	5
	150	Outdoors	A2	Good	5
	150	Outdoors	A3	Good	5
	150	Outdoors	A4	Good	5
	150	Outdoors	A5	Good	5
	150	Outdoors	A6	Good	5
	150	Outdoors	A7	Good	5
	150	Outdoors	A8	Good	5
	150	Outdoors	A9	Good	5
	150	Outdoors	A10	Good	5
	150	Outdoors	A11	Good	5
	150	Outdoors	A12	Good	5
	150	Outdoors	A13	Good	5
	150	Outdoors	A14	Good	5
	150	Outdoors	A15	Good	5
	150	Outdoors	A16	Good	5
	150	Outdoors	A17	Good	5
	150	Outdoors	A18	Good	5
	150	Outdoors	A19	Good	5
	150	Outdoors	A20	Good	5
	150	Outdoors	A21	Good	5
	150	Outdoors	A22	Good	5
	150	Outdoors	A23	Good	5
	150	Outdoors	A24	Good	5
	150	Outdoors	A25	Good	5
	150	Outdoors	A26	Good	5
	150	Outdoors	A27	Good	5
	150	Outdoors	A28	Good	5
	150	Outdoors	A29	Good	5
	150	Outdoors	A30	Good	5
	150	Outdoors	A31	Good	5
	150	Outdoors	A32	Good	5
	150	Outdoors	A33	Good	5
	150	Outdoors	A34	Good	5
	150	Outdoors	A35	Good	5
	150	Outdoors	A36	Good	5
	150	Outdoors	A37	Good	5
	150	Outdoors	A38	Good	5
	150	Outdoors	A39	Good	5
	150	Outdoors	A40	Good	5
	150	Outdoors	A41	Good	5
	150	Outdoors	A42	Good	5
	150	Outdoors	A43	Good	5
	150	Outdoors	A44	Good	5
	150	Outdoors	A45	Good	5
	150	Outdoors	A46	Good	5
	150	Outdoors	A47	Good	5
	150	Outdoors	A48	Good	5
	150	Outdoors	A49	Good	5
	150	Outdoors	A50	Good	5
	150	Outdoors	A51	Good	5
	150	Outdoors	A52	Good	5
	150	Outdoors	A53	Good	5
	150	Outdoors	A54	Good	5
	150	Outdoors	A55	Good	5
	150	Outdoors	A56	Good	5
	150	Outdoors	A57	Good	5
	150	Outdoors	A58	Good	5
	150	Outdoors	A59	Good	5
	150	Outdoors	A60	Good	5
	150	Outdoors	A61	Good	5
	150	Outdoors	A62	Good	5
	150	Outdoors	A63	Good	5
	150	Outdoors	A64	Good	5
	150	Outdoors	A65	Good	5
	150	Outdoors	A66	Good	5
	150	Outdoors	A67	Good	5
	150	Outdoors	A68	Good	5
	150	Outdoors	A69	Good	5
	150	Outdoors	A70	Good	5
	150	Outdoors	A71	Good	5
	150	Outdoors	A72	Good	5
	150	Outdoors	A73	Good	5
	150	Outdoors	A74	Good	5
	150	Outdoors	A75	Good	5
	150	Outdoors	A76	Good	5
	150	Outdoors	A77	Good	5
	150	Outdoors	A78	Good	5
	150	Outdoors	A79	Good	5
	150	Outdoors	A80	Good	5
	150	Outdoors	A81	Good	5
	150	Outdoors	A82	Good	5
	150	Outdoors	A83	Good	5
	150	Outdoors	A84	Good	5
	150	Outdoors	A85	Good	5
	150	Outdoors	A86	Good	5
	150	Outdoors	A87	Good	5
	150	Outdoors	A88	Good	5
	150	Outdoors	A89	Good	5
	150	Outdoors	A90	Good	5
	150	Outdoors	A91	Good	5
	150	Outdoors	A92	Good	5
	150	Outdoors	A93	Good	5
	150	Outdoors	A94	Good	5
	150	Outdoors	A95	Good	5
	150	Outdoors	A96	Good	5
	150	Outdoors	A97	Good	5
	150	Outdoors	A98	Good	5
	150	Outdoors	A99	Good	5
	150	Outdoors	A100	Good	5

Analyst: Tom Chestnam

Raw Cl. CL/m³ % Raw Cl. CL/m³ % Raw Cl. CL/m³ %

379 10,000 101 88 2,800 100 181 4,800 100

40 1,100 11 16 400 16 25 670 14

325 8,700 88 25 870 28 20 530 11

14 370 4 50 1,300 52 126 3,300 69

8 180 6 6 180 3

3 3 3

2 2 2

1 1 1

n.d. n.d. n.d.

2 5 5

Note: Some values may not appear to be perfectly additive due to rounding.

(1) Value indicates % of sample trace analyzed. 100% of Sample Trace is always examined for *avermectins*, *spora dulcabra* and *Stachybotrys / Merriamella* species, and any appropriate corrections are made as a result of findings. This process results in a lower MDL for *Stachybotrys / Merriamella* species and a more accurate overall analysis.

(2) Debris Rating Scales: 0 = No trace visible; 5 = Contiguous debris. Background debris levels greater than 3 indicate poor visibility for the analyst reading the slide, which can result in under-counting of small spores such as those from members of the *Aspergillus/Penicillium*-like group.

(3) Particulate are rated on a scale from n.d. (not detected) to 5 (highest abundance). Values in parentheses indicate typical indoor levels.

No disassemblable field blank was submitted with these samples. Minimum detection limit varies with amount of air sampled: 30L = 133 cf./m³; 75L = 53 cf./m³; 150L = 13 cf./m³

Reviewed By: *[Signature]*
Brett Goodrich, Manager, Environmental Microbiology Division

Analytical results and reports are generated by NEL at the request of and for the exclusive use of the person or entity (client) named on this report. Results, reports or copies of same will not be released by NEL to any third party without the prior express written consent from the client named in this report. This report applies only to those samples taken at the time, place and location referenced by the client. This report makes no express or implied warranty or guarantee as to the sampling methodology used by the individual performing the sampling unless sampling was performed by NEL. The client is solely responsible for the use and interpretation of these results and NEL makes no express or implied warranties as to such use or interpretation. NEL is not able to make and does not make a determination as to the soundness or safety of a product, environment or property from only the samples sent to their laboratory for analysis. Unless otherwise specified by the Client, NEL reserves the right to dispose of all samples after the testing of such samples is satisfactorily completed or after a thirty-day period, whichever period is greater. Samples for Microbiology that degrade rapidly or pass their hold times will be retained for shorter periods or not at all. NEL liability extends only to the cost of the testing.