

INSPECTION REPORT



For the Property at:
800 32ND AVE SOUTH
GRAND FORKS, ND 58201

Prepared for: CHRIS ARNOLD
Inspection Date: Wednesday, December 11, 2019
Prepared by: Lars Knobloch



Nordic Companies Inc
3628 Pierce Street South
Fargo, ND 58104
701-566-1446

www.nordiccompaniesinc.com
lars@nordiccompaniesinc.com

TRUST THE NORSEMEN



December 17, 2019

Dear Chris Arnold,

RE: Report No. 6869
800 32nd Ave South
Grand Forks, ND
58201

Our services conform to the industry standards for mold sampling and interpretation. All recommendations for mold remediation are based on IICRCs S520 Standards and Reference Guide for Professional Mold Remediation. The samples collected are analyzed by the nation's leading environmental testing firm; EMSL Analytical, Inc. Our Consultant is a Certified Indoor Environmentalist (CIE), Certified ASHI Inspector (ACI), Certified Residential and Commercial Mold Inspector, and has 19 years experience in mold industry, inspection and construction. We do not offer contracting services; therefore, you know our opinions are unbiased. A complete mold specification can be developed by Nordic Environmental for an additional cost to help prevent mold remediation contractors from recommending an unneeded and overly expensive solution.

Thank you for your interest in Nordic Environmental. Please feel free to call should you have any questions.

Sincerely,

Lars Knobloch
on behalf of
Nordic Companies Inc

Nordic Companies Inc
3628 Pierce Street South
Fargo, ND 58104
701-566-1446
www.nordiccompaniesinc.com
lars@nordiccompaniesinc.com

AGREEMENT

800 32nd Ave South, Grand Forks, ND December 11, 2019

Report No. 6869

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PARTIES TO THE AGREEMENT

Company

Nordic Companies Inc
3628 Pierce Street South
Fargo, ND 58104

Client

Chris Arnold

Total Fee: \$1,195.00

This is an agreement between Chris Arnold and Nordic Companies Inc.

MOLD INSPECTION AGREEMENT

The assessment is based on findings of the physical inspection and testing. Findings are current and accurate for the date and time they were found, but do not reflect expected or predictable mold growth and infestation on and within the property. The report addresses only those areas physically inspected and sampled. The Consultant is not responsible or liable for the non-discovery of any water damage, water problems, mold contamination, or other conditions of the Subject Property which may occur or may become evident after the inspection and testing time and date. The Consultant is neither an insurer nor guarantor against water problems, mold problems or other defects at the Subject Property and improvements, systems or components inspected. The Consultant makes no warranty, expressed or implied as to the fitness for use of condition of the systems or components inspected. The Consultant assumes no responsibility for the cost of repairing any water problems, mold problems or any other defects or conditions.

The property owner is the one liable for correcting the source of the problem. The Consultant is not responsible or liable for any future water problems, mold problems or any other future failures or repairs. Remediation recommendations are suggested guidelines, not a detailed remediation protocol. More or less action may be necessary and will be determined by the remediation company chosen by the property owners or other responsible party.

The client requests the inspection of the Subject Property subject to the following limitations and conditions:

1. The inspection, testing, interpretations and recommendations will be performed following current industry standards.
2. The report is an opinion of the current condition of the property, based on the testing performed, and a visual inspection of the readily accessible areas of the building, and/or areas specified by the client.
3. The client understands and agrees that the liability of Nordic Environmental, its employees and agents, is limited to the Inspection Fee.
4. The written report will be available within 7 business days of the day the testing was completed.
5. The client agrees to pay the inspection fee in full no later than the day of the assessment

I, Chris Arnold (Signature) _____, (Date) _____, have read, understood and accepted the terms of this agreement.

Recommendations and Observations

PRELIMINARY INSPECTION \ Final Conclusions

Condition: • Fungal growth has been identified on pipe insulation in various locations in the school tunnels. However, the mold spore count was extremely low in all air samples indicating that the air quality in the school is not impacted by air borne mold spores.

Nordic Environmental highly recommends taking action to prevent or limit moisture/water and fungal growth in the tunnels for the future. It is crucial to ensure proper drainage along the schools foundation and install long extensions on all downspouts.

Furthermore, a permanent solution for discharging water from the tunnels needs to be established (e.g., a permanent discharge pipe shall be installed through the concrete floor and discharged through the exterior wall).

In addition, when replacing the pipe insulation we do not recommend using fiberglass with paper jacketing as the paper is a great food source for fungal growth. Other options such as PVC jacketing should be explored.

It should also be considered to install hygrometers in the tunnels so temperature and humidity levels can be monitored.

Fungal growth shall be removed by following the recommendations in this report.

INDICATOR MEASUREMENTS \ Temperature

Condition: • 65-70F

Location: Room 604

Condition: • 65-70F

Location: Room 118

Condition: • 65-70F

Location: Room 102

Condition: • 65-70F

Location: Library

Condition: • 70-75F

Location: Room 116

Condition: • 70-75F

Location: Room 612

Condition: • 70-75F

Location: Room 610

Condition: • 70-75F

Location: Room 608

Condition: • 70-75F

Location: Room 106

Condition: • 75-80F

Location: Room 112

INDICATOR MEASUREMENTS \ Humidity

Condition: • 10-15%

Location: Room 116

Condition: • 10-15%

Location: Room 112

Condition: • 10-15%

Location: Room 106

Condition: • 10-15%

Location: Room 118

Condition: • 10-15%

Location: Library

Condition: • 15-20%

Location: Room 604

Condition: • 15-20%

Location: Room 102

Condition: • 20-25%

Location: Room 612

Condition: • 20-25%

Location: Room 610

Condition: • 20-25%

Location: Room 608

SAMPLING \ Chain of Custody

Condition: • See Appendix

SAMPLING \ Laboratory Results

Condition: • See Appendix

INTERPRETATIONS \ Samples with Acceptable Levels

Condition: • All samples had normal or acceptable levels of airborne mold spores when comparing to the Environmental Analysis Associates Inc, Air-O-Cell Method Interpretation Guide 2014 and other industry guidelines.

MOLD REMEDIATION \ Construct Containment

Condition: • Containment shall be established at each tunnel access door. Access doors that won't be used shall be sealed off with tape.

MOLD REMEDIATION \ Engineering Controls

Condition: • The buildings air handling system shall be turned off during the mold remediation process. Contractor shall attempt to create a negative pressure in the tunnels at all times. If negative air cannot be maintained, additional air scrubbers shall be used.

Condition: • Air scrubbers with HEPA filters shall be operating in the affected areas.

MOLD REMEDIATION \ Cleaning/Removal of Mold

Condition: • Contractor shall remove pipe insulation impacted by or suspected to be impacted by fungal growth.

MOLD REMEDIATION \ Material Removal Procedures

Condition: • All removed pipe insulation must be bagged in 6-mil or greater bags. The exterior of the bag shall be wiped down and HEPA vacuumed before being removed from the tunnels. Contractor is responsible for the safe disposal of mold and other construction debris.

MOLD REMEDIATION \ Final Polishing

Condition: • Upon completion of removing and cleaning all impacted pipe insulation, the tunnels shall be cleaned. It is recommended to HEPA vacuum all surfaces.

MOLD REMEDIATION \ Post Remediation Verification

Condition: • .

Consultant will perform a visual inspection of the work area prior to any materials being replaced or containment being removed. Consultant will:

- look for visual signs of remaining mold
- detect any musty odors
- inspect the wall cavity for active moisture problems
- verify that the containment is clean, and free of dust and debris

If any problems are encountered, Contractor shall rectify the problem, at no additional cost to Owner. If no problems are encountered, Consultant will proceed to perform air sampling. Negative air machines will stay on during the sampling, until the remediation is verified as being successful. Air samples will be collected in the containment, outdoors, and in an immediately adjacent area. Samples will be having a turnaround time of 24 hours.

Consultant will interpret the samples and deem if the area needs to be re-cleaned. If re-cleaning is required, all the post remediation verification steps outlined above will be repeated. Owner and Contractor shall negotiate who will be responsible for paying fees associated with the additional set of air sampling.

DEFINITIONS \ Report Definitions

Condition: • Containment or a Critical Barrier.

Typically established with the use of heavy plastic. The main goal when creating this physical barrier is to completely isolate the work area from any adjacent, non-affected areas. For example, if mold is present in one room of your home and the adjacent areas have not been affected, the room must be isolated. Depending on the layout, the doorway would be completely sealed with plastic. All HVAC systems or shared airways between other rooms would be taped or covered in plastic. In essence, any area that could allow air communication between the work area and other non-affected areas should be properly sealed.

Condition: • Negative Air Machine.

A negative air machine uses ducting to remove contaminated air from a sealed containment area. The filtered air is exhausted outside of the containment area. This creates negative air pressure (a vacuum effect), which helps limit the spread of contaminants to other areas inside the structure.

Condition: • HEPA vacuuming.

HEPA is a type of filter attached to a vacuum that can trap a large number of very small particles that other vacuum cleaners would simply recirculate back into the air of your home.

Description

Areas Inspected: • A visual inspection was not included in the scope of work of this inspection

Attendees: • School custodian

Occupancy: • Building was occupied

Building type: • Public school

Approximate age of building: • 55-60 years

Structure: • Slab on grade

Interior finishes: • Gypsum board walls • Suspended ceiling tiles • Carpet flooring

HVAC system: • The heating system is radiant hot water heat installed in tunnels below the school. Hot air is radiating from the tunnels through supply vents installed above the tunnels throughout the building. Air handler was operating at the time of the assessment.

Inspection conducted by: • Lars Knobloch, Certified Indoor Environmentalist (CIE)

Inspection authorized by: • Chris Arnold. Mr. Arnold is the Director of Buildings and Grounds at Grand Forks Public Schools.

Scope of work: • .

Collecting total spore air samples



Room 612



Room 610



Room 116



Room 112



Room 118

Scope of work: • •

Measuring temperature and relative humidity indoors and outdoors

Background: • Microbial growth was identified on pipe insulation in the tunnels below the school. See previous inspection report delivered December 05, 2019 for more information.

Tools and Equipment: • •

ZEFON'S BIO-PUMP PLUS - Air sampling • •

TSI AIR CALC - Measurements for Relative humidity, Carbon monoxide, Carbon dioxide, Dew point

Sampling Methodology: • •

AIRBORNE MOLD TESTING:

Airborne mold testing was performed utilizing Zefon International's Air-O-Cell sampling cassettes following all manufacturer-supplied recommended sampling procedures.

The Air-O-Cell 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 bio-aerosols

such as mold spores, pollen, insect fragments and skin cell fragments.

The method involves drawing a known quantity of air through a sterile sampling cassette. Subsequent to sampling, the cassette is sealed and transferred to a microbiology laboratory under chain of custody protocol for microscopic analysis. This method collects and enumerates both viable and non viable mold spores.

• • •
AIR-O-CELL CASSETTE:

The Air-O-Cell spore trap cassette is used with a portable air pump (15 liters/minute for 1 to 10 minutes) to collect airborne aerosols including mold, pollen and other airborne particulates. Air is drawn through a small opening at the top of the cassette and spores are trapped on a sticky coated glass slide inside the cassette. These cassettes are efficient at collecting spores as small as 2.6µm.

Inspection Methods and Limitations

• • •
Statement of Limitations:

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Currently there are no Federal regulations for evaluating potential health effects of fungal contamination. This information is subject to change as more information regarding fungal contaminants becomes available. This document was designed to follow currently known industry guidelines for the interpretation of microbial sampling, analysis and remediation. Since interpretation of mold analysis report is scientific work in progress, it may as such be changed without notice.

This Mold Testing Report prepared by Nordic Environmental is based on information supplied by the client and on conditions readily observable or measurable on the date of this study. Any inspection and/or testing conducted by Nordic Environmental are not meant to determine whether a building is safe or unsafe for occupants in regard to indoor air quality.

Indoor building conditions vary constantly, therefore the findings and results presented in this report should be considered relative to and representative of the conditions that existed at the time of the inspection and testing. The results and recommendations presented herein should not be relied upon exclusively for the prevention of all possible, injuries or losses. These services are a supplement to, and not a substitute for, the clients responsibility for protecting the health and safety of employees, students, residents and others and for complying with applicable laws and regulations. Nordic Environmental warrants that its work is performed in a competent and professional manner. No other warranties are expressed or implied. • •

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800 32nd Ave South, Grand Forks, ND December 11, 2019

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No outdoor sample was collected for background control due to snow coverage and low temperatures. Nordic Environmental will use statistics, experience, and samples collected from non-suspected contaminated areas to interpret the results of the air samples.

END OF REPORT

APPENDIX

800 32nd Ave South, Grand Forks, ND December 11, 2019

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APPENDIX

OrderID: 161925484



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

161925484
EMSL Order Number (Lab Use Only):

EMSL ANALYTICAL, INC.
14375 23RD AVE NORTH
MINNEAPOLIS, MN 55447

PHONE: (763) 449-4922
FAX: (763) 449-4924

Company : Nordic Companies		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different please note in Comments**			
Street: 3628 Pierce Street S		Third Party Billing requires written authorization from third party			
City: Fargo	State/Province: ND	Zip/Postal Code: 58104	Country: USA		
Report To (Name): Lars Knobloch		Fax #:			
Telephone #: 701-566-1446		E-mail Address: lars@nordiccompaniesinc.com; miranda@nordiccompaniesinc.com			
Project Name/ Number: <u>SCHROEDER</u>					
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> E-mail		PO#	State Samples Taken:		
Turnaround Time (TAT) Options* - Please Check					
<input type="checkbox"/> 3 Hour	<input type="checkbox"/> 6 Hour	<input checked="" type="checkbox"/> 24 Hour	<input type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week		
*Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide. TATs are subject to methodology requirements					
Non Culturable Air Samples (Spore Traps)					
<ul style="list-style-type: none"> M001 Air-O-Cell M049 BioSIS M030 Micro 5 	<ul style="list-style-type: none"> M173 Allegro M2 M003 Burkard M174 MoldSnap 	<ul style="list-style-type: none"> M004 Allergenco M043 Cyclex M176 Relle Smart 	<ul style="list-style-type: none"> M032 Allergenco-D M002 Cyclex-d M130 Via-Cell M172 Versa Trap 		
Other Microbiology Test Codes					
<ul style="list-style-type: none"> M041 Fungal Direct Examination M005 Viable Fungi ID and Count M006 Viable Fungi ID and Count (Speciation) M007 Culturable Fungi M008 Culturable Fungi (Speciation) M009 Gram Stain Culturable Bacteria M010 Bacterial Count and ID - 3 Most Prominent M011 Bacterial Count and ID - 5 Most Prominent M013 Sewage Contamination in Buildings 	<ul style="list-style-type: none"> M014 Endotoxin Analysis M015 Heterotrophic Plate Count M180 Real Time Q-PCR-ERMI 36 Panel M018 Total Coliform (Membrane Filtration) M020 Fecal Streptococcus (Membrane Filtration) M210-215 Legionella Detection M026 Recreational Water Screen M027 Mycotoxin Analysis 	<ul style="list-style-type: none"> M029 Enterococci M019 Fecal Coliform M133 MRSA Analysis M028 Cryptococcus neoformans Detection M120 Histoplasma capsulatum Detection M033-39 Allergen Testing M044 Group Allergen (Cat, Dog, Cockroach, Dustmites) Other See Analytical Price Guide 			
Preservation Method (Water):					
Name of Sampler: Lars Knobloch		Signature of Sampler:			
Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected
2860 9371	ROOM 612	AIR	M001	75 150L	12/11/19 3:20 pm
2860 9385	ROOM 610				3:35 pm
2861 6427	ROOM 608				3:50 pm
2860 9366	ROOM 604				4:05 pm
2860 9367	ROOM 116				4:20 pm
2861 6433	ROOM 112				4:35 pm
2860 9422	ROOM 106				4:50 pm
2860 9425	ROOM 118				5:05 pm
2860 9424	ROOM 102				5:20 pm
2860 9378	LIBRARY				5:30 pm
Client Sample # (s):		Total # of Samples: 10		3	
Relinquished (Client):		Date: 12/11/19	Time:	A 9:02	
Received (Client):		Date:	Time:		
Comments:					

Controlled Document - Microbiology COC - R2 - 1/12/2010

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800 32nd Ave South, Grand Forks, ND December 11, 2019

Report No. 6869

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EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250
 Tel/Fax: (317) 803-2997 / (317) 803-3047
<http://www.EMSL.com> / indianapolislab@emsl.com

EMSL Order: 161925484
Customer ID: NORD25
Customer PO:
Project ID:

Attn: Lars Knobloch
 Nordic Environmental
 3628 Pierce St. South
 Fargo, ND 58104

Phone: (701) 566-1446
Fax:
Collected: 12/11/2019
Received: 12/13/2019
Analyzed: 12/16/2019

Project: SCHROEDER

Test Report: Air-O-Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	161925484-0001			161925484-0002			161925484-0003		
Client Sample ID:	2860 9371			2860 9385			2861 6427		
Volume (L):	150			150			150		
Sample Location	ROOM 612			ROOM 610			ROOM 608		
Spore Types	Raw Count	Count/m ²	% of Total	Raw Count	Count/m ²	% of Total	Raw Count	Count/m ²	% of Total
Alternaria (Ulocladium)	1*	7*	5.8	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	2*	10*	22.7
Aspergillus/Penicillium	1	20	16.5	2	40	33.3	-	-	-
Basidiospores	2	40	33.1	2	40	33.3	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	20	16.5	1	20	16.7	1	20	45.5
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	1*	7*	5.8	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	1	20	16.5	-	-	-	-	-	-
Myxomycetes++	-	-	-	1	20	16.7	1*	7*	15.9
Pithomyces++	1*	7*	5.8	-	-	-	1*	7*	15.9
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	8	121	100	6	120	100	5	44	100
Hyphal Fragment	2	40	-	1	20	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	22	-	-	22	-	-	22	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	1	-	-	2	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	2	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Nathan Husted, Microbiology Laboratory Manager
 or other approved signatory

No discernable field blank was submitted with this group of samples.

Samples received in good condition unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. *** Denotes particles found at 300X. *- Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the result, it will be noted on the report.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN AIHA-LAP, LLC--EMLAP Accredited #157245

Initial report from: 12/16/2019 09:30:13

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com

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EMSL Order: 161925484
Customer ID: NORD25
Customer PO:
Project ID:

Attn: Lars Knobloch
 Nordic Environmental
 3628 Pierce St. South
 Fargo, ND 58104

Phone: (701) 566-1446
Fax:
Collected: 12/11/2019
Received: 12/13/2019
Analyzed: 12/16/2019

Project: SCHROEDER

Test Report: Air-O-Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	161925484-0004			161925484-0005			161925484-0006		
Client Sample ID:	2860 9366			2860 9367			2861 6433		
Volume (L):	150			150			150		
Sample Location	ROOM 604			ROOM 116			ROOM 112		
Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	-	-	-	-	-	-	-	-	-
Basidiospores	-	-	-	-	-	-	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	6	100	93.5	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1*	7*	6.5	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	7	107	100	-	None Detect	-	-	None Detect	-
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	22	-	-	22	-	-	22	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Nathan Husted, Microbiology Laboratory Manager
 or other approved signatory

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<http://www.EMSL.com> / indianapolislab@emsl.com

EMSL Order: 161925484
Customer ID: NORD25
Customer PO:
Project ID:

Attn: Lars Knobloch
 Nordic Environmental
 3628 Pierce St. South
 Fargo, ND 58104

Phone: (701) 566-1446
Fax:
Collected: 12/11/2019
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Project: SCHROEDER

Test Report: Air-O-Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	161925484-0007			161925484-0008			161925484-0009		
Client Sample ID:	2860 9422			2860 9425			2860 9424		
Volume (L):	150			150			150		
Sample Location	ROOM 106			ROOM 118			ROOM 102		
Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	-	-	-	4	90	100	1	20	29.9
Basidiospores	-	-	-	-	-	-	1	20	29.9
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	1	20	29.9
Epicoccum	-	-	-	-	-	-	1*	7*	10.4
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	-	None Detect	-	4	90	100	4	67	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	22	-	-	22	-	-	22	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Nathan Husted, Microbiology Laboratory Manager
 or other approved signatory

No discernable field blank was submitted with this group of samples.

Samples received in good condition unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. *** Denotes particles found at 300X. *- Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the result, it will be noted on the report.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN AIHA-LAP, LLC--EMLAP Accredited #157245

Initial report from: 12/16/2019 09:30:13

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com

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APPENDIX

800 32nd Ave South, Grand Forks, ND December 11, 2019

Report No. 6869

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APPENDIX



EMSL Analytical, Inc.

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 Tel/Fax: (317) 803-2997 / (317) 803-3047
<http://www.EMSL.com> / indianapolislab@emsl.com

EMSL Order: 161925484
Customer ID: NORD25
Customer PO:
Project ID:

Attn: Lars Knobloch
 Nordic Environmental
 3628 Pierce St. South
 Fargo, ND 58104

Phone: (701) 566-1446
Fax:
Collected: 12/11/2019
Received: 12/13/2019
Analyzed: 12/16/2019

Project: SCHROEDER

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	161925484-0010		
Client Sample ID:	2860 9378		
Volume (L):	150		
Sample Location:	LIBRARY		
Spore Types	Raw Count	Count/m ³	% of Total
Alternaria (Ulocladium)	-	-	-
Ascospores	-	-	-
Aspergillus/Penicillium	1	20	50
Basidiospores	-	-	-
Bipolaris++	-	-	-
Chaetomium	-	-	-
Cladosporium	-	-	-
Curvularia	-	-	-
Epicoccum	-	-	-
Fusarium	-	-	-
Ganoderma	-	-	-
Myxomycetes++	-	-	-
Pithomyces++	1	20	50
Rust	-	-	-
Scopulariopsis/Microascus	-	-	-
Stachybotrys/Memnoniella	-	-	-
Unidentifiable Spores	-	-	-
Zygomycetes	-	-	-
Total Fungi	2	40	100
Hyphal Fragment	-	-	-
Insect Fragment	-	-	-
Pollen	-	-	-
Analyt. Sensitivity 600x	-	22	-
Analyt. Sensitivity 300x	-	7*	-
Skin Fragments (1-4)	-	1	-
Fibrous Particulate (1-4)	-	1	-
Background (1-5)	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Nathan Husted, Microbiology Laboratory Manager
 or other approved signatory

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