

INSPECTION REPORT



For the Property at:
615 NORTH 25TH ST
GRAND FORKS, ND 58203

Prepared for: CHRIS ARNOLD
Inspection Date: Tuesday, January 28, 2020
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



February 3, 2020

Dear Chris Arnold,

RE: Report No. 6909
615 North 25th St
Grand Forks, ND
58203

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

Recommendations and Observations

PRELIMINARY INSPECTION \ Final Conclusions

Condition: • Stachybotrys and Penicillium was identified by collecting bulk samples from pipe insulation in tunnels near Classroom 2 and Classroom 8. Stachybotrys was identified by collecting a tape-lift sample from wall paper near a window on the exterior wall in the Library. The air samples collected collected in the classrooms and hallways were not impacted by this condition. The air sample collected from the library had marginally elevated levels of Aspergillus/Penicillium.

The air samples collected from the tunnels had significantly elevated levels of Aspergillus/Penicillium and Stachybotrys. Cladosporium was identified with marginally elevated levels.

The mold shall be remediated by following recommendations in the Mold Remediation section of this report.

VISUAL INSPECTION \ Observations

Condition: • Suspected fungal growth observed

Location: West Wall Library



MOLD

615 North 25th St, Grand Forks, ND January 28, 2020

Report No. 6909

www.nordiccompaniesinc.com

MOLD

APPENDIX

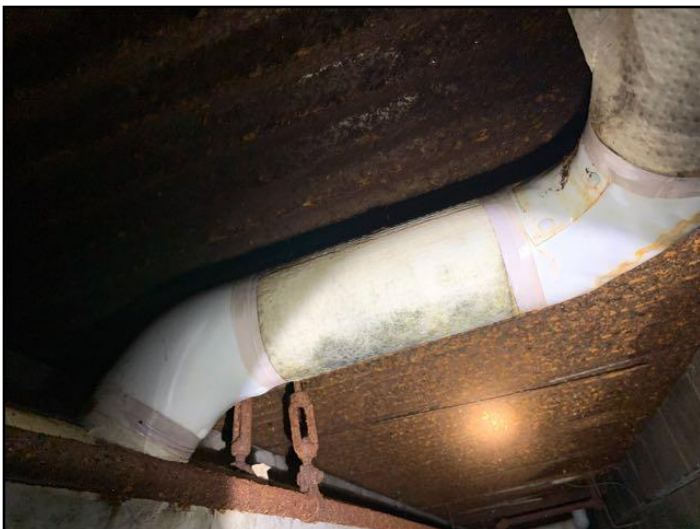
Condition: • Suspected fungal growth observed

Location: Tunnel Near Classroom 2



Condition: • Suspected fungal growth observed

Location: Tunnel Near Classroom 8



MOLD

615 North 25th St, Grand Forks, ND January 28, 2020

Report No. 6909

www.nordiccompaniesinc.com

MOLD

APPENDIX



INDICATOR MEASUREMENTS \ Temperature

Condition: • 65-70F

Location: Classroom 10

Condition: • 65-70F

Location: Classroom 8

Condition: • 65-70F

Location: Classroom 2

Condition: • 65-70F

Location: North hallway

Condition: • 70-75F

Location: 2nd floor hallway

Condition: • 70-75F

Location: Lunchroom

Condition: • 70-75F

Location: Library

Condition: • 70-75F

Location: Tunnel near classroom 8

Condition: • 75-80F

Location: Tunnel near classroom 2

INDICATOR MEASUREMENTS \ Humidity

Condition: • 15-20%

Location: Library

Condition: • 20-25%

Location: Classroom 8

Condition: • 20-25%

Location: Classroom 2

Condition: • 20-25%

Location: North hallway

Condition: • 20-25%

Location: 2nd floor hallway

Condition: • 20-25%

Location: Lunchroom

Condition: • 25-30%

Location: Classroom 10

Condition: • 75-80%

Location: Tunnel near classroom 2

Condition: • 80-85%

Location: Tunnel near classroom 8

SAMPLING \ Chain of Custody

Condition: • See Appendix

SAMPLING \ Laboratory Results

Condition: • See Appendix

INTERPRETATIONS \ Samples with Acceptable Levels

Condition: • Sample(s) had normal or acceptable levels of airborne mold spores when comparing to the outside sample and/or most industry guidelines.

(e.g. Environmental Analysis Associates Inc, Air-O-Cell Method Interpretation Guide 2014).

Location: Classrooms and Hallways

INTERPRETATIONS \ Samples with Questionable Levels

Condition: • Sample(s) had questionable levels of air borne mold spores when comparing to the outside sample and/or statistics, and industry guidelines (e.g. Environmental Analysis Associates Inc, Air-O-Cell Method Interpretation Guide 2014).

This could indicate of a possible mold condition and/or microbial growth nearby.

Location: Library

INTERPRETATIONS \ Samples with Elevated Levels

Condition: • Sample(s) had elevated levels of airborne mold spores when comparing to the outside sample and/or statistics, and industry guidelines (e.g. Environmental Analysis Associates Inc, Air-O-Cell Method Interpretation Guide 2014).

This indicates that the air quality is impacted by airborne mold spores in this location.

Location: Tunnels Near Classroom 2 and 8

MOLD REMEDIATION \ Construct Containment

Condition: • Containment shall be established around tunnel access doors.

Location: Classroom 8 and 2

Condition: • Containment shall be established near the impacted area on the exterior wall

Location: Library

MOLD REMEDIATION \ Preparation

Condition: • All content shall be removed from the exterior wall near the impacted area

Location: Library

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.

Location: Tunnels

Condition: • .

A HEPA air filtration device exhausting to the outdoors shall create a negative pressure inside containment. Pressure differential shall be recorded and documented. As per Texas Mold Assessment and Remediation Rules (TMARR), negative air pressure must be maintained at all times inside the containment until the project is verified (see TMARR sections 295.321(g) and 295.322(d)).

Location: Tunnels, Library

MOLD REMEDIATION \ Cleaning/Removal of Mold

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

Location: Tunnels

Condition: • Wall paper and other building material impacted by fungal growth shall be removed.

Location: Library

Condition: • Any mold-damaged non-porous surfaces in the wall cavity shall be cleaned by HEPA vacuuming followed by damp wiping.

Location: Library

MOLD REMEDIATION \ Material Removal Procedures

Condition: • .

Mold-damaged building materials 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 containment. 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 mold damaged materials, the work area shall be cleaned. It is recommended to HEPA vacuum and damp wipe all surfaces.

Location: Library, Tunnels

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: • Spore**

An individual reproductive body or propagule of fungi, similar to a seed of plant.

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: • Air Filtration Device/Air Scrubber.

An air scrubber is a portable filtration system that removes particles, gasses, and/or chemicals from the air within a given area. These machines draw air in from the surrounding environment and pass it through a series of filters to remove contaminants. The size and complexity of an air scrubber system will depend on the size of the space being serviced, as well as the range, type, and size of contaminants that must be removed from the area.

Air scrubbers are especially important on restoration jobs where airborne contaminants are present or will be created/disturbed during the restoration process, such as mold, dust, asbestos, lead, chemical fumes, etc. These hazardous particles can settle on carpet, upholstery, and furnishings, or be drawn into the HVAC system and contaminate other parts of a building.

If these contaminants are not removed, they will have a negative effect on the indoor air quality (IAQ) of the worksite. While naturally occurring particles, such as human skin cells, animal hair, and dirt, are nearly always present, toxic gases released by sewage-borne bacteria and mold spores can cause adverse human health effects when inhaled. In short, these contaminants can compromise the quality of the entire restoration job.

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.

FUNGAL INFO \ Explanation**Condition:** • Aspergillus

(Hyphomycetes) Teleomorph: Emericella (Ascomycetes), Eurotium (Ascomycetes) Found in soil, compost piles, decaying vegetation, stored grain, and other kinds of organic matter. Can be found indoors in water-damaged buildings. A few species can cause aspergillosis in humans with compromised or defective immune systems. Most people are naturally immune to this infection of the lung. Aspergillus fumigatus is the most common cause of aspergillosis, followed by A. flavus and A. niger. Some species are able to produce mycotoxins, depending on the strain, substrate, and/or food source. Other species are used in the manufacture of food, such as A. oryzae or A. soyae for soy sauce.

Condition: • Penicillium

(Hyphomycetes) Many species are common contaminants on a variety of substrates. May be found indoors in air samples, carpet dust, or on wallpaper. Some species are able to produce mycotoxins, as summarized below. Human pathogenic species are rare, only limited to P. marneffei, which causes disease in immunocompromised individuals. Some species are used for commercial production, such as P. chrysogenum for the antibiotic penicillin, P. griseofulvum for the antibiotic griseofulvin, and P. roquefortii for blue cheese.

Condition: • Stachybotrys

(Hyphomycetes) A common saprophyte found on many substrates like grains, decaying plant materials, textiles, and tobacco. Grows indoors on water-damaged cellulose rich materials, such as sheet rock, paper, ceiling tiles, insulation backing, gypsum board, and wallpaper. The presence of this fungus can be significant due to its ability to produce mycotoxins under certain environmental conditions. Exposure to the toxins can occur through inhalation, ingestion, or skin exposure. It is possible that Stachybotrys may play a role in the development of sick building syndrome, but probably only in conjunction with other factors. Until more information is available on the health risks of environmental exposure to Stachybotrys, caution should be taken when dealing with this fungus.

Description

Attendees: • Gina Wieler. Ms. Wieler is the Safety Coordinator at Grand Forks Public Schools.

Occupancy: • Building was occupied

Building type: • Public school

Approximate age of building: • 70-75 years

Interior finishes: • Plaster walls • Suspended ceiling tiles • Carpet flooring

HVAC system: • Hot water radiant

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



Classroom 10



Classroom 8



North hallway



Classroom 2



2nd floor hallway



Lunchroom



Library

Scope of work: • .

Sampling of surfaces via tape-lifts on suspect areas

Scope of work: • .

Measuring temperature and relative humidity indoors and outdoors

Scope of work: • .

Interpreting the results and providing recommendations

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.

• . .

TAPE LIFT SAMPLE:

These samples could be collected using clear adhesive tape or an adhesive slide for microscopic examination of suspect

stains, settled dust and spores. Tape lifts are an excellent, non-destructive method of sampling. The laboratory is usually able to determine if there is mold growth, a high concentration of settled spores, or just a normal background level.

Inspection Methods and Limitations

Statement of Limitations: • .

The following 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. This report addresses only those areas physically inspected and sampled.

Nordic Environmental 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. Nordic Environmental is neither an insurer nor guarantor against water problems, mold problems or other defects at the Subject Property and improvements, systems or components inspected. Nordic Environmental makes no warranty, expressed or implied as to the fitness for use of condition of the systems or components inspected. Nordic Environmental 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 actions may be necessary and will be determined by the remediation company chosen by the property owners or other responsible party.

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. • .

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

615 North 25th St, Grand Forks, ND January 28, 2020

Report No. 6909

www.nordiccompaniesinc.com

MOLD

APPENDIX

OrderID: 162001899



EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

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: ☒ Same ☐ 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: WEST			
Please Provide Results: ☐ Fax ☒ E-mail		PO#	State Samples Taken:
Turnaround Time (TAT) Options* - Please Check			
☐ 3 Hour ☐ 6 Hour ☒ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 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)			
- M001 Air-O-Cell - M049 BioSIS - M030 Micro 5 - M173 Allegro M2 - M003 Burkard - M174 MoldSnap - M004 Allergenco - M043 Cyclex - M176 Relle Smart - M032 Allergenco-D - M002 Cyclex-d - M130 Via-Cell - M172 Versa Trap			
Other Microbiology Test Codes			
- 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 - 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 - 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
2860 9333	CLASS ROOM 10	AIR	M001
2860 9337	CLASS ROOM 8	AIR	M001
2860 9306	CLASS ROOM 2	AIR	M001
2860 9328	NORTH HALLWAY	AIR	M001
2860 9324	2ND FLOOR HALLWAY	AIR	M001
2860 9319	LUNCH ROOM	AIR	M001
2860 9320	LIBRARY	AIR	M001
001	WEST WALL LIBRARY	TAPE	M041
2860 9372	TUNNE NEAR CLASSROOM 2	AIR	M001
002	PIPE INSULATION NEAR CLASSROOM 2	Bulk	M041
Volume/Area		Date/Time Collected	
150 L		1/28/20 8:15am	
150 L		1/28/20 8:28am	
150 L		1/28/20 8:40am	
150 L		1/28/20 8:52am	
150 L		1/28/20 9:05am	
150 L		1/28/20 9:18am	
150 L		1/28/20 9:31am	
---		1/28/20 9:40am	
10452		1/28/20 10:08	
---		1/28/20 9:55am	
Client Sample # (s):		Total # of Samples:	
Relinquished (Client):		Date:	Time:
Received (Client):		Date:	Time:
Comments:			

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

615 North 25th St, Grand Forks, ND January 28, 2020

Report No. 6909

www.nordiccompaniesinc.com

MOLD

APPENDIX

OrderID: 162001899



EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

EMSL Order Number (Lab Use Only):

1899

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

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

Company : Nordic Companies						EMSL-Bill to: ☒ Same ☐ 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 #:			E-mail Address: lars@nordiccompaniesinc.com; miranda@nordiccompaniesinc.com					
Telephone #: 701-566-1446														
Project Name/ Number: WEST														
Please Provide Results: ☐ Fax ☒ E-mail						PO#		State Samples Taken:						
Turnaround Time (TAT) Options* - Please Check														
☐ 3 Hour ☐ 6 Hour ☒ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 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)														
• M001 Air-O-Cell • M049 BioSIS • M030 Micro 5			• M173 Allegro M2 • M003 Burkard • M174 MoldSnap			• M004 Allergenco • M043 Cyclax • M176 Relle Smart			• M032 Allergenco-D • M002 Cyclax-d • M130 Via-Cell			• M172 Versa Trap		
Other Microbiology Test Codes														
• 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				• 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				• 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 9346		TUNNEL NEAR CLASSROOM 8		AIR		M001		45 L		1/28/20 10:15am				
003		PIPE INSULATION NEAR CLASSROOM 8		BULK		M041		-		1/28/20 10:28am				
Client Sample # (s):				Total # of Samples: 12										
Relinquished (Client): [Signature]				Date: 1/28/20				Time:						
Received (Client): [Signature]				Date:				Time:						
Comments:														

Controlled Document – Microbiology COC – R2 – 1/12/2019

APPENDIX

615 North 25th St, Grand Forks, ND January 28, 2020

Report No. 6909

www.nordiccompaniesinc.com

MOLD

APPENDIX



EMSL Analytical, Inc.

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

EMSL Order: 162001899

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: 01/28/2020

Received: 01/29/2020

Analyzed: 01/29/2020

Project: West

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

Lab Sample Number:	162001899-0001			162001899-0002			162001899-0003		
Client Sample ID:	2860 9333			2860 9337			2860 9306		
Volume (L):	150			150			150		
Sample Location:	Classroom 10			Classroom 8			Classroom 2		
Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria (Ulocladium)	1*	7*	4.8	-	-	-	1*	7*	9.5
Ascospores	1	20	13.6	-	-	-	-	-	-
Aspergillus/Penicillium	5	100	68	2	40	85.1	1	20	27
Basidiospores	1	20	13.6	-	-	-	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	1*	7*	14.9	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	2	40	54.1
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	1*	7*	9.5
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Total Fungi	8	147	100	3	47	100	5	74	100
Hyphal Fragment	-	-	-	3	60	-	2	40	-
Insect Fragment	1*	7*	-	5	100	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	21	-	-	21	-	-	21	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	1	-	-	2	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	2	-	-	3	-

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

Nathan Husted

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: 01/29/2020 18:14:24

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

MIC_M001_0002_0001 1.71 Printed: 01/29/2020 18:14 PM

Page 1 of 3

APPENDIX

615 North 25th St, Grand Forks, ND January 28, 2020

Report No. 6909

www.nordiccompaniesinc.com

MOLD

APPENDIX



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: 162001899

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: 01/28/2020

Received: 01/29/2020

Analyzed: 01/29/2020

Project: West

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

Lab Sample Number: Client Sample ID: Volume (L): Sample Location	162001899-0004 2860 9328 150 North Hallway			162001899-0005 2860 9324 150 2nd Floor Hallway			162001899-0006 2860 9319 150 Lunch Room		
Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	6	100	55.6	4	80	47.9	1	20	50
Basidiospores	2	40	22.2	3	60	35.9	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	2	40	22.2	1	20	12	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	1*	7*	4.2	1	20	50
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Total Fungi	10	180	100	9	167	100	2	40	100
Hyphal Fragment	-	-	-	-	-	-	1	20	-
Insect Fragment	1	20	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	21	-	-	21	-	-	21	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	3	-	-	2	-	-	2	-

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

Nathan Husted

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: 01/29/2020 18:14:24

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

MIC_M001_0002_0001 1.71 Printed: 01/29/2020 18:14 PM

Page 2 of 3

APPENDIX

615 North 25th St, Grand Forks, ND January 28, 2020

Report No. 6909

www.nordiccompaniesinc.com

MOLD

APPENDIX



EMSL Analytical, Inc.

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

EMSL Order: 162001899

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: 01/28/2020

Received: 01/29/2020

Analyzed: 01/29/2020

Project: West

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

Lab Sample Number: Client Sample ID: Volume (L): Sample Location	162001899-0007 2860 9320 150 Library			162001899-0008 2860 9372 45 Tunnel Near Classroom 2			162001899-0009 2860 9346 45 Tunnel Near Classroom 8		
Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria (Ulocladium)	1	20	2.7	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	28	590	80.1	299	21000	89.7	256	18000	89.4
Basidiospores	1	20	2.7	-	-	-	1	70	0.3
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	3	60	8.1	34	2400	10.3	15	1100	5.5
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1	20	2.7	-	-	-	1	70	0.3
Pithomyces++	-	-	-	-	-	-	2	100	0.5
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	1	20	2.7	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	10	700	3.5
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Nigrospora	1*	7*	0.9	-	-	-	2	100	0.5
Total Fungi	36	737	100	333	23400	100	287	20140	100
Hyphal Fragment	2	40	-	1	70	-	4	300	-
Insect Fragment	-	-	-	-	-	-	1	70	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	21	-	-	70	-	-	70	-
Analyt. Sensitivity 300x	-	7*	-	-	22*	-	-	22*	-
Skin Fragments (1-4)	-	3	-	-	1	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	3	-	-	2	-	-	4	-

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

Nathan Husted

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: 01/29/2020 18:14:24

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

MIC_M001_0002_0001 1.71 Printed: 01/29/2020 18:14 PM

Page 3 of 3

APPENDIX

615 North 25th St, Grand Forks, ND January 28, 2020

Report No. 6909

www.nordiccompaniesinc.com

MOLD

APPENDIX



EMSL Analytical, Inc.

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

Order ID: 162001899
Customer ID: NORD25
Customer PO:
Project ID:

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

Phone: (701) 566-3257
Fax:
Collected Date: 01/28/2020
Received Date: 01/29/2020
Analyzed Date: 01/29/2020

Project ID: West

Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other Particulates from Bulk Samples (EMSL Method MICRO-SOP-200)

Lab Sample Number:	162001899-0011	162001899-0012			
Client Sample ID:	002	003			
Sample Location:	Pipe Insulation Near Classroom 2	Pipe Insulation Near Classroom 8			
Spore Types	Category	Category			
Alternaria (Ulocladium)	-	-			
Ascospores	-	-			
Aspergillus/Penicillium	-	-			
Basidiospores	-	-			
Bipolaris++	-	-			
Chaetomium	-	-			
Cladosporium	-	-			
Curvularia	-	-			
Epicoccum	-	-			
Fusarium	-	-			
Ganoderma	-	-			
Myxomycetes++	-	-			
Pithomyces++	-	-			
Rust	-	-			
Scopulariopsis/Microascus	-	-			
Stachybotrys/Memnoniella	-	*Medium*			
Unidentifiable Spores	-	-			
Zygomycetes	-	-			
Penicillium/Talaromyces	*Medium*	-			
Hyphal Fragment	-	-			
Insect Fragment	-	-			
Pollen	-	-			

Category: Count/per area analyzed - Rare: 1 to 10 Low: 11 to 100 Medium: 101 to 1000 High: >1000

- Denotes Not Detected.

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

* = Sample contains fruiting structures and/or hyphae associated with the spores.

Nathan Husted

Nathan Husted, Microbiology Lab Manager
or other Approved Signatory

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

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. 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. 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: 01/30/2020 11:26 AM

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

Test Report DEVER1-2.9.0 Printed 01/30/2020 11:26 AM

Page 1 of 2

APPENDIX

615 North 25th St, Grand Forks, ND January 28, 2020

Report No. 6909

www.nordiccompaniesinc.com

MOLD

APPENDIX



EMSL Analytical, Inc.

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

Order ID: 162001899
Customer ID: NORD25
Customer PO:
Project ID:

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

Phone: (701) 566-3257
Fax:
Collected Date: 01/28/2020
Received Date: 01/29/2020
Analyzed Date: 01/29/2020

Project ID: West

Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other Particulates from Tape Samples (EMSL Method MICRO-SOP-200)

Lab Sample Number:	162001899-0010				
Client Sample ID:	001				
Sample Location:	West Wall Library				
Spore Types	Category				
Alternaria (Ulocladium)	-				
Ascospores	-				
Aspergillus/Penicillium	-				
Basidiospores	-				
Bipolaris++	-				
Chaetomium	-				
Cladosporium	-				
Curvularia	-				
Epicoccum	-				
Fusarium	-				
Ganoderma	-				
Myxomycetes++	-				
Pithomyces++	-				
Rust	-				
Scopulariopsis/Microascus	-				
Stachybotrys/Memnoniella	*High*				
Unidentifiable Spores	-				
Zygomycetes	-				
Penicillium/Talaromyces	-				
Hyphal Fragment	-				
Insect Fragment	-				
Pollen	-				

Category: Count/per area analyzed - Rare: 1 to 10 Low: 11 to 100 Medium: 101 to 1000 High: >1000

- Denotes Not Detected.

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

* = Sample contains fruiting structures and/or hyphae associated with the spores.

Nathan Husted

Nathan Husted, Microbiology Lab Manager
or other Approved Signatory

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

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. 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. 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: 01/30/2020 11:26 AM

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

Test Report DEVER1-2.9.0 Printed 01/30/2020 11:26 AM

Page 2 of 2