



**Property Owner:** Northfield Police Department

**Inspection Address:**

138 Park Street

Northfield, New Hampshire

## **Microbial & Air Quality Assessment Report**

### **Background**

EOC Environmental is pleased to present this report for the mold inspection performed by Joseph P. Molloy. The inspection was performed at 138 Park Street, Northfield, New Hampshire on Thursday, January 25, 2024. This microbial analysis was requested to assess the air quality in the police department following air quality concerns by employees within the building.

### **Results:**

Presented below are the results of the mold inspection at the inspection address previously mentioned. Included in this section is a list of the samples taken, a description of the locations, and the results.

### **Visual Inspection and Observations**

A thorough visual inspection of the home was performed. No significant molds were present in the building. Minor visible dust and debris were present throughout the building. According to information obtained from the police chief, most complaints are made in the detectives office and in the evidence room.

### **Air Samples**

Five non-viable air samples were collected from the *Living Room, Basement and Outside* for ambient comparison. Air Samples were collected using an IAQ15 Connect Mold Sampling Pump. Prior to collection of samples, the pump was calibrated to a flow rate of 15 liters per minute. Samples were collected for a total of 5 minutes. The total volume of air collected was 75 Liters for each sample. Samples were collected on Air-O-Cell cassettes and sent via chain of custody to Hayes Microbial Consulting of Midlothian, VA. Samples were analyzed via light microscopy at the standardized magnification of 600X. The results are reported as total spores or particulates seen. The laboratory sample results are attached to this report. Results from the air sampling at the site are depicted in the table below.

**Table 1: Air Sample Spore Results - 1/18/2024**



Sample Number*	1 3731 2053			2 3731 1914			3 3731 2038			4 3731 2029			5 3731 2048		
Sample Name*	Outdoor			Secretary Office			Detective Office			Basement Common Room			Basement Evidence Room		
Sample Volume*	75 L			75 L			75 L			75 L			75 L		
Reporting Limit	13 spores/m <sup>3</sup>			13 spores/m <sup>3</sup>			13 spores/m <sup>3</sup>			13 spores/m <sup>3</sup>			13 spores/m <sup>3</sup>		
Background	2			2			2			2			2		
Fragments	ND			ND			ND			ND			ND		
Organism	Raw Count	Count / m <sup>3</sup>	% of Total	Raw Count	Count / m <sup>3</sup>	% of Total	Raw Count	Count / m <sup>3</sup>	% of Total	Raw Count	Count / m <sup>3</sup>	% of Total	Raw Count	Count / m <sup>3</sup>	% of Total
Alternaria															
Ascospores	9	120	45.0%	2	27	100.0%	1	13	50.0%	4	53	36.4%	2	27	50.0%
Aspergillus/Penicillium	3	40	15.0%							3	40	27.3%			
Basidiospores	3	40	15.0%				1	13	50.0%	2	27	18.2%	2	27	50.0%
Bipolaris/Drechslera															
Chaetomium															
Cladosporium	5	67	25.0%												
Curvularia															
Epicoccum										1	13	9.1%			
Fusarium															
Memnoniella															
Myxomyces										1	13	9.1%			
Pitheomyces															
Stachybotrys															
Stemphylium															
Torula															
Ulocladium															
<b>Total</b>	<b>20</b>	<b>267</b>	<b>100%</b>	<b>2</b>	<b>27</b>	<b>100%</b>	<b>2</b>	<b>26</b>	<b>100%</b>	<b>11</b>	<b>146</b>	<b>100%</b>	<b>4</b>	<b>54</b>	<b>100%</b>

Water Damage Indicator      Common Allergen      Slightly Higher than Baseline      Significantly Higher than Baseline      Ratio Abnormality

### Conclusions

EOC Environmental conducted a microbial investigation at 138 Park Street, Northfield, New Hampshire. The investigation conducted included a thorough visual inspection of the facility, and collection of non-viable air samples. While there are no federal or state guidelines for air quality, we rely on the American Conference of Government Industrial Hygienists (ACGIH) which suggests an average range of 50-500 corrected background spores per cubic meter and the California Healthy Building study suggests an average range of 100 to 1000 spores per cubic meter. Air quality is **Acceptable** in the building.

EOC Environmental recommends the following but not limited steps to help improve air quality within the building.

- Removal of carpet as it holds organic material, dust/debris and other common allergens.
- Use of air purifiers in the affected areas to help remove impurities within the air.
- Sealing of the hole between the basement and secretary office.
- Installation and use of robust dehumidifier or air exchanger in the basement to exhaust stale air and bring in fresh air.
- Use of robust air purifier to promote air cleaning and removal of impurities in the air.
- Elevated moisture in homes can cause surface mold growth on framing materials, contents, especially on organic containing materials such as leather and fabric contents. EOC recommends the installation and use of a robust dehumidifier to assure relative humidity remains below 50%.



**Limitations**

The contents of this report are based on the observations and samples collected by EOC Environmental. The results of any EOC report are subject to change based on temperature and moisture conditions, these results are a snapshot of the current conditions at the time of sampling. This report has been prepared at the request of the client and is your property. The contents of this report may be shared with affected parties, including contractors, building owners, and tenants. This report may not be altered by anyone other than the undersigned. The report contains information available to date, should additional information be provided, the report can be amended to reflect changes. EOC provides recommendations based on data collected by EOC and information collected from contractors, building owners/representatives, and tenants.

Please let me know if you have any questions or concerns.

Yours truly,

---

Joseph P. Molloy  
ACAC- CSMI-1812011  
EOC Environmental  
Joe.molloy@eocenvironmental.com  
Attachment #1: Laboratory Report



#24003790

Analysis Report prepared for

## EOC Environmental

17 Hickory Stick Lane  
Gilford, NH 03249

Phone: (603) 343-0195

**NPD0001**  
Northfield Police Department  
138 Park St.  
Northfield, NH

Collected: **January 25, 2024**  
Received: **January 29, 2024**  
Reported: **January 29, 2024**

We would like to thank you for trusting Hayes Microbial for your analytical needs!  
We received 5 samples by FedEx in good condition for this project on January 29th, 2024.

The results in this analysis pertain only to this job, collected on the stated date, and should not be used in the interpretation of any other job. Information supplied by the customer can affect the validity of results. These results apply only to the samples as received. This report may not be duplicated, except in full, without the written consent of Hayes Microbial Consulting, LLC.

All information provided to Hayes Microbial is confidential information relating to our customers and their clients. We will not disclose, copy, or distribute any information verbally or written, except to those designated by the customer(s). We take confidentiality very seriously. No changes to the distribution list will be made without the express consent of the customer.

This laboratory bears no responsibility for sample collection activities, analytical method limitations, or your use of the test results. Interpretation and use of test results are your responsibility. Any reference to health effects or interpretation of mold levels is strictly the opinion of Hayes Microbial. In no event, shall Hayes Microbial or any of its employees be liable for lost profits or any special, incidental or consequential damages arising out of the use of these test results.

A handwritten signature in black ink that reads 'Stephen A. Hayes'.

Steve Hayes, BSMT(ASCP)  
Laboratory Director  
Hayes Microbial Consulting, LLC.



EPA Laboratory ID: VA01419



Lab ID: #188863



DPH License: #PH-0198

**Joe Molloy**  
**EOC Environmental**  
 17 Hickory Stick Lane  
 Gilford, NH 03249  
 (603) 343-0195

**NPD0001**  
 Northfield Police Department  
 138 Park St.  
 Northfield, NH

**#24003790**

**Spore Trap**  
 SOP - HMC#101

Sample Number*	1 3731 2053			2 3731 1914			3 3731 2038			4 3731 2029		
Sample Name*	Outdoor			Secretary Office			Detective Office			Basement Common Room		
Sample Volume*	75 L			75 L			75 L			75 L		
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Background	2			2			2			2		
Fragments	ND			ND			ND			ND		
Organism	Raw Count	Count / m <sup>3</sup>	% of Total	Raw Count	Count / m <sup>3</sup>	% of Total	Raw Count	Count / m <sup>3</sup>	% of Total	Raw Count	Count / m <sup>3</sup>	% of Total
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Stachybotrys												
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Water Damage Indicator      Common Allergen      Slightly Higher than Baseline      Significantly Higher than Baseline      Ratio Abnormality

\* indicates data provided by the customer

Collected: Jan 25, 2024

Received: Jan 29, 2024

Reported: Jan 29, 2024



Project Analyst:  
 Ronzo Lee, *Ronzo Lee*

Date:  
 01 - 29 - 2024

Reviewed By:  
 Steve Hayes, BSMT *Stephen N. Hayes*

Date:  
 01 - 29 - 2024

3005 East Boundary Terrace, Suite F. Midlothian, VA. 23112

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Page: 2 of 5

**Joe Molloy**  
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 17 Hickory Stick Lane  
 Gilford, NH 03249  
 (603) 343-0195

**NPD0001**  
 Northfield Police Department  
 138 Park St.  
 Northfield, NH

**#24003790**

**Spore Trap**  
 SOP - HMC#101

Sample Number*	5		3731 2048
Sample Name*	Basement Evidence Room		
Sample Volume*	75 L		
Reporting Limit	13 spores/m <sup>3</sup>		
Background	2		
Fragments	ND		
Organism	Raw Count	Count / m <sup>3</sup>	% of Total
Alternaria			
Ascospores	2	27	50.0%
Aspergillus Penicillium			
Basidiospores	2	27	50.0%
Bipolaris Drechslera			
Chaetomium			
Cladosporium			
Curvularia			
Epicoccum			
Fusarium			
Memnoniella			
Myxomycetes			
Pithomyces			
Stachybotrys			
Stemphylium			
Torula			
Ulocladium			
<b>Total</b>	<b>4</b>	<b>54</b>	<b>100%</b>

Water Damage Indicator      Common Allergen      Slightly Higher than Baseline      Significantly Higher than Baseline      Ratio Abnormality

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Collected: <b>Jan 25, 2024</b>	Received: <b>Jan 29, 2024</b>	Reported: <b>Jan 29, 2024</b>	
Project Analyst: Ronzo Lee, <i>Ronzo Lee</i>	Date: <b>01 - 29 - 2024</b>	Reviewed By: Steve Hayes, BSMT <i>Stephen N. Hayes</i>	Date: <b>01 - 29 - 2024</b>

**Spore Trap Information**

<b>Reporting Limit</b>	The Reporting Limit is the lowest number of spores that can be detected based on the total volume of the sample collected and the percentage of the slide that is counted. At Hayes Microbial, 100% of the slide is read so the LOD is based solely on the total volume. Raw spore counts that exceed 500 spores will be estimated.					
<b>Blanks</b>	Results have not been corrected for field or laboratory blanks.					
<b>Background</b>	<p>The Background is the amount of debris that is present in the sample. This debris consists of skin cells, dirt, dust, pollen, drywall dust and other organic and non-organic matter. As the background density increases, the likelihood of spores, especially small spores such as those of <i>Aspergillus</i> and <i>Penicillium</i> may be obscured. The background is rated on a scale of 1 to 5 and each level is determined as follows:</p> <p><b>NBD:</b> No background detected due to possible pump or cassette malfunction. Recollect sample. (Field Blanks will display NBD)</p> <p><b>1 :</b> &lt;5% of field occluded. No spores will be uncountable.  <b>2 :</b> 5-25% of field occluded.  <b>3 :</b> 25-75% of field occluded.  <b>4 :</b> 75-90% of field occluded.  <b>5 :</b> &gt;90% of field occluded. Suggested recollection of sample.</p>					
<b>Fragments</b>	Fragments are small pieces of fungal mycelium or spores. They are not identifiable as to type and when present in very large numbers, may indicate the presence of mold amplification.					
<b>Control Comparisons</b>	There are no national standards for the numbers of fungal spores that may be present in the indoor environment. As a general rule and guideline that is widely accepted in the indoor air quality field, the numbers and types of spores that are present in the indoor environment should not exceed those that are present outdoors at any given time. There will always be some mold spores present in "normal" indoor environments. The purpose of sampling and counting spores is to help determine whether an abnormal condition exists within the indoor environment and if it does, to help pinpoint the area of contamination. Spore counts should not be used as the sole determining factor of mold contamination. There are many factors that can cause anomalies in the comparison of indoor and outdoor samples due to the dynamic nature of both of those environments.					
<table border="1"> <tr><td>Water Damage Indicator</td></tr> <tr><td>Common Allergen</td></tr> <tr><td>Slightly Higher than Baseline</td></tr> <tr><td>Significantly Higher than Baseline</td></tr> <tr><td>Ratio Abnormality</td></tr> </table>	Water Damage Indicator	Common Allergen	Slightly Higher than Baseline	Significantly Higher than Baseline	Ratio Abnormality	<p><b>Blue:</b> These molds are commonly seen in conditions of prolonged water intrusion and usually indicate a problem.</p> <p><b>Green:</b> Although all molds are potential allergens, these are the most common allergens that may be found indoors.</p> <p><b>Orange:</b> The spore count is slightly higher than the outside count and may or may not indicate a source of contamination.</p> <p><b>Red:</b> The spore count is significantly higher than the baseline count and probably indicates a source of contamination.</p> <p><b>Violet:</b> The types of spores found indoors should be similar to the ones that were identified in the baseline sample. Significant increases (more than 25%) in the ratio of a particular spore type may indicate the presence of abnormal levels of mold, even if the total number of spores of that type is lower in the indoor environment than it was outdoors.</p>
Water Damage Indicator						
Common Allergen						
Slightly Higher than Baseline						
Significantly Higher than Baseline						
Ratio Abnormality						
<b>Color Coding</b>	Fungi that are present in indoor samples at levels lower than 200 per cubic meter are not color coded on the report, unless they are one of the water damage indicators.					
<b>Significant Figures</b>	Raw counts and column totals may reflect more than 2 significant figures, but results should only be considered significant to 2 figures.					

**Organism Descriptions**

**Ascospores**

**Habitat:** A large group consisting of more than 3000 species of fungi. Common plant pathogens and outdoor numbers become very high following rain. Most of the genera are indistinguishable by spore trap analysis and are combined on the report.

**Effects:** Health affects are poorly studied, but many are likely to be allergenic.

**Aspergillus|Penicillium**

**Habitat:** The most common fungi isolated from the environment. Very common in soil and on decaying plant material. Are able to grow well indoors on a wide variety of substrates.

**Effects:** This group contains common allergens and many can cause hypersensitivity pneumonitis. They may cause extrinsic asthma, and many are opportunistic pathogens. Many species produce mycotoxins which may be associated with disease in humans and other animals. Toxin production is dependent on the species, the food source, competition with other organisms, and other environmental conditions.

**Basidiospores**

**Habitat:** A common group of Fungi that includes the mushrooms and bracket fungi. They are saprophytes and plant pathogens. In wet conditions they can cause structural damage to buildings.

**Effects:** Common allergens and are also associated with hypersensitivity pneumonitis.

**Cladosporium**

**Habitat:** One of the most common genera worldwide. Found in soil and plant debris and on the leaf surfaces of living plants. The outdoor numbers are lower in the winter and often relatively high in the summer, especially in high humidity. The outdoor numbers often spike in the late afternoon and evening. Indoors, it can be found growing on textiles, wood, sheetrock, moist window sills and in HVAC supply ducts.

**Effects:** A common allergen, producing more than 10 allergenic antigens and a common cause of hypersensitivity pneumonitis.

**Epicoccum**

**Habitat:** It is found in soil and plant litter and is a plant pathogen. It can grow indoors on a variety of substrates, including paper and textiles and is commonly found on wet drywall.

**Effects:** It is a common allergen. No cases of infection have been reported in humans.

**Myxomycetes**

**Habitat:** Found on decaying plant material and as a plant pathogen.

**Effects:** Some allergenic properties reported, but generally pose no health concerns to humans.