

# CUMBERLAND ANALYTICAL LABORATORIES, INC.

“The Environmental Consultant”  
125 Frytown Road  
Carlisle, Pennsylvania 17015

Richard E. Roush (717) 379-3782

Lonnie R. Eslinger, Jr. (717) 386-1918

## PREPARED FOR:

Mr. Brian Miller, Facilities Supervisor  
Elizabethtown Area School District  
600 East High Street  
Elizabethtown, Pennsylvania 17022

## E-MAILED:

[brian\\_miller@etownschools.org](mailto:brian_miller@etownschools.org)

## INDOOR AIR QUALITY SURVEY REPORT FOR:

### Elizabethtown Area High School

600 East High Street in Elizabethtown, Pennsylvania 17022

### Elizabethtown Area Middle School

600 East High Street in Elizabethtown, Pennsylvania 17022

### East High Street Elementary School

800 East High Street in Elizabethtown, Pennsylvania 17022

### Bear Creek School

1459 Sheaffer Road in Elizabethtown, Pennsylvania 17022

### Bainbridge Elementary School

416 North Second Street in Bainbridge, Pennsylvania 17502

## Performed On:

August 13, 2025

**CALI PROJECT NUMBER: 25-1015-002**

**REPORT DATE:** August 18, 2025

**PERFORMED BY/REVIEWED BY:**



Richard E. Roush, CIAQM

Pennsylvania Asbestos Building Inspector/Management Planner

**Table of Contents**

EXECUTIVE SUMMARY: ..... 2

SURVEY RESULTS: ..... 2

RECOMMENDATIONS: ..... 2

**High School Non-Viable Mold Spore Graphic Chart: ..... 2**

High School Non-Viable Mold Spore Trap Sample Results ..... 3

**Middle School Non-Viable Mold Spore Graphic Chart: ..... 4**

Middle School Non-Viable Mold Spore Trap Sample Results ..... 5

**East High Elementary Non-Viable Mold Spore Graphic Chart: ..... 6**

East High Elementary Non-Viable Mold Spore Trap Sample Results ..... 7

**Bear Creek Non-Viable Mold Spore Graphic Chart:..... 8**

Bear Creek Non-Viable Mold Spore Trap Sample Results ..... 9

**Bainridge Elementary Non-Viable Mold Spore Graphic Chart: ..... 10**

Bainridge Elementary Non-Viable Mold Spore Trap Sample Results ..... 11

**OUTSIDE COMPARISON SAMPLE Non-Viable Mold Spore  
Graphic Chart:..... 12**

OUTSIDE COMPARISON SAMPLE Non-Viable Mold Spore Trap Sample  
Results ..... 13

EXPLANATION OF BACKGROUND DENSITIES: ..... 14

ORGANISM DESCRIPTIONS: ..... 14

MOLD (FUNGAL) NAME/DESCRIPTIONS DATA: ..... 15

STANDARDS FOR BACTERIAL/MOLD: ..... 17

METHOD AND ANALYSIS – AIR SAMPLING: ..... 18

DISCLAIMER: ..... 18

**EXECUTIVE SUMMARY:**

Cumberland Analytical Laboratories, Inc. (CALI) was contracted by the Elizabethtown Area School District to perform an Indoor Air Quality Survey at various schools within the district. This survey consisted of the collection of air samples for airborne fungal a total of 14 mold samples were collected and sent out for analyses.

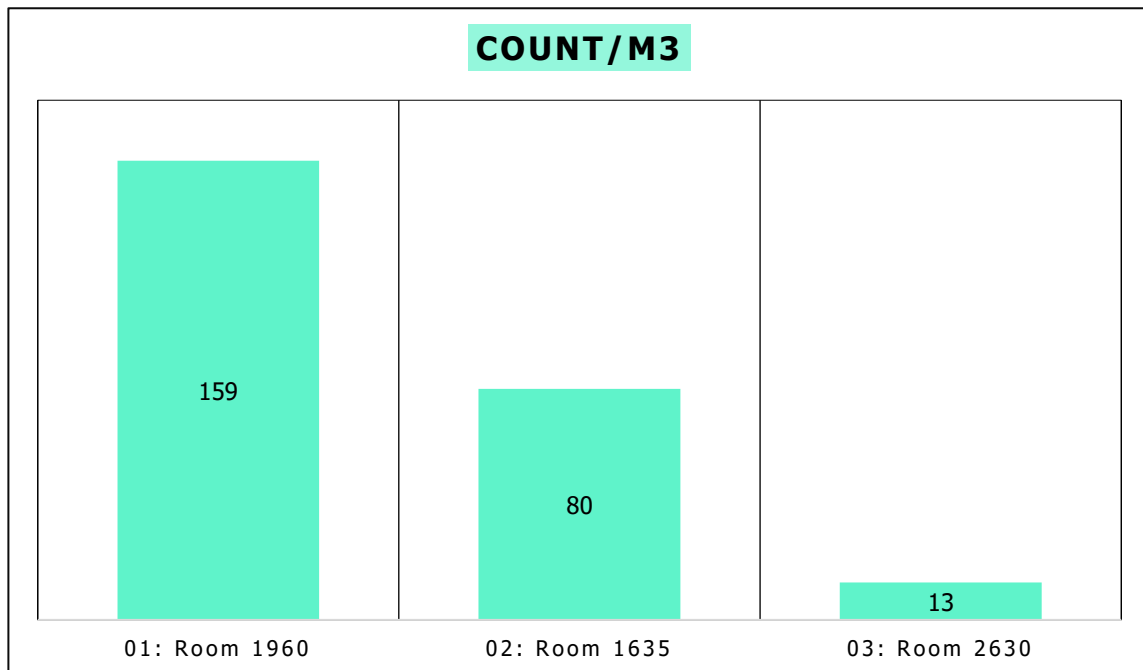
**SURVEY RESULTS:**

During the time of the survey performed on **August 13, 2025**, the results showed that **NO** unusual mold conditions existed. Please refer to the individual sample results for more detailed information regarding these individual samples.

**RECOMMENDATIONS:**

Based on the Laboratory Results of **August 15, 2025**, no recommendations are warranted at this time.

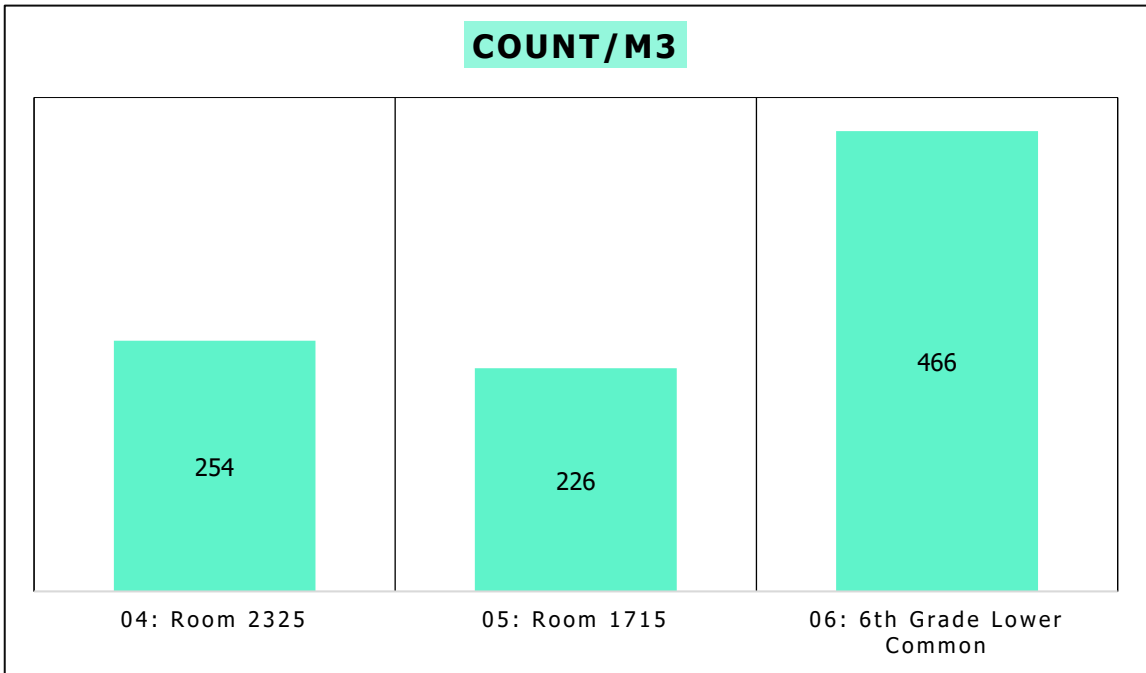
**High School Non-Viable Mold Spore Graphic Chart:**



**High School Non-Viable Mold Spore Trap Sample Results**

<b>SanAir ID Number</b>	<b>25053609-001</b>		<b>25053609-002</b>		<b>25053609-003</b>	
Analysis Using STL	STL 105C		STL 105C		STL 105C	
Sample Number	01		02		03	
Sample Identification	HS Room 1960		HS Room 1635		HS Room 2630	
Sample Type	Air Cassette Air-O-Cell		Air Cassette Air-O-Cell		Air Cassette Air-O-Cell	
Volume	75 Liters		75 Liters		75 Liters	
Analytical Sensitivity	13 Count/M <sup>3</sup>		13 Count/M <sup>3</sup>		13 Count/M <sup>3</sup>	
Background Density	1+		1+		1+	
<b>Other</b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>
Dander	35	467	20	267	25	333
Fibers	4	53	3	40	5	67
Mycelial Fragments	0	0	0	0	1	13
<b>Fungal Identification</b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>
Alternaria Species	1	13	0	0	0	0
Ascospores	1	13	1	13	0	0
Aspergillus/Penicillium	2	27	3	40	0	0
Basidiospores	1	13	2	27	1	13
Bipolaris Group	0	0	0	0	0	0
Cercospora Species	0	0	0	0	0	0
Cladosporium Species	3	40	0	0	0	0
Epicoccum Species	0	0	0	0	0	0
Nigrospora Species	0	0	0	0	0	0
Non-Specified Spore	0	0	0	0	0	0
Pithomyces Species	1	13	0	0	0	0
Rusts	1	13	0	0	0	0
Smuts/Myxomycetes	2	27	0	0	0	0
<b>TOTAL</b>	12	<b>159</b>	6	<b>80</b>	1	<b>13</b>

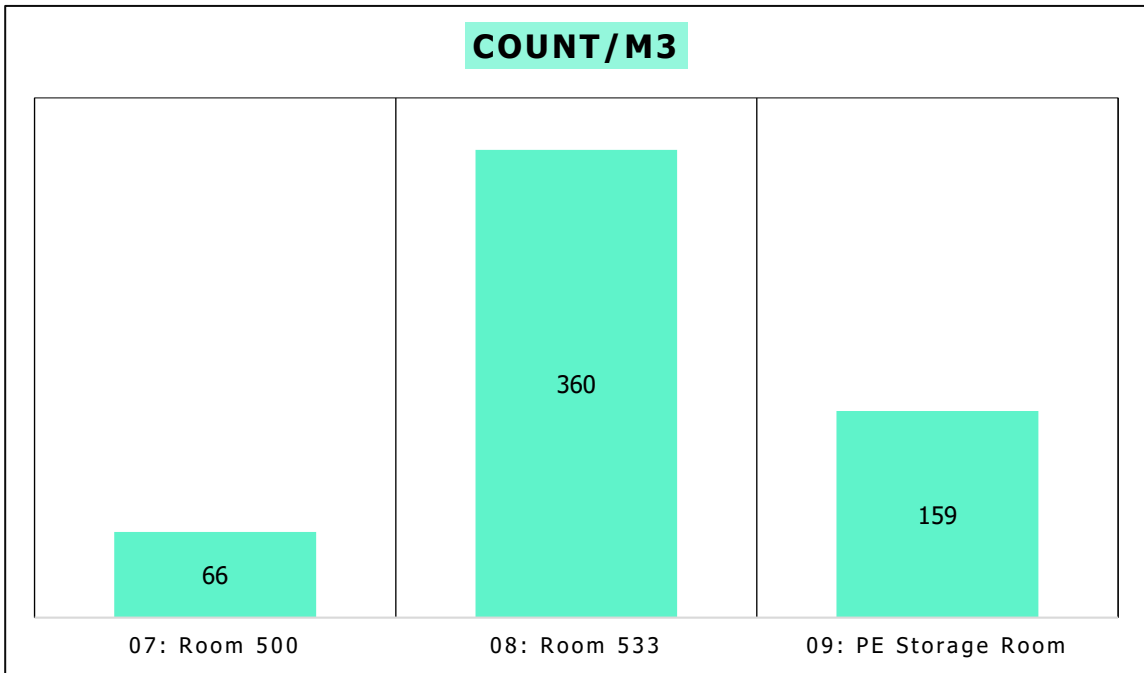
**Middle School Non-Viable Mold Spore Graphic Chart:**



**Middle School Non-Viable Mold Spore Trap Sample Results**

<b>SanAir ID Number</b>	<b>25053609-004</b>		<b>25053609-005</b>		<b>25053609-006</b>	
Analysis Using STL	STL 105C		STL 105C		STL 105C	
Sample Number	04		05		06	
Sample Identification	MS Room 2325		MS Room 1715		6 <sup>th</sup> Grade Lower Common MS	
Sample Type	Air Cassette Air-O-Cell		Air Cassette Air-O-Cell		Air Cassette Air-O-Cell	
Volume	75 Liters		75 Liters		75 Liters	
Analytical Sensitivity	13 Count/M <sup>3</sup>		13 Count/M <sup>3</sup>		13 Count/M <sup>3</sup>	
Background Density	1+		1+		2	
<b>Other</b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>
Dander	35	467	25	333	45	600
Fibers	5	67	3	40	6	80
Mycelial Fragments	0	0	0	0	1	13
<b>Fungal Identification</b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>
Alternaria Species	0	0	0	0	0	0
Ascospores	0	0	0	0	0	0
Aspergillus/Penicillium	3	40	8	107	14	187
Basidiospores	11	147	7	93	7	93
Bipolaris Group	1	13	1	13	1	13
Cercospora Species	0	0	0	0	0	0
Cladosporium Species	2	27	1	13	6	80
Epicoccum Species	2	27	0	0	0	0
Nigrospora Species	0	0	0	0	0	0
Non-Specified Spore	0	0	0	0	0	0
Pithomyces Species	0	0	0	0	7	93
Rusts	0	0	0	0	0	0
Smuts/Myxomycetes	0	0	0	0	0	0
<b>TOTAL</b>	19	<b>254</b>	17	<b>226</b>	35	<b>466</b>

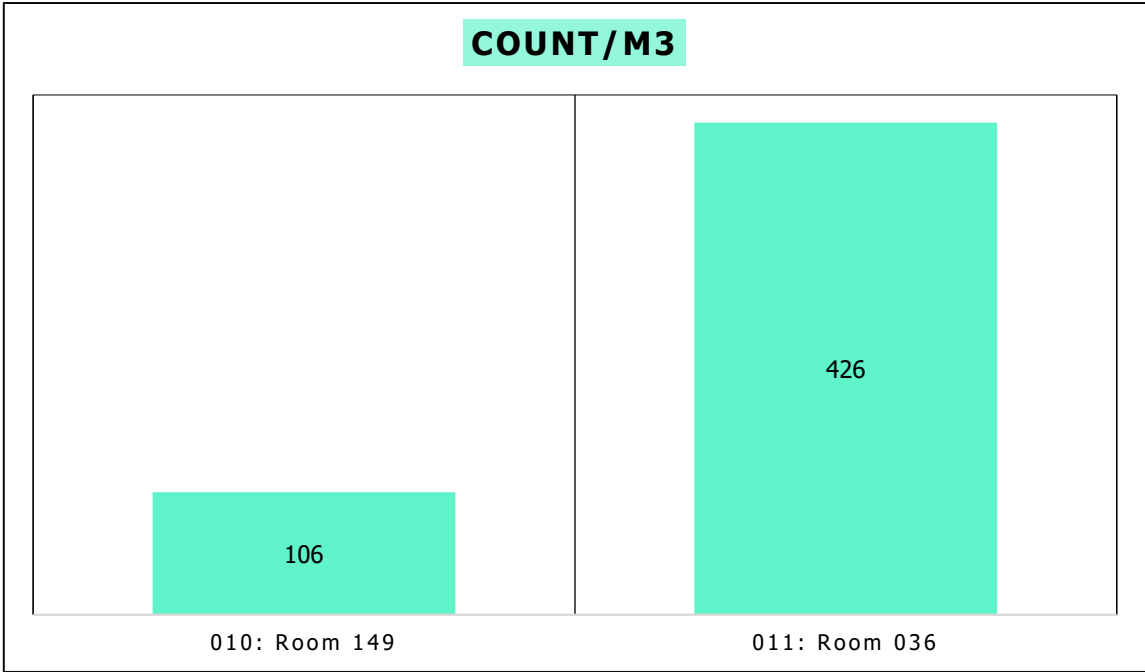
**East High Elementary Non-Viable Mold Spore Graphic Chart:**



**East High Elementary Non-Viable Mold Spore Trap Sample Results**

<b>SanAir ID Number</b>	<b>25053609-007</b>		<b>25053609-008</b>		<b>25053609-009</b>	
Analysis Using STL	STL 105C		STL 105C		STL 105C	
Sample Number	07		08		09	
Sample Identification	EH Room 500		EH Room 533		EH PE Storage Room	
Sample Type	Air Cassette Air-O-Cell		Air Cassette Air-O-Cell		Air Cassette Air-O-Cell	
Volume	75 Liters		75 Liters		75 Liters	
Analytical Sensitivity	13 Count/M <sup>3</sup>		13 Count/M <sup>3</sup>		13 Count/M <sup>3</sup>	
Background Density	1+		1+		2	
<b>Other</b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>
Dander	3	40	15	200	40	533
Fibers	1	13	3	40	5	67
Mycelial Fragments	0	0	0	0	1	13
<b>Fungal Identification</b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>
Alternaria Species	0	0	0	0	0	0
Ascospores	0	0	1	13	0	0
Aspergillus/Penicillium	0	0	6	80	1	13
Basidiospores	0	0	14	187	9	120
Bipolaris Group	1	13	0	0	0	0
Cercospora Species	0	0	0	0	0	0
Cladosporium Species	0	0	5	67	1	13
Epicoccum Species	3	40	1	13	0	0
Nigrospora Species	0	0	0	0	0	0
Non-Specified Spore	0	0	0	0	0	0
Pithomyces Species	0	0	0	0	1	13
Rusts	1	13	0	0	0	0
Smuts/Myxomycetes	0	0	0	0	0	0
<b>TOTAL</b>	<b>5</b>	<b>66</b>	<b>27</b>	<b>360</b>	<b>12</b>	<b>159</b>

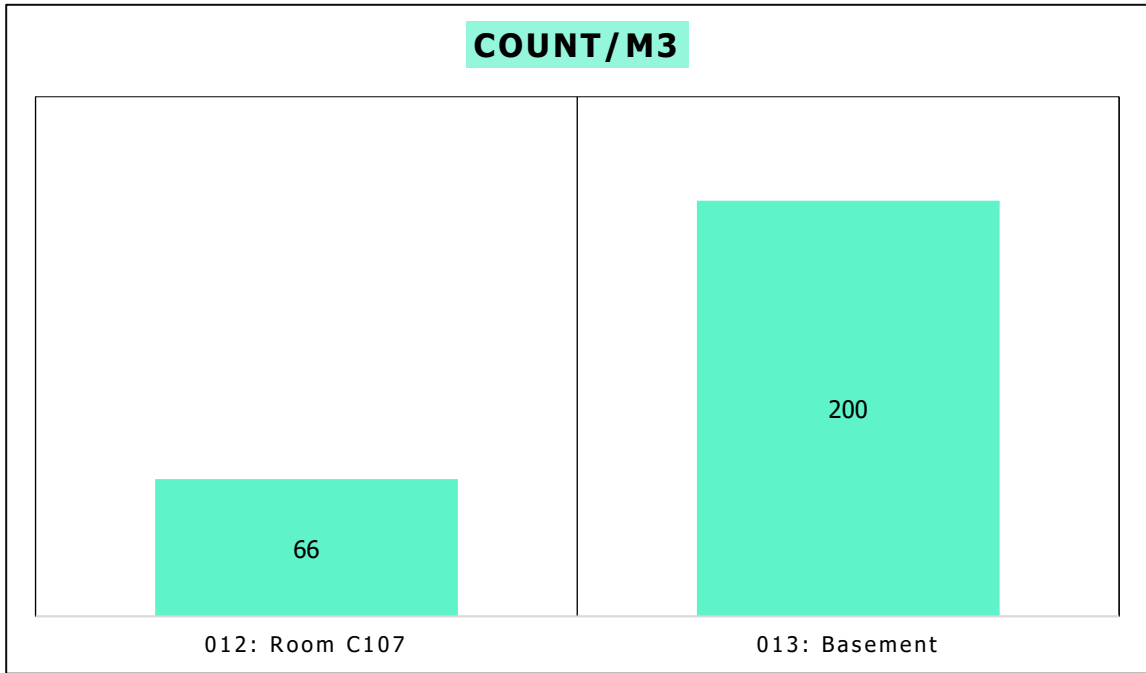
**Bear Creek Non-Viable Mold Spore Graphic Chart:**



**Bear Creek Non-Viable Mold Spore Trap Sample Results**

<b>SanAir ID Number</b>	<b>25053609-010</b>		<b>25053609-011</b>	
Analysis Using STL	STL 105C		STL 105C	
Sample Number	010		011	
Sample Identification	BC Room 149		BC Room 036	
Sample Type	Air Cassette Air-O-Cell		Air Cassette Air-O-Cell	
Volume	75 Liters		75 Liters	
Analytical Sensitivity	13 Count/M <sup>3</sup>		13 Count/M <sup>3</sup>	
Background Density	1+		2	
<b>Other</b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>
Dander	35	467	55	773
Fibers	4	53	6	80
Mycelial Fragments	1	13	3	40
<b>Fungal Identification</b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>
Alternaria Species	0	0	0	0
Ascospores	0	0	1	13
Aspergillus/Penicillium	1	13	3	40
Basidiospores	6	80	3	40
Bipolaris Group	0	0	0	0
Cercospora Species	0	0	0	0
Cladosporium Species	1	13	2	27
Epicoccum Species	0	0	1	13
Nigrospora Species	0	0	0	0
Non-Specified Spore	0	0	20	267
Pithomyces Species	0	0	1	13
Rusts	0	0	1	13
Smuts/Myxomycetes	0	0	0	0
<b>TOTAL</b>	<b>8</b>	<b>106</b>	<b>32</b>	<b>426</b>

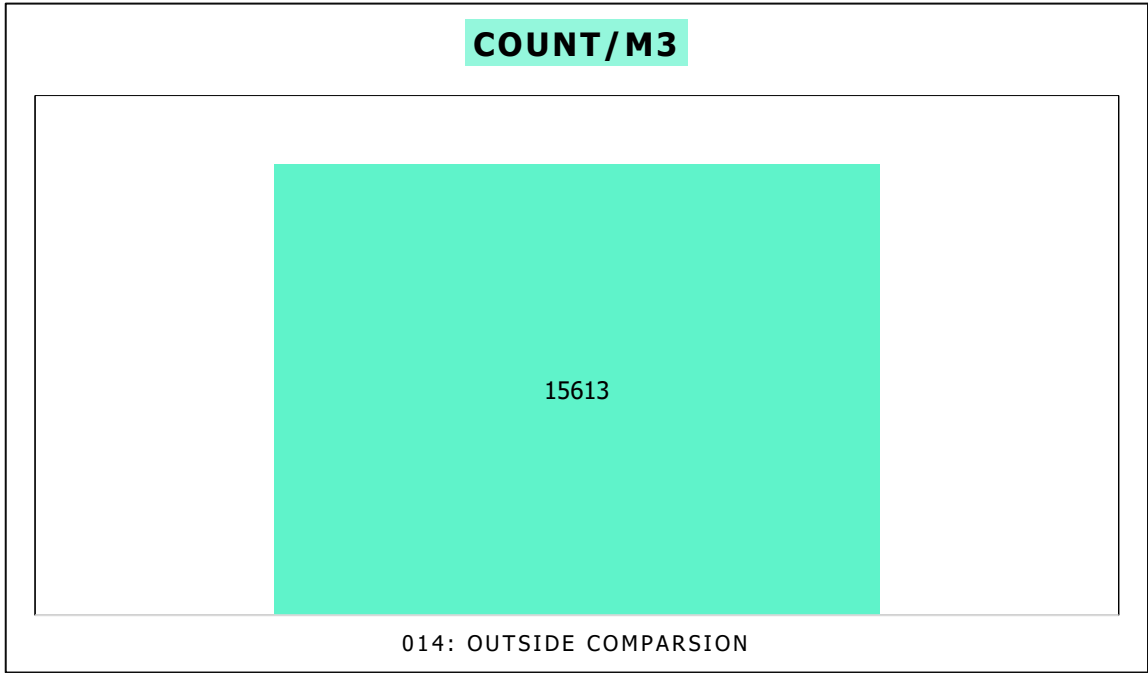
**Bainridge Elementary Non-Viable Mold Spore Graphic Chart:**



**Bainridge Elementary Non-Viable Mold Spore Trap Sample Results**

<b>SanAir ID Number</b>	<b>25053609-012</b>		<b>25053609-013</b>	
Analysis Using STL	STL 105C		STL 105C	
Sample Number	012		013	
Sample Identification	BB C107		BB Basement	
Sample Type	Air Cassette Air-O-Cell		Air Cassette Air-O-Cell	
Volume	75 Liters		75 Liters	
Analytical Sensitivity	13 Count/M <sup>3</sup>		13 Count/M <sup>3</sup>	
Background Density	1+		2	
<b>Other</b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>
Dander	30	400	65	867
Fibers	4	53	6	80
Mycelial Fragments	1	13	0	0
<b>Fungal Identification</b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>
Alternaria Species	0	0	0	0
Ascospores	0	0	2	27
Aspergillus/Penicillium	0	0	1	13
Basidiospores	1	13	3	40
Bipolaris Group	3	40	0	0
Cercospora Species	0	0	0	0
Cladosporium Species	0	0	7	93
Epicoccum Species	0	0	0	0
Nigrospora Species	0	0	0	0
Non-Specified Spore	0	0	0	0
Pithomyces Species	1	13	2	27
Rusts	0	0	0	0
Smuts/Myxomycetes	0	0	0	0
<b>TOTAL</b>	<b>5</b>	<b>66</b>	<b>15</b>	<b>200</b>

**OUTSIDE COMPARISON SAMPLE Non-Viable Mold Spore Graphic Chart:**



**OUTSIDE COMPARISON SAMPLE Non-Viable Mold Spore Trap Sample Results**

<b>SanAir ID Number</b>	<b>25053609-014</b>	
Analysis Using STL	STL 105C	
Sample Number	014	
Sample Identification	<b>OUTSIDE COMPARISON SAMPLE</b>	
Sample Type	Air Cassette Air-O-Cell	
Volume	75 Liters	
Analytical Sensitivity	13 Count/M <sup>3</sup>	
Background Density	2+	
<b>Other</b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>
Dander	7	93
Fibers	1	13
Mycelial Fragments	0	0
<b>Fungal Identification</b>	<b>Raw Count</b>	<b>Count/ M<sup>3</sup></b>
Alternaria Species	0	0
Ascospores	37	493
Aspergillus/Penicillium	9	120
Basidiospores	1098	14640
Bipolaris Group	1	13
Cercospora Species	2	27
Cladosporium Species	20	267
Epicoccum Species	0	0
Nigrospora Species	1	13
Non-Specified Spore	0	0
Pithomyces Species	3	40
Rusts	0	0
Smuts/Myxomycetes	0	0
<b>TOTAL</b>	1171	<b>15613</b>

**EXPLANATION OF BACKGROUND DENSITIES:**

The background density of an air cassette aids in the overall interpretation of results as it indicates the level of background debris present (e.g., dander, pollen, fibers, insect parts, soot, fly ash, etc.). Excessive background debris may mask the presence of fungal spores thereby reducing the accuracy of the count. It may also serve as an alert that the volume of air pulled was too high or too low. The following table explains background densities.

Air Cassette Density	Amount of Particulate on Slide	Explanation
1	Insignificant	Should not skew any counts.
1+	Low	Should not skew any counts.
2	Low to Moderate	Should not skew any counts.
2+	Moderate to High	May cause occlusion of small spores.
3	High	May cause occlusion of small to medium spores.
3+	Very High	Will cause occlusion of spores.
4	Overloaded	Level of particulate too high to perform analysis.

**ORGANISM DESCRIPTIONS:**

The descriptions of the organisms presented are derived from various reference materials. The laboratory report is based on the data derived from the samples submitted and no interpretation of the data, as to potential, or actual, health effects resulting from exposure to the numbers of organisms found, can be made by laboratory personnel. Any interpretation of the potential health effects of the presence of this organism must be made by qualified professional personnel with firsthand knowledge of the sample site, and the problems associated with that site.

**DANDER** - Comprised of human and/or animal skin cells. Counts may be higher in carpeted rooms and in rooms with more traffic.

**Health Effects:** May cause allergies.

**FIBERS:** - This category can include clothing, carpet, and insulation fibers.

**MYCELIAL FRAGMENTS** - A mycelium (plural = mycelia) is the "body" of a fungus. It is a collective term for hyphae (singular = hypha), which are the tubular units of the mycelium usually composed of chitin. The terms hyphae and mycelial fragments are used interchangeably. [This information was referenced from the mycology text "The Fifth Kingdom"] In some cases a fungal identification cannot be obtained due to lack of sporulation. Only the mycelial fragments are present and cannot be identified without the distinguishing characteristics of the spores or the structures they grow from.

**Health Effects:** Allergic reactions may occur in the presence of spores (conidia) or mycelial/hyphal fragments.

**MOLD (FUNGAL) NAME/DESCRIPTIONS DATA:**

The descriptions of the organisms presented are derived from various reference materials. The laboratory report is based on the data derived from the samples submitted and no interpretation of the data, as to potential, or actual, health effects resulting from exposure to the numbers of organisms found, can be made by laboratory personnel. Any interpretation of the potential health effects of the presence of this organism must be made by qualified professional personnel with firsthand knowledge of the sample site, and the problems associated with that site.

**Alternaria Species** - This genus comprises a large number of saprobes and plant pathogens. It is one of the predominate airborne fungal spores indoor and outdoor. Outdoors it may be isolated from samples of soil, seeds, and plants. It is one of the more common fungi found in nature, extremely widespread and ubiquitous. Conidia are easily carried by the wind, with peak concentrations in the summer and early fall. It is commonly found in outdoor samples. It is often found in indoor environments, on drywall, ceiling tiles, in house dust, carpets, textiles, and on horizontal surfaces in building interiors. Often found on window frames. This genus also includes species that were once identified as *Ulocladium*. Genetic testing has shown that the two are not phylogenetically distinct, and as such have been combined.

**Health Effects:** In humans, it is recognized to cause allergic responses. Because of the large size of the spores, it can be deposited in the nose, mouth and upper respiratory tract, causing nasal septum infections. It has been known to cause Baker's asthma, farmer's lung, and hay fever. It has been associated with hypersensitivity pneumonitis, sinusitis, dermatomycosis, onychomycosis, subcutaneous phaeohiphomycosis, and invasive infection. Common cause of extrinsic asthma (immediate-type hypersensitivity: type I). Acute symptoms include edema and bronchospasms, chronic cases may develop pulmonary emphysema.

**Ascospores** - From the fungal Subphylum Ascomycotina. Ascospores are ubiquitous in nature and are commonly found in the outdoor environment. This class contains "sac fungi" and yeasts. Some ascospores can be identified by spore morphology, however; some care should be exercised with regard to specific identification. They are identified on tape lifts and non-viable analysis by the fact that they have no attachment scars and are sometimes enclosed in sheaths with or without sacs. Ascomycetes may develop both sexual and asexual stages. Rain and high humidity may help asci to release, and disperse ascospores, which is why during these weather conditions there is a great increase in counts.

**Health Effects:** This group contains possible allergens.

**Aspergillus/Penicillium** - These spores are easily aerosolized. Only through the visualization of reproductive structures can the genera be distinguished. Also included in this group may be spores of the genera *Acremonium*, *Phialophora*, *Verticillium*, *Paecilomyces*, *Talaromyces* etc. Small, round to ovoid spores of this group lack the necessary distinguishing characteristics when seen on non-viable examination.

**Health Effects:** Can cause a variety of symptoms including allergic reactions. Most symptoms occur if the individual is immunocompromised in some way (HIV, cancer, etc).

**MOLD (FUNGAL) NAME/DESCRIPTIONS DATA continued:**

**Basidiospores** - From the Subphylum Basidiomycotina which contains the mushrooms, shelf fungi, and a variety of other macrofungi. They are saprophytes, ectomycorrhizal fungi or agents of wood rot, which may destroy the structure wood of buildings. It is extremely difficult to identify a specific genera of mushrooms by using standard culture plate techniques. Some basidiomycete spores can be identified by spore morphology; however, some care should be exercised with regard to specific identification. The release of basidiospores is dependent upon moisture, and they are dispersed by wind.

**Health Effects:** Many have the potential to produce a variety of toxins. Members of this group may trigger Type I and III fungal hypersensitivity reactions. Rarely reported as opportunistic pathogens.

**Bipolaris Group** - This group ID is used to combine fungi that have similar conidia and cannot be distinguished based on only the microscopic morphology. Organisms included in this group are Bipolaris, Drechslera, Curvularia, Exserohilum and Helminthosporium. Curvularia is now included based on the renaming of several clinically significant species, originally classified as Bipolaris species, based on genetic sequencing reported in a study by Manamgoda et al. The organisms in this group are saprobic and isolated from soil and dead plant material. Many are considered plant pathogens.

**Health Effects:** This group of fungi includes isolates reported as causes of allergic fungal sinusitis. They produce type I fungal hypersensitivity in humans. Some clinically relevant species of Bipolaris have undergone taxonomic revision and are now classified as Curvularia species.

**Cercospora Species** - Plant pathogen. Cercospora tends to grow on leaves. (Genera of Hyphomycetes, 1980).

**Health Effects:** No data is available at this time.

**Cladosporium species** - The most commonly identified outdoor fungus. The outdoor numbers are reduced in the winter and are often high in the summer. Often found indoors in numbers less than outdoor numbers. It is commonly found on the surface of fiberglass duct liner in the interior of supply ducts. A wide variety of plants are food sources for this fungus. It is found on dead plants, woody plants, food, straw, soil, paint and textiles. Often found in dirty refrigerators and especially in reservoirs where condensation is collected, on moist window frames it can easily be seen covering the whole painted area with a velvety olive-green layer.

**Health Effects:** It is a common allergen. It can cause mycosis. Common cause of extrinsic asthma. Acute symptoms include edema and bronchospasms, chronic cases may develop pulmonary emphysema. Illnesses caused by this genus can include phaeohyphomycosis, chromoblastomycosis, hay fever and common allergies.

**Epicoccum Species** - It is found in plants, soil, grains, textiles, and paper products. Frequently isolated from air and occasionally occurs in house dust. It is a saprophyte and considered a weakly parasitic secondary invader of plants, moldy paper and textiles.

**Health Effects:** A common allergen. It also has the potential to produce type I fungal hypersensitivity reactions.

**MOLD (FUNGAL) NAME/DESCRIPTIONS DATA continued:**

**Nigrospora Species** - Has been isolated from air and soil samples. Usually found in plant material as a saprobe.

**Health Effects:** Not commonly associated with human infection. Reported cases typically involving immunocompromised patients.

**Non-Specified Spore** - This category is used for spore types without any differentiating characteristics for a more definitive classification.

**Pithomyces Species** - Grows on dead grass in pastures and decaying plant material.

**Health Effects:** Causes facial eczema in ruminants.

**Rusts** - From the group Uredinales, called Rusts due to the color of the spores, which are known for causing disease in plants.

**Health Effects:** No data is available at this time.

**Smuts/Myxomycetes** - Smuts and Myxomycetes are parasitic plant pathogens. They are typically grouped together due to their association with plants, the outdoors and because they share similar microscopic morphology.

**Health Effects:** Can produce type I fungal hypersensitivity reactions.

#### **STANDARDS FOR BACTERIAL/MOLD:**

There are no current Permissible Exposure Levels or Safe Levels established by OSHA or NIOSH. EPA has guidelines on mold remediation in schools, yet no clearance levels have been established. Molds are a major source of indoor allergens. There are no national standards for the number 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.

#### **STANDARDS FOR BACTERIAL/MOLD continued:**

Mold can also trigger asthma. Even when dead or unable to grow, mold can cause health effects such as allergic reactions. The types and severity of health effects associated with exposure to mold depend, in part, on the type of mold present and the extent of the occupants' exposure and existing sensitivities or allergies. Prompt and effective remediation of moisture problems is essential to minimize potential mold exposures and their potential health effects.

Statistically, total spore counts are always significantly correlated with counts conducted on Agar Plate samples. On average, total mold spore to culturable mold ratios are in the range of 10:1. A concentration dominated by one genus such as *Penicillium* or *Aspergillus* even at 10,000 Particles/m<sup>3</sup> is unacceptable. Total levels should not exceed 2,000 Particles/m<sup>3</sup>, and each individual count should not exceed 650 Particles/m<sup>3</sup>.

For remediation, a reduction of airborne spores based upon Pre and Post sampling, compared to exterior sample results, and no evidence of mold growth present is the goal.

#### **METHOD AND ANALYSIS – AIR SAMPLING:**

These Non-Viable Spore Trap Samples for fungal spores were collected according to the American Industrial Hygiene Association (AIHA) and laboratory protocol. Specifically, the air samples were collected using Allergenco-D collection cassettes and a high-volume pump calibrated to 15.0 liters per minute. Samples were delivered to SanAir Technologies Laboratory (North Chesterfield, Virginia) an AIHA accredited laboratory.

#### **DISCLAIMER:**

These samples were properly packaged and shipped to SanAir Technology Laboratory in North Chesterfield, VA. While CALI considers the results of the collected and analyzed samples to be reliable through laboratory certifications and accreditations, it assumes no responsibility for the accuracy of these results and assumes no responsibility or liability for the manner in which these results are used or interpreted.