



*Environmental Consulting Services*

7834 Forest Hill Avenue, Suite 7, Richmond, Virginia 23225  
ph 804.716.0560 fax 804.918.7098 web FranceEnv.com

January 27, 2024

**City of Richmond Public Schools**

Department of Facility Service  
1461 A Commerce Road  
Richmond, Virginia 23224

ATTN.: Mr. Ronald Hathaway, Jr.  
Director of Facilities

RE: Moisture & Mold Assessment Report  
***Barack Obama Elementary School (All Rooms)***  
3101 Fendall Avenue  
Richmond, Virginia 23222  
FEI Project Number: FEI-23MI639

Dear Mr. Hathaway:

In accordance with your request, a Moisture & Mold Assessment has been performed at the above reference academic facility. France Environmental, Inc. (FEI) is providing this letter report summarizing our findings and sample results from the fieldwork conducted on November 22, 2023. The investigation was performed by FEI Industrial Hygienists, Mr. Micheal D. Allshouse, Mrs. Christine K. Gyurik and Mr. Kshan X. Sims. An additional site visit was performed on December 29, 2023 by FEI Industrial Hygienist Mr. Micheal D. Allshouse to perform resampling of one area that previously showed an elevation of airborne fungi. A visual inspection was performed and another air samples was collected during the return visit.

The scope of this assessment was to test for identifiable conditions, if any, that may be affecting the quality of the air in the subject space. The assessment included a visual inspection and air sampling for fungi (mold). At the client's request, air samples were collected from each accessible classroom, office, and academic space within the building. Please find attached with this letter the Laboratory Results; Sample Location Drawing; Photographs of Site Conditions; and Fungal Types/Groups Chart for the air sampling performed.

**VISUAL OBSERVATIONS:**

France Environmental, Inc. performed a visual assessment of the interior areas of the subject spaces. The visual inspection was focused on potential indicators of Indoor Air Quality (IAQ) problems and specifically included areas of visible water damage and visible mold growth. Specific items of interest observed during the inspection are described below:

- Moisture and/or damaged stained lay-in ceiling tiles were observed throughout the building. Staining appears to be from HVAC Duct/Diffuser condensation and past or current pipe and/or roof leaks.
- Visible mold growth was observed throughout the Ceiling Mounted HVAC Units.
- Peeling paint and/or water damaged, indicating being "Dry" with the use of the Moisture Meter, ceilings were observed in the following areas: Rooms 203, 204, 206 and 207.

### **TOTAL FUNGAL AIR SAMPLING:**

On November 22, 2023, FEI collected a total of thirty-eight (38) airborne fungal (mold) spore samples from the following areas:

- All Classrooms, Offices, Common Areas, Kitchen, Cafeteria, Auditorium, Break Rooms, and Media Center.
- Two (2) exterior samples were collected outside the building for comparison purposes. These samples were collected throughout the day and included a pre-sample before interior air samples were collected, and a post interior air sample.

The air samples were collected at an airflow rate of five (5) liters per minute for five (5) minutes totaling twenty-five (25) liters of air.

### ***The results of the fungi samples collected and analyzed are as follows:***

- The results of the air samples collected **did** indicate airborne fungal amplification when compared to the outside building samples at the time of the air sampling. **Room 308** did have elevated spore counts of **Basidiospores** when compared to the outside building samples. However, this room did not have any visual signs of concern. FEI returned to the site, conducted a second visual inspection of Room 308 and collected another air sample. There was no visible mold observed and the second air sample did not indicate airborne fungal amplification was occurring. *(Please Refer To “Mold Air Cassette Sample Analysis Laboratory Results” Appendix)*

Microbiological interpretation of sample results poses a challenge for the health and safety professionals as there are at present no strict numerical guidelines which are appropriate for assessing whether microbial levels inside buildings are “safe” or “normal” spore levels. There are currently no regulatory standards for evaluating airborne fungi concentrations for this or any other facility. As these organisms are present everywhere the standard of care is to perform a risk-based analysis. In general, industry standards effective interpretation is based on the comparison of indoor and outdoor samples. In “Clean” buildings, total airborne spore concentrations are generally less than outdoor spore concentrations with similar genera identified within each environment. The presence or absence of a few non-moisture indicator genera in small numbers (<1,000 Counts/M<sup>3</sup>) identified within interior building areas should not be considered abnormal. However, the presence of moisture indicator mold spores (**Chaetomium; Stachybotrys; Rhodotorula; Trichoderma; and Scopulariopsis**) in any significant amounts may indicate chronic moisture intrusion issues and confirmation that molds have colonized and are amplifying within the building. **Stachybotrys sp.** was found in trace amounts located at the 2<sup>nd</sup> Floor – Corridor next to Room 305. The area had no visual signs of concern.

### **TOTAL FUNGAL SURFACE SAMPLING:**

FEI collected a total of two (2) direct tape lift surface samples from the following areas:

- One (1) sample was collected from the suspect growth found on right side wood stage trim in Auditorium
- One (1) sample was collected from the suspect growth found on the ceiling mounted metal HVAC Unit in Room 305

The direct microscopic examination of the surface samples determines whether or not fungi is growing and/or still present on the surfaces sampled, and if so, what kinds of fungi was present.

***The results of the fungi surface sample collected and analyzed are as follows:***

- The results of the surface **sample T1** collected from the suspect growth on right side wood stage trim in Auditorium indicated the presence of ***Cladosporium sp., and Hyphae***. The estimated number of spores on the sample for these species was described by the laboratory as “Light” and “Heavy”. **Light** being defined as (10-100) spores, light hyphae – possible growth at sample site. **Heavy** which the laboratory defines as 200 or more spores observed. Definite Mold Growth. The ***Cladosporium sp.*** is Heavy. *(Please Refer To “Surface Sample Analysis Laboratory Results” Appendix)*
- The results of the surface **sample T2** collected from the black growth on a lay-in ceiling tile in Room 215 indicated the presence of ***Cladosporium sp., and Hyphae***. The estimated number of spores on the sample for these species was described by the laboratory as “Moderate”. **Moderate** being defined as (100-200) spores, moderate hyphae – probable growth at sample site. *(Please Refer To “Surface Sample Analysis Laboratory Results” Appendix)*

**COMFORT PARAMETER TESTING:**

FEI also conducted Comfort Parameter Sampling which included Temperature and Relative Humidity by utilizing electronic recording monitors (EXTECH Model 445580 Humidity/Temperature Pen). Measurements were collected throughout the building during the inspection. Description of recommended levels and comfort parameter results are found below.

***TEMPERATURE (T)***

The measurement of the air temperature is used to determine comfort level parameters associated with the indoor environment. The measuring device was used to collect the temperature in each of the rooms inspected. The American Society of Heating, Refrigerating and Air-conditioning Engineers, Inc. (ASHRAE) provides guidance on comfort ranges for temperature depending on the season. These numbers generally range from 68 to 75 Degrees Fahrenheit (°F) during the winter months and from 73°F to 79°F during the summer months. These ranges should be acceptable for sedentary or slightly active persons. The temperature measured in the building ranged from 69.4°F to 75.9°F. The temperatures measured outside were 66.9°F in the morning, 64.1°F mid-day and 63.5°F in the afternoon.

***RELATIVE HUMIDITY (RH)***

Measurement of the Relative Humidity are used to indicate comfort level parameters associated with the indoor air. Overly dry or overly humid air are indicators of air quality issues caused by the HVAC system. ASHRAE has set standards that present guidelines for human occupation. Relative Humidity levels below 30% are associated with increased discomfort and drying of the mucus membranes and skin. High humidity can result in condensation and the subsequent development of mold and fungi along with the increase of dust mite propagation. Ideal indoor Relative Humidity for winter months is 35%, while 50% is optimal in the summer months. Relative Humidity levels ≤65% are considered acceptable by ASHRAE standards. The Relative Humidity levels in the building at the time of the sampling ranged from 30.5% to 48.4%. The outside humidity readings were 47.0% in the morning, 49.4% mid-day and 50.6% in the afternoon.

**CONCLUSIONS/RECOMMENDATIONS:**

- The airborne fungal spore levels for the indoor air samples at the time of this sampling event **do not** indicate active amplification of fungal spores based on comparison to the outdoor fungal spore levels.
- Visible mold-impacted ceiling tiles observed in Room 215; and wood stage trim observed in the Auditorium (confirmed by surface sampling). It is recommended these ceiling tiles be removed and the surrounding ceiling grid surfaces; and wood trim cleaned in accordance with industry standard mold remediation procedures, such as those outlined in the U.S. Environmental Protection Agency (EPA) publication Mold Remediation in Schools and Commercial Buildings (September 2008).
- As part of an on-going maintenance program, it is recommended that water-stained ceiling tiles, when identified, be investigated to determine the water source and try and correct/reduce the source of the moisture.
- As part of the on-going maintenance & custodial activities, it is recommended that HVAC ceiling diffusers and wall mounted HVAC Units be cleaned (HEPA Vacuumed and wiped down) periodically throughout the year.
- To improve the perception of the buildings indoor air quality, the school system may consider replacing water stained and/or dirty ceiling tiles as an on-going maintenance item.
- As part of the on-going maintenance program, it is recommended HVAC filters and air filtration machines are maintained in good condition with preventative maintenance in accordance with the manufacturer's recommendations.

It is important to note that the reported microbial levels are only reflective of conditions at the time of this test and that microbial populations can vary over time, depending upon a number of conditions, including environmental factors, i.e., temperature and relative humidity. FEI, by virtue of providing the services described in this report, does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state or federal public agencies any conditions at the site that may present a potential danger to public health, safety, or the environment.

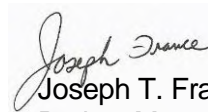
Thank you for choosing FEI as your consultant for this project. If you have any questions, or if we can be of additional service, please contact the undersigned at 804.716.0560.

Respectfully submitted,

**FRANCE ENVIRONMENTAL, INC.**



Micheal D. Allshouse  
Industrial Hygienist



Joseph T. France  
Project Manager

Attachments: Mold Air Cassettes/Tape Lift Analytical Laboratory Report  
Drawing Indicating Sample Locations  
Photographs of Site Conditions  
Fungal Types and Group Chart

**MOLD AIR CASSETTE/TAPE LIFT ANALYTICAL  
LABORATORY RESULTS**

**AmeriSci Bio-Chem**13635 GENITO ROAD  
MIDLOTHIAN, VIRGINIA 23112  
TEL: (804) 763-1200 • FAX: (804) 763-1800**Analyzed By:**  
Justin B. LivermanAmeriSci Job #:  
**323111130**  
FINAL REPORT**Client: France Environmental, Inc.****Address: 7834 Forest Hill Ave  
Suite 7  
Richmond, VA 23225****Client Job#: FEI-23MI639**  
**Client Job Name: City Of Richmond Public School  
Barack Obama Elementary School;  
3101 Fendall Avenue, Richmond,****Date Received: 11/27/23****Date Reported: 11/29/23****Air Cassette Analytical Report (SOP# 3.24.01)**

AmeriSci Number	323111130-01			323111130-02			323111130-03			323111130-04		
Sample Number	2918531			2918659			2918669			2918679		
Sample Name	Pre-Sampling Exterior Front of Building			Media Center			Basement Level Corridor By Mechanical Room			Room 101		
Analysis Date	11/29/2023			11/29/2023			11/29/2023			11/29/2023		
Volume (L)	25			25			25			25		
Limit of Detection (LOD) (Count/M <sup>3</sup> )	40			40			40			40		
Background Density	1			1			2			1		
<b>Other</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Pollen	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND
Fibers	40	n/a	1	40	n/a	1	320	n/a	8	ND	n/a	ND
Mycelial Fragments	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND
<b>Fungal Identification</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Alternaria sp.	ND			ND			ND			ND		
Ascospores	40	14	1	ND			ND			ND		
Aspergillus/Penicillium	ND			ND			ND			ND		
Basidiospores	240	86	6	ND			320	89	8	520	81	13
Cladosporium sp.	ND			ND			ND			80	13	2
Epicoccum sp.	ND			ND			ND			ND		
Myxomycetes/Periconia/Smuts	ND			ND			40	11	1	40	6	1
Stachybotrys sp.	ND			ND			ND			ND		
<b>Total Fungal Spores</b>	<b>280</b>	<b>100</b>	<b>7</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>360</b>	<b>100</b>	<b>9</b>	<b>640</b>	<b>100</b>	<b>16</b>

ND = None Detected



# AmeriSci Bio-Chem

13635 GENITO ROAD  
MIDLOTHIAN, VIRGINIA 23112  
TEL: (804) 763-1200 • FAX: (804) 763-1800

Analyzed By:  
Justin B. Liverman

AmeriSci Job #:  
**323111130**  
FINAL REPORT

**Client: France Environmental, Inc.**

**Client Job#:** FEI-23MI639

**Date Received:** 11/27/23

**Address:** 7834 Forest Hill Ave  
Suite 7  
Richmond, VA 23225

**Client Job Name:** City Of Richmond Public School  
Barack Obama Elementary School;  
3101 Fendall Avenue, Richmond,  
VA 23225

**Date Reported:** 11/29/23

## Air Cassette Analytical Report (SOP# 3.24.01)

AmeriSci Number	323111130-05			323111130-06			323111130-07			323111130-08		
Sample Number	2918678			2918668			2918658			2918530		
Sample Name	Room 102			Room 103			Teacher's Lounge			Cafeteria		
Analysis Date	11/29/2023			11/29/2023			11/29/2023			11/29/2023		
Volume (L)	25			25			25			25		
Limit of Detection (LOD) (Count/M <sup>3</sup> )	40			40			40			40		
Background Density	1			1			1			1		
<b>Other</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Pollen	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND
Fibers	ND	n/a	ND	40	n/a	1	40	n/a	1	40	n/a	1
Mycelial Fragments	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND
<b>Fungal Identification</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Alternaria sp.	ND			ND			ND			ND		
Ascospores	ND			40	9	1	ND			ND		
Aspergillus/Penicillium	ND			40	9	1	ND			ND		
Basidiospores	400	91	10	320	73	8	40	50	1	ND		
Cladosporium sp.	40	9	1	40	9	1	40	50	1	ND		
Epicoccum sp.	ND			ND			ND			ND		
Myxomycetes/Periconia/Smuts	ND			ND			ND			ND		
Stachybotrys sp.	ND			ND			ND			ND		
<b>Total Fungal Spores</b>	<b>440</b>	<b>100</b>	<b>11</b>	<b>440</b>	<b>100</b>	<b>11</b>	<b>80</b>	<b>100</b>	<b>2</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>

ND = None Detected



**Client: France Environmental, Inc.**

**Address: 7834 Forest Hill Ave  
Suite 7  
Richmond, VA 23225**

**Client Job#:** FEI-23MI639  
**Client Job Name:** City Of Richmond Public School  
Barack Obama Elementary School;  
3101 Fendall Avenue, Richmond,  
VA 23225

**Date Received:** 11/27/23  
**Date Reported:** 11/29/23

**Air Cassette Analytical Report (SOP# 3.24.01)**

AmeriSci Number	323111130-09			323111130-10			323111130-11			323111130-12		
Sample Number	2918561			2918559			2922972			2918667		
Sample Name	Kitchen			Room 209			Room 208			Guidance		
Analysis Date	11/29/2023			11/29/2023			11/29/2023			11/29/2023		
Volume (L)	25			25			25			25		
Limit of Detection (LOD) (Count/M <sup>3</sup> )	40			40			40			40		
Background Density	1			1			1			1		
<b>Other</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Pollen	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND
Fibers	120	n/a	3	80	n/a	2	40	n/a	1	40	n/a	1
Mycelial Fragments	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND
<b>Fungal Identification</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Alternaria sp.	ND			ND			ND			ND		
Ascospores	ND			ND			ND			ND		
Aspergillus/Penicillium	ND			ND			ND			ND		
Basidiospores	120	75	3	40	100	1	ND			ND		
Cladosporium sp.	40	25	1	ND			40	100	1	40	100	1
Epicoccum sp.	ND			ND			ND			ND		
Myxomycetes/Periconia/Smuts	ND			ND			ND			ND		
Stachybotrys sp.	ND			ND			ND			ND		
<b>Total Fungal Spores</b>	<b>160</b>	<b>100</b>	<b>4</b>	<b>40</b>	<b>100</b>	<b>1</b>	<b>40</b>	<b>100</b>	<b>1</b>	<b>40</b>	<b>100</b>	<b>1</b>

ND = None Detected





**AmeriSci Bio-Chem**

13635 GENITO ROAD  
MIDLOTHIAN, VIRGINIA 23112  
TEL: (804) 763-1200 • FAX: (804) 763-1800

**Analyzed By:**  
Justin B. Liverman

AmeriSci Job #:  
**323111130**  
FINAL REPORT

**Client: France Environmental, Inc.**

**Address: 7834 Forest Hill Ave  
Suite 7  
Richmond, VA 23225**

**Client Job#:** FEI-23MI639  
**Client Job Name:** City Of Richmond Public School  
Barack Obama Elementary School;  
3101 Fendall Avenue, Richmond,  
VA 23225

**Date Received:** 11/27/23  
**Date Reported:** 11/29/23

**Air Cassette Analytical Report (SOP# 3.24.01)**

AmeriSci Number	323111130-13			323111130-14			323111130-15			323111130-16		
Sample Number	2918677			2918666			2918676			2918549		
Sample Name	Nurse Room 207			Room 206			Room 205			Main Office		
Analysis Date	11/29/2023			11/29/2023			11/29/2023			11/29/2023		
Volume (L)	25			25			25			25		
Limit of Detection (LOD) (Count/M <sup>3</sup> )	40			40			40			40		
Background Density	1			1			1			1		
<b>Other</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Pollen	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND
Fibers	80	n/a	2	ND	n/a	ND	ND	n/a	ND	40	n/a	1
Mycelial Fragments	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND
<b>Fungal Identification</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Alternaria sp.	ND			ND			ND			ND		
Ascospores	ND			ND			ND			ND		
Aspergillus/Penicillium	ND			40	50	1	ND			ND		
Basidiospores	80	67	2	40	50	1	200	83	5	40	100	1
Cladosporium sp.	40	33	1	ND			40	17	1	ND		
Epicoccum sp.	ND			ND			ND			ND		
Myxomycetes/Periconia/Smuts	ND			ND			ND			ND		
Stachybotrys sp.	ND			ND			ND			ND		
<b>Total Fungal Spores</b>	<b>120</b>	<b>100</b>	<b>3</b>	<b>80</b>	<b>100</b>	<b>2</b>	<b>240</b>	<b>100</b>	<b>6</b>	<b>40</b>	<b>100</b>	<b>1</b>

ND = None Detected



**AmeriSci Bio-Chem**

13635 GENITO ROAD  
 MIDLOTHIAN, VIRGINIA 23112  
 TEL: (804) 763-1200 • FAX: (804) 763-1800

**Analyzed By:**  
 Justin B. Liverman

AmeriSci Job #:  
**323111130**  
 FINAL REPORT

**Client: France Environmental, Inc.**  
**Address: 7834 Forest Hill Ave**  
**Suite 7**  
**Richmond, VA 23225**

**Client Job#:** FEI-23MI639  
**Client Job Name:** City Of Richmond Public School  
 Barack Obama Elementary School;  
 3101 Fendall Avenue, Richmond,  
 VA 23225

**Date Received:** 11/27/23  
**Date Reported:** 11/29/23

**Air Cassette Analytical Report (SOP# 3.24.01)**

AmeriSci Number	323111130-17			323111130-18			323111130-19			323111130-20		
Sample Number	2918552			2918665			2918675			2915835		
Sample Name	First Floor Corridor by Main Office			Room 204			Room 205			Room 201		
Analysis Date	11/29/2023			11/29/2023			11/29/2023			11/29/2023		
Volume (L)	25			25			25			25		
Limit of Detection (LOD) (Count/M <sup>3</sup> )	40			40			40			40		
Background Density	1			1			1			1		
<b>Other</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Pollen	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND
Fibers	40	n/a	1	ND	n/a	ND	40	n/a	1	40	n/a	1
Mycelial Fragments	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND
<b>Fungal Identification</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Alternaria sp.	ND			40	14	1	ND			ND		
Ascospores	ND			ND			ND			ND		
Aspergillus/Penicillium	ND			40	14	1	ND			ND		
Basidiospores	ND			120	43	3	120	75	3	40	33	1
Cladosporium sp.	ND			80	29	2	40	25	1	80	67	2
Epicoccum sp.	ND			ND			ND			ND		
Myxomycetes/Periconia/Smuts	ND			ND			ND			ND		
Stachybotrys sp.	ND			ND			ND			ND		
<b>Total Fungal Spores</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>280</b>	<b>100</b>	<b>7</b>	<b>160</b>	<b>100</b>	<b>4</b>	<b>120</b>	<b>100</b>	<b>3</b>

ND = None Detected



**AmeriSci Bio-Chem**

13635 GENITO ROAD  
 MIDLOTHIAN, VIRGINIA 23112  
 TEL: (804) 763-1200 • FAX: (804) 763-1800

**Analyzed By:**  
 Justin B. Liverman

AmeriSci Job #:  
**323111130**  
 FINAL REPORT

**Client: France Environmental, Inc.**  
**Address: 7834 Forest Hill Ave**  
**Suite 7**  
**Richmond, VA 23225**

**Client Job#:** FEI-23MI639  
**Client Job Name:** City Of Richmond Public School  
 Barack Obama Elementary School;  
 3101 Fendall Avenue, Richmond,  
 VA 23225

**Date Received:** 11/27/23  
**Date Reported:** 11/29/23

**Air Cassette Analytical Report (SOP# 3.24.01)**

AmeriSci Number	323111130-21			323111130-22			323111130-23			323111130-24		
Sample Number	2915840			2915837			2915825			2915826		
Sample Name	Room 202			Auditorium			Room 310			Room 309		
Analysis Date	11/29/2023			11/29/2023			11/29/2023			11/29/2023		
Volume (L)	25			25			25			25		
Limit of Detection (LOD) (Count/M <sup>3</sup> )	40			40			40			40		
Background Density	1			1			1			1		
<b>Other</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Pollen	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND
Fibers	40	n/a	1	80	n/a	2	120	n/a	3	80	n/a	2
Mycelial Fragments	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND	40	n/a	1
<b>Fungal Identification</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Alternaria sp.	ND			ND			ND			ND		
Ascospores	ND			ND			ND			ND		
Aspergillus/Penicillium	ND			ND			80	20	2	40	17	1
Basidiospores	ND			40	33	1	320	80	8	160	67	4
Cladosporium sp.	ND			80	67	2	ND			40	17	1
Epicoccum sp.	ND			ND			ND			ND		
Myxomycetes/Periconia/Smuts	ND			ND			ND			ND		
Stachybotrys sp.	ND			ND			ND			ND		
<b>Total Fungal Spores</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>120</b>	<b>100</b>	<b>3</b>	<b>400</b>	<b>100</b>	<b>10</b>	<b>240</b>	<b>100</b>	<b>6</b>

ND = None Detected

**AmeriSci Bio-Chem**13635 GENITO ROAD  
MIDLOTHIAN, VIRGINIA 23112  
TEL: (804) 763-1200 • FAX: (804) 763-1800**Analyzed By:**  
Justin B. LivermanAmeriSci Job #:  
**323111130**  
FINAL REPORT**Client: France Environmental, Inc.****Address: 7834 Forest Hill Ave  
Suite 7  
Richmond, VA 23225****Client Job#: FEI-23MI639**  
**Client Job Name: City Of Richmond Public School  
Barack Obama Elementary School;  
3101 Fendall Avenue, Richmond,  
VA 23225****Date Received: 11/27/23****Date Reported: 11/29/23****Air Cassette Analytical Report (SOP# 3.24.01)**

AmeriSci Number	323111130-25			323111130-26			323111130-27			323111130-28		
Sample Number	2915827			2915828			2915829			2915831		
Sample Name	Room 308			Room 311			Room 312			Room 307		
Analysis Date	11/29/2023			11/29/2023			11/29/2023			11/29/2023		
Volume (L)	25			25			25			25		
Limit of Detection (LOD) (Count/M <sup>3</sup> )	40			40			40			40		
Background Density	2			1			2			1		
<b>Other</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Pollen	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND
Fibers	120	n/a	3	80	n/a	2	80	n/a	2	80	n/a	2
Mycelial Fragments	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND
<b>Fungal Identification</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Alternaria sp.	ND			ND			ND			ND		
Ascospores	ND			ND			ND			ND		
Aspergillus/Penicillium	160	4	4	40	100	1	ND			ND		
Basidiospores	3560	90	89	ND			40	33	1	40	50	1
Cladosporium sp.	240	6	6	ND			80	67	2	40	50	1
Epicoccum sp.	ND			ND			ND			ND		
Myxomycetes/Periconia/Smuts	ND			ND			ND			ND		
Stachybotrys sp.	ND			ND			ND			ND		
<b>Total Fungal Spores</b>	<b>3960</b>	<b>100</b>	<b>99</b>	<b>40</b>	<b>100</b>	<b>1</b>	<b>120</b>	<b>100</b>	<b>3</b>	<b>80</b>	<b>100</b>	<b>2</b>

ND = None Detected

**AmeriSci Bio-Chem**13635 GENITO ROAD  
MIDLOTHIAN, VIRGINIA 23112  
TEL: (804) 763-1200 • FAX: (804) 763-1800**Analyzed By:**  
Justin B. LivermanAmeriSci Job #:  
**323111130**  
FINAL REPORT**Client: France Environmental, Inc.****Address: 7834 Forest Hill Ave  
Suite 7  
Richmond, VA 23225****Client Job#:** FEI-23MI639  
**Client Job Name:** City Of Richmond Public School  
Barack Obama Elementary School;  
3101 Fendall Avenue, Richmond,  
VA 23225**Date Received:** 11/27/23**Date Reported:** 11/29/23**Air Cassette Analytical Report (SOP# 3.24.01)**

AmeriSci Number	323111130-29			323111130-30			323111130-31			323111130-32		
Sample Number	2915833			2915834			2915832			2915830		
Sample Name	Room 306			Room 305			Room 304			Room 313		
Analysis Date	11/29/2023			11/29/2023			11/29/2023			11/29/2023		
Volume (L)	25			25			25			25		
Limit of Detection (LOD) (Count/M <sup>3</sup> )	40			40			40			40		
Background Density	1			1			1			1		
<b>Other</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Pollen	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND
Fibers	40	n/a	1	ND	n/a	ND	ND	n/a	ND	80	n/a	2
Mycelial Fragments	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND
<b>Fungal Identification</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Alternaria sp.	ND			ND			ND			ND		
Ascospores	ND			ND			ND			ND		
Aspergillus/Penicillium	ND			80	22	2	80	15	2	40	33	1
Basidiospores	80	67	2	200	56	5	360	69	9	40	33	1
Cladosporium sp.	40	33	1	80	22	2	40	8	1	40	33	1
Epicoccum sp.	ND			ND			40	8	1	ND		
Myxomycetes/Periconia/Smuts	ND			ND			ND			ND		
Stachybotrys sp.	ND			ND			ND			ND		
<b>Total Fungal Spores</b>	<b>120</b>	<b>100</b>	<b>3</b>	<b>360</b>	<b>100</b>	<b>9</b>	<b>520</b>	<b>100</b>	<b>13</b>	<b>120</b>	<b>100</b>	<b>3</b>

ND = None Detected



**AmeriSci Bio-Chem**

13635 GENITO ROAD  
MIDLOTHIAN, VIRGINIA 23112  
TEL: (804) 763-1200 • FAX: (804) 763-1800

**Analyzed By:**  
Justin B. Liverman

AmeriSci Job #:  
**323111130**  
FINAL REPORT

**Client: France Environmental, Inc.**

**Address: 7834 Forest Hill Ave  
Suite 7  
Richmond, VA 23225**

**Client Job#:** FEI-23MI639  
**Client Job Name:** City Of Richmond Public School  
Barack Obama Elementary School;  
3101 Fendall Avenue, Richmond,  
VA 23225

**Date Received:** 11/27/23  
**Date Reported:** 11/29/23

**Air Cassette Analytical Report (SOP# 3.24.01)**

AmeriSci Number	323111130-33			323111130-34			323111130-35			323111130-36		
Sample Number	2915838			2915836			2915839			2915841		
Sample Name	Room 301			Room 302			Room 309			2nd Floor Corridor by Room 305		
Analysis Date	11/29/2023			11/29/2023			11/29/2023			11/29/2023		
Volume (L)	25			25			25			25		
Limit of Detection (LOD) (Count/M <sup>3</sup> )	40			40			40			40		
Background Density	1			1			1			2		
<b>Other</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Pollen	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND
Fibers	80	n/a	2	40	n/a	1	40	n/a	1	80	n/a	2
Mycelial Fragments	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND	ND	n/a	ND
<b>Fungal Identification</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Alternaria sp.	ND			ND			ND			ND		
Ascospores	ND			ND			ND			ND		
Aspergillus/Penicillium	ND			40	5	1	ND			40	20	1
Basidiospores	40	100	1	640	80	16	ND			40	20	1
Cladosporium sp.	ND			120	15	3	40	100	1	80	40	2
Epicoccum sp.	ND			ND			ND			ND		
Myxomycetes/Periconia/Smuts	ND			ND			ND			ND		
Stachybotrys sp.	ND			ND			ND			40	20	1
<b>Total Fungal Spores</b>	<b>40</b>	<b>100</b>	<b>1</b>	<b>800</b>	<b>100</b>	<b>20</b>	<b>40</b>	<b>100</b>	<b>1</b>	<b>200</b>	<b>100</b>	<b>5</b>

ND = None Detected

**AmeriSci Bio-Chem**13635 GENITO ROAD  
MIDLOTHIAN, VIRGINIA 23112  
TEL: (804) 763-1200 • FAX: (804) 763-1800**Analyzed By:**  
Justin B. LivermanAmeriSci Job #:  
**323111130**  
FINAL REPORT**Client: France Environmental, Inc.****Address: 7834 Forest Hill Ave  
Suite 7  
Richmond, VA 23225****Client Job#: FEI-23MI639**  
**Client Job Name: City Of Richmond Public School  
Barack Obama Elementary School;  
3101 Fendall Avenue, Richmond,  
VA 23225****Date Received: 11/27/23**  
**Date Reported: 11/29/23****Air Cassette Analytical Report (SOP# 3.24.01)**

AmeriSci Number		323111130-37			323111130-38								
Sample Number	2918563			2918540									
Sample Name	Room 104			Post-Sampling Exterior Front Of Building									
Analysis Date	11/29/2023			11/29/2023									
Volume (L)	25			25									
Limit of Detection (LOD) (Count/M <sup>3</sup> )	40			40									
Background Density	1			1									
<b>Other</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	
Pollen	ND	n/a	ND	ND	n/a	ND							
Fibers	ND	n/a	ND	ND	n/a	ND							
Mycelial Fragments	ND	n/a	ND	ND	n/a	ND							
<b>Fungal Identification</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	
Alternaria sp.	ND			ND									
Ascospores	40	17	1	ND									
Aspergillus/Penicillium	80	33	2	40	10	1							
Basidiospores	80	33	2	280	70	7							
Cladosporium sp.	40	17	1	80	20	2							
Epicoccum sp.	ND			ND									
Myxomycetes/Periconia/Smuts	ND			ND									
Stachybotrys sp.	ND			ND									
<b>Total Fungal Spores</b>	<b>240</b>	<b>100</b>	<b>6</b>	<b>400</b>	<b>100</b>	<b>10</b>							

ND = None Detected

Results relate only to the items tested and are reported mathematically to significant figures.

Name/Title: Justin B. Liverman / AnalystName/Title: Jill G. Carrillo / Analyst

Signature:

Reviewed By:

Date: 11/29/23Date: 11/29/23

**AmeriSci Bio-Chem**13635 GENITO ROAD  
MIDLOTHIAN, VIRGINIA 23112  
TEL: (804) 763-1200 • FAX: (804) 763-1800AmeriSci Job #:  
**323111130**  
FINAL REPORT**Client:** France Environmental, Inc.  
**Address:** 7834 Forest Hill Ave  
Suite 7  
Richmond, VA 23225**Client Job#:** FEI-23MI639  
**Client Job Name:** City Of Richmond Public School  
Barack Obama Elementary School;  
3101 Fendall Avenue, Richmond,**Date Received:** 11/27/23  
**Date Reported:** 11/29/23**Direct Fungal Identification (SOP# 3.21.01)****AmeriSci Job # 323111130-39****Sample #:** T1      **Sample description:** Auditorium Right Side Wood Stage Trim      **Analysis Date:** 11/29/23

<u>Fungal Identification</u>	<u>Estimated Amount</u>	<u>Comments</u>
Cladosporium sp.	Heavy	
Hyphae	Light	

**AmeriSci Job # 323111130-40****Sample #:** T2      **Sample description:** Room 305 Ceiling Mounted Metal HVAC U      **Analysis Date:** 11/29/23

<u>Fungal Identification</u>	<u>Estimated Amount</u>	<u>Comments</u>
Cladosporium sp.	Moderate	
Hyphae	Moderate	

Minimum reporting limit is no fungi detected

**Rare: 1 - 10 Spores****Light: 11 - 100 Spores****Moderate: 101 - 200 Spores****Heavy: 200+ Spores**

Results relate only to the items tested.

Name/Title: Justin B. Liverman / AnalystName/Title: Jill G. Carrillo / Analyst

Signature:

Reviewed By:

Date: 11/29/23Date: 11/29/23





13635 Genito Road Midlothian, VA 23112  
 (804) 763-1200 Phone / (804) 763-1800 Fax

323-11-1130

**Requested Services (X Boxes)**

Non-Viable		Culturable			
Spore Trap	Tape Bulk	Andersen, Swab, Bulk			

Fungal Spore Count and Genus ID, pollen, fiber & mycelial fragment count	Fungal Genus Identification - Qualitative	Environmental Fungal Genus ID & Enumeration	Environmental Bacterial Enumeration & Gram Stain ID	Fungal Speciation - Scheduled in Advance Only	Bacterial speciation - Scheduled in Advance Only						
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Contact Information**

Company: France Environmental PO#: \_\_\_\_\_  
 Address 7834 Forest Hill Ave Suite #7 Richmond, VA 23225  
 Results To: FEI Fax Results?  Fax#: \_\_\_\_\_  
 Phone: 804 716 0560 Email?  Email: FEI Distribution List

**Project Information** **Turnaround Time Codes**

City of Richmond Public Schools (CORPS)  
 Barack Obama Elementary School  
 Project Name: 3101 Fendall Avenue  
 Richmond, Virginia 23222  
 Proj. #: FEI-23M1639

**STD** - Standard: 2 Days (Non-viable)  
**24 - 24:** 24 Hours (Non-viable)  
**R** - Rush: 6 hours (Non-viable)  
**C** - Culture: 7-14 Days  
**W** - Weekends: Scheduled by noon ET Friday Only  
 \*\*\*Samples received after 5pm, on weekends or in drop-box, will be considered received the next business day.

Sampling Date(s): **11/22/23**

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume/Area (as applicable)	Notes: (Time, Temp, Etc.)
2918531	Pre-Sampling Exterior Front of Building	ST	STD	25 Liters	
2918659	Media Center	ST	STD	25 Liters	
2918669	Basement Level Corridor By Mechanical Room	ST	STD	25 Liters	
2918679	Room 101	ST	STD	25 Liters	
2918678	Room 102	ST	STD	25 Liters	
2918668	Room 103	ST	STD	25 Liters	
2918658	Teacher's Lounge	ST	STD	25 Liters	
2918530	Cafeteria	ST	STD	25 Liters	
2918561	Kitchen	ST	STD	25 Liters	
2918559	Room 209	ST	STD	25 Liters	
2922972	Room 208	ST	STD	25 Liters	
2918667	Guidance	ST	STD	25 Liters	

Sample Type Codes	Relinquished By	Date & Time	Received By	Date & Time
<b>AP</b> - Andersen Plate <b>SW</b> - Swab <b>B</b> - Bulk <b>T</b> - Tape <b>ST</b> - Spore Trap: Zefon, Micro5, Cyclex-d, etc.	Micheal D. Allshouse	11/27/23	<i>Kennell Moore</i>	11.28.23

328 11180



13635 Genito Road Midlothian, VA 23112  
 (804) 763-1200 Phone / (804) 763-1800 Fax

Requested Services (X Boxes)											
Non-Viable		Culturable									
Spore Trap	Tape Bulk	Andersen, Swab, Bulk									
Fungal Spore Count and Genus ID, pollen, fiber & mycelial fragment count	Fungal Genus Identification - Qualitative	Environmental Fungal Genus ID & Enumeration	Environmental Bacterial Enumeration & Gram Stain ID	Fungal Speciation - Scheduled in Advance Only	Bacterial speciation - Scheduled in Advance Only						
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Contact Information	
Company: France Environmental	PO#:
Address 7834 Forest Hill Ave Suite #7 Richmond, VA 23225	
Results To: FEI	Fax Results? <input type="checkbox"/> Fax#:
Phone: 804 716 0560	Email? <input checked="" type="checkbox"/> Email: FEI Distribution List
Project Information	Turnaround Time Codes
City of Richmond Public Schools (CORPS) Barack Obama Elementary School Project Name: 3101 Fendall Avenue Richmond, Virginia 23222 Proj. #: FEI-23MI639	<b>STD</b> - Standard: 2 Days (Non-viable) <b>24</b> - 24: 24 Hours (Non-viable) <b>R</b> - Rush: 6 hours (Non-viable) <b>C</b> - Culture: 7-14 Days <b>W</b> - Weekends: Scheduled by noon ET Friday Only ***Samples received after 5pm, on weekends or in drop-box, will be considered received the next business day.
Sampling Date(s):	11/22/23

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume/Area (as applicable)	Notes: (Time, Temp, Etc.)
2918677	Nurse, Room 207	ST	STD	25 Liters	
2918666	Room 206	ST	STD	25 Liters	
2918676	Room 205	ST	STD	25 Liters	
2918549	Main Office	ST	STD	25 Liters	
2918552	First Floor Corridor by Main Office	ST	STD	25 Liters	
2918665	Room 204	ST	STD	25 Liters	
2918675	Room 205	ST	STD	25 Liters	
2915835	Room 201	ST	STD	25 Liters	
2915840	Room 202	ST	STD	25 Liters	
2915837	Auditorium	ST	STD	25 Liters	
2915825	Room 310	ST	STD	25 Liters	
2915826	Room 309	ST	STD	25 Liters	

Sample Type Codes	
AP - Andersen Plate	T - Tape
SW - Swab	ST - Spore Trap: Zefon, Micro5, Cyclex-d, etc.
B - Bulk	

Relinquished By	Date & Time
Micheal D. Allshouse	11/27/23

Received By	Date & Time

AmeriSci Bio-Chem

NOV 27 2023

323 111130



13635 Genito Road Midlothian, VA 23112  
 (804) 763-1200 Phone / (804) 763-1800 Fax

Requested Services (X Boxes)											
Non-Viable		Culturable									
Spore Trap	Tape Bulk	Andersen, Swab, Bulk									
Fungal Spore Count and Genus ID, pollen, fiber & mycelial fragment count	Fungal Genus Identification - Qualitative	Environmental Fungal Genus ID & Enumeration	Environmental Bacterial Enumeration & Gram Stain ID	Fungal Speciation - Scheduled in Advance Only	Bacterial speciation - Scheduled in Advance Only						
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Contact Information	
Company: France Environmental	PO#:
Address 7834 Forest Hill Ave Suite #7 Richmond, VA 23225	
Results To: FEI	Fax Results? <input type="checkbox"/> Fax#:
Phone: 804 716 0560	Email? <input checked="" type="checkbox"/> Email: FEI Distribution List
Project Information	Turnaround Time Codes
City of Richmond Public Schools (CORPS) Barack Obama Elementary School Project Name: 3101 Fendall Avenue Richmond, Virginia 23222 Proj. #: FEI-23MI639	STD - Standard: 2 Days (Non-viable) 24 - 24: 24 Hours (Non-viable) R - Rush: 6 hours (Non-viable) C - Culture: 7-14 Days W - Weekends: Scheduled by noon ET Friday Only ***Samples received after 5pm, on weekends or in drop-box, will be considered received the next business day.
Sampling Date(s):	11/22/23

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume/Area (as applicable)	Notes: (Time, Temp, Etc.)
2915827	Room 308	ST	STD	25 Liters	
2915828	Room 311	ST	STD	25 Liters	
2915829	Room 312	ST	STD	25 Liters	
2915831	Room 307	ST	STD	25 Liters	
2915833	Room 306	ST	STD	25 Liters	
2915834	Room 305	ST	STD	25 Liters	
2915832	Room 304	ST	STD	25 Liters	
2915830	Room 313	ST	STD	25 Liters	
2915838	Room 301	ST	STD	25 Liters	
2915836	Room 302	ST	STD	25 Liters	
2915839	Room 309	ST	STD	25 Liters	
2915841	2nd Floor Corridor by Room 305	ST	STD	25 Liters	

Sample Type Codes	
AP - Andersen Plate	T - Tape
SW - Swab	ST - Spore Trap: Zefon, Micro5, Cyclex-d, etc.
B - Bulk	

Relinquished By	Date & Time	Received By	Date & Time
Micheal D. Allshouse	11/24/23		
		Received	

AmeriSci Bio-Chem

NOV 27 2023

pg 3



13635 Genito Road Midlothian, VA 23112  
 (804) 763-1200 Phone / (804) 763-1800 Fax

823 111130

Requested Services (X Boxes)						
Non-Viable		Culturable				
Spore Trap	Tape Bulk	Andersen, Swab, Bulk				
Fungal Spore Count and Genus ID, pollen, fiber & mycelial fragment count	Fungal Genus Identification - Qualitative	Environmental Fungal Genus ID & Enumeration	Environmental Bacterial Enumeration & Gram Stain ID	Fungal Speciation - Scheduled in Advance Only	Bacterial speciation - Scheduled in Advance Only	
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

**Contact Information**

Company: France Environmental PO#: \_\_\_\_\_

Address 7834 Forest Hill Ave Suite #7 Richmond, VA 23225

Results To: FEI Fax Results? Y  Fax#: \_\_\_\_\_

Phone: 804 716 0560 Email? Y  Email: FEI Distribution List

**Project Information**      **Turnaround Time Codes**

City of Richmond Public Schools (CORPS)  
 Barack Obama Elementary School  
 Project Name: 3101 Fendall Avenue  
 Richmond, Virginia 23222  
 Proj. #: FEI-23MI639

STD - Standard: 2 Days (Non-viable)  
 24 - 24: 24 Hours (Non-viable)  
 R - Rush: 6 hours (Non-viable)  
 C - Culture: 7-14 Days  
 W - Weekends: Scheduled by noon ET Friday Only  
 \*\*\*Samples received after 5pm, on weekends or in drop-box, will be considered received the next business day.

Sampling Date(s): 11/22/23

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume/Area (as applicable)	Notes: (Time, Temp, Etc.)
2918563	Room104	ST	STD	25 Liters	
2918540	Post-Sampling Exterior Front of Building	ST	STD	25 Liters	
T1	Auditorium Right Side Wood Stage Trim	T	STD		
T2	Room 305 Cellin Mounted Metal HVAC Unit	T	STD		

**Sample Type Codes**

AP - Andersen Plate  
 SW - Swab  
 B - Bulk

T - Tape  
 ST - Spore Trap: Zefon, Micro5, Cyclex-d, etc.

Relinquished By	Date & Time	Received By	Date & Time
Micheal D. Allshouse	11/27/23		
		Received	

AmeriSci Bio-Chem

NOV 27 2023



# AmeriSci Bio-Chem

13635 GENITO ROAD  
MIDLOTHIAN, VIRGINIA 23112  
TEL: (804) 763-1200 • FAX: (804) 763-1800

Analyzed By:  
Justin B. Liverman

AmeriSci Job #:  
**323121090**  
FINAL REPORT

**Client: France Environmental, Inc.**  
**Address: 7834 Forest Hill Ave**  
**Suite 7**  
**Richmond, VA 23225**

**Client Job#: FEI-23MI639**  
**Client Job Name: City Of Richmond Public Schools**  
**(CORPS); Barack Obama**  
**Elementary School; 3101 Fendall**

**Date Received: 12/29/23**  
**Date Reported: 12/29/23**

## Air Cassette Analytical Report (SOP# 3.24.01)

AmeriSci Number	323121090-01			323121090-02								
Sample Number	2916186			2916187								
Sample Name	Room 308			Exterior By Front Entrance								
Analysis Date	12/29/2023			12/29/2023								
Volume (L)	25			25								
Limit of Detection (LOD) (Count/M <sup>3</sup> )	40			40								
Background Density	2			1								
<b>Other</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Pollen	ND	n/a	ND	40	n/a	1						
Fibers	120	n/a	3	ND	n/a	ND						
Mycelial Fragments	ND	n/a	ND	ND	n/a	ND						
<b>Fungal Identification</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>	<b>Count/M<sup>3</sup></b>	<b>%</b>	<b>Raw Count</b>
Aspergillus/Penicillium	40	13	1	ND								
Basidiospores	200	63	5	200	63	5						
Cladosporium sp.	80	25	2	120	38	3						
<b>Total Fungal Spores</b>	<b>320</b>	<b>100</b>	<b>8</b>	<b>320</b>	<b>100</b>	<b>8</b>						

ND = None Detected

Results relate only to the items tested and are reported mathematically to significant figures.

Name/Title: Justin B. Liverman / Analyst

Name/Title: Justin B. Liverman / Analyst

Signature:

Reviewed By:

Date: 12/29/23

Date: 12/29/23

323 121090



13635 Genito Road Midlothian, VA 23112  
(804) 763-1200 Phone / (804) 763-1800 Fax

Requested Services (X Boxes)						
Non-Viable		Culturable				
Spore Trap	Tape Bulk	Andersen, Swab, Bulk				
Fungal Spore Count and Genus ID, pollen, fiber & mycelial fragment count	Fungal Genus Identification - Qualitative	Environmental Fungal Genus ID & Enumeration	Environmental Bacterial Enumeration & Gram Stain ID	Fungal Speciation - Scheduled in Advance Only	Bacterial speciation - Scheduled in Advance Only	

**Contact Information**

Company: France Environmental PO#: \_\_\_\_\_  
 Address 7834 Forest Hill Ave Suite #7 Richmond, VA 23225  
 Results To: FEI Fax Results? Y  Fax#: \_\_\_\_\_  
 Phone: 804 716 0560 Email? Y  Email: FEI Distribution List

**Project Information** **Turnaround Time Codes**

City of Richmond Public Schools (CORPS)  
 Barack Obama Elementary School  
 Project 3101 Fendall Avenue  
 Name: Richmond, Virginia 23222  
 Proj. #: FEI-23MI639

STD - Standard: 2 Days (Non-viable)  
 24 - 24: 24 Hours (Non-viable)  
 R - Rush: 6 hours (Non-viable)  
 C - Culture: 7-14 Days  
 W - Weekends: Scheduled by noon ET Friday Only  
 \*\*\*Samples received after 5pm, on weekends or in drop-box, will be considered received the next business day.

Sampling Date(s): **12/29/23**

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume/Area (as applicable)	Notes: (Time, Temp, Etc.)
2916186	Room 308	ST	STD	25 Liters	
2916187	Exterior By Front Entrance	ST	STD	25 Liters	

**Sample Type Codes**

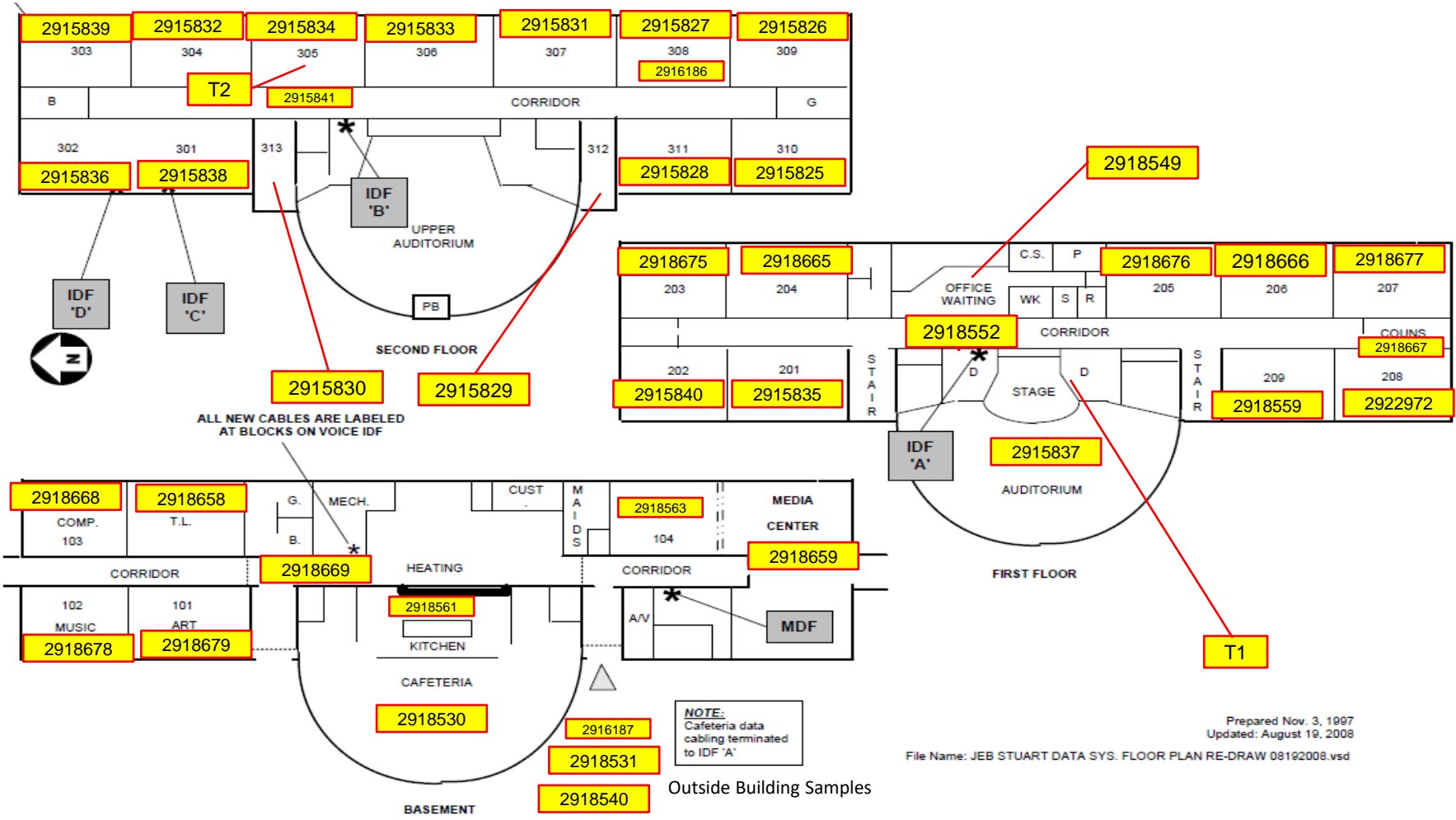
AP - Andersen Plate  
 SW - Swab  
 B - Bulk

T - Tape  
 ST - Spore Trap: Zefon, Micro5, Cyclex-d, etc.

<b>Relinquished By</b> Micheal D. Allshouse	<b>Date &amp; Time</b> 12/29/23	<b>Received By</b> Received	<b>Date &amp; Time</b> DEC 29 2023
--	------------------------------------	--------------------------------	---------------------------------------

*TJM*

**DRAWING INDICATING SAMPLE LOCATIONS**



**Moisture & Mold Assessment Sample Location Drawing**  
 Barack Obama Elementary School  
 Richmond, Virginia  
 FEI Project #: FEI-23MI639 Survey Date(s): 11/22/2023 and 12/29/23





## **PHOTOGRAPHS OF SITE CONDITIONS**



**Photograph No. 1**

Showing Typical Mold Impacted Ceiling Mounted HVAC Units & Moisture Staining



**Photograph No. 2**

Showing Typical Mold Impacted Ceiling Mounted HVAC Units

**CHART 1**  
**FUNGAL TYPES AND GROUPS**

# Chart 1

## Fungal Types and Groups

These are brief descriptions for general informational purposes:

<b><i>Alternaria</i> (all-tur-nair-ee-uh)</b>	common allergen/contaminant/opportunistic pathogen, one of the most common molds found worldwide in soil and on plants and can commonly be found indoors (frequently appearing black on window frames). It is an important airborne allergen and common agent for hay fever, asthma, and other allergy related symptoms.
<b><i>Ascospores</i> (ass-co-spores)</b>	a large category of spores (produced in a sac-like structure) that are found everywhere in nature and include more than 3,000 genera. Most <i>Ascospores</i> of health or IAQ importance are identified separately by their genus (e.g. <i>Chaetomium</i> ) when possible on a IAQ report, and the <i>Ascospore</i> category is used primarily on these reports for a large group of less important spore types often found in quantity on outdoor air samples. On tape samples, <i>Ascospore</i> is sometimes also used as a general morphological identification (i.e., the ascus or sac structure is present) for certain samples in those cases when the spores do not appear to represent any of the IAQ significant genera.
<b><i>Aspergillus</i> (as-per-jill-us)</b>	allergen/contaminant/opportunistic pathogen, commonly found in the environment around the world. It comprises approximately 200 species and can appear almost any color. Though commonly found on cultures, tape-lifts, and air samples, its spores are indistinguishable from <i>Penicillium</i> on non-cultured samples (like tape-lifts and air-o-cells) unless the conidiophore is present. Health effects vary by species, but many species are reported to be allergenic. Some species produce toxins that might have significant health effects in humans. <i>Aspergillus</i> is one of the most infectious of molds, but infections are not common in normal immune systems. In immuno-compromised individuals, however, the disease <i>Aspergillosis</i> is a very significant and potentially deadly health concern.
<b><i>Basidiospores</i> (bah-sid-ee-oh-spores)</b>	allergen/contaminant, a general class of spore formed on a structure known as a <i>basidium</i> , characteristic of the <i>Basidiomycete</i> class (that includes rusts, smuts and mushrooms). This category is commonly found in outdoor air samples. Many species are reported to be allergenic and some species are associated with dry rot in wood. Elevated airborne concentrations indoors might be indicative of water damage or too high of humidity.
<b><i>Cladosporium</i> (clad-oh-spore-ee-um)</b>	common allergen/contaminant/very rarely pathogenic, found everywhere, many times the most common and numerous mold found in outdoor air. Indoor concentrations are usually not as high, but it is an important airborne allergen and common agent for hay fever, asthma, and other allergy related symptoms. It can thrive in various indoor environments, appearing light green to black (the black mold on air vent grills is usually <i>Cladosporium</i> ).
<b><i>Epicoccum</i> (epp-ee-cock-um)</b>	contaminant/opportunistic pathogen, found in soil, air, water and rotting vegetation and can be commonly found in outdoor air. It is a common allergen and rarely can it cause an infection in the skin.
<b><i>Hyphal Elements</i> (high-full)</b>	filamentous, branched structures with cell walls. Hyphae are somewhat analogous to roots or stems in plants whereas the spores would be analogous to the seeds.
<b><i>Mycelial Fragments</i> (my-sill-e-ul)</b>	a mass of hyphae; not in the form of large spore producing parts. Hyphae are an individual fungal thread or filament of connected cells. The thread that represents the individual parts of the fungal body.
<b><i>Myxomycetes</i> (mix-oh'-my-seat)</b>	general category for commonly found genera usually associated with living and decaying plants as well as decaying wood. Sometimes can be found indoors. Some allergenic properties reported, but generally pose no health concerns to humans or animals.
<b><i>Penicillium</i> (pen-uh-sill-ee-um)</b>	contaminant/opportunistic pathogen, one of the most common genera found worldwide in soil and decaying vegetation and indoors in dust, food and various building materials. Common bread mold is a species of <i>Penicillium</i> . Spores usually cannot be distinguished from <i>Aspergillus</i> on non-cultured samples (like tape-lifts and air-o-cells). It is reported to be allergenic, to cause certain infections in compromised individuals, and some species do produce toxins unhealthy to humans.
<b><i>Periconia</i> (per-ee-cone-e-uh)</b>	ubiquitous cosmopolitan. Mostly found in soil, blackened and dead herbaceous stems and leaf spots, grasses, rushes and sedges. Almost always associated with other fungi. Rare case of mycotic keratitis reported. Allergen not studied.

## Chart 1 - Continued

### Fungal Types and Groups

These are brief descriptions for general informational purposes:

***Pollen (pol-uhn)***

Pollen is a fine powder produced by certain plants when they reproduce. During the spring, summer, and fall seasons, it's released into the air and picked up by the wind, which brings it to other plants to fertilize them. Inside of these pollen grains are proteins that commonly cause allergic reactions (such as sneezing, runny nose, and itchy eyes) when breathed in. The pollen that's most often responsible for causing allergies comes from grasses, trees, and weeds. Many people with asthma are allergic to pollen. When they breathe it in, it can trigger their asthma symptoms.

***Smuts***

general category for commonly found genera usually associated with living and decaying plants as well as decaying wood. Sometimes can be found indoors. Some allergenic properties reported, but generally pose no health concerns to humans or animals.

***Stachybotrys (stack-ee-bought-ris)***

contaminant, found indoors primarily on wet cellulose containing materials. It is the "toxic black mold" that has garnered much media attention. Some species produce a potent toxin that is lethal to animals, though dose effect on humans is not clear. One species produces a toxin linked to the bleeding lung deaths of several infants. A host of other toxic reactions in humans are also linked to it, but many of these require further study. ***Stachybotrys*** is sometimes difficult to detect indoors because many times it will grow unseen on the back of walls or in the wall cavity with little disturbance that would cause it to be detected by routine air sampling. This is potentially also when it is of most health concern: when it covers entire wall areas and constantly produces toxins undetected. Non-cultured lab analyses (air-o-cells and tape-lifts) usually are the proper method of identification because ***Stachybotrys*** does not grow or compete well on most culture plate media, and it is reported that even non-viable spores can be toxigenic.