



October 26, 2021

Ms. Margaret Durham  
Facilities Manager  
**Delsea Regional High School District**  
Fries Mill Road  
Franklinville, NJ 08322

**RE: Indoor Air Quality Inspection Report – September 2021**  
**Delsea Middle School**  
**Epic Project No. 21-3309**

Dear Ms. Durham:

**Epic Environmental Services, LLC (Epic)** was retained by the Delsea Regional High School District (District) to perform indoor air quality inspections for six randomly selected areas at the Delsea Middle School. The inspections consisted of visual observations and the collection of temperature/relative humidity data. Additionally, samples for airborne mold spores were collected in the inspection areas.

The visual inspections focused on signs of moisture, water intrusion, and visible mold growth.

Temperature and relative humidity data were compared to current New Jersey Indoor Air Quality and industry standards.

Epic Environmental performed the visual inspections September 24, 2021. Air samples were collected October 4, 2021.

### **Acceptable Temperature, Relative Humidity**

**Acceptable Indoor Temperature Range:**

**68° - 79° Fahrenheit**

**Ideal Relative Humidity Range:**

**30-60%**

The following rooms/areas were inspected:

Room A-12, Room A-6, Room B-6, Room C-8, Room C-9, Room D-6

## **Observations, Comments, and Recommendations**

### **Room A-12**

No visible mold was observed.  
No evidence of recent water intrusion was observed.  
Relative humidity was within ideal range (43%). Temperature was within the acceptable range.  
Airborne mold spore concentrations were near or below outside (background) concentrations.  
No action required at this time.

### **Room A-6**

No visible mold was observed.  
No evidence of recent water intrusion was observed.  
Relative humidity was within ideal range (43%). Temperature was within the acceptable range.  
Airborne mold spore concentrations were near or below outside (background) concentrations.  
No action required at this time.

### **Room B-6**

No visible mold was observed.  
No evidence of recent water intrusion was observed.  
Relative humidity was within ideal range (43%). Temperature was within the acceptable range.  
Airborne mold spore concentrations were near or below outside (background) concentrations.  
No action required at this time.

### **Room C-8**

No visible mold was observed.  
No evidence of recent water intrusion was observed.  
Relative humidity was within ideal range (43%). Temperature was within the acceptable range.  
Airborne mold spore concentrations were near or below outside (background) concentrations.  
No action required at this time.

### **Room C-9**

No visible mold was observed.  
No evidence of recent water intrusion was observed.  
Relative humidity was within ideal range (43%). Temperature was within the acceptable range.  
Airborne mold spore concentrations were near or below outside (background) concentrations.  
No action required at this time.

### **Room D-6**

No visible mold was observed.  
No evidence of recent water intrusion was observed.  
Relative humidity was within ideal range (43%). Temperature was within the acceptable range.  
Airborne mold spore concentrations were near or below outside (background) concentrations.  
No action required at this time.

## Air Sample Results

Air samples were collected in 6 random locations throughout the school. Airborne mold spore concentrations were near or below background (outside) concentrations.

See Sample Data Summary

## Conclusions

- Assure steps are taken to reduce relative humidity to a maximum of 60% during the summer cooling season. Although most mold activity is not likely to start until extended periods of 75% or higher relative humidity are experienced, it is recommended to have the goal of 60%.

Please do not hesitate to contact me at 856-205-1077 should you have any questions.

An invoice for the completed project is enclosed.

Regards,



James Eberts  
President  
Epic Environmental Services, LLC

## Sample Data Summary

### Air Sampling

#### Air Samples October 4, 2021

Air Sample Location	Airborne Mold Concentrations (spores/m <sup>3</sup> )	
	Total	Individual Mold Concentrations
Room A-12	400	Basidiospores 200 Myxomycetes 80 Pithomyces 80 Rust 40
Room A-6	1000	Aspergillus/Penicillium 300 Basidiospores 200 Cladosporium 80 Curvularia 40 Myxomycetes 300 Rust 80
Room B-6	820	Aspergillus/Penicillium 80 Basidiospores 500 Cladosporium 80 Curvularia 80 Myxomycetes 80
Room C-8	80	Basidiospores 80
Room C-9	280	Basidiospores 200 Rust 80
Room D-6	3560	Aspergillus/Penicillium 80 Basidiospores 1000 Cladosporium 2200 Myxomycetes 200 Rust 80
Outside	12560	Alternaria 200 Ascospores 200 Aspergillus/Penicillium 600 Basidiospores 700 Cladosporium 3400 Curvularia 80 Fusarium 200 Ganoderma 200 Myxomycetes 200 Rust 200 Cercospora 80 Pyricularia 200

- Total mold counts found in **green** indicate a total airborne mold level NEAR or BELOW the outside (background) level.
- Total mold counts found in **red** indicate a total airborne mold level significantly ABOVE the outside (background) level, and may be an indicator of active mold growth.
- Individual molds listed in **green** indicate an individual airborne mold level NEAR or BELOW outside the (background) level.
- Individual molds listed in **purple** were not found in the background sample, but not considered evidence of a water/moisture issue or active mold growth.
- Individual molds listed in **red** indicate an individual airborne mold level significantly ABOVE the outside (background) level, and may be an indicator of active mold growth in the area.

Airborne mold spore concentrations were near or below background (outside) concentrations.



# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-0262

<http://www.EMSL.com> / [cinnmicrolab@emsl.com](mailto:cinnmicrolab@emsl.com)

EMSL Order: 372116980

Customer ID: EPIC62

Customer PO:

Project ID:

**Attention:** James Eberts  
Epic Environmental Services, LLC  
80 Fork Bridge Road  
Pittsgrove, NJ 08318

**Phone:** (856) 205-1077  
**Fax:** (856) 205-0413  
**Collected Date:** 10/04/2021  
**Received Date:** 10/05/2021  
**Analyzed Date:** 10/12/2021

**Project:** Delsea Middle School IAQ

### Test Report: Micro-5(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	372116980-0001			372116980-0002			372116980-0003		
Client Sample ID:	M-01			M-02			M-03		
Volume (L):	25			25			25		
Sample Location:	A-12			A-6			B-6		
Spore Types	Raw Count	Count/m <sup>2</sup>	% of Total	Raw Count	Count/m <sup>2</sup>	% of Total	Raw Count	Count/m <sup>2</sup>	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	-	-	-	4	300	30	1	80	9.8
Basidiospores	3	200	50	3	200	20	6	500	61
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	1	80	8	1	80	9.8
Curvularia	-	-	-	1*	40*	4	1	80	9.8
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1	80	20	4	300	30	1	80	9.8
Pithomyces++	1	80	20	-	-	-	-	-	-
Rust	1*	40*	10	1	80	8	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Pyricularia	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>6</b>	<b>400</b>	<b>100</b>	<b>14</b>	<b>1000</b>	<b>100</b>	<b>10</b>	<b>820</b>	<b>100</b>
Hyphal Fragment	-	-	-	1*	40*	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	80	-	-	80	-	-	80	-
Analyt. Sensitivity 300x	-	40*	-	-	40*	-	-	40*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	3	-	-	2	-

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

Vincent Iuzzolino, M.S., Laboratory Director  
or other Approved Signatory

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

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "\*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-EMLAP Accredited #100194

Initial report from: 10/12/2021 04:08 PM

For information on the fungi listed in this report, please visit the Resources section at [www.emsl.com](http://www.emsl.com)



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EMSL Order: 372116980  
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### Test Report: Micro-5(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	372116980-0004			372116980-0005			372116980-0006		
Client Sample ID:	M-04			M-05			M-06		
Volume (L):	25			25			25		
Sample Location:	C-8			C-9			D-6		
Spore Types	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 (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	-	-	-	-	-	-	1	80	2.2
Basidiospores	1	80	100	2	200	71.4	13	1000	28.1
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	27	2200	61.8
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	3	200	5.6
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	1	80	28.6	1	80	2.2
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Pyricularia	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>1</b>	<b>80</b>	<b>100</b>	<b>3</b>	<b>280</b>	<b>100</b>	<b>45</b>	<b>3560</b>	<b>100</b>
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	80	-	-	80	-	-	80	-
Analyt. Sensitivity 300x	-	40*	-	-	40*	-	-	40*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	2	-	-	2	-

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

Vincent Iuzzolino, M.S., Laboratory Director  
or other Approved Signatory

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### Test Report: Micro-5(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

<b>Lab Sample Number:</b>	372116980-0007						
<b>Client Sample ID:</b>	M-07						
<b>Volume (L):</b>	25						
<b>Sample Location:</b>	Outside						
<b>Spore Types</b>	<b>Raw Count</b>	<b>Count/m³</b>	<b>% of Total</b>				
Alternaria (Ulocladium)	2	200	1.6				
Ascospores	3	200	1.6				
Aspergillus/Penicillium	8	600	4.8				
Basidiospores	88	7000	55.7				
Bipolaris++	-	-	-				
Chaetomium++	-	-	-				
Cladosporium	43	3400	27.1				
Curvularia	2*	80*	0.6				
Epicoccum	-	-	-				
Fusarium++	2	200	1.6				
Ganoderma	3	200	1.6				
Myxomycetes++	3	200	1.6				
Pithomyces++	-	-	-				
Rust	3	200	1.6				
Scopulariopsis/Microascus	-	-	-				
Stachybotrys/Memnoniella	-	-	-				
Unidentifiable Spores	-	-	-				
Zygomycetes	-	-	-				
Cercospora++	1	80	0.6				
Pyricularia	3	200	1.6				
<b>Total Fungi</b>	<b>161</b>	<b>12560</b>	<b>100</b>				
Hyphal Fragment	-	-	-				
Insect Fragment	-	-	-				
Pollen	-	-	-				
Analyt. Sensitivity 600x	-	80	-				
Analyt. Sensitivity 300x	-	40*	-				
Skin Fragments (1-4)	-	1	-				
Fibrous Particulate (1-4)	-	1	-				
Background (1-5)	-	2	-				

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

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-EMLAP Accredited #100194

Initial report from: 10/12/2021 04:08 PM

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EMSL ANALYTICAL, INC.  
MEMBER OF PRAXIS SYSTEMS

# Environmental Microbiology Chain of Custody

EMSL Order Number (Lab Use Only):

3721169 FO

Westmont, NJ  
1707 Hidden Avenue  
Westmont, NJ 08108  
TEL: (856) 858-4900  
FAX: (856) 858-4960

21 OCT - 5 AM 10:54

Company: Epic Environmental Services, LLC  
 Street: 1930 Brown Road  
 City/State/Zip: Newfield, NJ 08344  
 Report To (Name): James Eberts  
 Telephone: 856-205-1077  
 EMSL-Bill to:  Same  Different  
 If Bill to is Different note instructions in Comments\*\*  
 Third Party Billing requires written authorization from third party  
 Fax: 856-205-0413  
 Email Address: jeberts@epicenviro.com

Project Name/Number: Delsea Middle School IAQ  
 Please Provide Results: Email  
 Purchase Order:  
 State Samples Taken: NJ

Turnaround Time (TAT) Options\* - Please Check  
 3 Hour  6 Hour  24 Hour  48 Hour  72 Hour  96 Hour  1 Week  2 Week

\*Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide. TATs are subject to methodology requirements

- Non Culturable Air Samples (Spore Traps)**
- M001 Air-Q-Cell
  - M049 BioSIS
  - M030 Micro 5
  - M173 Alegro M2
  - M003 Burkard
  - M174 MoldSnap
  - M004 Allergenco
  - M043 Cyclax
  - M176 Relic Smart
  - M032 Allergenco-D
  - M002 Cyclax-d
  - M130 Via-Cell
  - M172 Versa Trap

- Other Microbiology Test Codes**
- M041 Fungal Direct Examination
  - M005 Visible Fungi ID and Count
  - M006 Visible Fungi ID and Count (Speciation)
  - M007 Culturable Fungi
  - M008 Culturable Fungi (Speciation)
  - M009 Gram Stain Culturable Bacteria
  - M010 Bacterial Count and ID - 3 Most Prominent
  - M011 Bacterial Count and ID - 5 Most Prominent
  - M013 Sewage Contamination in Buildings
  - M014 Endotoxin Analysis
  - M015 Heterotrophic Plate Count
  - M100 Real Time Q-PCR-ERMI 30 Panel
  - M016 Total Coliform (Membrane Filtration)
  - M020 Fecal Streptococcus (Membrane Filtration)
  - M210-215 Legionella Detection
  - M026 Recreational Water Screen
  - M027 Mycotoxin Analysis
  - M029 Enterococci
  - M019 Fecal Coliform
  - M133 MRSA Analysis
  - M020 Cryptococcus neoformans Detection
  - M120 Histoplasma capsulatum Detection
  - M033-39 Allergen Testing
  - M044 Group Allergen (Cat, Dog, Cockroach, Dustmites)
  - Other See Analytical Price Guide

Preservation Method (Water):

Name of Sampler: Tim Eberts  
 Signature of Sampler: [Signature]

Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected
M-01	A-12	A/R	M030	25 L	10/4/21 1506
M-02	A-10				1521
M-03	B-6				1514
M-04	C-8				1529
M-05	C-9				1537
M-06	D-6				1547
M-07	Outside				1606

Client Sample # (s): M-01 - M-07  
 Total # of Samples: 7

Relinquished (Client): [Signature] Date: 10/5/21 Time: 1020

Received (Client): [Signature] DB Date: 10/5/21 Time: 1100

Comments/Special Instructions:



**AIHA Laboratory Accreditation Programs, LLC**

*acknowledges that*

**EMSL Analytical, Inc.**

**200 Route 130 North Cinnaminson, NJ 08077**

**Laboratory ID: LAP-100194**

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2017 international standard, General Requirements for the Competence of Testing and Calibration Laboratories in the following:

**LABORATORY ACCREDITATION PROGRAMS**

<input checked="" type="checkbox"/>	INDUSTRIAL HYGIENE	Accreditation Expires: November 01, 2022
<input checked="" type="checkbox"/>	ENVIRONMENTAL LEAD	Accreditation Expires: November 01, 2022
<input checked="" type="checkbox"/>	ENVIRONMENTAL MICROBIOLOGY	Accreditation Expires: November 01, 2022
<input type="checkbox"/>	FOOD	Accreditation Expires:
<input type="checkbox"/>	UNIQUE SCOPES	Accreditation Expires:

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached Scope of Accreditation. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2017 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached Scope of Accreditation. Please review the AIHA-LAP, LLC website ([www.aihaaccreditedlabs.org](http://www.aihaaccreditedlabs.org)) for the most current Scope.

*Cheryl O. Morton*

Cheryl O. Morton  
Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision19: 09/01/2020

Date Issued: 10/31/2020