J.C. Broderick & Associates, Inc.
Environmental / Construction Consulting & Testing

1775 Expressway Drive North
Hauppauge, NY 11788
631.584.5492
Fax: 631.584.3395
www.jcbroderick.com

November 4, 2019

Mr. John Lackner
Northport-East Northport Union Free School District
W. J. Brosnan Building
158 Laurel Avenue
Northport, New York 11768

Re: Limited Indoor Air Quality Sampling
Northport Middle School – K Wing & G51, G52, G53
11 Middleville Road
Northport, New York 11768
Sampling Date: October 23, 2019

JCB#: 19-44783

Dear Mr. Lackner:

J.C. Broderick & Associates, Inc. (JCB) was retained to perform limited indoor air quality sampling in the above referenced subject spaces. The sampling was requested due to occupant concerns related to intermittent odors and consisted of the following:

- Visual Inspection of Building Materials
- Moisture in Building Materials Sampling
- Mold in Air Sampling
- Temperature (°F) and Relative Humidity (%RH) Sampling
- Total Airborne Particulate Sampling
- Carbon Monoxide (CO) Sampling
- Volatile Organic Compounds (VOC) Sampling

Results of the sampling were compared to applicable standards to identify if any of these parameters exist at hazardous levels. In the absence of a governmental exposure value, an applicable industry standard was referenced. Results which fell outside of these standards/guidelines could indicate conditions which may cause occupant discomfort or be an indicator of other indoor air quality concerns. The following sections summarize the results of the inspection and sampling performed. Results and laboratory reports, if applicable, are provided as attachments to this report.

Visual Inspection of Building Materials

A non-destructive visual inspection of the subject space(s) was performed to identify evidence of any obvious conditions which may adversely affect the quality of the indoor air. This included an inspection of the visibly accessible building materials and contents utilizing the EPA's Baseline IAQ Building Audit Form for Indoor Spaces.

Areas specifically inaccessible for visual inspection included concealed plenum spaces, behind fixed items (chalkboards, casework, etc.) inside HVAC systems/ducts, desks, locked closets/cabinets, and personal items (i.e. totes, bags, boxes, etc.). Also, unless specifically noted, no furniture/fixtures or contents were moved during this inspection. Therefore, any surfaces or items obstructed by these items were also not included in this inspection.

The visual inspection revealed the following significant findings:

- The subject spaces are utilized primarily as instructional spaces. Observed building materials included gypsum and concrete block walls, drop-in ceiling tile systems and vinyl tile flooring. Observed contents were typical for an educational setting.
- Each of the subject spaces are serviced independently by centralized HVAC systems, which appeared to be in operation at the time of the inspection. Recent inspections of these systems and duct work were performed by independent contractors. These inspections did not identify any notable sources of the reported odors.
- No notable odors, similar to those reported by occupants, were experienced at the time of the sampling. If occupant reports of odors persist, further investigation should be performed in attempt to identify the potential source(s).
- Dust accumulation was observed on the underside of select wooden storage cabinets. It is recommended that custodial practices be reviewed and adjusted, as applicable, to minimize the accumulation of dusts.
- Two (2) isolated areas of moisture stained ceiling tiles were observed within the K-Wing. Each of these areas were observed as having acceptable levels of moisture when sampled with the moisture meter.
- No evidence of visible mold growth was observed within any of the subject spaces.

Moisture in Building Materials Sampling

Moisture in building materials sampling was performed to identify areas of potential moisture impact within the subject space. Areas of moisture intrusion (active or historical) are potential areas of indoor mold growth. The sampling is divided into (1) infrared imaging of building material surfaces and (2) moisture meter sampling. The sampling was performed utilizing a Flir E60bx portable infrared system and Delmhorst Navigator Moisture Meter. Technical information pertaining to these instruments is available upon request.

The science behind infrared imaging is that the water retained within building materials decreases the thermal resistance and increases the heat storage capacity of these materials. Therefore, the rate of change of temperatures for wet materials will be different than that of dry materials. That is, the surface temperature over a wet area will respond more slowly to a change in the air temperature than the surface temperature of a dry area. This leads to thermal anomalies on the surfaces of building materials that can be located using the portable infrared system. Therefore, the thermal imaging is performed to convert the spatial variations in the infrared radiance of the building materials into two-dimensional images where the differing radiance are displayed as a range of colors and tones.

The thermal anomalies were evaluated at the time of the inspection. Moisture Meter sampling was also performed on building materials within the subject space.

The infrared imaging and moisture meter sampling revealed the following significant findings:

- No thermal anomalies indicative of moisture was observed within the subject spaces.
- The moisture meter sampling confirmed that the building materials contained acceptable levels of moisture

Mold-in-Air Sampling

Sampling for the presence of total airborne mold spores was conducted with a Zefon International Custom Bio-Pump utilizing Air-O-Cell cassette methodology. Technical information pertaining to the Zefon pump and Air-O-Cell methodology is available upon request.

“Area samples” were collected from within the subject space(s) of the subject structure and “ambient (control) samples” were collected from outside the structure. The samples collected were assigned unique identification numbers, a chain of custody form was prepared, and the samples were delivered to an accredited independent

microbiology laboratory for analysis for total counts of hyphal fragments, pollen counts and fungal spores. The fungal spores were also analyzed for identification to the genus level.

Since there are currently no established standards for mold counts by any applicable governmental agency, the best method of evaluating microbial sampling results is to perform a comparison between counts observed within a test space to those from ambient or background locations. This comparative evaluation includes a review of total count, presence of tertiary types of mold spores, and concentrations of individual genera. The results reported herein were also compared with the typical indoor and outdoor mold spore concentration ranges referenced in the Airborne and Surface Dust Analysis Interpretation Guide 2018-3, by Environmental Analysis Associates, Inc.

The comparisons made within this report are solely for the purpose of evaluating the potential presence of indoor mold growth and does not constitute a medical opinion. Any users of this report who have specific medical concerns related to the types and concentrations reported shall consult with a qualified healthcare professional.

Based upon these comparisons, the mold-in-air sampling results revealed the following:

- Airborne mold results for each of the sampled spaces did not reveal concentrations typically indicative of chronic indoor mold amplification.

Relative Humidity and Temperature Sampling Results

Sampling of relative humidity (RH) and temperature was performed primarily for assessing the potential for indoor mold growth. Higher RH and/or temperature may lead to elevated levels of microbial growth and contaminants. Sampling of RH is also performed since a low RH may lead to increased airborne particulate concentrations and/or occupant discomfort.

The sampling was performed utilizing a portable real-time monitor. Temperature was reported in degrees Fahrenheit (℉) and humidity was reported in %RH. Detailed information pertaining to this equipment is available upon request.

No regulatory limit currently exists for RH for indoor environments. However, the Environmental Protection Agency (EPA) in their document "IAQ Design Tools for Schools" states that indoor RH be maintained below 60% and ideally between 30 and 50%.

Acceptable temperature ranges for indoor environments are described by ASHRAE as being between 68℉ to 79℉. Temperatures above this range may cause occupants to become lethargic and increase the initial out-gassing of VOCs from materials. There are different guidelines for temperature in the winter and summer, which are a result of the different dressing habits of the occupants throughout the year. In the winter months, occupants typically wear heavier clothing, and therefore are less comfortable with higher indoor temperatures. In the summer, occupants typically dress with lighter clothing and are less comfortable with lower temperatures.

The results of the sampling performed revealed the following:

- The RH levels were observed as being within the recommended range during the sampling period.
- Temperatures were observed as being within the recommended range during the sampling period.

Airborne Particulate Sampling Results

Total airborne particulate sampling was performed as elevated concentrations of airborne particulates may be an indication of poor ventilation efficiency, inadequate housekeeping practices, or periods of low relative humidity.

Total particulate sampling was performed utilizing a portable real-time monitor. The monitor is a technologically advanced instrument designed to measure the concentration of airborne particulate matter providing direct and continuous readout as well as electronic recording of the information.

The sampling results were compared with the OSHA permissible exposure limit (PEL), the ACGIH guidance values, and through a comparison between concentrations observed within the test spaces and those from control or background locations.

The results of the sampling performed revealed the following:

- All the data points observed were well below the OSHA PEL of 15 mg/m^3 and the ACGIH exposure value of 3 mg/m^3.

Carbon Monoxide (CO) Sampling Results

Sampling of Carbon Monoxide (CAS# 630-08-0) was performed since it is a product of incomplete combustion and is present in combustion exhaust.

Carbon Monoxide (CO) in its physical state is an odorless, tasteless and colorless gas. It mixes well with air and explosive mixtures are easily formed. The gas penetrates easily through walls and ceilings and is absorbed into the body by inhalation. The sampling was performed utilizing a portable real-time monitor. The results of the sampling were compared to OSHA's PEL of 50 ppm, ASHRAE Standard 62-2007 Appendix B, and ambient (outdoor) concentrations. This ASHRAE standard denotes a "concentration of interest" for CO at 9 ppm.

The Carbon Monoxide sampling revealed the following:

- No detectable concentrations of Carbon Monoxide were detected in any of the subject spaces during the sampling period.

Volatile Organic Compounds (VOC) Sampling Results

Multiple sources of volatile organic compounds (VOCs) exist within a building (i.e. cleaning solvents, perfumes/colognes, etc...). As it is not feasible to sample for each chemical compound individually, sampling for total VOCs was performed.

VOCs are organic chemicals that have a high vapor pressure and easily form vapors at standard temperature and pressure. VOCs resulting from out-gassing of fabrics, carpets, building materials, etc. may contribute to poor indoor air quality. Several hundred different VOCs have been identified in indoor air by academic and government investigators. Materials most often implicated as contributing to indoor VOC contamination include paints, adhesives, carpeting, vinyl tiles, floor products and insulation.

Sampling was performed utilizing a portable real-time monitor. Concentrations of VOCs are reported in parts per million (ppm). Currently, no standards have been established for total VOC concentrations within a non-industrial setting. Therefore, the sampling results were compared with what is typically regarded as an industry standard that the presence of total VOCs greater than 3 ppm may cause undesirable health effects.

The results of the sampling performed revealed the following:

- No detectable concentrations of total Volatile Organic Compounds were observed within any of the other subject spaces during the sampling period.

Findings and Recommendations

The results of the sampling performed did not reveal any evidence of a significant indoor air quality concern within the subject spaces. That is, the sampling performed did not reveal the presence of any contaminants at hazardous concentrations.

It is important to note that this inspection and sampling are limited in that it only reports the presence and conditions of the parameters analyzed at the time the inspection and sampling was performed. Although every attempt was made to collect the samples at a time which is most representative of the typical conditions of the subject space, these results cannot guarantee the conditions prior to, and subsequent to, when the samples were collected. If concerns and/or symptoms persist, further investigation, including more expansive air monitoring and collaboration with the occupant's physician(s) is recommended. Please contact our office if these services are requested.

Attached, please find a copy of the laboratory analytical report detailing the findings. If there are any questions or if more information is needed, please feel free to contact our office.

Sincerely,

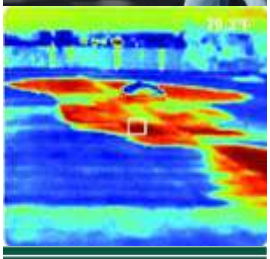
George Greve

Edward J. McGuire III
J.C. Broderick & Associates, Inc.

Photo Logs





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NORTHPORT MIDDLE SCHOOL

K-WING CORRIDOR

J.C. BRODERICK
& Associates

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NORTHPORT MIDDLE SCHOOL

TYPICAL CLASSROOM

J.C. BRODERICK
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NORTHPORT MIDDLE SCHOOL

TYPICAL SCIENCE CLASSROOM

J.C. BRODERICK
& Associates

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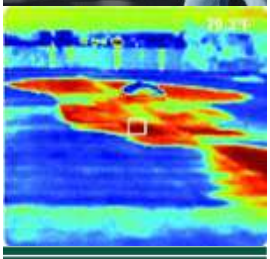
NORTHPORT MIDDLE SCHOOL

REPRESENTATIVE MOISTURE IMPACTED CEILING TILE

Laboratory Results





J.C. Broderick & Associates, Inc.
Environmental Consulting & Testing
1775 Expressway Drive North
Hauppauge, New York 11788

OrderID: 061924066

J.C. BRODERICK & ASSOCIATES — AIR MONITORING & CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

PROJECT NAME/LOCATION: Northport Middle School	PROJECT #: 19-94783	DATE: 10/23/2019	LABORATORY: EMSL	☐ BACKGROUND ☐ POST-ABATE ☐ 3 HR
ADDRESS: 11 Middleville Road, Northport, NY 11768	WORK AREA: K Wing + Rooms G51, G51 + G53			☐ PRE-ABATE ☐ 6 HR ☐ 12 HR
CLIENT: Northport-East Northport	(A=Air) B=Bulk W=Wipe L=Liquid S=Soil			☐ DURING-ABATE ☑ 24 HR ☐ OTHER

SAMPLE ID	DATE	LAB #	TYPE		SAMPLE LOCATION/DESCRIPTION	FLOW B/E (L)	FLOW AVG (L)	BEGIN TIME	END TIME	TOTAL MIN	TOTAL VOL (L)	ANALYSIS METHOD	RESULT
1	10/23		A	☐ IWA ☐ OWA	Ambient Outside of Structure		15			5	75	M001	
2	10/23		A	☐ IWA ☐ OWA	Ambient Outside of Structure		15			5	75	M001	
3	10/23		A	☐ IWA ☐ OWA	Ambient Outside of Structure		15			5	75	M001	
4	10/23		A	☐ IWA ☐ OWA	Ambient Outside of Structure		15			5	75	M001	
5	10/23		A	☐ IWA ☐ OWA	Composite of Room K70 (AHERA 1068)		15			5	75	M001	
6	10/23		A	☐ IWA ☐ OWA	Composite of Mens Restroom (AHERA 1069)		15			5	75	M001	
7	10/23		A	☐ IWA ☐ OWA	Composite of Room K71 (AHERA 1071)		15			5	75	M001	
8	10/23		A	☐ IWA ☐ OWA	Composite of Room K75 (AHERA 1072)		15			5	75	M001	
9	10/23		A	☐ IWA ☐ OWA	Composite of Prep Room (AHERA 1072A)		15			5	75	M001	
10	10/23		A	☐ IWA ☐ OWA	Composite of Room K72 (AHERA 1073)		15			5	75	M001	
11	10/23		A	☐ IWA ☐ OWA	Composite of Room K74 (AHERA 1074)		15			5	75	M001	
12	10/23		A	☐ IWA ☐ OWA	Composite of Room K73 (AHERA 1075)		15			5	75	M001	
13	10/23		A	☐ IWA ☐ OWA	Composite of ~~Room~~ K Wing Corridor (AHERA 1076)		15			5	75	M001	

SAMPLERS NAME (PRINT)	SAMPLERS SIGNATURE	DATE	TIME	RECEIVED BY	SIGNATURE	DATE	TIME
Tara Ricker		10/23/2019	19:00-20:15	Jeff Lau		10/24/19	9:05Am
RELINQUISHED (PRINT)	SIGNATURE	DATE	TIME	ANALYST (PRINT)	SIGNATURE	DATE	TIME
		10/23/19		Jeff Lau		10/24/19	12:19PM

COMMENTS: Ambient Conditions: Clear skies, 61°F 36% rh

☐ ANALYZE EACH MATERIAL TO 1st POSITIVE

MANAGER: George Greve

J.C. Broderick & Associates 1775 Expressway Drive North, Hauppauge, NY 11788 (Bill to Accounts Payable) 631-584-5492 Phone, 631-584-3395 Fax

White-Laboratory Yellow-Office Pink-Field

J.C. BRODERICK & ASSOCIATES — **AIR MONITORING & CHAIN OF CUSTODY RECORD** — PAGE 2 OF 2

PROJECT NAME/LOCATION: Northport Middle School	PROJECT #: 19-44783	DATE: 10/23/19	LABORATORY: EMSL
ADDRESS: 11 Middleville Road, Northport, NY 11768	WORK AREA: K Wing + Rooms 651, 652, 653		
CLIENT: Northport-East Northport	(A=Air) B=Bulk W=Wipe L=Liquid S=Soil		

☐ BACKGROUND ☐ POST-ABATE ☐ 3 HR
☐ PRE-ABATE ☐ 6 HR ☐ 12 HR
☐ DURING-ABATE ☑ 24 HR ☐ OTHER____

SAMPLE ID	DATE	LAB #	TYPE		SAMPLE LOCATION/DESCRIPTION	FLOW B/E (L)	FLOW AVG (L)	BEGIN TIME	END TIME	TOTAL MIN	TOTAL VOL (L)	ANALYSIS METHOD	RESULT
14	10/23		A	☐ IWA ☐ OWA	Composite of Room 651 (AHERA 1081)		15			5	75	M001	
15	10/23		A	☐ IWA ☐ OWA	Composite of Room 652 (AHERA 1082)		15			5	75	M001	
16	10/23		A	☐ IWA ☐ OWA	Composite of Room 653 (AHERA 1083)		15			5	75	M001	
				☐ IWA ☐ OWA									
				☐ IWA ☐ OWA									
				☐ IWA ☐ OWA									
				☐ IWA ☐ OWA									
				☐ IWA ☐ OWA									
				☐ IWA ☐ OWA									
				☐ IWA ☐ OWA									
				☐ IWA ☐ OWA									
				☐ IWA ☐ OWA									
				☐ IWA ☐ OWA									

19 OCT 24 AM 9:05
EMSL ANALYTICAL, INC. CARLE PLACE, NY

SAMPLERS NAME (PRINT)	SAMPLERS SIGNATURE	DATE	TIME	RECEIVED BY	SIGNATURE	DATE	TIME
RELINQUISHED (PRINT)	**SIGNATURE**	**DATE**	**TIME**	**ANALYST (PRINT)**	**SIGNATURE**	**DATE**	**TIME**
	[signature]	10/23/19					

COMMENTS: Ambient Conditions: clear skies, 61°F 36%RH

☐ ANALYZE EACH MATERIAL TO 1st POSITIVE

MANAGER: George Greve

J.C. Broderick & Associates 1775 Expressway Drive North, Hauppauge, NY 11788 (Bill to Accounts Payable) 631-584-5492 Phone, 631-584-3395 Fax

White-Laboratory Yellow-Office Pink-Field

EMSL Analytical, Inc.

528 Mineola Avenue Carle Place, NY 11514

Tel/Fax: (516) 997-7251 / (516) 997-7528

http://www.EMSL.com / carleplacelab@emsl.com

EMSL Order: 061924066
Customer ID: JCBR50
Customer PO: 19-44783
Project ID:

Attn: George Greve
J.C. Broderick & Associates
1775 Expressway Drive North, Suite 1
Hauppauge, NY 11788

Phone: (631) 584-5492
Fax:
Collected: 10/23/2019
Received: 10/24/2019
Analyzed: 10/24/2019

Project: Northport Middle School, 11 Middleville, Northport, NY 11768. Northport-East Northport. Project: 19-44783. K Wing + Room G51, G51 + G53.

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

Lab Sample Number:	061924066-0001			061924066-0002			061924066-0003		
Client Sample ID:	1			2			3		
Volume (L):	75			75			75		
Sample Location	Ambient Outside of Structure			Ambient Outside of Structure			Ambient Outside of Structure		
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**
Alternaria (Ulocladium)	-	-	-	1	40	0.2	-	-	-
Ascospores	16	700	5.5	4	200	1.1	7	300	1.8
Aspergillus/Penicillium	29	1300	10.2	24	1000	5.3	18	790	4.8
Basidiospores	231	10100	78.9	389	17000	90.2	311	13600	83.5
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	13	570	4.5	14	610	3.2	33	1400	8.6
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	2	90	0.7	-	-	-	4	200	1.2
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	1	40	0.3	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Total Fungi	**292**	**12800**	**100**	**432**	**18850**	**100**	**373**	**16290**	**100**
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

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

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

Jeffrey Lau, Microbiology Laboratory Manager
or other approved signatory

Samples received in good condition unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the result, it will be noted on the report.

Samples analyzed by EMSL Analytical, Inc. Carle Place, NY AIHA-LAP, LLC--EMLAP Accredited #102344

Initial report from: 10/24/2019 12:23:21

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

EMSL Analytical, Inc.

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Tel/Fax: (516) 997-7251 / (516) 997-7528

http://www.EMSL.com / carleplacelab@emsl.com

EMSL Order: 061924066
Customer ID: JCBR50
Customer PO: 19-44783
Project ID:

Attn: George Greve
J.C. Broderick & Associates
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Hauppauge, NY 11788

Phone: (631) 584-5492
Fax:
Collected: 10/23/2019
Received: 10/24/2019
Analyzed: 10/24/2019

Project: Northport Middle School, 11 Middleville, Northport, NY 11768. Northport-East Northport. Project: 19-44783. K Wing + Room G51, G51 + G53.

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

Lab Sample Number:	061924066-0004			061924066-0005			061924066-0006		
Client Sample ID:	4			5			6		
Volume (L):	75			75			75		
Sample Location	Ambient Outside of Structure			Composite of Room K70 (AHERA 1068)			Composite of Mens Restroom (AHERA 1069)		
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	40	1700	13.1	-	-	-	4	200	8.3
Aspergillus/Penicillium	19	830	6.4	26	1100	60.1	21	920	38.3
Basidiospores	196	8550	66.1	12	520	28.4	27	1200	50
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	41	1800	13.9	4	200	10.9	-	-	-
Curvularia	1	40	0.3	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	1	40	1.7
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1*	10*	0.1	-	-	-	1	40	1.7
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	1*	10*	0.5	-	-	-
Total Fungi	**298**	**12930**	**100**	**43**	**1830**	**100**	**54**	**2400**	**100**
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	2	-	-	1	-
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.

Jeffrey Lau, Microbiology Laboratory Manager
or other approved signatory

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

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Samples analyzed by EMSL Analytical, Inc. Carle Place, NY AIHA-LAP, LLC--EMLAP Accredited #102344

Initial report from: 10/24/2019 12:23:21

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EMSL Order: 061924066
Customer ID: JCBR50
Customer PO: 19-44783
Project ID:

Attn: George Greve
J.C. Broderick & Associates
1775 Expressway Drive North, Suite 1
Hauppauge, NY 11788

Phone: (631) 584-5492
Fax:
Collected: 10/23/2019
Received: 10/24/2019
Analyzed: 10/24/2019

Project: Northport Middle School, 11 Middleville, Northport, NY 11768. Northport-East Northport. Project: 19-44783. K Wing + Room G51, G51 + G53.

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

Lab Sample Number:	061924066-0007			061924066-0008			061924066-0009		
Client Sample ID:	7			8			9		
Volume (L):	75			75			75		
Sample Location	Composite of Room K71 (AHERA 1071)			Composite of Room K75 (AHERA 1072)			Composite of Prep Room (AHERA 1072A)		
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	2	90	2.8	3	100	4.4	1	40	5
Aspergillus/Penicillium	13	570	17.8	11	480	21	5	200	25
Basidiospores	47	2100	65.6	30	1300	56.8	11	480	60
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	10	440	13.8	9	400	17.5	1	40	5
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	1	40	5
Myxomycetes++	-	-	-	1*	10*	0.4	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Total Fungi	**72**	**3200**	**100**	**54**	**2290**	**100**	**19**	**800**	**100**
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

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

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

Jeffrey Lau, Microbiology Laboratory Manager
or other approved signatory

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Analyzed: 10/24/2019

Project: Northport Middle School, 11 Middleville, Northport, NY 11768. Northport-East Northport. Project: 19-44783. K Wing + Room G51, G51 + G53.

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

Lab Sample Number:	061924066-0010			061924066-0011			061924066-0012		
Client Sample ID:	10			11			12		
Volume (L):	75			75			75		
Sample Location	Composite of Room K72 (AHERA 1073)			Composite of Room K74 (AHERA 1074)			Composite of Room K73 (AHERA 1075)		
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	1	40	2.9	-	-	-	1	40	2.5
Aspergillus/Penicillium	4	200	14.6	4	200	18.2	21	920	56.8
Basidiospores	22	960	70.1	16	700	63.6	15	660	40.7
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	2	90	6.6	-	-	-	-	-	-
Curvularia	1	40	2.9	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1	40	2.9	5	200	18.2	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Total Fungi	**31**	**1370**	**100**	**25**	**1100**	**100**	**37**	**1620**	**100**
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	1	-	-	1	-

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

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

Jeffrey Lau, Microbiology Laboratory Manager
or other approved signatory

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Project: Northport Middle School, 11 Middleville, Northport, NY 11768. Northport-East Northport. Project: 19-44783. K Wing + Room G51, G51 + G53.

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

Lab Sample Number:	061924066-0013			061924066-0014			061924066-0015		
Client Sample ID:	13			14			15		
Volume (L):	75			75			75		
Sample Location	Composite of K Wing Corridor (AHERA 1076)			Composite of Room G51 (AHERA 1081)			Composite of Room G52 (AHERA 1082)		
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	1	40	1.6	3	100	5
Aspergillus/Penicillium	18	790	26	20	870	34.4	12	520	25.7
Basidiospores	44	1900	62.5	25	1100	43.5	29	1300	64.4
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	6	300	9.9	11	480	19	-	-	-
Curvularia	1*	10*	0.3	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	1*	10*	0.5
Myxomycetes++	1	40	1.3	1	40	1.6	2	90	4.5
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Total Fungi	**70**	**3040**	**100**	**58**	**2530**	**100**	**47**	**2020**	**100**
Hyphal Fragment	1	40	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

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

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

Jeffrey Lau, Microbiology Laboratory Manager
or other approved signatory

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Project: Northport Middle School, 11 Middleville, Northport, NY 11768. Northport-East Northport. Project: 19-44783. K Wing + Room G51, G51 + G53.

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

Lab Sample Number:	**061924066-0016**		
Client Sample ID:	**16**		
Volume (L):	**75**		
Sample Location	Composite of Room G53 (AHERA 1083)		
Spore Types	**Raw Count**	**Count/m³**	**% of Total**
Alternaria (Ulocladium)	-	-	-
Ascospores	2	90	3.8
Aspergillus/Penicillium	19	830	35.2
Basidiospores	33	1400	59.3
Bipolaris++	-	-	-
Chaetomium	-	-	-
Cladosporium	1	40	1.7
Curvularia	-	-	-
Epicoccum	-	-	-
Fusarium	-	-	-
Ganoderma	-	-	-
Myxomycetes++	-	-	-
Pithomyces++	-	-	-
Rust	-	-	-
Scopulariopsis/Microascus	-	-	-
Stachybotrys/Memnoniella	-	-	-
Unidentifiable Spores	-	-	-
Zygomycetes	-	-	-
Cercospora++	-	-	-
Nigrospora	-	-	-
Total Fungi	**55**	**2360**	**100**
Hyphal Fragment	-	-	-
Insect Fragment	-	-	-
Pollen	-	-	-
Analyt. Sensitivity 600x	-	44	-
Analyt. Sensitivity 300x	-	13*	-
Skin Fragments (1-4)	-	2	-
Fibrous Particulate (1-4)	-	1	-
Background (1-5)	-	1	-

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

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