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Since 1994*

The logo features a blue triangle pointing to the right, with the company name overlaid in white text with a black outline.

**Midwest
Environmental
Consulting Services, Inc.**

Consultants ◀ Engineers ◀ Scientists

**IAQ, AIRBORNE MOLD
SAMPLING REPORT**

Performed for:

**LINCOLNSHIRE PRAIRIE VIEW
SCHOOL DISTRICT #103**

1370 N. Riverwoods Road
Lincolnshire, IL 60069

Project Location:

LAURA B. SPRAGUE ELEMENTARY SCHOOL

*2425 Riverwoods Road
Lincolnshire, IL 60069*

Visit Dates: January 15 – 29, 2016

MEC Project #: 16-01-031-I.H.

EXECUTIVE SUMMARY

Midwest Environmental Consulting Services, Inc. (MEC) was retained to provide indoor air quality monitoring and airborne mold sampling within selected areas at Laura B. Sprague Elementary School (located at 2425 Riverwoods Road in Lincolnshire, Illinois). Testing included monitoring and recording the ambient air temperature, percent relative humidity, carbon dioxide, and carbon monoxide levels.

The purpose of this sampling was to determine whether airborne mold concentrations at select locations within the building were significantly different from those present in the outdoor air and to determine whether common air quality parameters were consistent with regulatory and industry standards.

Mold air sampling occurred on January 15 and 22, 2016. IAQ parameters were recorded from January 22 – 29, 2016.

- *Ambient Temperature, Percent Relative Humidity, CO₂, and CO measuring/recording*

Based on the results from these visits, the following recommendation is offered:

- Increase the relative humidity level to within the ASHRAE recommended range. This recommendation is offered with the recognition that humidification devices require routine maintenance and that such units, if unmaintained, can be a source of unwanted mold/bacteria contamination.
- *Airborne Mold Spore Sampling*

Absent additional evidence of moisture impacted building materials (such as water staining, mottled surface finishes, etc.), the presence of an independent source of airborne molds appears limited to the Multipurpose Room and Room 34.

Based on these visits, the following conclusions is reached:

- The presence of molds consistent with the presence of moisture impacted building materials in the outside air has confounded precise interpretation of the indoor sampling results.
- The Multipurpose Room and Room 34 appear most likely as areas where moisture impacted building materials may be present.

Based on these conclusions, the following recommendations are provided:

- Investigate the Multipurpose Room and Room 34 for sources of uncontrolled moisture and address them as soon as possible.
- Remediate moisture impacted building materials in conformance with EPA/IDPH guidelines, if found. Note that remediation includes damp cleaning methods and HEPA filtered vacuuming to eliminate dusts to the extent feasible.
- Consider retesting several rooms at a future time (for example, Spring/Summer break) to confirm/refute these results and to monitor the progress of dust control measures.
- Inform and educate building users to report any instance of uncontrolled water to building authorities as soon as possible. Building authorities should address any report of uncontrolled water as an urgent matter requiring prompt action to control the water and dry/replace any impacted building materials and/or furnishings as needed.

INTRODUCTION

Midwest Environmental Consulting Services, Inc. (MEC) was retained to provide indoor air quality monitoring and airborne mold sampling within selected areas at Laura B. Sprague Elementary School (located at 2425 Riverwoods Road in Lincolnshire, Illinois). Testing included monitoring and recording the ambient air temperature, percent relative humidity, carbon dioxide, and carbon monoxide levels.

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Mold air sampling occurred on January 15 and 22, 2016. IAQ parameters were recorded from January 22 – 29, 2016.

MEC was represented during the subject visits by David W. Sloman, CIH.

METHODS

- *Ambient Temperature, Percent Relative Humidity, CO₂ and CO measuring/recording*



Ambient air temperature, percent relative humidity, CO₂ and CO measurements were performed using a Q-Trak[®] real time indoor air quality monitor (Model 7565 or equivalent) manufactured by TSI Incorporated, Shorewood, MN. This instrument was programmed to collect data over an approximate 1-week time period. Once data collection was completed, the instrument was downloaded to a computer and its output was printed.

- *Airborne Mold Spore Sampling*



The spore trap air sampling was performed using a high volume air-sampling pump attached to an Air-O-Cell cassette provided by Zefon Corporation containing a tacky substance used to trap mold spores from air on through the method of impaction. For this sampling, pumps operated for approximately five minutes in each location at 15 liters per minute, according to manufacturer's recommendations. The air sampling process impacts particulates (including mold fragments) onto the Air-O-Cell cassette, which is then forwarded to a laboratory for microbial identification.

An independent laboratory (STAT Analysis Corporation, Chicago, Illinois.) accredited by the American Industrial Hygiene Association (AIHA) was used for all microscopic identification.

RESULTS

- *Ambient Temperature, Percent Relative Humidity, CO₂, and CO measuring/recording*

The table below displays a summary of the results provided by the Q-Trak monitoring. The table lists the indoor air quality parameters, the average recorded values, as well as the minimum and maximum values recorded.

Room 5

	Air Temperature °F	Relative Humidity (%)	CO ₂ (ppm) ¹	CO (ppm) ¹
Average	68.6	18.6	453	0.0
Range	64.8-71.9	10.8-26.2	355-989	0-0.3

¹'ppm' means parts of contaminant per million parts of air by volume

A graph and statistics regarding the Q-trak monitoring is provided in Appendix 2.

- *Airborne Mold Spore Sampling*

The tables below display the results of the airborne mold spore sampling. The tables display the sample ID number, sampled location, types of spores detected, their concentration, and their percent of the total spores detected in the respective sample.

January 15, 2016 Results

Sample ID Number	Sampled Location	Type of Mold Detected	Concentration (counts/m ³)	Percent of the Total Molds
21861797	Room 106	No molds detected	0	---
21861866	Gymnasium	No molds detected	0	---
21861788	Room 104	Aspergillus/Penicillium	13	100.0
21861852	Room 103	No molds detected	0	---
21861874	Room 102 (Early Childhood)	Ascospores	27	50.0
		Epicoccum	13	25.0
		Smuts/Myxomycetes	13	25.0
21861877	Room 101	Ascospores	13	100.0
21861859	Room 1	Ascospores	27	100.0
21861974	Room 3	No molds detected	0	---
21861876	Room 5	Ascospores	13	50.0
		Epicoccum	13	50.0
21861807	Room 7	No molds detected	0	---
21861906	Media Center	Aspergillus/Penicillium	13	100.0
21861847	Room 13	Aspergillus/Penicillium	13	100.0
21861870	Room 12	Ascospores	13	25.0
		Aspergillus/Penicillium	13	25.0
		Pithomyces	13	25.0
		Smuts/Myxomycetes	13	25.0
21861865	Room 11	No molds detected	0	---
21861848	Room 10	Ascospores	13	100.0
21861854	Room 8	Ascospores	13	100.0
21861839	Room 6	Ascospores	13	100.0
21861830	Room 4	Ascospores	13	100.0
21861804	Room 2	No molds detected	0	---
21861791	Multi-purpose Room	Ascospores	27	25.0
		Aspergillus/Penicillium	53	50.0
		Cladosporium	13	12.5
		Smuts/Myxomycetes	13	12.5
21861789	Outside Air	Ascospores	27	25.0
		Aspergillus/Penicillium	40	37.5
		Chaetomium	53	50.0
		Cladosporium	13	12.5
		Smuts/Myxomycetes	27	25.0

Aspergillus/Penicillium and *Chaetomium* are molds that are commonly associated with the presence of moisture impacted building materials. *Aspergillus/Penicillium* was detected in low concentrations at several locations as follows:

- Room 104
- Media Center
- Room 13
- Room 12, and
- Multipurpose Room.

Aspergillus/Penicillium and *Chaetomium* were detected in the outside air as well, confounding these results.

Given these results, if an independent source of airborne in the rooms sampled above, it is most likely present at the Multipurpose Room.

January 22, 2016 Results

Sample ID Number	Sampled Location	Type of Mold Detected	Concentration (counts/m ³)	Percent of the Total Molds
21861789	Room 34	Ascospores	67	35.7
		Aspergillus/Penicillium	80	42.9
		Cladosporium	13	7.1
		Smuts/Myxomycetes	27	14.3
21861863	Room 33	Ascospores	13	100.0
21861853	Room 32	Ascospores	27	100.0
21861861	Room 31	Ascospores	13	100.0
21861838	Room 30	Ascospores	13	50.0
		Smuts/Myxomycetes	13	50.0
21861867	Room 29	Ascospores	13	100.0
21861828	Room 28	Aspergillus/Penicillium	13	100.0
21861878	Room 27	Ascospores	13	25.0
		Aspergillus/Penicillium	13	25.0
		Epicoccum	13	25.0
		Smuts/Myxomycetes	13	25.0
21861834	Room 24	Ascospores	67	55.6
		Aspergillus/Penicillium	27	22.2
		Smuts/Myxomycetes	13	11.1
		Torula	13	11.1
21861783	Room 14	Aspergillus/Penicillium	13	50.0
		Epicoccum	13	50.0
21861833	Room 15	Aspergillus/Penicillium	13	100.0
21861831	Room 16	Ascospores	27	50.0
		Aspergillus/Penicillium	27	50.0
21861856	Room 17	Ascospores	27	100.0
21861844	Room 18	Ascospores	13	100.0
21861842	Room 19	Ascospores	13	100.0
21861869	Room 20	Aspergillus/Penicillium	13	50.0
		Smuts/Myxomycetes	13	50.0
21861864	Room 21	Ascospores	27	100.0
21861841	Outside Air	Ascospores	13	25.0
		Aspergillus/Penicillium	27	50.0
		Smuts/Myxomycetes	13	25.0

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Aspergillus/Penicillium are molds that are commonly associated with the presence of moisture impacted building materials. *Aspergillus/Penicillium* was detected in low concentrations at several locations as follows:

- Room 34
- Room 28
- Room 27
- Room 24
- Room 14
- Room 15
- Room 16, and
- Room 20.

Aspergillus/Penicillium were detected in the outside air as well, confounding these results.

Given these results, if an independent source of airborne in the rooms sampled above, it is most likely present at Room 34.

A copy of the laboratory analysis report for these samples is provided in Appendix 1. Photos of the sampled areas are provided in Appendix 2. Drawings that display the sampled areas are provided in Appendix 3.

CONCLUSIONS AND RECOMMENDATIONS

- *Ambient Temperature, Percent Relative Humidity, CO₂, and CO measuring/recording*

The results obtained during this visit were compared with the ASHRAE guidelines for ambient indoor temperatures during the winter (heating) season which is 68-76 °F (reference: ASHRAE 55-1992, "Thermal Environmental Conditions for Human Occupancy"). According to this standard, when temperatures are maintained within this range, building owners can expect the vast majority of occupants (10% dissatisfaction) to be comfortable when dressed appropriately for the season.

The measured percent relative humidity levels can be compared with the ASHRAE guideline levels of 20%-60%.

The measured CO₂ concentrations can be compared with the ASHRAE guideline level for "comfort" which is generally considered to be 1000 ppm, and the OSHA-PEL for carbon dioxide level which is 5000 ppm.

The regulatory OSHA-PEL for carbon monoxide is 50 ppm and the health-based Threshold Limit Value provided by ACGIH (ACGIH-TLV®) is 35 ppm.

During this visit, the average ambient air temperature was within the ASHRAE criterion range for temperature anticipated to be acceptable for the vast majority of occupants.

During this visit, the average percent relative humidity was below the level recommended by ASHRAE (below 20%). Low relative humidity levels can result in dry eyes, sinuses and irritation for contact lens wearers. Low relative humidity levels can also result in unwanted static electrical discharges.

During this visit, the average carbon dioxide concentration was within at a level ASHRAE considered "comfortable" during the entire monitoring period.

During this visit, carbon monoxide was detected (less than 0.3 ppm), well below any level of concern).

Based on these results, the following recommendation is offered:

- Increase the relative humidity level to within the ASHRAE recommended range. This recommendation is offered with the recognition that humidification devices require routine maintenance and that such units, if unmaintained, can be a source of unwanted mold/bacteria contamination.
- *Airborne Mold Spore Testing*

There is no uniformity in the suggested guidelines for acceptable levels of molds in indoor ambient air. Thus, health professionals have no way to determine what levels of molds may pose a threat to human health.

According to the American Conference of Governmental Industrial Hygienists (ACGIH), an independent source of molds likely exists indoors when either of the following conditions exists:

- There is a significantly greater concentration of molds present indoors compared with outdoors (barring a heavy snow covering or rainfall), or
- The types of molds present indoors are significantly different than the types of molds present outdoors.

Aspergillus/Penicillium and *Chaetomium* are molds that are commonly associated with the presence of moisture impacted building materials. *Aspergillus/Penicillium* were detected at several locations within Laura B. Sprague Elementary School. However, *Aspergillus/Penicillium* and *Chaetomium* were also detected in the outside air confounding the interpretation of these results.

Given the overall low mold concentrations both indoors and outside, the presence/absence of a single spore is significant leading to the potential for misinterpretation.

Absent additional evidence of moisture impacted building materials (such as water staining, mottled surface finishes, etc.), the presence of an independent source of airborne molds appears limited to the Multipurpose Room and Room 34.

Based on these visits, the following conclusions is reached:

- The presence of molds consistent with the presence of moisture impacted building materials in the outside air has confounded precise interpretation of the indoor sampling results.
- The Multipurpose Room and Room 34 appear most likely as areas where moisture impacted building materials may be present.

Based on these conclusions, the following recommendations are provided:

- Investigate the Multipurpose Room and Room 34 for sources of uncontrolled moisture and address them as soon as possible.
- Remediate moisture impacted building materials in conformance with EPA/IDPH guidelines, if found. Note that remediation includes damp cleaning methods and HEPA filtered vacuuming to eliminate dusts to the extent feasible.
- Consider retesting several rooms at a future time (for example, Spring/Summer break) to confirm/refute these results and to monitor the progress of dust control measures.
- Inform and educate building users to report any instance of uncontrolled water to building authorities as soon as possible. Building authorities should address any report of uncontrolled water as an urgent matter requiring prompt action to control the water and dry/replace any impacted building materials and/or furnishings as needed.

Respectfully submitted,



David W. Sloman, CIH
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Yorkville, IL 60560

Appendices (4)

1. Laboratory Analysis Reports
2. Q-Trak Graph and Statistics
3. Photos
4. Drawings with Sample Locations

Performed for:
LINCOLNSHIRE PRAIRIE VIEW SCHOOL DISTRICT #103
1370 N. Riverwoods Road
Lincolnshire, IL 60069
MEC Project #: 16-01-031-I.H.

APPENDIX 1
Laboratory Analysis Reports
Laura B. Sprague Elementary School
Lincolnshire, Illinois
January 15 & 22, 2016

January 15, 2016 Results

STAT Analysis Corporation:
 2242 West Harrison St., Suite 200, Chicago, Illinois 60612-3766
 Tel: 312.733.0351; Fax: 312.733.2386; e-mail address: STATinfo@STATAnalysis.com

Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client: Midwest Environmental Consulting Services Date/Time Received: 1/19/16 11:40 AM
 Project ID: 16-01-031, Sprange School, Lincolnshire Date Reported: 1/26/2016
 STAT Project No.: 16010418 Analyzed By: DM

Client Sample No.:	21861797	21861866	21861788	21861852												
Sample Description:																
Date Sampled:	1/15/2016	1/15/2016	1/15/2016	1/15/2016												
STAT Sample No.:	16010418-001	16010418-002	16010418-003	16010418-004												
Volume (m ³):	0.075	0.075	0.075	0.075												
	Total Count	Count/ m ³	DL	%	Total Count	Count/ m ³	DL	%	Total Count	Count/ m ³	DL	%	Total Count	Count/ m ³	DL	%
Total Fungal Spores:	0			100	0			100	1	13	1	100	0			100
<i>Alternaria</i>																
<i>Ascospores</i>																
<i>Aspergillus/Penicillium</i>									1	13	1	100.0				
<i>Basidiospores</i>																
<i>Botrytis</i>																
<i>Cercospora</i>																
<i>Chaetomium</i>																
<i>Cladosporium</i>																
<i>Curvularia</i>																
<i>Drechslera/Bipolaris</i>																
<i>Epicoccum</i>																
<i>Fusarium</i>																
<i>Nigrospora</i>																
<i>Oidium/Erysiphe</i>																
<i>Pariconia</i>																
<i>Phoma</i>																
<i>Pithomyces</i>																
<i>Pleospora</i>																
<i>Polythrincium</i>																
<i>Rhizopus/Mucor</i>																
Rusts																
Smuts/Myxomycetes																
<i>Stachybotrys</i>																
<i>Stemphylium</i>																
<i>Torula</i>																
<i>Ulocladium</i>																
Unidentified Fungi																
Other																
Mycelial Fragments																
Debris Level	Low				Low				Low				Low			
Organic Material	Absent				Present				Present				Present			

DL - Detection Limit = Spores

SOP 6110

Performed for:
 LINCOLNSHIRE PRAIRIE VIEW SCHOOL DISTRICT #103
 1370 N. Riverwoods Road
 Lincolnshire, IL 60069
 MEC Project #: 16-01-031-I.H.

Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client: Midwest Environmental Consulting Services Date/Time Received: 1/19/16 11:40 AM
 Project ID: 16-01-031, Sprange School, Lincolnshire Date Reported: 1/26/2016
 STAT Project No.: 16010418 Analyzed By: DM

Client Sample No.:	21861874				21861877				21861859				21861974			
Sample Description:																
Date Sampled:	1/15/2016				1/15/2016				1/15/2016				1/15/2016			
STAT Sample No.:	16010418-005				16010418-006				16010418-007				16010418-008			
Volume (m ³):	0.075				0.075				0.075				0.075			
	Total Count	Count/m ³	DL	%	Total Count	Count/m ³	DL	%	Total Count	Count/m ³	DL	%	Total Count	Count/m ³	DL	%
Total Fungal Spores:	4	53	1	100	1	13	1	100	2	27	1	100	0			100
<i>Alternaria</i>																
Ascospores	2	27	1	50.0	1	13	1	100.0	2	27	1	100.0				
<i>Aspergillus/Penicillium</i>																
Basidiospores																
<i>Botrytis</i>																
<i>Cercospora</i>																
<i>Chaetomium</i>																
<i>Cladosporium</i>																
<i>Curvularia</i>																
<i>Drechslera/Bipolaris</i>																
<i>Epicoccum</i>	1	13	1	25.0												
<i>Fusarium</i>																
<i>Nigrospora</i>																
<i>Oidium/Erysiphe</i>																
<i>Pariconia</i>																
<i>Phoma</i>																
<i>Pithomyces</i>																
<i>Pleospora</i>																
<i>Polythrincium</i>																
<i>Rhizopus/Mucor</i>																
Rusts																
Smuts/Myxomycetes	1	13	1	25.0												
<i>Stachybotrys</i>																
<i>Stenphyllum</i>																
<i>Torula</i>																
<i>Ulocladium</i>																
Unidentified Fungi																
Other																
Mycelial Fragments																
Debris Level	Low				Low				Low				Low			
Organic Material	Present				Present				Present				Present			

DL - Detection Limit = Spores

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Performed for:
 LINCOLNSHIRE PRAIRIE VIEW SCHOOL DISTRICT #103
 1370 N. Riverwoods Road
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Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client: Midwest Environmental Consulting Services Date/Time Received: 1/19/16 11:40 AM
 Project ID: 16-01-031, Sprange School, Lincolnshire Date Reported: 1/26/2016
 STAT Project No.: 16010418 Analyzed By: DM

Client Sample No.:	21861876				21861807				21861906				21861847			
Sample Description:																
Date Sampled:	1/15/2016				1/15/2016				1/15/2016				1/15/2016			
STAT Sample No.:	16010418-009				16010418-010				16010418-011				16010418-012			
Volume (m ³):	0.075				0.075				0.075				0.075			
	Total Count	Count/m ³	DL	%	Total Count	Count/m ³	DL	%	Total Count	Count/m ³	DL	%	Total Count	Count/m ³	DL	%
Total Fungal Spores:	2	27	1	100	0			100	1	13	1	100	1	13	1	100
<i>Alternaria</i>																
Ascospores	1	13	1	50.0												
<i>Aspergillus/Penicillium</i>									1	13	1	100.0	1	13	1	100.0
Basidiospores																
<i>Botrytis</i>																
<i>Cercospora</i>																
<i>Chaetomium</i>																
<i>Cladosporium</i>																
<i>Curvularia</i>																
<i>Drechslera/Bipolaris</i>																
<i>Epicoccum</i>	1	13	1	50.0												
<i>Fusarium</i>																
<i>Nigrospora</i>																
<i>Oidium/Erysiphe</i>																
<i>Pariconia</i>																
<i>Phoma</i>																
<i>Pithomyces</i>																
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<i>Torula</i>																
<i>Ulocladium</i>																
Unidentified Fungi																
Other																
Mycelial Fragments																
Debris Level	Low				Low				Low				Low			
Organic Material	Present				Present				Present				Present			

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Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client: Midwest Environmental Consulting Services Date/Time Received: 1/19/16 11:40 AM
 Project ID: 16-01-031, Sprange School, Lincolnshire Date Reported: 1/26/2016
 STAT Project No.: 16010418 Analyzed By: DM

Client Sample No.:	21861870				21861865				21861848				21861854			
Sample Description:																
Date Sampled:	1/15/2016				1/15/2016				1/15/2016				1/15/2016			
STAT Sample No.:	16010418-013				16010418-014				16010418-015				16010418-016			
Volume (m ³):	0.075				0.075				0.075				0.075			
	Total Count	Count/m ³	DL	%	Total Count	Count/m ³	DL	%	Total Count	Count/m ³	DL	%	Total Count	Count/m ³	DL	%
Total Fungal Spores:	4	53	1	100	0			100	1	13	1	100	1	13	1	
<i>Alternaria</i>																
Ascospores	1	13	1	25.0					1	13	1	100.0	1	13	1	100.0
<i>Aspergillus/Penicillium</i>	1	13	1	25.0												
Basidiospores																
<i>Botrytis</i>																
<i>Carcospora</i>																
<i>Chaetomium</i>																
<i>Cladosporium</i>																
<i>Curvularia</i>																
<i>Drechslera/Bipolaris</i>																
<i>Epicoccum</i>																
<i>Fusarium</i>																
<i>Nigrospora</i>																
<i>Oidium/Erysiphe</i>																
<i>Pariconia</i>																
<i>Phoma</i>																
<i>Pithomyces</i>	1	13	1	25.0												
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<i>Ulocladium</i>																
Unidentified Fungi																
Other																
Mycelial Fragments																
Debris Level	Low				Low				Low				Low			
Organic Material	Present				Present				Present				Present			

DL - Detection Limit = Spores

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Performed for:
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STAT Analysis Corporation:
 2242 West Harrison St., Suite 200, Chicago, Illinois 60612-3766
 Tel: 312.733.0551; Fax: 312.733.2386; e-mail address: STATinfo@STATAnalysis.com

Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client: Midwest Environmental Consulting Services Date/Time Received: 1/19/16 11:40 AM
 Project ID: 16-01-031, Sprange School, Lincolnshire Date Reported: 1/26/2016
 STAT Project No.: 16010418 Analyzed By: DM

Client Sample No.:	21861839				21861830				21861804				21861791			
Sample Description:																
Date Sampled:	1/15/2016				1/15/2016				1/15/2016				1/15/2016			
STAT Sample No.:	16010418-017				16010418-018				16010418-019				16010418-020			
Volume (m ³):	0.075				0.075				0.075				0.075			
	Total Count	Count/m ³	DL	%	Total Count	Count/m ³	DL	%	Total Count	Count/m ³	DL	%	Total Count	Count/m ³	DL	%
Total Fungal Spores:	1	13	1	100	1	13	1	100	0			100	8	107	1	100
<i>Alternaria</i>																
Ascospores	1	13	1	100.0	1	13	1	100.0					2	27	1	25.0
<i>Aspergillus/Penicillium</i>													4	53	1	50.0
Basidiospores																
<i>Bohytis</i>																
<i>Cercospora</i>																
<i>Chaetomium</i>																
<i>Cladosporium</i>													1	13	1	12.5
<i>Curvularia</i>																
<i>Drechslera/Bipolaris</i>																
<i>Epicoccum</i>																
<i>Fusarium</i>																
<i>Nigrospora</i>																
<i>Oidium/Erysiphe</i>																
<i>Periconia</i>																
<i>Phoma</i>																
<i>Pithomyces</i>																
<i>Pleospora</i>																
<i>Polythrinctum</i>																
<i>Rhizopus/Mucor</i>																
Rusts																
Smuts/Myxomycetes													1	13	1	12.5
<i>Stachybotrys</i>																
<i>Stemphylium</i>																
<i>Torula</i>																
<i>Ulocladium</i>																
Unidentified Fungi																
Other																
Mycelial Fragments																
Debris Level	Low				Low				Low				Moderate			
Organic Material	Present				Present				Present				Present			

DL - Detection Limit = Spores

SOP 6110

Performed for:
LINCOLNSHIRE PRAIRIE VIEW SCHOOL DISTRICT #103
 1370 N. Riverwoods Road
 Lincolnshire, IL 60069
 MEC Project #: 16-01-031-I.H.

Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client: Midwest Environmental Consulting Services Date/Time Received: 1/19/16 11:40 AM
 Project ID: 16-01-031, Sprange School, Lincolnshire Date Reported: 1/26/2016
 STAT Project No.: 16010418 Analyzed By: DM

Client Sample No.:	21861789															
Sample Description:																
Date Sampled:	1/15/2016															
STAT Sample No.:	16010418-021															
Volume (m ³):	0.075															
	Total Count	Count/ m ³	DL	%	Total Count	Count/ m ³	DL	%	Total Count	Count/ m ³	DL	%	Total Count	Count/ m ³	DL	%
Total Fungal Spores:	8	107	1	100				100				100				100
<i>Alternaria</i>																
Ascospores	2	27	1	25.0												
<i>Aspergillus/Penicillium</i>	3	40	1	37.5												
Basidiospores																
<i>Botrytis</i>																
<i>Cercospora</i>																
<i>Chaetomium</i>	4	53	1	50.0												
<i>Cladosporium</i>	1	13	1	12.5												
<i>Curvularia</i>																
<i>Drechslera/Bipolaris</i>																
<i>Epicoccum</i>																
<i>Fusarium</i>																
<i>Nigrospora</i>																
<i>Oidium/Erysiphe</i>																
<i>Pariconia</i>																
<i>Phoma</i>																
<i>Pithomyces</i>																
<i>Pleospora</i>																
<i>Polythrincium</i>																
<i>Rhizopus/Mucor</i>																
Rusts																
Smuts/Myxomycetes	2	27	1	25.0												
<i>Stachybotrys</i>																
<i>Stemphylium</i>																
<i>Torula</i>																
<i>Ulocladium</i>																
Unidentified Fungi																
Other																
Mycelial Fragments																
Debris Level	Low															
Organic Material	Present															

DL - Detection Limit = Spores

SOP 6110

Performed for:
LINCOLNSHIRE PRAIRIE VIEW SCHOOL DISTRICT #103
 1370 N. Riverwoods Road
 Lincolnshire, IL 60069
 MEC Project #: 16-01-031-I.H.

January 22, 2016 Results

STAT Analysis Corporation:
 2242 West Harrison St., Suite 200, Chicago, Illinois 60612-3766
 Tel: 312.733.0551; Fax: 312.733.2386; e-mail address: STATInfo@STATAnalysis.com

Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client: Midwest Environmental Consulting Services Date/Time Received: 1/25/16 12:20 PM
 Project ID: 16-01-031, Sprague School, Lincolnshire Date Reported: 1/29/2016
 STAT Project No.: 16010616 Analyzed By: DM

Client Sample No.:	21861789				21861863				21861853				21861861			
Sample Description:																
Date Sampled:	1/22/2016				1/22/2016				1/22/2016				1/22/2016			
STAT Sample No.:	16010616-001				16010616-002				16010616-003				16010616-004			
Volume (m ³):	0.075				0.075				0.075				0.075			
	Total Count	Count/ m ³	DL	%	Total Count	Count/ m ³	DL	%	Total Count	Count/ m ³	DL	%	Total Count	Count/ m ³	DL	%
Total Fungal Spores:	14	187	1	100	1	13	1	100	2	27	1	100	1	13	1	100
<i>Alternaria</i>																
Ascospores	5	67	1	35.7	1	13	1	100.0	2	27	1	100.0	1	13	1	100.0
<i>Aspergillus/Penicillium</i>	6	80	1	42.9												
Basidiospores																
<i>Botrytis</i>																
<i>Cercospora</i>																
<i>Chaetomium</i>																
<i>Cladosporium</i>	1	13	1	7.1												
<i>Curvularia</i>																
<i>Drechslera/Bipolaris</i>																
<i>Epicoccum</i>																
<i>Fusarium</i>																
<i>Nigrospora</i>																
<i>Oidium/Erysiphe</i>																
<i>Periconia</i>																
<i>Phoma</i>																
<i>Pithomyces</i>																
<i>Pleospora</i>																
<i>Polythrincium</i>																
<i>Rhizopus/Mucor</i>																
Rusts																
Smuts/Myxomycetes	2	27	1	14.3												
<i>Stachybotrys</i>																
<i>Stemphylium</i>																
<i>Torula</i>																
<i>Ulocladium</i>																
Unidentified Fungi																
Other																
Mycelial Fragments																
Debris Level	Moderate				Low				Low				Low			
Organic Material	Present				Present				Present				Present			

DL - Detection Limit = Spores

SOP 6110

Performed for:
LINCOLNSHIRE PRAIRIE VIEW SCHOOL DISTRICT #103
 1370 N. Riverwoods Road
 Lincolnshire, IL 60069
 MEC Project #: 16-01-031-I.H.

Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client: Midwest Environmental Consulting Services Date/Time Received: 1/25/16 12:20 PM
 Project ID: 16-01-031, Sprague School, Lincolnshire Date Reported: 1/29/2016
 STAT Project No.: 16010616 Analyzed By: DM

Client Sample No.:	21861834				21861783				21861833				21861831			
Sample Description:																
Date Sampled:	1/22/2016				1/22/2016				1/22/2016				1/22/2016			
STAT Sample No.:	16010616-009				16010616-010				16010616-011				16010616-012			
Volume (m ³):	0.075				0.075				0.075				0.075			
	Total Count	Count/m ³	DL	%	Total Count	Count/m ³	DL	%	Total Count	Count/m ³	DL	%	Total Count	Count/m ³	DL	%
Total Fungal Spores:	9	120	1	100	2	27	1	100	1	13	1	100	4	53	1	100
<i>Alternaria</i>																
Ascospores	5	67	1	55.6									2	27	1	50.0
<i>Aspergillus/Penicillium</i>	2	27	1	22.2	1	13	1	50.0	1	13	1	100.0	2	27	1	50.0
Basidiospores																
<i>Botrytis</i>																
<i>Cercospora</i>																
<i>Chaetomium</i>																
<i>Cladosporium</i>																
<i>Curvularia</i>																
<i>Drechslera/Bipolaris</i>																
<i>Epicoccum</i>					1	13	1	50.0								
<i>Fusarium</i>																
<i>Nigrospora</i>																
<i>Oidium/Erysiphe</i>																
<i>Periconia</i>																
<i>Phoma</i>																
<i>Pithomyces</i>																
<i>Pleospora</i>																
<i>Polythrincium</i>																
<i>Rhizopus/Mucor</i>																
Rusts																
Smuts/Myxomycetes	1	13	1	11.1												
<i>Stachybotrys</i>																
<i>Stemphylium</i>																
<i>Torula</i>	1	13	1	11.1												
<i>Ulocladium</i>																
Unidentified Fungi																
Other																
Mycelial Fragments																
Debris Level	Low				Low				Low				Low			
Organic Material	Present				Present				Present				Present			

DL - Detection Limit = Spores

SOP 6110

Performed for:
LINCOLNSHIRE PRAIRIE VIEW SCHOOL DISTRICT #103
 1370 N. Riverwoods Road
 Lincolnshire, IL 60069
 MEC Project #: 16-01-031-I.H.

Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client: Midwest Environmental Consulting Services Date/Time Received: 1/25/16 12:20 PM
 Project ID: 16-01-031. Sprague School, Lincolnshire Date Reported: 1/29/2016
 STAT Project No.: 16010616 Analyzed By: DM

Client Sample No.:	21861856				21861844				21861842				21861869			
Sample Description:																
Date Sampled:	1/22/2016				1/22/2016				1/22/2016				1/22/2016			
STAT Sample No.:	16010616-013				16010616-014				16010616-015				16010616-016			
Volume (m ³):	0.075				0.075				0.075				0.075			
	Total Count	Count/ m ³	DL	%	Total Count	Count/ m ³	DL	%	Total Count	Count/ m ³	DL	%	Total Count	Count/ m ³	DL	%
Total Fungal Spores:	2	27	1	100	1	13	1	100	1	13	1	100	2	27	1	
<i>Alternaria</i>																
Ascospores	2	27	1	100.0	1	13	1	100.0	1	13	1	100.0				
<i>Aspergillus/Penicillium</i>													1	13	1	50.0
Basidiospores																
<i>Botrytis</i>																
<i>Carcospora</i>																
<i>Chaetomium</i>																
<i>Cladosporium</i>																
<i>Curvularia</i>																
<i>Drechslera/Bipolaris</i>																
<i>Epicoccum</i>																
<i>Fusarium</i>																
<i>Nigrospora</i>																
<i>Oidium/Erysiphe</i>																
<i>Periconia</i>																
<i>Phoma</i>																
<i>Pithomyces</i>																
<i>Pleospora</i>																
<i>Polythrincium</i>																
<i>Rhizopus/Mucor</i>																
Rusts																
Smuts/Myxomycetes													1	13	1	50.0
<i>Stachybotrys</i>																
<i>Stemphylium</i>																
<i>Torula</i>																
<i>Ulocladium</i>																
Unidentified Fungi																
Other																
Mycelial Fragments																
Debris Level	Low				Low				Low				Low			
Organic Material	Present				Present				Present				Present			

DL - Detection Limit = Spores

SOP 6110

Performed for:
LINCOLNSHIRE PRAIRIE VIEW SCHOOL DISTRICT #103
 1370 N. Riverwoods Road
 Lincolnshire, IL 60069
 MEC Project #: 16-01-031-I.H.

Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client: Midwest Environmental Consulting Services Date/Time Received: 1/25/16 12:20 PM
 Project ID: 16-01-031, Sprague School, Lincolnshire Date Reported: 1/29/2016
 STAT Project No.: 16010616 Analyzed By: DM

Client Sample No.:	21861864				21861841							
Sample Description:												
Date Sampled:	1/22/2016				1/22/2016							
STAT Sample No.:	16010616-017				16010616-018							
Volume (m ³):	0.075				0.075							
	Total Count	Count/m ³	DL	%	Total Count	Count/m ³	DL	%	Total Count	Count/m ³	DL	%
Total Fungal Spores:	2	27	1	100	4	53	1	100			100	
<i>Alternaria</i>												
Ascospores	2	27	1	100.0	1	13	1	25.0				
<i>Aspergillus/Penicillium</i>					2	27	1	50.0				
Basidiospores												
<i>Botrytis</i>												
<i>Cercospora</i>												
<i>Chaetomium</i>												
<i>Cladosporium</i>												
<i>Curvularia</i>												
<i>Drechslera/Bipolaris</i>												
<i>Epicoccum</i>												
<i>Fusarium</i>												
<i>Nigrospora</i>												
<i>Oidium/Erysiphe</i>												
<i>Periconia</i>												
<i>Phoma</i>												
<i>Pithomyces</i>												
<i>Pleospora</i>												
<i>Polythrinctum</i>												
<i>Rhizopus/Mucor</i>												
Rusts												
Smuts/Myxomycetes					1	13	1	25.0				
<i>Stachybotrys</i>												
<i>Stemphylium</i>												
<i>Torula</i>												
<i>Ulocladium</i>												
Unidentified Fungi												
Other												
Mycelial Fragments												
Debris Level	Low				Low							
Organic Material	Present				Present							

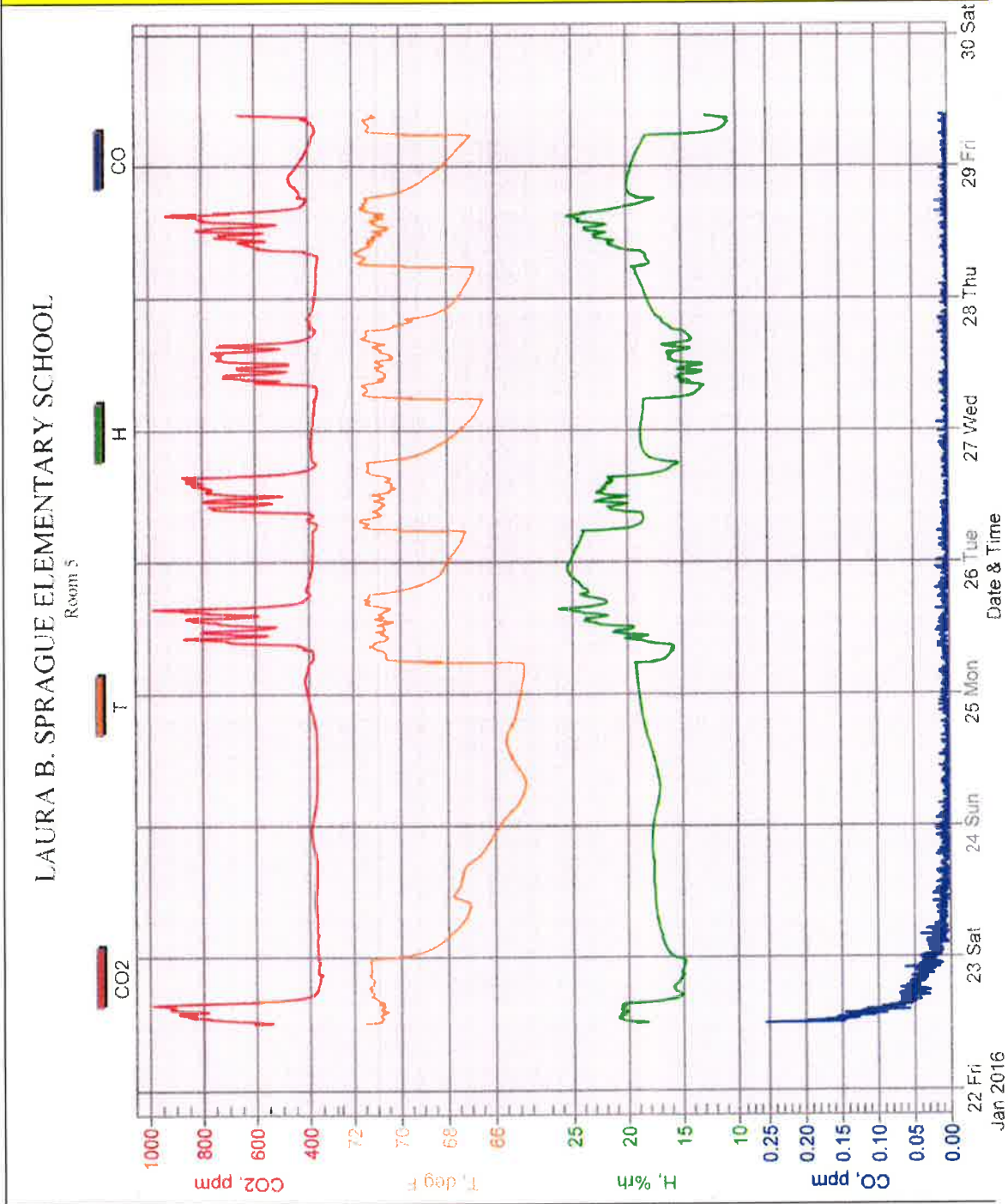
DL - Detection Limit = Spores

SOP 6110

Performed for:
 LINCOLNSHIRE PRAIRIE VIEW SCHOOL DISTRICT #103
 1370 N. Riverwoods Road
 Lincolnshire, IL 60069
 MEC Project #: 16-01-031-I.H.

APPENDIX 2
Q-Trak Graphs and Statistics
Laura B. Sprague Elementary School
Lincolnshire, Illinois
January 22 – 29, 2016

Room 5



Performed for:
LINCOLNSHIRE PRAIRIE VIEW SCHOOL DISTRICT #103
 1370 N. Riverwoods Road
 Lincolnshire, IL 60069
 MEC Project #: 16-01-031-I.H.

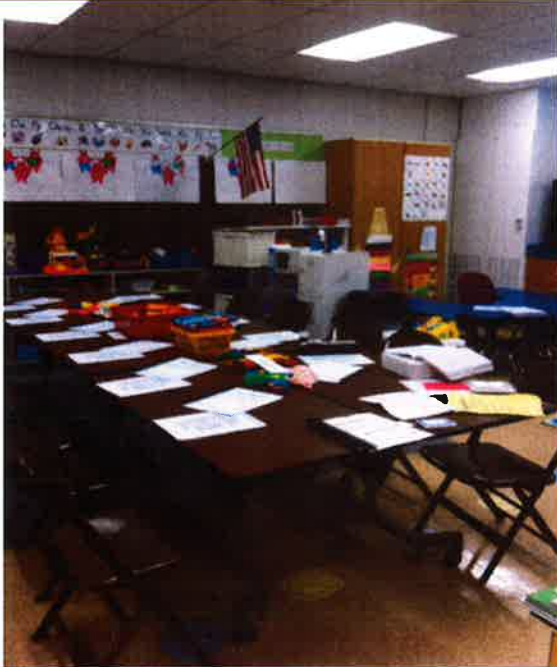
Graph Statistics

Statistics				
	CO2	T	H	CO
Avg	453 ppm	68.6 deg F	18.6 %rh	0.0 ppm
Max	989 ppm	71.9 deg F	26.2 %rh	0.3 ppm
Max Date	01/22/2016	01/28/2016	01/25/2016	01/22/2016
Max Time	15:22:13	08:11:56	15:27:04	12:07:14
Min	355 ppm	64.8 deg F	10.8 %rh	0.0 ppm
Min Date	01/22/2016	01/24/2016	01/29/2016	01/23/2016
Min Time	20:52:13	07:52:08	08:16:53	10:12:11
TWA (8 hr)	601			0.1
TWA Start Date	01/22/2016			01/22/2016
TWA Start Time	12:02:14			12:02:14
TWA End Time	09:26:53			09:26:53

Performed for:
LINCOLNSHIRE PRAIRIE VIEW SCHOOL DISTRICT #103
 1370 N. Riverwoods Road
 Lincolnshire, IL 60069
 MEC Project #: 16-01-031-I.H.

APPENDIX 3
Photos
Laura B. Sprague Elementary School
Lincolnshire, Illinois
January 15 & 22, 2016

January 15, 2016 Photos



View of Room 105, location for Sample 21861797.



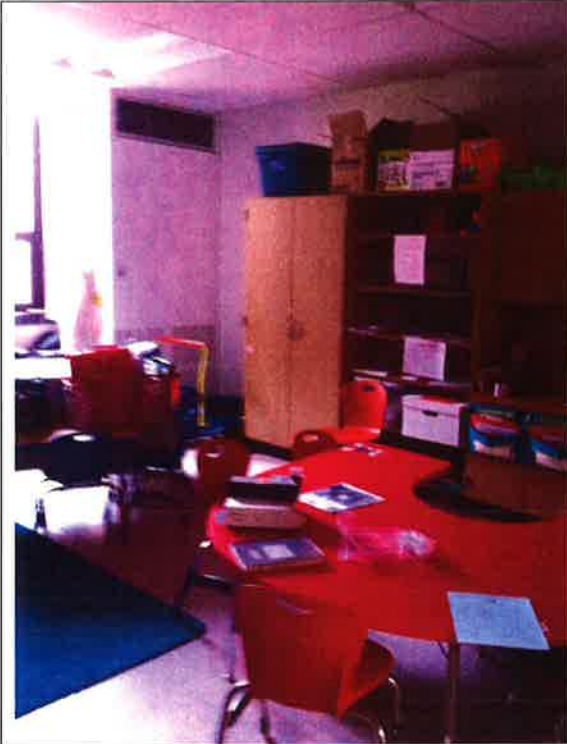
View of Gymnasium, location for Sample 21861866.



View of Room 104, location for Sample 21861788



View of Room 103, location for Sample 21861852.



View of Room 102, location for Sample 21861874.



View of Room 101, location for Sample 21861877.



View of Room 1, location for Sample 21861859.



View of Room 3, location for Sample 21861974.



View of Room 5, location for Sample 21861876.



View of Room 7, location for Sample 21861802.



View of Media Center, location for Sample 21861906.



View of Room 13, location for Sample 21861847.



View of Room 12, location for Sample 21861870.



View of Room 11, location for Sample 21861865.



View of Room 10, location for Sample 21861848.



View of Room 8, location for Sample 21861854.



View of Room 6, location for Sample 21861839.



View of Room 4, location for Sample 21861830.



View of Room 2, location for Sample 21861804.



View of Multipurpose Room, location for Sample 21861791.



View outside Subject Building, location for Sample 21861789.

Performed for:
LINCOLNSHIRE PRAIRIE VIEW SCHOOL DISTRICT #103
1370 N. Riverwoods Road
Lincolnshire, IL 60069
MEC Project #: 16-01-031-I.H.

January 22, 2016 Photos



View of Room 34, location for Sample 21861787.



View of Room 33, location for Sample 21861863.



View of Room 32, location for Sample 21861853.

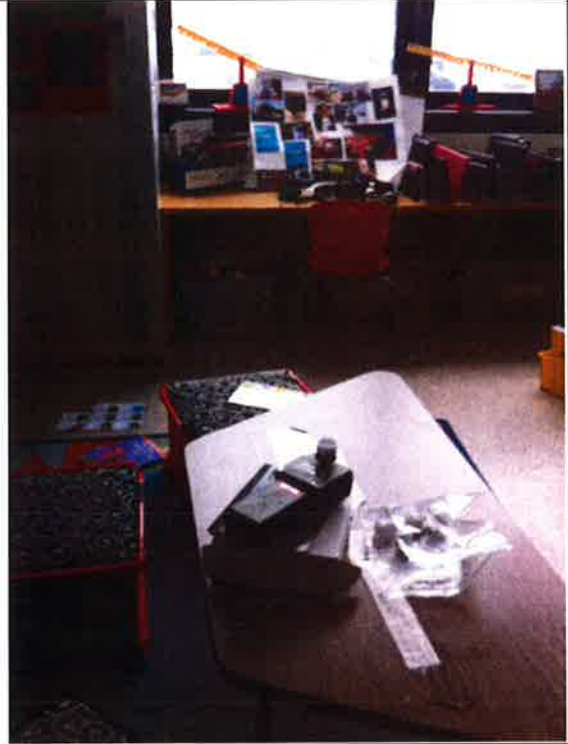


View of Room 31, location for Sample 21861861.

Performed for:
LINCOLNSHIRE PRAIRIE VIEW SCHOOL DISTRICT #103
1370 N. Riverwoods Road
Lincolnshire, IL 60069
MEC Project #: 16-01-031-I.H.



View of Room 30, location for Sample 21861838.



View of Room 29, location for Sample 21861867.



View of Room 28, location for Sample 21861828.



View of Room 27, location for Sample 21861878.



View of Room 24, location for Sample 21861834.



View of Room 14, location for Sample 21861783.



View of Room 15, location for Sample 21861833.



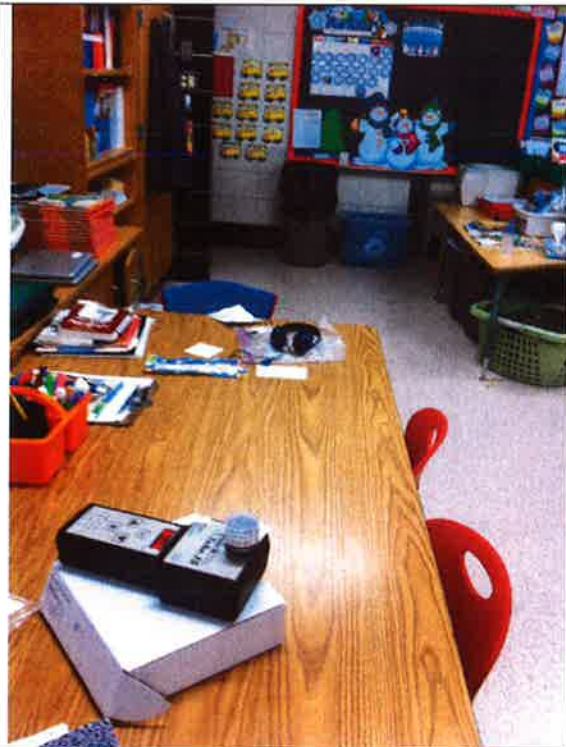
View of Room 16, location for Sample 21861831.



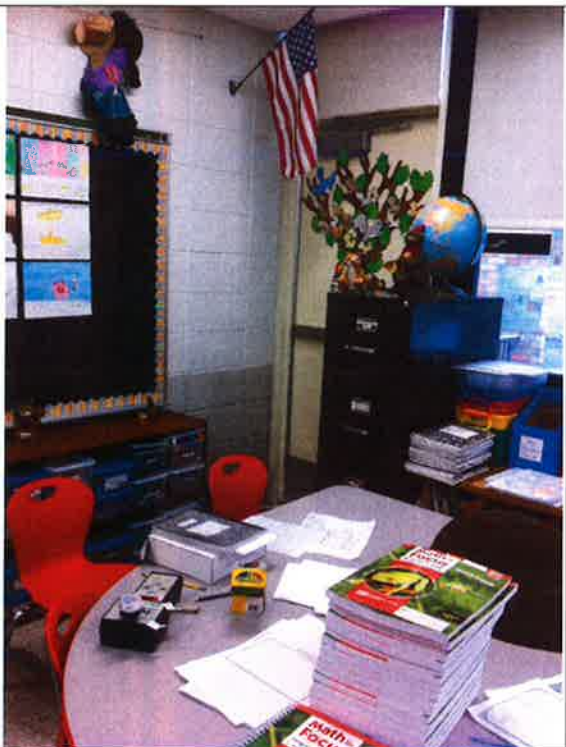
View of Room 17, location for Sample 21861856.



View of Room 18, location for Sample 21861844.

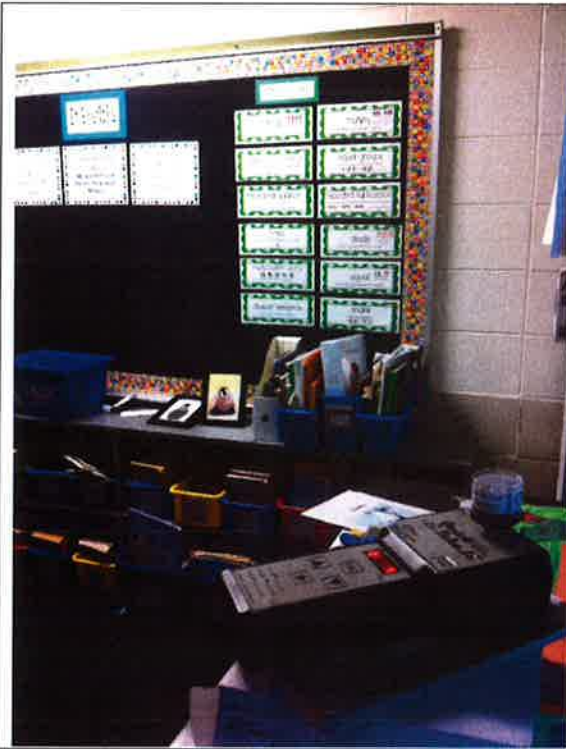


View of Room 19, location for Sample 21861842.



View of Room 20, location for Sample 21861869.

Performed for:
LINCOLNSHIRE PRAIRIE VIEW SCHOOL DISTRICT #103
1370 N. Riverwoods Road
Lincolnshire, IL 60069
MEC Project #: 16-01-031-I.H.



View of Room 21, location for Sample 21863664.



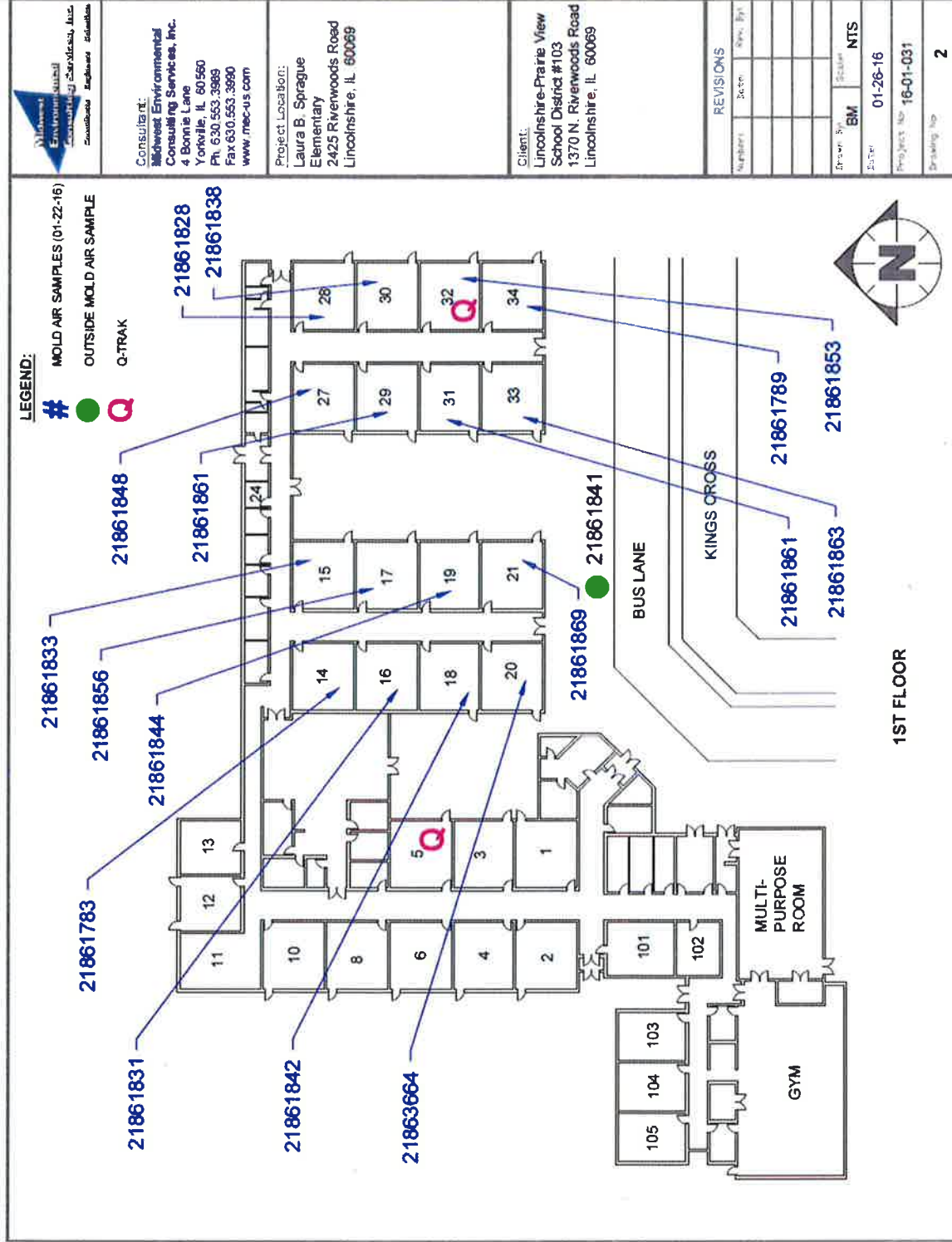
View outside Subject Building, location for Sample 21861841.



View of Q-Trak at Room 5.

Performed for:
LINCOLNSHIRE PRAIRIE VIEW SCHOOL DISTRICT #103
1370 N. Riverwoods Road
Lincolnshire, IL 60069
MEC Project #: 16-01-031-I.H.

January 22, 2016 Samples



Performed for:
LINCOLNSHIRE PRAIRIE VIEW SCHOOL DISTRICT #103
 1370 N. Riverwoods Road
 Lincolnshire, IL 60069
 MEC Project #: 16-01-031-I.H.