### INDOOR AIR QUALITY ASSESSMENT REPORT

COMMUNITY CONSOLIDATED SCHOOL DISTRICT 181
HINSDALE MIDDLE SCHOOL
100 SOUTH GARFIELD AVENUE
HINSDALE, ILLINOIS
IES NO. 915-15



630-718-9133 FAX 630-718-9114

April 13, 2016

C-11789

Mr. Mike Duggan
Facilities Coordinator
Community Consolidated School District 181
115 West 55th Street
Clarendon Hills, Illinois 60514

Dear Mr. Duggan:

Final Report
Indoor Air Quality Assessment
Community Consolidated School District 181
Hinsdale Middle School
100 South Garfield Avenue
Hinsdale, Illinois
IES No. 915-15

Integrity Environmental Services, Inc. has completed this final Indoor Air Quality Assessment Report for the above referenced School District facility. One (1) original and one (1) copy of the Report have been provided.

This Report has been prepared based on observations made and sample data collected during our March 28 – April 6, 2016 building investigation.

Opinions made or formed, other than those expressed herein are those of the reader and in no way shall obligate Integrity Environmental Services, Inc. The findings presented in this Report are representative of the date and times that the readings were collected. The findings presented herein should not be used or relied upon to evaluate the air quality measurements obtained at significantly later dates.

If you have any questions, please feel free to contact our office at (630) 718-9133.

INTEGRITY ENVIRONMENTAL SERVICES, INC.

Guy S. Tawzer

Vice President, Air Quality Division

GST/ks

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#### EXECUTIVE SUMMARY

INDOOR AIR QUALITY ASSESSMENT REPORT COMMUNITY CONSOLIDATED SCHOOL DISTRICT 181 HINSDALE MIDDLE SCHOOL 100 SOUTH GARFIELD AVENUE HINSDALE, ILLINOIS IES NO. 915-15

#### A. INTRODUCTION:

The following paragraphs provide a narrative description of an indoor air quality (IAQ) assessment conducted for Community Consolidated School District 181 within the above referenced facility. The study was requested as a follow-up to a building-wide mold remediation project conducted in January and February of 2014, along with a large water leak/flood clean-up conducted within the building in January of 2015. The study was conducted to determine the presence of any existing and potential indoor air quality concerns in order to help maintain the well being of the school's faculty, staff, students, and visitors within the building.

At the request of the School District, Integrity Environmental Services, Inc. (IES) was present at the Hinsdale Middle School on Monday and Tuesday, March 28 and 29, 2016, and on Tuesday and Wednesday, April 5 and 6, 2016 to conduct an IAQ assessment. The IAQ assessment was conducted to document ambient air conditions within the school district facility, including carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), temperature, and relative humidity, as well as to collect and document concentrations of airborne mold spores.

As part of our investigation, a visual inspection of representative areas within the building, including offices, classrooms, restrooms and the gymnasium was conducted. During this inspection, the IES representative noted the conditions within the building and spoke with District personnel regarding any air quality issues raised by staff members within the building.

Following the development of a sample collection strategy, the IES representative conducted IAQ monitoring and airborne mold spore sample collection. A more detailed description of the IAQ monitoring process is provided in the sample strategy section of this report.

While students and faculty were not in the school building on March 28 and 29, members of the maintenance staff were present. IES conducted the site inspection and the indoor air quality study procedures under otherwise normal building conditions. All indoor air quality monitoring was performed during typical school hours. In all areas where samples were collected, the windows and doors were closed, and the building's HVAC system was operational.

On March 28, 2016, the weather was overcast, breezy and cold. The weather on March 29 and April 5, 2016 was clear, breezy and cool. The weather on April 6, 2016 was rainy, windy and cold.

### B. INSPECTION SUMMARY

Prior to the IAQ study IES was informed that building occupants have not recently expressed concerns regarding indoor air quality. Neither visible mold nor evidence of active water leaks was observed within the both the main school building and the adjacent mobile classroom units.

During previous discussions with the school building's maintenance engineer, the IES representative was informed that heating and cooling within the building is controlled using forced-air by means of roof-top air handling units (AHUs). All systems are maintained on a regular basis and schedule. Filters are visually inspected regularly and are changed on an "as needed" basis. Filters are typically changed three (3) times a year; during the summer, winter and spring breaks (approximately every four (4) months).

As previously reported, the ventilation system within the school building is air-conditioned. Air within the supply ducts is usually a combination of outside air and re-circulated indoor air. Outside air intake is usually set at 10% but may be increased depending on interior conditions including levels of CO<sub>2</sub>. The building's return system utilizes the open plenums on the first and second floors of the main school building, and return ducts on the building' third floor and within the school's "portable building." The IES representative was also informed that it is the School District's policy to try and maintain indoor building temperatures within the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) guidelines.

#### C. SAMPLING STRATEGY:

### Indoor Air Quality -

Guidelines suggested by the American Indoor Air Quality Association (AIAQA), the EPA National Ambient Air Quality Standards (NAAQS), and ASHRAE were utilized to help interpret the CO, CO<sub>2</sub>, temperature, and relative humidity sample data. On April 5, 2016, Environmental sample readings were collected from twenty-eight (28) separate locations within the school building. Readings were collected at each location during both the morning and afternoon. At each sample location, the IES representative collected simultaneous readings for CO, CO<sub>2</sub>, temperature, and relative humidity using a VelociCalc Multifunction Ventilation Meter, Model 9555-P monitor, manufactured by TSI, Inc.

At each sample location, the IAQ monitor was placed at breathing zone level in an area of the room that would result in minimal distraction to the on-going activities. The duration of each set of readings was five (5) minutes. The average reading of each parameter (CO, CO<sub>2</sub>, temperature, and relative humidity), and the time that the reading was taken, was recorded by the IES representative prior to moving to the next sample location. A separate set of sample readings was collected outside the building as baseline or background data. The VelociCalc is considered to be a "direct-read" instrument.

Refer to Section 2, Exhibit A for illustrations of the sample locations. A table listing all direct read environmental sample results can be found in Section 2, Exhibit B.

#### Airborne Mold Spores -

The sampling protocols for this project were developed in conjunction with existing guidelines and recommendations presented by the American Conference of Governmental Industrial Hygienists (ACGIH), the American Industrial Hygiene Association (AIHA), and Environmental Microbiology Laboratories, Inc. (EMLab), a nationally recognized, AIHA proficiency-tested laboratory specializing in microbial testing. In conjunction with our Air Quality Division, guidelines suggested by the Indoor Air Quality Association (IAQA) and Mycotech Biological, Inc. (MBI) were utilized in helping determine and interpret sample data.

It should be noted that there are no current regulatory requirements governing the testing strategies and interpretation of sample data at this time. Our sampling strategy has included the incorporation of current guidelines and recommendations, as well as state-of-the-art methodologies to help define the levels of mold and related airborne bioaerosols in the subject areas located within Hinsdale Middle School. IES collected representative samples within each sample location.

At each area air sample location, the IES representative collected a sample for mold spores using a particulate sampling cassette known as an "Allergenco-D" Disposable Air Sampling Cassette. The duration of each of the mold spore air samples was five (5) minutes at each sample location. During each sampling event, a separate area air sample was collected for mold spores outside the facility as a baseline or background samples.

Following each collection event, all samples were relinquished to STAT Analysis Corporation, located in Chicago, Illinois for analysis. During this investigation, a total of forty-four (44) area air samples were collected for mold spores (including the required QA/QC blanks). All sample locations are illustrated in Section 2, Exhibit A of this report.

#### D. DATA SUMMARY:

#### Indoor Air Quality -

During the morning, the indoor levels of CO were undetected inside of the school building and therefore reported as 0.0 parts per million (ppm). The indoor concentrations of CO<sub>2</sub> ranged between 548 and 1,215 parts per million (ppm) (The highest reading was detected within Classroom 214). The morning indoor temperatures ranged between 67.1°F and 73.0°F, while the indoor relative humidity ranged between 13.5% and 24.3%.

The morning readings were collected on the southeast exterior of the building, at the beginning and at the end of the session. Exterior readings showed no recordable level of CO (0.0 ppm). The exterior CO<sub>2</sub> readings were shown to be 552 ppm and 437 ppm respectively. The respective exterior morning temperatures were 31.3°F and 41.3°F. The respective exterior relative humidity readings were 55.4% and 23.2%.

During the afternoon, once again, indoor levels of CO were undetected (0.0 ppm). The indoor CO<sub>2</sub> concentrations ranged between 590 ppm and 2,616 ppm (The highest reading was detected within Classroom 3 located within the mobile units). The afternoon indoor temperatures ranged between 67.4°F and 74.3°F, while indoor relative humidity ranged between 11.8% and 31.7%.

The afternoon readings were also collected on the southeast exterior of the school building, again at the beginning and at the end of the session. As with the morning readings, the exterior readings showed no recordable level of CO (0.0 ppm). The exterior levels of CO<sub>2</sub> were shown to be 435 ppm and 430 ppm respectively. The respective exterior afternoon temperatures were 40.9°F and 46.2°F. The respective exterior relative humidity readings were 21.2% and 32.6%.

The EPA NAAQS state that CO levels of 35 ppm for a 1-hour exposure and 9 ppm for an 8-hour exposure should not be exceeded more than once a year, per person. While these levels are intended to protect the health of the general public, they do not directly apply to indoor environments.

According to Standard 62.1-2010, offices should be provided with seventeen (17) cubic feet per minute (cfm) of outside (make-up) air per person (based on occupancy of five (5) people per 1,000 ft<sup>2</sup>). Standard 62.1-2010, Informative Appendix C recommends indoor concentrations of CO<sub>2</sub> not exceed the outdoor concentrations by more than 700 ppm. CO<sub>2</sub> levels above those recommended are a possible indication of poor ventilation.

Former ASHRAE Standard 55-1992 recommended indoor summer temperatures between 73°F and 79°F and indoor winter temperatures between 68°F and 74.5°F. To minimize the growth of microorganisms, former ASHRAE Standard 62-2001 recommended that the relative humidity be maintained between 30% and 60%.

ASHRAE Standard 55-2010, Section 5.2.1.1 provides acceptable ranges of operative temperatures that meet the criteria specified within the Section. The operative temperature "comfort zone" for warm environments ranges between 75°F and 83°F. The operative temperature "comfort zone" for cold environments ranges between 67°F and 79°F. The temperatures within each range are designed to be acceptable to 80% of a building's occupants. It should be noted that at the time of this assessment, the exterior environmental conditions were considered to be cold.

ASHRAE Standard 62.1-2010, Section 5.9.1 recommends that the upper relative humidity within an occupied space be limited to 65% or less. There is no longer a recommended lower relative humidity limit.

#### Airborne Mold Spores -

Mold spores were found on thirty-six (36) of the forty-four (44) air samples collected during this investigation. Results of the air sample analysis show that six (6) types of mold spores were found on the collected air samples. Basidiospores, spores from the genus *Cladosporium sp.*, and spores from a group including Smuts and spores from the genus *Myxomycetes sp.* were found on various air samples, collected both inside and outside of the building. A couple of Ascospores, a single spore from the genus Pithomyces *sp.* were found exclusively on air samples collected inside of the building. A single spore from the genus *Epicoccum sp.* was found on an air sample collected outside of the building.

The reported mold spore concentrations of samples collected inside of the building ranged from "very low" to "moderate". All interior airborne sample concentrations of mold spores were reported to be well below the Mycotech Biological, Inc. guidelines of 650 spores per cubic meter of air (spores/m³) for individual spore concentrations, and 2,000 spores/m³ for total spore concentrations.

Although elevated mold spore concentrations were not detected during the subject sampling event and the general population will likely not be affected by the reported mold spore sample concentrations, persons who are sensitive and/or allergic to molds may still experience some discomfort.

Refer to Section 2, Exhibit A for illustrations of the sample locations. Refer to Section 2, Exhibit C for Laboratory Analytical Results. Refer to Section 3, Definitions, for additional information regarding the types of mold spores mentioned above.

#### E. CONCLUSIONS:

Based on our inspection, sample collection work, and laboratory analysis, IES has made the following conclusions:

- No detectable level of CO was detected inside or outside of the subject school building during this assessment.
- All but one (1) of the recorded indoor readings for CO<sub>2</sub> obtained in the morning were within 700 ppm of the respective outdoor readings. The elevated reading was collected in Classroom 214.
- Three (3) of the recorded indoor readings for CO<sub>2</sub> obtained in the afternoon were above 700 ppm of the respective outdoor readings. The elevated readings were collected in Classroom 3 of the mobile units, Classroom 5 of the mobile units, and in Classroom 214.
- All of the recorded interior temperatures obtained in the morning and in the afternoon were within the recommended operative temperature "comfort zone" for cold environments.

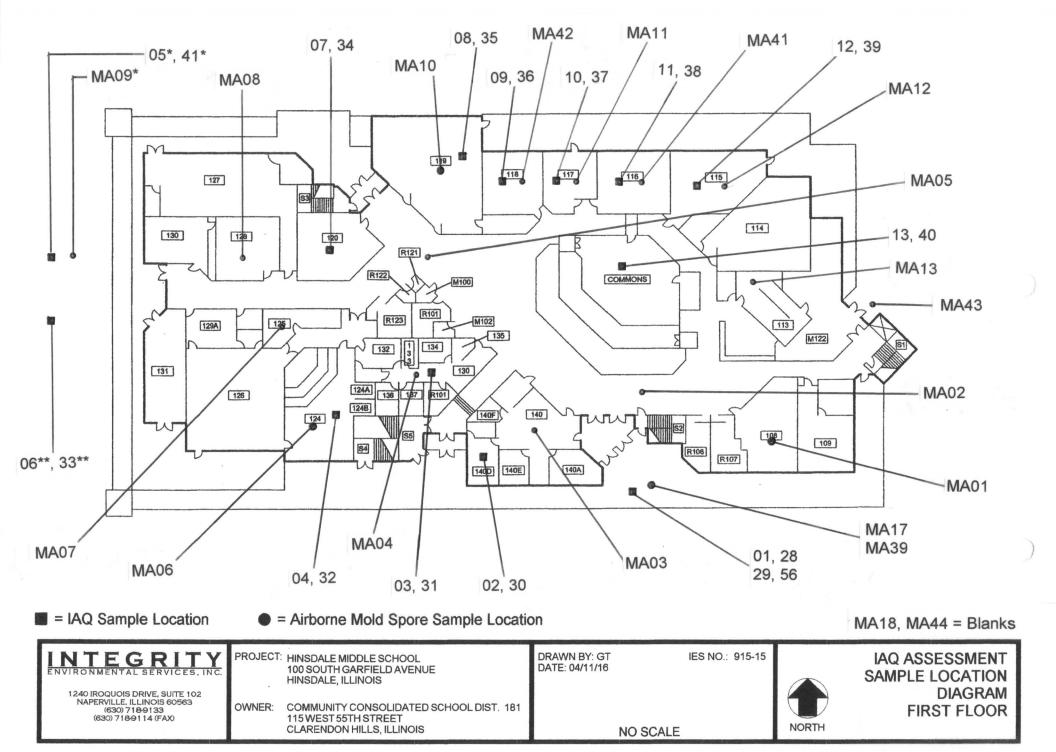
- All interior readings for relative humidity throughout the school building were considerably lower than the recommended upper limit, as expected for this time of year. The majority of readings recorded in both the morning and the afternoon were below 20%
- No active water leaks or visible mold was observed within the finished spaces of the school building.
- The cool/cold exterior temperatures and the low humidity is the probable cause for the low to moderate levels of airborne mold spores collected both inside and outside of the school building.
- At this time of year, the wind is a significant contributing factor to increased concentrations (both inside and outside) of spores from the group that includes both Smuts and spores from the genus Myxomycetes, sp. Concentrations of airborne mold spores, both inside and outside can be expected to increase as temperatures and humidity also increase.

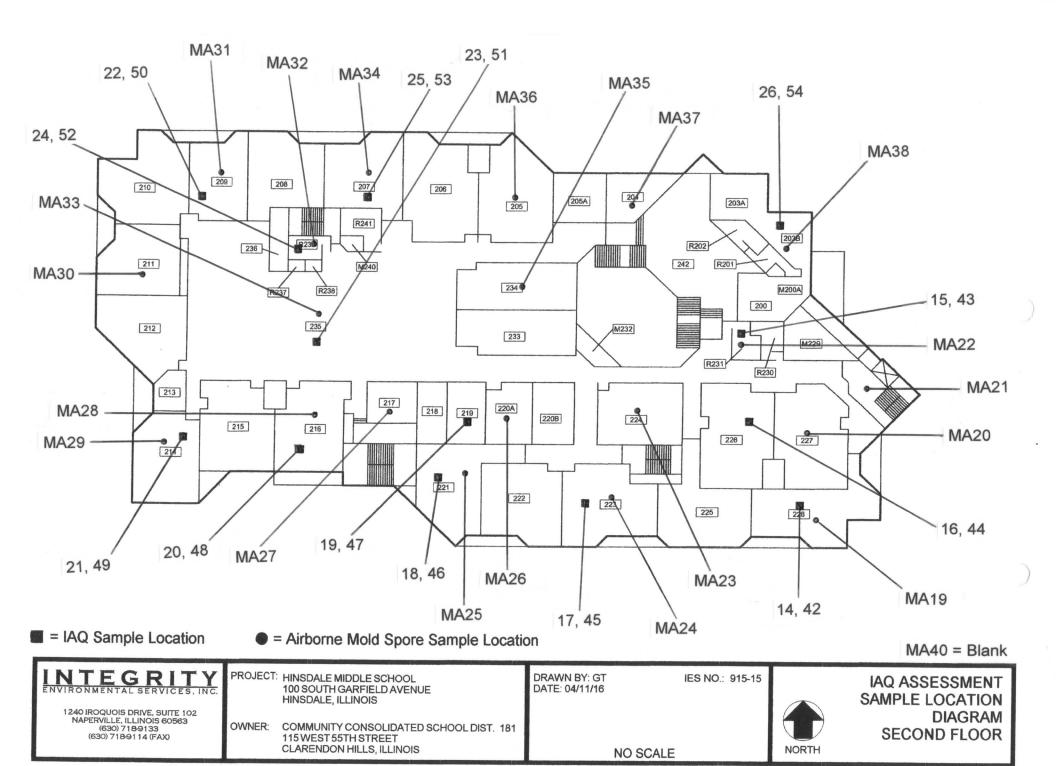
#### F. RECOMMENDATIONS:

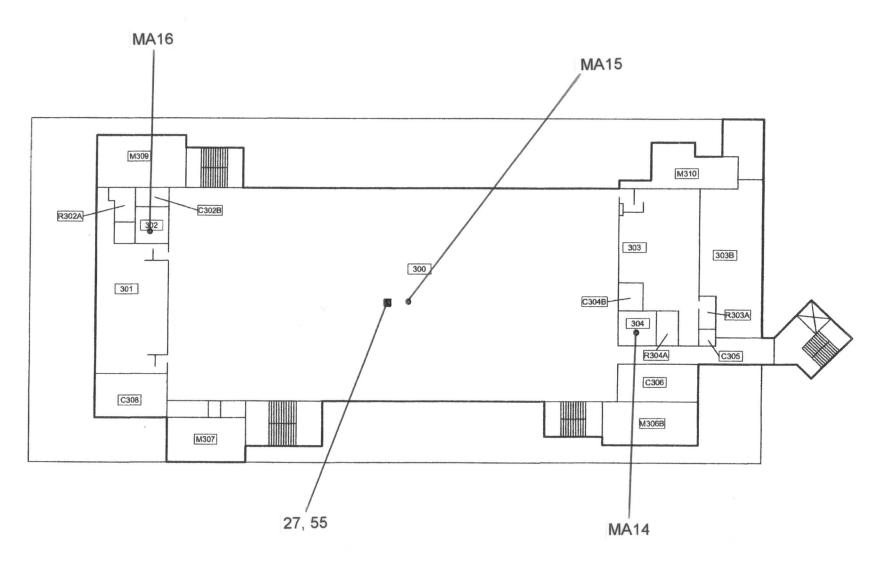
Based upon sample analysis results and visual observations made during this assessment, IES recommends that the following actions be taken:

- 1. It is important to make sure that the building maintenance staff maintains all HVAC systems on a regular and periodic schedule, including the routine inspection and replacement of system air filters.
- 2. It is also important to make sure that the building maintenance staff maintains building temperatures and airflow rates according to ASHRAE Standards.
- 3. The building maintenance staff should conduct periodic assessments and adjust HVAC systems as necessary to accommodate changes, such as building renovations and/or occupancy levels that could affect air quality and thermal comfort levels throughout the building.
- 4. While visible mold and water damaged surfaces were not observed during this investigation, any surfaces that are found to be water damaged or showing visible mold growth should be addressed by removing, cleaning, and disinfecting. Minimal disturbance of the contaminated surface during any removal, cleaning or disinfecting work is necessary to prevent introduction of additional microorganisms into the air. The use of a qualified, professional mold remediation contractor to remove the mold-impacted materials should be considered.

# **EXHIBIT A**







= IAQ Sample Location

= Airborne Mold Spore Sample Location

MA18, MA44 = Blanks

INTEGRITY ENVIRONMENTAL SERVICES, INC.

1240 IROQUOIS DRIVE, SUITE 102 NAPERVILLE, ILLINOIS 60563 (630) 718-9133 (630) 718-9114 (FAX)

PROJECT: HINSDALE MIDDLE SCHOOL 100 SOUTH GARFIELD AVENUE HINSDALE, ILLINOIS

OWNER: COMMUNITY CONSOLIDATED SCHOOL DIST. 181 115WEST 55TH STREET

CLARENDON HILLS, ILLINOIS

DRAWN BY: GT DATE: 04/11/16

IES NO.: 915-15

NO SCALE



IAQ ASSESSMENT SAMPLE LOCATION **DIAGRAM** THIRD FLOOR

# **EXHIBIT** B

#### IAQ SUMMARY TABLE FIRST FLOOR A.M. READINGS

Sample No.	Sample Location	CO (ppm)	CO <sub>2</sub> (ppm)	Temp.	Relative Humidity	Time of Day	No. of People
01	Building Exterior (Southeast Side)	0	552	31.3	55.4	07:10	0
02	Room 140D Nurse	0	620	73.9	16.6	07:32	0
03	Room 130 Student Services	0	569	70.8	16.1	07:39	0
04	Room 124 Choir	0	548	70.8	17.0	07:46	2
05	Room 3 Mobile Units	0	665	67.1	24.3	07:55	15*
06	Room 5 Mobile Units	0	758	69.3	24.2	08:02	15
07	Room 120	0	948	69.6	21.4	08:10	21
08	Room 119 Art	0	772	71.5	17.3	08:17	21
09	Room 118	0	839	70.7	17.1	08:25	0
10	Room 117	0	697	72.3	16.1	08:32	0
11	Room 116	0	698	73.0	15.3	08:38	0
12	Room 115	0	949	72.7	18.7	08:45	24
13	Commons Area	0	646	71.2	14.5	08:53	0

<sup>\*</sup> Students entered room while testing was in progress

ANSI/ASHRAE Standard 62.1-2010 does not provide or recommend default concentrations for indoor air contaminants.

50ppm = OSHA PEL for CO

ANSI/ASHRAE Standard 62.1-2010 recommends that relative humidity within an occupied space be limited to 65% or less. Specific Lower limits for relative humidity are no longer recommended.

<sup>9</sup> ppm = Permissible Exposure Level (PEL) for CO from National Ambient Air Quality Standards (NAAQS) as developed by the U.S. EPA (Not to be exceeded more than once a year)

<sup>25</sup>ppm = ACGIH TLV for CO (1/10 TLV formerly used by ASHRAE for non-industrial indoor environments) ASHRAE no longer recommends the use of a fraction of TLV® to establish an acceptable concentration of an indoor contaminant within a non-industrial environment without first establishing whether or not the fraction is suitable for the subject contaminant.

#### IAQ SUMMARY TABLE SECOND & THIRD FLOORS A.M. READINGS

Sample No.	Sample Location	CO (ppm)	CO <sub>2</sub> (ppm)	Temp.	Relative Humidity	Time of Day	No. of People
14	Room 228	0	817	71.5	15.9	09:08	25
15	R231 Girls' Restroom	0	844	72.2	17.5	09:16	0
16	Room 226	0	854	72.1	15.4	09:23	27
17	Room 223	0	975	71.7	17.5	09:30	21
18	Room 221	0	1033	72.8	17.5	09:37	28
19	Room 219	0	736	72.2	15.0	09:44	0
20	Room 216	0	681	70.5	14.9	09:50	0
21	Room 214	0	1215	72.3	20.4	10:00	25
22	Room 209	0	1029	72.8	17.1	10:07	27
23	MRC	0	767	72.3	14.5	10:13	4
24	R239 Boys' Restroom	0	790	71.8	15.9	10:20	0
25	Room 207	0	914	71.4	16.6	10:27	23
26	Room 203B	0	665	73.0	13.5	10:35	4
27	Gym	0	858	68.5	19.5	10:43	115
28	Building Exterior (Southeast Side)	0	437	41.3	23.2	10:56	0

XXXX = CO<sub>2</sub> concentration elevated above recommended level

ANSI/ASHRAE Standard 62.1-2010 does not provide or recommend default concentrations for indoor air contaminants.

50ppm = OSHA PEL for CO

ANSI/ASHRAE Standard 62.1-2010 recommends that relative humidity within an occupied space be limited to 65% or less. Specific Lower limits for relative humidity are no longer recommended.

<sup>9</sup> ppm = Permissible Exposure Level (PEL) for CO from National Ambient Air Quality Standards (NAAQS) as developed by the U.S. EPA (Not to be exceeded more than once a year)

<sup>25</sup>ppm = ACGIH TLV for CO (1/10 TLV formerly used by ASHRAE for non-industrial indoor environments) ASHRAE no longer recommends the use of a fraction of TLV® to establish an acceptable concentration of an indoor contaminant within a non-industrial environment without first establishing whether or not the fraction is suitable for the subject contaminant.

### IAQ SUMMARY TABLE FIRST FLOOR P.M. READINGS

Sample	Sample Location	CO (ppm)	CO <sub>2</sub> (ppm)	Temp.	Relative Humidity	Time of Day	No. of People
<b>No.</b> 29	Building Exterior (Southeast Side)	0	435	40.9	21.2	11:50	0
30	Room 140D Nurse	0	721	73.2	15.4	12:00	1
31	Room 130 Student Services	0	680	70.8	11.8	12:10	2
32	Room 124 Choir	0	841	70.7	14.4	12:17	25
33	Room 5 Mobile Units	0	1814	69.4	31.7	12:26	0
34	Room 120	0	774	69.2	16.2	12:35	29
35	Room 119	0	842	71.2	14.4	12:42	24
36	Room 118	0	716	71.6	14.6	12:52	1
37	Room 117	0	743	72.6	12.2	12:58	2
38	Room 116	0	1058	73.2	15.0	13:05	30
39	Room 115	0	1079	73.2	16.0	13:13	27
40	Commons Area	0	809	72.0	12.5	13:20	20*
41	Room 3 Mobile Units	0	2616	67.4	38.5	13:29	26

<sup>\*</sup> Over 100 students left area following lunch break just prior to initiation of test xxxx = CO<sub>2</sub> concentration elevated above recommended level

ANSI/ASHRAE Standard 62.1-2010 does not provide or recommend default concentrations for indoor air contaminants.

9 ppm = Permissible Exposure Level (PEL) for CO from National Ambient Air Quality Standards (NAAQS) as developed by the U.S. EPA (Not to be exceeded more than once a year)

50ppm = OSHA PEL for CO

25ppm = ACGIH TLV for CO (1/10 TLV formerly used by ASHRAE for non-industrial indoor environments) ASHRAE no longer recommends the use of a fraction of TLV® to establish an acceptable concentration of an indoor contaminant within a non-industrial environment without first establishing whether or not the fraction is suitable for the subject contaminant.

ANSI/ASHRAE Standard 62.1-2010 recommends that relative humidity within an occupied space be limited to 65% or less. Specific Lower limits for relative humidity are no longer recommended.

3

### IAQ SUMMARY TABLE SECOND & THIRD FLOORS P.M. READINGS

Sample No.	Sample Location	CO (ppm)	CO <sub>2</sub> (ppm)	Temp.	Relative Humidity	Time of Day	No. of People
42	Room 228	0	602	70.8	11.8	13:38	1
43	R231 Girls' Restroom	0	818	72.0	14.4	13:46	0
44	Room 226	0	642	71.5	11.3	13:52	1
45	Room 223	0	989	72.9	15.7	14:00	21
46	Room 221	0	895	74.3	13.9	14:07	22
47	Room 219	0	647	72.4	12.1	14:14	0
48	Room 216	0	848	71.6	14.4	14:22	27
49	Room 214	0	1318	73.8	19.3	14:29	24
50	Room 209	0	756	73.5	13.0	14:35	6
51	MRC	0	695	72.5	12.6	14:42*	5
52	R239 Boys' Restroom	0	807	72.2	15.7	14:58	0
53	Room 207	0	674	71.6	13.6	15:05	2
54	Room 203B	0	590	73.2	12.2	15:13	3
55	Gym	0	961	69.8	20.5	15:20	25
56	Building Exterior (Southeast Side)	0	430	46.2	32.6	15:33	0

<sup>\*</sup> Classes dismissed for the school day

ANSI/ASHRAE Standard 62.1-2010 does not provide or recommend default concentrations for indoor air contaminants.

9 ppm = Permissible Exposure Level (PEL) for CO from National Ambient Air Quality Standards (NAAQS) as developed by the U.S. EPA (Not to be exceeded more than once a year)

50ppm = OSHA PEL for CO

25ppm = ACGIH TLV for CO (1/10 TLV formerly used by ASHRAE for non-industrial indoor environments) ASHRAE no longer recommends the use of a fraction of TLV® to establish an acceptable concentration of an indoor contaminant within a non-industrial environment without first establishing whether or not the fraction is suitable for the subject contaminant.

ANSI/ASHRAE Standard 62.1-2010 recommends that relative humidity within an occupied space be limited to 65% or less. Specific Lower limits for relative humidity are no longer recommended.

XXXX = CO<sub>2</sub> concentration elevated above recommended level

# **EXHIBIT C**

STAT Analysis Corporatic

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

April 05, 2016

Integrity Environmental Services, Inc. 1240 Iroquois Drive Naperville, IL 60563

Telephone: (630) 718-9133 Fax: (630) 718-9114

Analytical Report for STAT Work Order: 16031067 Revision 0

RE: 915-15, Hinsdale Middle School, Throughout Building

Dear Guy Tawzer:

STAT Analysis received 18 samples for the referenced project on 3/31/2016 11:35:00 AM. The analytical results are presented in the following report.

Enclosed are the analytical results for the above referenced project. The samples were analyzed as per the enclosed chain of custody.

All analyses were performed in accordance with established microbiology methodology. All Quality Control criteria as specified in the methods have been met. QA/QC documentation and raw data will remain on file for future reference. Sample acceptance criteria has been met unless noted in the Case Narrative or Sample Receipt Checklist. If required, an estimate of uncertainty for the analyses can be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions about the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Albio Marquez

Senior Microscopist

The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.

Tel: 312.733.0551; Fax: 312.733.2386; e-mail address: STATinfo@STATAnalysis.com

# Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client: Integrity Environmental

Date/Time Received: 3/31/16 11:35 AM

Project ID:

915-15, Hinsdale Middle School Throughout

Date Reported: 4/5/2016

STAT Project No.:

16031067

Analyzed By: AM

STAT Hoject No	1000	1007								Anary	,			AIVI		
Client Sample No.:		MA	101			MA	.02			MA	.03			1	MA04	
Sample Description:		Rm	108		(	Commo	n are	a		Main	office			Stu	dent ser	V
	_														_	
Date Sampled:		3/28/	2016			3/28/2	2016			3/28/	2016			3/2	28/2016	j
STAT Sample No.:	1	160310	67-00	1	1	60310	67-00	2	1	160310	67-00	3		1603	1067-0	04
Volume (m <sup>3</sup> ):		0.0	75			0.0	75			0.0	75			(	0.075	
	Total	Count/		Г	Total	Count/			Total	Count/		T	Total	Count/		
	Count	m <sup>3</sup>	DL	%	Count	m <sup>3</sup>	DL	%	Count	m <sup>3</sup>	DL	%	Count	m <sup>3</sup>	DL	%
Total Fungal Spores:	3	40	1	100	0			100	7	93	1	100	5	67	1	100
Alternaria																
Ascospores																
Aspergillus/Penicillium																
Basidiospores									1	13	1	14.3	1	13	1	20.0
Botrytis																
Cercospora																
Chaetomium																
Cladosporium									1	13	1	14.3	2	27	1	40.0
Curvularia																
Drechslera/Bipolaris	T															
Ерісоссит	T															
Fusarium	T															
Nigrospora																
Oidium/Erysiphe																
Periconia																
Phoma																
Pithomyces																
Pleospors																
Polythrincium																
Rhizopus/Mucor																
Rusts																
Smuts/Myxomycetes	3	40	1	100.0					5	67	1	71.4	2	27	1	40.0
Stachybotrys																
Stemphylium																
Torula																
Ulocladium																
Unidentified Fungi																
Other	-															
Mycelial Fragments									1							
Debris Level	Low				Low				Mode	rate			Mode	roto		
Organic Material	Preser			1	Preser				Preser				Mode: Preser			

Tel: 312.733.0551; Fax: 312.733.2386; e-mail address: STATinfo@STATAnalysis.com

# Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client: Integrity Environmental

Date/Time Received: 3/31/16 11:35 AM

Project ID:

915-15, Hinsdale Middle School Throughout

Date Reported: 4/5/2016

STAT Project No.:

16031067

Analyzed By: AM

Client Sample No.:		MA	.05			MA	06			MA	.07			N	MA08			
Sample Description:	N	E end c	ommo	ons		Rm :	124			Rm	125			R	m 128			
•																		
Date Sampled:		3/28/	2016			3/28/2	2016			3/28/	2016			3/2	28/2016	5		
STAT Sample No.:		160310		5	1	60310		6	1	60310		7		1603	1067-0	008		
Volume (m <sup>3</sup> ):	1	0.0			i i	0.0				0.0		<u></u>			0.075			
volume (m).	+	0.0	13			0.0	75				75				0.075			
	Total	Count/			Total	Count/			Total	Count/			Total	Count/				
	Count	m <sup>3</sup>	DL	%	Count	m <sup>3</sup>	DL	%	Count	m <sup>3</sup>	DL	%	Count	m <sup>3</sup>	DL			
Total Fungal Spores:	2	27	1	100	1	13	1	100	3	40	1	100	0			100		
Alternaria																		
Ascospores									1	13	1	33.3						
Aspergillus/Penicillium																		
Basidiospores																		
Botrytis																		
Cercospora																		
Chaetomium																		
Cladosporium									1	13	1	33.3						
Curvularia																		
Drechslera/Bipolaris																		
Ерісоссит																		
Fusarium																		
Nigrospora																		
Oidium/Erysiphe																		
Periconia																		
Phoma	_						_											
Pithomyces	_								1	13	1	33.3						
Pleospors							_											
Polythrincium							_											
Rhizopus/Mucor	1						_									-		
Rusts	1_						_				-							
Smuts/Myxomycetes	2	27	1	100.0	1	13	1	100.0			-		-					
Stachybotrys	+-	-	-	-			-				-	-	-	-				
Stemphylium	4—	-	-	-			-				-	-	-		-			
Torula	+	-	-	-		-	-			-	-	-	-		-			
Ulocladium	+	-	-	+		-	₩			-	-		-			-		
Unidentified Fungi	+	-	-	-	-	-	-	-	_	-	-		├	-		-		
Other	+	-	-	-	-	-	$\vdash$	-	-		-	-	$\vdash$	-	-	-		
Mycelial Fragments																		
Debris Level	Mode				Mode				Mode				Low		DL %			
Organic Material	Presen	nt			Preser	nt			Preser	nt			Preser	nt				

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Tel: 312.733.0551; Fax: 312.733.2386; e-mail address: STATinfo@STATAnalysis.com

# Analytical Report for Microbiological Analysis - Fungal Spores in Air

Integrity Environmental Client:

Date/Time Received: 3/31/16 11:35 AM

Project ID:

915-15, Hinsdale Middle School Throughout

Date Reported: 4/5/2016

STAT Project No.:

16031067

Analyzed By: AM

STAT Project No.:	1003	1007								Anary	Zear	<i>-</i>		AIVI		
Client Sample No.:		MA	.09			MA	.10			MA	.11			N	MA12	
Sample Description:		Rm 3 n	nobile	S		Rm	119			Rm	117			R	m 115	
Date Sampled:		3/28/	2016			3/28/2	2016			3/28/	2016			3/2	28/2016	)
STAT Sample No.:		160310		9	1	60310	67-01	0	1	60310	67-01	1		1603	1067-0	12
Volume (m <sup>3</sup> ):	+	0.0				0.0				0.0					0.075	
, ording (iii ):																
	Total	Count/	77	0/	Total	Count/ m <sup>3</sup>	DI	0/	Total	Count/ m <sup>3</sup>	DI	0/	Total	Count/ m <sup>3</sup>	DL	%
	Count	m <sup>3</sup>	DL	%	Count	m	DL	%	Count		DL	%	Count			
Total Fungal Spores:	3	40	1	100	0			100	3	40	1	100	1	13	1	100
Alternaria																
Ascospores																
Aspergillus/Penicillium																
Basidiospores									1	13	1	33.3				
Botrytis																
Cercospora																
Chaetomium																
Cladosporium																
Curvularia																
Drechslera/Bipolaris																
Epicoccum																
Fusarium																
Nigrospora																
Oidium/Erysiphe																
Periconia																
Phoma																
Pithomyces																
Pleospors																
Polythrincium																
Rhizopus/Mucor													_			
Rusts							_						ـــــ			
Smuts/Myxomycetes	3	40	1	100.0					2	27	1	66.7	1	13	1	100.0
Stachybotrys				_		_	_								-	-
Stemphylium	_								_				-	-	-	
Torula		-					-		-		-	-	-	-		
Ulocladium			-			-		-	_		-	-	-	-		
Unidentified Fungi	4-	+	-	-		-	+-	-	-		-		-	-	-	
Other	+-	+-	-	+-	-	-	$\vdash$	-	$\vdash$		-	+	+-	+	-	
Mycelial Fragments	_							-								
Debris Level	Low				Low				Mode				Mode			
Organic Material	Prese	nt			Prese	nt			Preser	nt			Prese	nt		

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Tel: 312.733.0551; Fax: 312.733.2386; e-mail address: STATinfo@STATAnalysis.com

# Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client: Integrity Environmental

Date/Time Received: 3/31/16 11:35 AM

Project ID:

915-15, Hinsdale Middle School Throughout

4/5/2016

STAT Project No.:

16031067

Date Reported: Analyzed By:

AM

Client Sample No.:		MA	13			MA	14			MA	15			N	/A16	
	+-	IVIA	113			1417 1	1 1	$\neg$		1411	110					
Sample Description:	+-						-	-				$\neg$				
Date Sampled:	$\vdash$	3/28/	2016			3/28/2	2016			3/28/	2016			3/2	28/2016	
STAT Sample No.:	1	160310		2	1	603106		4	1	60310		5		1603	1067-0	16
	<del>                                     </del>	0.0		,	1	0.0		_		0.0					0.075	
Volume (m³):	+	0.0	1/3			0.0	/ 3			0.0	13	_			0.075	
	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m³	DL	%	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m <sup>3</sup>	DL	%
Total Fungal Spores:	5	67	1	100	2	27	1	100	1	13	1	100	4	53	1	100
Alternaria	-															
	+-															
Ascospores	+	-	-	$\vdash$			$\vdash$					$\vdash$				
Aspergillus/Penicillium	+	-	-				$\vdash$					$\vdash$			$\vdash$	
Basidiospores	+-	-	-		<b>-</b>		$\vdash$		$\vdash$			$\vdash$			$\vdash$	
Botrytis	+	_					$\vdash$					-				
Cercospora Chaetomium	+-											$\vdash$				
	+-	-	-						$\vdash$							
Cladosporium Curvularia	+	-			-											
Drechslera/Bipolaris	+-	-		-	-	-			$\vdash$							
	+-	-	-	-		_										
Epicoccum	+-	-	-	-	<del>                                     </del>											
Fusarium	+	-	-	<del>                                     </del>	_	_	_		_							
Nigrospora Oidium/Erysiphe	+	-	-	-	-		-		_		_		<b>-</b>			
	+-	-	-	-		-	_		$\vdash$		-					
Periconia	+	-	-	-	_	-	-						_			
Phoma	+-	-	-	-	-	-	-		_		_	<del>                                     </del>		_		
Pithomyces	+-	-	-		-	-	-				-	_		<del> </del>		
Pleospors	+-		-	-	-	-	-				-	-	-			
Polythrincium	+-	┼	-	-	-		-	-	$\vdash$		-	-	_	-	$\vdash$	
Rhizopus/Mucor	+	+	+	-	-	-	-		_	-	+	-	-	<del>                                     </del>		
Rusts	-	(7	1	100.0	2	27	1	100.0	1	13	1	100.0	4	53	1	100.0
Smuts/Myxomycetes	5	67	1	100.0	2	21	1	100.0	1	13	1	100.0	-	33	1	100.0
Stachybotrys Stemphylium	+-	+	+	+	<del>                                     </del>	+	+			<del>                                     </del>	+	+				
Stemphytium Torula	+-	+	+-	-	$\vdash$	+	+	-			$\vdash$	_			<del>                                     </del>	
Torula Ulocladium	+-	+	+	+	$\vdash$	<del>                                     </del>	+	_	$\vdash$		1	_		<del>                                     </del>	_	
	+	+	+	+	+-	+	+		$\vdash$	-	$\vdash$	_		<del>                                     </del>	<u> </u>	
Unidentified Fungi	+	+	+	+	1	+	+-	<del>                                     </del>	<del>                                     </del>	_	+-	+-	<del></del>		<del>                                     </del>	
Other																
Mycelial Fragments	-															
Debris Level	Mode	erate			Mode	rate			Low				Mode	rate		
Organic Material	Prese				Prese				Preser	nt			Prese			

# Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client: Integrity Environmental

Date/Time Received: 3/31/16 11:35 AM

Project ID:

915-15, Hinsdale Middle School Throughout

Date Reported: 4/5/2016

STAT Project No.:

16031067

Analyzed By: AM

Client Sample No.:	Т	MA	17		i	MA	18									
Sample Description:	+					Bla							<u> </u>			
Sample Description.	+-	Bldg	EXISE		_	Bla	пк						_			
Date Sampled:		3/28/	2016			3/28/2	2016									
STAT Sample No.:	T	160310	67-01	7	1	60310	67-01	8								
Volume (m <sup>3</sup> ):	T	0.0				N/.										
		0.0				147.	-						-			
	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m³	DL	%
Total Fungal Spores:	21	280	1	100	0			100				100				100
Alternaria																
Ascospores	T															
Aspergillus/Penicillium																
Basidiospores																
Botrytis																
Cercospora																
Chaetomium																
Cladosporium	17	227	1	81.0												
Curvularia																
Drechslera/Bipolaris																
Epicoccum																
Fusarium																
Nigrospora																
Oidium/Erysiphe																
Periconia																
Phoma																
Pithomyces																
Pleospors																
Polythrincium	_															
Rhizopus/Mucor	_															
Rusts	_															
Smuts/Myxomycetes	4	53	1	19.0												
Stachybotrys	-															
Stemphylium	-															
Torula	-															
Ulocladium	-															
Unidentified Fungi	-															
Other	-															
	+															
Mycelial Fragments	+															
Debris Level	Mode	rate			Absen	t										
Organic Material	Preesn				Absen								_			

Analysis Corporation
2242 West Harrison Street, Suite 200, Chicago, Illinois 60612 Phone: (312) 733-0551 Fax: (312) 733-2386
e-mail address: STATinfo@STATAnalysis.com

					MI	CROB	OLO	OGY CH	AIN OF CUS	STO	DY	RE	COL	ND				Pag	ge:		of_	2		
	Integrity Environm			Inc.		Off	ice U	se Only I	Below:	Tur	n Aı	round	d Tin	ne:	<1	1	П	2		3	7	Viable: 6	-10	
Street Address:	1240 Iroquois Ave	e., Ste	. 102		Wor	k Orde	No.	11.00	1-17	Oth	er T	AT:			, I	)aje l	Due:			T	- Γime			1
,,	Naperville, IL 605							1605	1067	Reli	ingu	ishe	d by:	1/2	1	m	n			The same of the same of		THE REAL PROPERTY.	11/12	100
	(630) 718-9133/C	ell (70	8) 528-	1491	Sam	ples Ac	cepta	ble: Yes;	No:	-			12		2/1		53	989	2	Bate Ti	me: I	IPS		400
	(630) 718-9114				Ana	lyzed B	y:	J.J.	4/11/	Reli	inqu	ishe	d by:	· W	45					Date/Tir				1
	ies2001@sbcglob	al.net				e/Time:	-		11116	Rec	eive	d fo	r lab	by	mari	town	1/2	u	<b>~</b>	Date/Ti	me: 3	131/18	6 11:3.	3
Project Number:	915-15					File:							d by:							Date/Tir				1
Project Name:	Hinsdale Mid				QC					Rec	eive	d by	·:					,	,,	Date/Ti	me:			]
Project Location:	Throughout E	sullai	ng		-		y (Ini	tial/Date/7	Time):			43	a l											
Project Manager: P.O. Number:					Verl							-Tap	-Swa	-Bull	100									
1.0. Number.	915-15				Fax.	e-mail:	T.	****		able	sette	xam	xam	xam		act				AV. 1				
Client Sample Nu	mber/Description:	Date	Taken	Time Ta	aken	(Liters		ea Wiped Units) <sup>2</sup>	Laboratory Sample No.	Non-Viable	Air Cassette	Direct Exam-Tape	Direct Exam-Swab	Direct Exam-Bulk	Viable	Air Impact	Swab	Bulk		Office				
MADI/Ka	a. 108	3/2	8/16	08:3	2	75,0		1	001		X						102				$\dagger$	+	1	
MADZ/LO	MILLONS AREA		1	Bic	4	1			002												T	$\prod$	$\top$	
MAO3/Ma	y Office			08.3	0				003															
MAD4/5/2	Leat Gerl.			08:5	B				004												T	$\Box$	1	1
MADS/NE	nd ot Compan	5		M:0	7				005							13							1	1
MAD6 /4	ne 124			19:1	6				006												T			1
MAOT/Rue	125			09:2	6				607												T	$\prod$	1	1
MA043/	n. 128			99:3	3				800												T	$\prod$	1	
MAD9/Pm 3	~ Mobiles			09:4	8				009												T	$\prod$		1
MA10/ Km	119			10.0	2				010							4.C					T	$\prod$	1	1
MAII/E	m. 117			10:	0				011					1							T	$\prod$		1
MA12/6	115	SV		10:2		V		/	012		V													

Analysis Corporation

2242 West Harrison Street, Suite 200, Chicago, Illinois 60612 Phone: (312) 733-0551 Fax: (312) 733-2386
e-mail address: STATinfo@STATAnalysis.com

				MI	CROBIC	DLOGY CH	AIN OF CUS	TO	DY	RE	CO	RD				Pa	ge:		_ of	Z	_	
Client:	Integrity Environm		lnc.		Offic	e Use Only I	Below:	Tur	n Aı	roun	d Tii	ne:	<1	1		2		3	X	Viable:	: 6-10	
Street Address:	1240 Iroquois Ave			Wo	ork Order	No.: 11000	10/00	Oth	er T	AT:			_ 1	)ate	Due:			- 1	Time	Due:		
City, State, Zip:	Naperville, IL 605					1005	1067	Rel	inqu	ishe	d by	: /	4/	les .	20	-		Date/	THE RESERVE OF THE PERSON NAMED IN	10.		10.
Phone:	(630) 718-9133/C	ell (708) 528	-1491	Sar	nples Acc	eptable: Yes:	No:				7: M.	~350790	7	4	-			Date/		100	41	/
Fax:	(630) 718-9114				alyzed By:	(for	44/16	Rel	inqu	ishe	d by	UP	75					Date/	Γime:			
e-mail/Alt. Fax:	ies2001@sbcglob	al.net		4	te/Time:			Rec	eive	ed fo	r lab	by	main	tis	al.	er		Date/	Time?	131/	160	- 35
Project Number:					ta File:						d by							Date/			Ott	
Project Name:	Hinsdale Mid			1	By:			Rec	eive	d by	7:				-			Date/	Γime:			
Project Location Project Manager:		Building				(Initial/Date/	Time):												T		П	
P.O. Number:					rbal:					Tape	Swal	Bulk										
1.O. Ivaniber.	915-15			Fax	/e-mail:			able	sette	Direct Exam-Tape	Direct Exam-Swab	Direct Exam-Bulk		t								
Client Sample N	umber/Description:	Date Taken	Time T	aken	Volume	Area Wiped	Laboratory	Non-Viable	Air Cassette	ect E	ect E	ect E	Viable	Air Impact	l ag	×		ь				
12 8 12 11	1 /	1/10/11		1	(Liters)	(Units) <sup>2</sup>	Sample No.	No	Air	Dir	Di	Dir	5	Air	Swab	Bulk		Officer				
MAIS/KI	tchea.	2/28/16	10:2	4	750		013		X													
MA14/6,	cls P.E. S.F.	<b>*</b>	10:9	10	1		014	(14)	[					· · · · · · · · · · · · · · · · · · ·					$\top$	+	$\Box$	$\dashv$
MARY!	Gran		10:3				015		1						T				+	T		
MA16/	Boys 8. E. Q4	<i>y</i>	11:8				016		1						T			12 B	+	+	$\vdash$	
M417/8	3/d Ext 150	づ	11:2	-	V		017								T		Н		+		$\vdash$	$\neg$
MA/8/	Black	1/		_	0.0	)	018		V				196		1		Н		+	+	$\vdash$	$\dashv$
													18							+	$\vdash$	
																					H	$\exists$
												$\exists$							$\top$	+		$\neg$
												$\neg$							$\top$		$  \uparrow  $	
													i en						$\top$	+	$\Box$	
																			$\top$	$\top$	$\Box$	$\neg$
Comments:																		-				

2242 West Harrison St., Suite 2001, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

April 03, 2016

Integrity Environmental Services, Inc. 1240 Iroquois Drive
Naperville, IL 60563

Telephone: (630) 718-9133 Fax: (630) 718-9114

Analytical Report for STAT Work Order: 16031072 Revision 0

RE: 915-15, Hinsdale Middle School, Throughout Building

Dear Guy Tawzer:

STAT Analysis received 22 samples for the referenced project on 3/31/2016 11:35:00 AM. The analytical results are presented in the following report.

Enclosed are the analytical results for the above referenced project. The samples were analyzed as per the enclosed chain of custody.

All analyses were performed in accordance with established microbiology methodology. All Quality Control criteria as specified in the methods have been met. QA/QC documentation and raw data will remain on file for future reference. Sample acceptance criteria has been met unless noted in the Case Narrative or Sample Receipt Checklist. If required, an estimate of uncertainty for the analyses can be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions about the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Albio Marquez

Senior Microscopist

The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.

STAT Project No.:

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

AM

Date/Time Received: 3/31/16 11:35 AM Integrity Environmental Client:

Date Reported: Project ID: 915-15, Hinsdale Middle School Throughout Bldg 4/1/2016 Analyzed By: 16031072

Client Sample No.:	T	MA	19			MA	20			MA	21			N	/A22	
Sample Description:		Rm	228			Rm 2	227		2n	d Fl El	ev lob	by		R	M 231	
Dunipie Description.	T															
Date Sampled:		3/29/	2016			3/29/2	2016			3/29/	2016			3/2	29/2016	
STAT Sample No.:	T	160310	72-00	1	1	60310	72-00	2	1	60310	72-003	3		1603	1072-0	04
Volume (m <sup>3</sup> ):		0.0				0.0				0.0	No. of Concession, Name of Street, or other party of the Concession, Name of Street, or other pa			-	0.075	
v oranie (iii ).	+	0.0	7.5			0.0										
	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m³	DL	%	Total Count	Count/ m <sup>3</sup>	DL	%
Total Fungal Spores:	4	53	1	100	1	13	1	100	3	40	1	100	6	80	1	100
Alternaria																
Ascospores																
Aspergillus/Penicillium																
Basidiospores																
Botrytis																
Cercospora																
Chaetomium																
Cladosporium													1	13	1	16.7
Curvularia																
Drechslera/Bipolaris																
Ерісоссит																
Fusarium																
Nigrospora																
Oidium/Erysiphe																
Periconia							_									
Phoma																
Pithomyces					_											
Pleospors	-						<u> </u>									
Polythrincium	-			-									_			
Rhizopus/Mucor	+-	-		-	-		-		_		-			-	-	
Rusts	+	-	_		<u> </u>		ļ.,	1000		40		100.0				
Smuts/Myxomycetes	4	53	1	100.0	1	13	1	100.0	3	40	1	100.0	5	67	1	83.3
Stachybotrys	+	-	-	+	-	-	-		-	-	-		_	-		
Stemphylium	+	-	-	-	-	_	-		-	-	-	_	<del> </del>			
Torula	+-	-	-	-	-	-	-	_	_	-	-	-	-	-	-	
Ulocladium	+	-	-	+	-	-	-	-	-	-	-	-		-	-	
Unidentified Fungi	+-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	
Other																
Mycelial Fragments	-															
Debris Level	Mode	erate			Mode	rate			Low			1	Mode	rate		
Organic Material	Prese				Prese				Preser	nt.			Preser			

SOP 6110 DL - Detection Limit = Spores

Tel: 312.733.0551; Fax: 312.733.2386; e-mail address: STATinfo@STATAnalysis.com

# Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client: Integrity Environmental

Date/Time Received: 3/31/16 11:35 AM

Project ID:

915-15, Hinsdale Middle School Throughout Bldg

Date Reported: 4/1/2016

STAT Project No.:

16031072

Analyzed By: AM

Client Sample No.:		MA	23			MA	24			MA	25			N	/A26	
Sample Description:		Rm	224			Rm 2	223			Rm	221			Rn	n 220A	
Date Sampled:		3/29/	2016			3/29/2	2016			3/29/	2016			3/2	9/2016	
STAT Sample No.:		160310	72-00	5	1	603107	72-00	6	1	60310	72-00	7		1603	1072-0	08
Volume (m <sup>3</sup> ):		0.0				0.0				0.0	75			(	0.075	
	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m <sup>3</sup>	DL	%
Total Fungal Spores:	2	27	1	100	1	13	1	100	0			100	2	27	1	100
	-															
Alternaria	+-		-		1	13	1	100.0	$\vdash$							
Ascospores	+-	-	-	-	1	13	1	100.0	$\vdash$				_			
Aspergillus/Penicillium Basidiospores	+	-	-	-	<del></del>											
	+-	-	-	-	-				$\vdash$				_			
Botrytis Cercospora	+-	_	-	_			_									
Chaetomium	+-															
Cladosporium	+															
Curvularia	+-		<del>                                     </del>										<u> </u>			
Drechslera/Bipolaris	+-	<del>                                     </del>	_													
Epicoccum	1															
Fusarium	1															
Nigrospora																
Oidium/Erysiphe																
Periconia																
Phoma																
Pithomyces																
Pleospors																
Polythrincium												_	_			
Rhizopus/Mucor													_			
Rusts	_				_						-		_			
Smuts/Myxomycetes	2	27	1	100.0			_		_		-	-	2	27	1	100.
Stachybotrys	_				<u> </u>		_	-	<u> </u>		-	-	₩	-	_	
Stemphylium	1				_	-	-	-	-		-	-	₽-	-		
Torula	4			-	_		_	-	-		-	-				
Ulocladium	_			-	-	-	-	-	-	-	-	-		-	-	
Unidentified Fungi	_		-		-	-	-	-	├	-	-	+	+-	-	-	
Other	+	+-	+	-	-	-	$\vdash$	-	$\vdash$	_						
Mycelial Fragments																
Debris Level	Mode	erate			Low				Low	· Company			Low			
Organic Material	Prese				Prese	nt.			Preser	nt			Prese	nt		

### Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client:

Integrity Environmental

Date/Time Received: 3/31/16 11:35 AM

Project ID:

915-15, Hinsdale Middle School Throughout Bldg

Date Reported: 4/1/2016

STAT Project No.:

16031072

Analyzed By: AM

CII . C . 1 X	T	2.54	27			2.64	20			3.64	20					
Client Sample No.:	$\vdash$	MA			_	MA				MA					MA30	
Sample Description:	$\vdash$	Rm	217		-	Rm :	216		_	Rm	214		-	R	m 211	
Date Sampled:		3/29/	2016		<del>                                     </del>	3/29/2	2016			3/29/	2016			3/2	29/2016	
STAT Sample No.:		160310		9	1	60310		0	1	160310		1			1072-0	
Volume (m <sup>3</sup> ):	1	0.0		,	<u> </u>	0.0		. 0		0.0		1		-	0.075	12
voidine (iii ).	-	0.0	113		-	0.0	13			0.0	13		-		0.073	
	Total Count	Count/ m³	DL	%	Total Count	Count/ m³	DL	%	Total Count	Count/ m³	DL	%	Total Count	Count/ m³	DL	%
Total Fungal Spores:	4	53	1	100	1	13	1	100	1	13	1	100	3	40	1	100
Alternaria																
Ascospores																
Aspergillus/Penicillium																
Basidiospores																
Botrytis																
Cercospora																
Chaetomium																
Cladosporium																
Curvularia																
Drechslera/Bipolaris																
Epicoccum																
Fusarium																
Nigrospora																
Oidium/Erysiphe																
Periconia																
Phoma																
Pithomyces																
Pleospors																
Polythrincium																
Rhizopus/Mucor																
Rusts																
Smuts/Myxomycetes	4	53	1	100.0	1	13	1	100.0	1	13	1	100.0	3	40	1	100.0
Stachybotrys	-															
Stemphylium	-															
Torula	1_															
Ulocladium	╀	-					_									
Unidentified Fungi	+						_									
Other	+		-	_	_		_		_				_			
Managhal Parameter																
Mycelial Fragments	Moderate L				Т				Т				M. 1			
Debris Level	_				Low	·+			Low	+			Mode			
Organic Material	Preser	ıt			Preser	ıt			Presen	II			Presen	it		

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:

Integrity Environmental

Date/Time Received: 3/31/16 11:35 AM

Project ID:

915-15, Hinsdale Middle School Throughout Bldg

Date Reported: 4/1/2016

STAT Project No.:	1603	1072		.,					_	Analy	zed I	Ву:		AM		
Client Sample No.:		MA	31			MA	32			MA	.33			N	/IA34	
Sample Description:		Rm	209			Rm 2	239			MF	RC			R	m 207	
Date Sampled:		3/29/	2016			3/29/2	2016			3/29/	2016			3/2	9/2016	1
STAT Sample No.:		160310	72-01	3	1	603107	72-01	4	1	60310	72-01:	5		1603	1072-0	16
Volume (m <sup>3</sup> ):		0.0	75			0.07	75			0.0	75			(	0.075	
		Count/				Count/			T-4-1	Count/			Total	Count/		
	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	m <sup>3</sup>	DL	%	Total Count	m <sup>3</sup>	DL	%	Count	m <sup>3</sup>	DL	%
Total Fungal Spores:	0			100	5	67	1	100	5	67	1	100	2	27	1	
Alternaria																
Ascospores																
Aspergillus/Penicillium																
Basidiospores																
Botrytis																
Cercospora																
Chaetomium																
Cladosporium					1	13	1	20.0								
Curvularia																
Drechslera/Bipolaris	ـــــ	_														
Epicoccum	-						_									
Fusarium	-				_		_							-		
Nigrospora	╀	-			-		_							-		
Oidium/Erysiphe	┼	-	_		├		_		_	-		-	-	-		
Periconia	+-	-	-	-	├	-	-	-	-	-			-	-	_	
Phoma	-	-	-	-	-		-		-			-	_	_		
Pithomyces	+-	-	-	-	$\vdash$	-	-	-	-	-	-	-	-	-		
Pleospors	+-	+	-	-	$\vdash$	-	-	-	-	-	-	<del>                                     </del>		$\vdash$		
Polythrincium Rhizopus/Mucor	+-	+	-	-	+	-	$\vdash$		_			<u> </u>		+		
Rusts	+	+	_	-	+-	<del>                                     </del>	$\vdash$									
Smuts/Myxomycetes	+-	+	<del>                                     </del>	_	4	53	1	80.0	5	67	1	100.0	2	27	1	100.0
Stachybotrys		_		$\vdash$	†	1		1								
Stemphylium		$\top$	<u> </u>		T											
Torula	1	1		1	1											
Ulocladium																
Unidentified Fungi					T											
Other	$\vdash$															
	1															
Mycelial Fragments	1								14 :			-	\ . ·			
Debris Level					Mode				Mode				Mode	_		
Organic Material	Prese	nt			Prese	nt			Prese	nt			Prese	ш		

# Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client: Integrity Environmental Date/Time Received: 3/31/16 11:35 AM

Project ID: 915-15, Hinsdale Middle School Throughout Bldg Date Reported: 4/1/2016
STAT Project No.: 16031072 Analyzed By: AM

Client Sample No.:		MA	35			MA	36			MA	37			N	/A38	
Sample Description:		Rm	234			Rm 2	205			Rm	204			Rr	n 203B	
Sumpre D total parent	T															
Date Sampled:		3/29/	2016			3/29/2	2016			3/29/	2016			3/2	29/2016	
STAT Sample No.:		160310	72-01	7	1	60310	72-01	8	1	60310	72-019	9		1603	1072-0	20
Volume (m <sup>3</sup> ):		0.0	CARLES OF THE RES			0.0	75			0.0	75			(	0.075	
votanie (m.).	1	0.0	75													
	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m <sup>3</sup>	DL	%
Total Fungal Spores:	2	27	1	100	1	13	1	100	9	120	1	100	5	67	1	100
Alternaria																
Ascospores																
Aspergillus/Penicillium	1															
Basidiospores																
Botrytis	+-															
Cercospora	1															
Chaetomium	T															
Cladosporium	1															
Curvularia																
Drechslera/Bipolaris																
Epicoccum	T															
Fusarium	T															
Nigrospora																
Oidium/Erysiphe																
Periconia																
Phoma																
Pithomyces							_									
Pleospors							_									
Polythrincium																
Rhizopus/Mucor							1_								_	
Rusts							_								_	
Smuts/Myxomycetes	2	27	1	100.0	1	13	1	100.0	9	120	1	100.0	5	67	1	100.0
Stachybotrys	_		-				_	-			-	-		-	-	
Stemphylium	_	_	_			_	_	-	_	-	-	-		-	-	
Torula	_		-	-			-	-	_	-	-	-		-	-	-
Ulocladium	_	-	1	_	<u> </u>	-	-	-	-	-	-	-	_	-	-	
Unidentified Fungi	+-	-	_	-	<u> </u>	-	_	-	_	-	-	-	-	-	-	-
Other	+-	-	-	-		-	-	-	-		-	-	-	-	-	-
	+-	+-	-	-		+	$\vdash$	+	-	-	-	-	-		+-	
Mycelial Fragments	+-															
Debris Level	Mode	CONTROL OF THE PARTY OF THE PAR			Low				Mode	rate			Mode	rate		
Organic Material	Prese	Control of the Contro			Prese	nt			Prese				Prese			

DL - Detection Limit = Spores SOP 6110

# Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client: Integrity Environmental Date/Time Received: 3/31/16 11:35 AM

Project ID: 915-15, Hinsdale Middle School Throughout Bldg Date Reported: 4/1/2016

STAT Project No.: 16031072 Analyzed By: AM

STAT Project No	1003	1072								Tillar	, = 0 0	- J ·		7 1111		
Client Sample No.:		MA	39			MA	40									
Sample Description:		Bldg	Ext			Bla	nk									
Date Sampled:		3/29/	2016			3/29/2	2016									
STAT Sample No.:		160310		1	1	60310	72-02	2								
Volume (m <sup>3</sup> ):	1-	0.0				N/									the state of the s	
volume (m.).	+	0.0	15			1 1/										
	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m <sup>3</sup>	DL	%
T . 15	25			100	0	- 111	DL	100	Count	***	DE	100	Count			100
Total Fungal Spores:	23	333	1	100	0			100			L	100				100
Alternaria																
Ascospores																
Aspergillus/Penicillium																
Basidiospores	1	13	1	4.0												
Botrytis																
Cercospora																
Chaetomium																
Cladosporium	9	120	1	36.0												
Curvularia																
Drechslera/Bipolaris																
Ерісоссит	1	13	1	4.0												
Fusarium																
Nigrospora																
Oidium/Erysiphe																
Periconia									_				ـــــ			
Phoma							_									
Pithomyces							_		_				ــــــ			
Pleospors					_		_		_				_			
Polythrincium							_		_				_			
Rhizopus/Mucor									_		_		_			
Rusts									_							
Smuts/Myxomycetes	14	187	1	56.0							-		<del></del>			
Stachybotrys							_		_				_			
Stemphylium					_		-	-				-	-			
Torula			_				_			-	-	-	₩	-		
Ulocladium							1_		_			_				
Unidentified Fungi						_	1_		-					<del></del>		
Other	+-	-	-	-	$\vdash$	-	$\vdash$	-	$\vdash$	-	-	-	$\vdash$	+-	-	
	1															
Mycelial Fragments	N/ 1				A 1	-4						- 1	-			
Debris Level	Mode				Abser				-			-				
Organic Material	Prese	ш			Ause	ııı	Estata									

DL - Detection Limit = Spores SOP 6110

STAT Analysis Corporation
2242 West Harrison Street, Suite 200, Chicago, Illinois 60612 Phone: (312) 733-0551 Fax: (312) 733-2386

e-mail a	ddress: STATinfo@	STATAnalysis	com	ois ou	OIL F	none: (31)	4) /33	-0331 Fax: (3	12) 733-	2386								1	_		
				MIC	CROBIC	OLOGY	CH	AIN OF CUS	STODY	RE	CO	RD				Page	: 1	of	1		
	Integrity Environm		, Inc.		Offic	ze Use O	nly I	Below:	Turn A	roun	d Ti	me:	<1	71		7 2 [	3	V	Viable:	6-10	7
-	1240 Iroquois Ave			Wor	k Order	No.:			Other 7				. [	ate I	Due:	J - L		Time	e Due:	5-10[	1
J	Naperville, IL 6050					16	,63	1073	Reling		d hv	- 14	220	77	EN.		Dat		3.30-	11/10	
	(630) 718-9133/C	ell (708) 528	3-1491	Sam	ples Acc	eptable:	Yes:	No:	Receiv				2 1				a Date	73 La	7 110	9//7	<i><b>3</b>po</i>
-	(630) 718-9114			Anal	yzed By:		gue	4/1/16	Reling	uishe	d by	: 140	5	( 0		7 10		e/Time:	9 (1)	,	+
	es2001@sbcglob	al.net		Date	/Time:				Receiv					-	87	1			3/31/1	6 112	7
Project Number:	915-15			Data	File:				Reling				7-50/8					/Time:	711	71-	4
Project Name:	Hinsdale Mide		1	QC E	Ву:				Receiv		-							/Time:			1
Project Location:	Throughout E	Building		Repo	orted By	(Initial/L	Date/1	Time):		T		T	2345				影響	П	TT	$\neg$	1
Project Manager:				Verb	al:					вре	wab	黃									
P.O. Number:	915-15			Fax/e	e-mail:				le:	Direct Exam-Tape	Direct Exam-Swab	Direct Exam-Bulk		1							
Client Sample Nu	mber/Description:	Date Taken	Time T	1	Volume	Area W	iped	Laboratory	Non-Viable: Air Cassette	t Ex	t Exa	Ex	ě	Air Impact							
	moen bescription.	Date Taken	Time 12	iken	(Liters)	(Units	s) <sup>2</sup>	Sample No.	Non Air C	Dire	Direc	Direc	Viable:	Air Ir	Swab	Bulk	Other				1
MA19/1	Sm. 128	3/29/16	08:	31	75.0		1	001	X						62	+		$\Box$	+	$\top$	1
MAZO/La	. 227	1	OB:	40	1		/	002										$\vdash$	+	+	1
MA21/224	1. Elev. Lolla	,	18:4	B				003										$\vdash$	$\top$	$\top$	1
MAZZ/R2	31 1		DB:5	3			1	004				1					3		11	+	1
MAJ3/Ky	m.224		09:0	3			1	005											++	+	
MA24/K	u 223		09:1	13				006								$\Box$			$\top$		1
11935/	Car. 221		19:2	-1				007											$\top$		1
MA26/	Em. 2200		09:3	31			1	0008											$\dagger \dagger$	1	1
MAZT/K	n. 117		09:3	9			1	009											TT	$\top$	1
MAZE	By 216		09:4	8				010												+	1
MAZG	16.219		59:3	57			1	00											$\top$	+	1
143 (/	La 311		17:0	1			1	012	V								727		1	+	1

Comments:

Analysis Corporation

2242 West Harrison Street, Suite 200, Chicago, Illinois 60612 Phone: (312) 733-0551 Fax: (312) 733-2386
e-mail address: STATinfo@STATAnalysis.com

				MICR	OBIG	DLOGY CH	AIN OF CU	STODY	RE	CO	RD				Pa	ge:	1	of L		
Client:	Integrity Environn		Inc.		Offic	e Use Only l	Below:	Turn A	roun	d Ti	me:	<1	T	ī	7 2		3 X	Viable: 6	-10	1
Street Address:	1240 Iroquois Ave	e., Ste. 102		Work O	rder	No.:		Other 7				_	 Date	Due			Ti	me Due:	-10	1
City, State, Zip:	Naperville, IL 605					1603	51077	Relinq		d by	. /		7-1	·				3-30-1	11 /100	1.
Phone:	(630) 718-9133/C	ell (708) 528	3-1491	Sample	s Acc	eptable: Yes:		Receiv	-	And in case of Females,	ALCOHOL: NAME OF	15		1			Date/Time		- ff /:	P
Fax:	(630) 718-9114			Analyze			4/1/16	Reling		-		105					Date/Time			1
	ies2001@sbcglob	pal.net	-	Date/Ti				Receiv					te	, .	Vin			3/31/16	1/5	1
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Project Name:	Hinsdale Mid			QC By:				Receiv	ed by	':							Date/Time	<b>3</b> .		1
Project Location: Project Manager:		Building			d By	(Initial/Date/	Time):			٩	u						e dica			1
P.O. Number:	915-15			Verbal:	:1.				-Tape	-Swa	-Bulk									
1.0.14dinoci,	910-10	T	<del></del> L'	Fax/e-m		T		able:	xam	xam	xam			2			4			
Client Sample No	umber/Description:	Date Taken	Time Tal	ken	lume ters)	,	1	Non-Viable Air Cassette	Direct Exam-Tape	Direct Exam-Swab	Direct Exam-Bulk		Viable.	ap	Bulk		<b>E</b>			
M13//	110	2/20/11	Call			(Units) <sup>2</sup>	Sample No.	ZZ	Ü	Di	Ď		2   3	Swab	Bn		Other			-
MAJIL	14,107	0/27/16	111.14	/ /3	1.0	1 /	013						3.70							
MABJI	he. 1439		10:30	0 1	ſ	/	014						2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00				#1 114 148			
MA33 [N	MRC		15:38	P		1	015							$\dagger$					+	
MA34/	m. 207		10:4	15			016							T						
MA35/	my 234		10:53	5			017													
MA36/2	m 205		11:03	3			810												1	
MA37/	n. 204		11:1	2			019					1					8.45		1	
MA38/L	2636		11:20	5			020													
MA34/812	EXT		11:37	1			021												+	
MAYOTAL	a B	V	,	0.	0		02	V			1									
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Comments:																- Control of the Cont				

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

April 12, 2016

Integrity Environmental Services, Inc. 1240 Iroquois Drive Naperville, IL 60563

Telephone: (630) 718-9133 Fax: (630) 718-9114

Analytical Report for STAT Work Order: 16040204 Revision 0

RE: 915-15, Hinsdale Middle School, Throughout Building

Dear Guy Tawzer:

STAT Analysis received 4 samples for the referenced project on 4/7/2016 12:05:00 PM. The analytical results are presented in the following report.

Enclosed are the analytical results for the above referenced project. The samples were analyzed as per the enclosed chain of custody.

All analyses were performed in accordance with established microbiology methodology. All Quality Control criteria as specified in the methods have been met. QA/QC documentation and raw data will remain on file for future reference. Sample acceptance criteria has been met unless noted in the Case Narrative or Sample Receipt Checklist. If required, an estimate of uncertainty for the analyses can be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions about the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Albio Marquez

Senior Microscopist

The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.

2242 West Harrison St., Suite 200, Chicago, Illinois 60612-3766

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### Analytical Report for Microbiological Analysis - Fungal Spores in Air

Client: Integrity Environmental Date/Time Received: 4/7/16 12:05

Project ID: 915-15, Hinsdale Middle School, Throughout Bldg Date Analyzed: 4/12/2016

STAT Project No.: 16040204 Analyzed By: AM
OC By: DM

										QC By	7:			DM		
Client Sample No.:		MA	<b>A</b> 41			MA	42			MA	443			M	A44	
Sample Description:		Rm	116			Rm	118			Bldg	g Ext			Bl	ank	
										•						
Date Sampled:		4/6/	2016			4/6/2	2016			4/6/	2016			4/6/	2016	
STAT Sample No.:	T	160402	204-00	)1	1	60402	04-00	)2		160402	204-00	)3		16040	204-00	4
Volume (m <sup>3</sup> ):	T		)75			0.0					075				I/A	
()											-					
	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m <sup>3</sup>	DL	%	Total Count	Count/ m <sup>3</sup>	DL	%
Total Fungal Spores:	6	80	13	100	4	53	13	100	11	147	13	100	0			100
Alternaria	+-											Γ		Ι		
Ascospores	+								-			<u> </u>				
Aspergillus/Penicillium	1															
Basidiospores	t-								2	27		18.2		<del>                                     </del>		
Botrytis	T								<u> </u>			10.2				
Cercospora	1															
Chaetomium	$\top$															
Cladosporium	$\top$															
Curvularia													$\overline{}$			
Drechslera/Bipolaris	$\top$															
Epicoccum																
Fusarium	T															
Nigrospora																
Oidium/Erysiphe																
Periconia																
Phoma																
Pithomyces																
Pleospora																
Polythrincium																
Rhizopus/Mucor																
Rusts																
Smuts / Myxomycetes	6	80		100.0	4	53		100.0	9	120		81.8				
Stachybotrys	_													_		
Stemphylium	+-												_			
Torula	_															
Ulocladium	_															
Unidentified Fungi	-												_			
Other	+	-									_					
	+	-	_		-		-		-		_	-	-	-	-	-
Mycelial Fragments	+															Tuel -
Debris Level	Mode	rate		Mode	rate			Mode	rate			Abser	nt			
Organic Material	Preser				Preser	CANADA STATE			Preser				Abser			

STAT Analysis Corporation

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City, State, Zip:	Naperville, IL 6050	63				No.: 1604	10 24	-	-	ishe	d hv	18	4 2		70.	20/	· ,		4-6	111	73.
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P.O. Number:	915-15				e-mail:			Ple:	ette	каш-	cam-	(am-		ಕ							
Client Sample N	umber/Description:	Date Taken	Time Ta	kenl	Volume (Liters)	Area Wiped (Units) <sup>2</sup>	Laboratory Sample No.	Non-Viable:	Air Cassette	Direct Exam-Tape	Direct Exam-Swab	Direct Exam-Bulk	Viable:	Air Impact	Swab	Bulk	7	Other			
MA41/	fu 116	4/6/16	DJ:0	12	75.D		001		X								1459				
MAYZI	En. 1/8,	1	07:11	1	75.0		002		1								100				
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#### **DEFINITIONS**

#### MOLD FUNGI AND SPORES -

An estimated 100,000 species of fungi are known to exist. Fungi may be single celled or multi-cellular. Various organisms such as yeasts, mushrooms, morels, truffles, and molds are actually fungi. Fungal growth is affected by moisture, temperature, and light. All humans are exposed to fungi through inhalation and ingestion, apparently, with no ill health effects. Many fungi are used as foods and sources of drugs that help fight disease. Most fungi are saprophytic, feeding on dead and decaying organic matter. Some species of fungi, however, are known to cause infectious diseases in humans. In most cases, the fungi are unable to cause disease in persons with a healthy immune system.

Three (3) types of fungal infections exist. They are defined as:

- 1. Systemic Infection: Caused by the inhalation of certain fungal spores. Most of these infections produce little or no symptoms.
- 2. Opportunistic Infection: Limited to those with impaired immunological defenses. In this situation, infection is secondary to a primary disease. Species of *Aspergillus*, *Cladosporium*, *Mucor*, *Rhizopus* and *Cryptococcus* are common opportunistic fungi.
- 3. Dermatophytes: A group of fungi that infect the hair, skin and nails. Direct contact with an infected individual or the sharing of items such as grooming utensils or clothes is usually how the infection is transmitted. Transmission to humans from an environmental source is rare.

Fungi produce toxic metabolites called mycotoxins. Mycotoxins are present in both spores and viable fungi. Usually, inhalation exposure of mycotoxins occurs following the disturbance of a contaminated source.

Fungi also produce volatile organic compounds (VOCs) while growing. Some of these compounds have noticeable odors that many people find offensive. It is thought that exposure to these VOCs may be generally responsible for some building-related symptoms (BRSs).

The following is a description of each genus of fungi found within the Community Consolidated School District 181 Administration Center:

Ascospores:

On March 28, 2016, a single spore was found on the air sample collected in Classroom 125. On March 29, 2016 a single spore was found on the air sample collected in Classroom 223. These spores were not positively identified. They are possibly from species of *Alternaria*, *Aspergillus*, *Cladosporium*, *or Penicillium* among others.

Basidiospores:

On March 28, 2016, spores were found on the air samples collected in the Main Office, the Student Services Office, and in Classroom 117. On March 29, 2016 spores were found on the air sample collected outside of the School Building. On April 6, 2016, spores were also found on the air sample collected outside of the building. These spores were not positively identified and are possibly from some species of yeasts (*Rhodotorula* and *Sporobolomyces*) that are found in some indoor environments or possibly from a variety of fungus known as *Cryptococcus sp.* 

Cladosporium sp.:

On March 28, 2016, these spores were found on air samples collected in the Main Office, the Student Services Office, Classroom 125, and on the air sample collected outside of the School Building. On March 29, 2016 spores were found on air samples collected in Classroom 231, Classroom 239, and on the air sample collected outside of the school building. This fungus is commonly found both indoors and outdoors and is often located in spaces where condensation is collected and/or where there is poor ventilation. It is commonly found on the surface of fiberglass duct lining inside supply ducts. It is a common cause of allergies and hay fever and has also been associated with various skin and eye infections acquired by immune compromised individuals.

Epicoccum sp.:

A single spore was found on the air sample collected on March 29, 2016, outside of the School Building. This fungus is commonly found in plants, soils, grains, textiles and paper products. It is usually found in association with *Cladosporium* and Aureobasidum. Considered to be a saprophyte, *Epicoccum*, is routinely found on air samples and occasionally found in dust samples. This fungus is reported to be an allergen.

Myxomycetes:

Spores were found on every air sample, collected outside of the School Building, and on the majority of air samples collected inside of the School Building. Myxomycetes are usually found outdoors on decaying plant material. They are easily dispersed by wind in their dry phase and occasionally are found in indoor environments. Under 600x microscopy, Myxomycetes are indistinguishable from smuts.

Smuts:

Spores were found on every air sample, collected outside of the School Building, and on the majority of air samples collected inside of the School Building. This allergen is a parasitic plant pathogen that needs a living host. Smuts are often found on corn, grass, weeds, flowering plants, and even other fungi. Smuts are distributed by wind. Under 600x microscopy, smuts are indistinguishable from mxomycetes.