21 Griffin Rd. North
Windsor, CT 06095
T 860.298.9692
TRCcompanies.com

November 7, 2024

Mr. Angelus Papageorge
Director of Operations
Fairfield Public Schools
501 Kings Highway East, Suite 210
Fairfield, CT 06825

Via email: apapageorge@fairfieldschools.org

RE: Limited Indoor Air Quality Assessment Report
Timothy Dwight Elementary School – Room 18
1600 Redding Road
Fairfield, CT
TRC Project No. 63856

Dear Mr. Papageorge:

Per your request, TRC performed a Limited Indoor Air Quality (IAQ) Assessment at Timothy Dwight Elementary School located at 1600 Redding Road in Fairfield, Connecticut. This limited IAQ assessment was performed in response to expressed health concerns for a student that occupies Room 18.

The assessment included a visual and olfactory inspection, collection of baseline IAQ parameter measurements of carbon dioxide (CO_2), carbon monoxide (CO), temperature (T), relative humidity (RH), moisture measurements of select building materials, particulate matter monitoring, and spore trap bioaerosol air sampling.

Sampling was conducted within Room 18 (area of concern), Room 19, Hallway (non-problem areas), and the exterior/ambient for comparative purposes. TRC's Industrial Hygienist, Mr. Andrew Smith, performed the assessment on November 1, 2024. The weather was overcast with light showers with a temperature of 64 ºF.

Observations

At the time of the assessment, the Industrial Hygienist observed the following:

Room 18 (area of concern):

- Musty odor present
- Visible signs of water staining observed below sink – musty odor present upon opening sink cabinet
- Visible signs of particulate/suspect fungal growth observed on interior of wall-mounted
- ventilation unit fan – fan was operational during the assessment
- Particulate accumulation observed on ventilation diffuser in bathroom
- Visible signs of suspect fungal growth observed on ceiling tiles in bathroom
- Elevated concentrations of moisture not detected

Room 19 (non-problem area):

- Faint musty odor present
- No visible signs of water damage
- No visible signs of suspect fungal growth
- Particulate accumulation observed on ventilation diffusers in room and bathroom
- Elevated concentrations of moisture not detected

Hallway (non-problem area):

- No musty odors present
- No visible signs of water damage
- No visible signs of suspect fungal growth
- Elevated concentrations of moisture not detected

Sampling and Analytical Methods:

Indoor Air Quality Parameter Monitoring

Monitoring of IAQ Parameters was conducted in Room 18 (area of concern), Room 19 (non-problem area), hallway (non-problem area), and exterior/ambient. Real-time monitor readings for CO_2, CO, T and RH were collected using a Q-Trak™ IAQ Monitor Model 7545.

CO_2 is a normal constituent of exhaled breath. When monitored indoors, CO_2 can be a useful indicator of inadequate make-up (fresh) air and inadequate air supply per occupant. American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 62-2013, *Ventilation for Acceptable Indoor Air Quality*, recommends a delta (difference between inside and outside concentrations) value of 700 parts per million (ppm) or less for CO_2. The delta value of 700 ppm equates to approximately 15 cubic feet per minute of supply air per occupant. Ambient concentrations of carbon dioxide generally range from 300 – 500 ppm depending on population densities and time of year. If the delta exceeds 700 ppm it does not mean the building is hazardous or should be evacuated, but rather, this level should be a guideline that helps maximize comfort for all occupants. The Occupational Safety and Health Administration's (OSHA) permissible exposure limit (PEL) and the American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV) for CO_2 are 5000 ppm for 8 hours of exposure, with concentrations above this level potentially hazardous to human health.

CO is a combustion product, often present in buildings with boilers, fuel-burning engines, parking garages, or busy side streets near the fresh air intakes. Carbon monoxide is a colorless, odorless gas that can cause fatigue or drowsiness, nausea, headache, and difficulty breathing when present at elevated levels. OSHA's PEL for CO is 50 ppm for 8 hours of exposure. ACGIH's TLV for CO is 25 ppm for 8 hours of exposure. The National Ambient Air Quality Standard (NAAQS) for CO is 9 ppm for 8 hours of exposure and 35 ppm for 1 hour of exposure. The US Green Building Council (USGBC) LEED Indoor Air Guideline is 9 ppm and no greater than 2 ppm above ambient levels.

Occupants are generally tolerant of temperatures between 68° – 82° F. ASHRAE Standard 55-2013 *Thermal Environmental Conditions for Human Occupancy* recommends temperatures be

maintained between 75° – 82° F during warmer summer operative conditions and 68° – 78° F in cooler winter operative conditions.

Relative humidity below 30% may cause specific physiological effects, which lead to discomfort and dissatisfaction with the indoor environment. Potential symptoms include dry and sore nose and throat, bleeding nose, sinus and tracheal irritation, dry scratchy eyes, inability to wear contact lenses, and dry flaking skin. The number of persons affected generally increases as the RH drops below 30%. Low RH may also contribute to an increase in respiratory illness, by weakening the defenses provided by the mucous membranes. At the other end of the spectrum, discomfort and dissatisfaction is common with RH readings above 60%. Carpets, curtains, furniture, etc., can absorb enough moisture at 60% RH to promote microbial growth. In addition, elevated RH can lead to condensation on materials with cooler surface temperatures and subsequently promote microbial growth. Several industry organizations recommend RH be maintained between 30% - 60%. ASHRAE Standard 55-2013 recommends RH be maintained below 65%. AIHA recommends RH between 30%-50% and ACGIH recommends RH be maintained below 60% to prevent the amplification of microbial growth.

Indoor Air Quality Parameter Results

Time	Sample Number	Measurement Location	CO_2 (ppm)	CO (ppm)	T (°F)	RH (%)
7:18am – 7:28 am	1	Ambient/Outside Main Entrance	435	0.1	64.4	76.6
7:36am – 7:46 am	2	Room 18 (AOC)	439	0.6	71.0	60.0
7:52am – 8:02 am	3	Room 19	445	0.7	72	58.4
7:52am – 8:02 am	4	Hallway	448	0.4	71.5	60.24
8:20am - 8:30am	5	Ambient/Outside North Entrance	443	0.4	67.9	69.14
Standards			**ASHRAE = <700 above ambient OSHA PEL and ACGIH TLV = 5000**	**LEED = 9 or <2 above ambient; NAAQS = <9; ACGIH TLV = 25; OSHA PEL = 50**	**ASHRAE Summer = 75-82° Fall & Winter = 68-78° F**	**ACGIH = <60; ASHRAE = 30-65**

ppm = parts per million

The baseline IAQ measurements collected indicate concentrations for CO_2, CO and T to be within acceptable recommended ranges. IAQ Measurements for RH were reported at the higher range of the ASHRAE recommended guideline and may be attributed to seasonal conditions.

Moisture Measurements

Moisture measurements were collected from select building materials using the Protimeter Surveymaster™ moisture meter.

The moisture meter operates in measure mode by measuring the electrical conductivity between two pins that are inserted into the sample substrate. Materials containing surface moisture exhibit

increased conductivity compared to a dry sample of the same material. The Protimeter Moisture Meter is designed to check moisture levels in wood, plaster, brick, mortar, sheetrock and other building materials and displays readings as a percent Wood-Moisture-Equivalent (%WME). % WME can be thought of as the moisture level in any building material expressed as a moisture content of wood. According to the manufacturer's literature, %WME above 20% in any building material indicates an excess moisture content which can lead to substrate decay and microbial amplification.

No elevated concentrations of moisture were detected on the representative surfaces/building materials tested during this assessment

Particulate Matter Monitoring

To evaluate airborne particulate levels TRC utilized a TSI DustTrak II™ Model 8532 real-time particle meter equipped with size selective inlet for PM_{10} particles. The unit is capable of logging readings for display of data.

In urban atmospheres, particles less than 10 µm (PM_{10}) in diameter are referred to as "respirable" particles. Respirable particles with aerodynamic diameters greater than 2.5 micrometers (µm) are commonly referred to as "coarse" and tend to settle in the upper respiratory tract. Particles larger than 10 µm in diameter, or roughly one-sixth the width of a human hair, are generally trapped in the nose, throat and upper bronchioles and then expelled by coughing, sneezing, or swallowing.

For workplace exposures the respirable (10 µm diameter) OSHA PEL is 5 mg/m^3 8-hour TWA and is appropriate for exposures to construction workers in construction worksites. The USGBC LEED guidance for PM_{10} in buildings is 0.05 mg/m^3.

Particulate Matter (PM_{10}) Parameter Results

Date	Sample Number	Measurement Location	Average PM_{10} Airborne Dust (mg/m^3)
11/1/24	001	Ambient/Outside	0.023
11/1/24	002	Room 18	0.013
11/1/24	003	Room 19	0.013
11/1/24	004	Hallway	0.016
11/1/24	005	Ambient/Outside	0.021
Standards		**LEED =0.05 (PM_{10}); OSHA = 5.0 (PM_{10})**	

The PM_{10} readings were below both the LEED and OSHA standards.

Particulate Bioaerosol Monitoring

Sampling for particulate bioaerosols/total fungal spore counts (both viable and non-viable spores) was conducted using Air-O-Cell™ spore trap sampling cassettes, a device designed for the rapid collection and analysis of a wide range of airborne particles, including fungal spores. The samples were collected at 15 liters per minute and run for 10-minute sampling periods (150 liters of air) using an AP Buck sampling pump. Airborne particulates are drawn through the cassette and directly impacted on adhesive collection media. The cassettes are then transported to the laboratory for direct microscopic fungal examination via light microscopy at 600X. The Air-O-Cell™ cassette collects both viable and non-viable fungal spores and the laboratory can identify some of the collected spores down to the genus level. Results reflect conditions only at the time the samples were collected.

Three (3) air samples were collected from inside the building (Room 18 – area of concern and Room 19 and Hallway – control/non-problem areas). Two (2) additional ambient outdoor samples (pre/post assessment) were collected to determine background ambient types and concentrations of airborne bioaerosols for comparison, for a total of four (5) air samples. The samples were sent to EMSL Analytical, Inc. of Meriden, Connecticut for analysis. EMSL is an American Industrial Hygiene Association (AIHA) Environmental Microbiology Laboratory Accreditation Program (EMLAP) accredited laboratory.

Note: Mold spores are ubiquitous in nature and found in all normal indoor environments. No federal or state standards or guidelines exist for acceptable or hazardous levels of spore counts. As a result, relative level/type comparisons and professional judgments of concentrations compared to "typical" and ambient levels are utilized to supplement visual inspections in order to provide an assessment.

Total Particulate Fungi Air Sampling Results

Sample #	Date	Location	Total Spores/m^3	Identification –Species (sp.)
M-01	11/1/24	Ambient/Exterior Rear	220	*Alternaria (Ulocladium)*
			2230	*Ascospores*
			280	*Aspergillus/Penicillium*++
			2100	*Basidiospores*
			2790	*Cladosporium*
			90	*Eppicoccum*
			90	*Fusarium*++
			40	*Ganoderma*
			700	*Myxomycetes*++
			10	*Pithomyces*++
			70	*Rust*
			70	*Cercospora*++
			20	*Nigrospora*
			310	*Paecilomyces*++
			40	*Pestalotia*++
			20	*Polythrincium*
			100	*Torula*++
			9180	**Total Spore Count**
			260	Hyphal Fragment

Sample #	Date	Location	Total Spores/m^3	Identification –Species (sp.)
M-02	11/1/24	Room 18 (Area of Concern)	100 20 90 330 7 **547** 40	*Ascospores* *Aspergillus/Penicillium*++ *Basidiospores* *Cladosporium* *Rust* **Total Spore Count** Hyphal Fragment
M-03	11/1/24	Room 19	200 40 200 370 20 40 200 20 20 20 **1130** 20	*Ascospores* *Aspergillus/Penicillium*++ *Basidiospores* *Cladosporium* *Curvularia* *Ganoderma* *Myxomycetes*++ *Pithomyces*++ *Rust* *Pestalotia*++ **Total Spore Count** Hyphal Fragment
M-04	11/1/24	Hallway	3880 40 3320 2770 790 40 **10840** 90	*Ascospores* *Aspergillus/Penicillium*++ *Basidiospores* *Cladosporium* *Myxomycetes*++ *Rust* **Total Spore Count** Hyphal Fragment
M-05	11/1/24	Ambient/Exterior Adjacent Doorway 6	70 3880 350 740 9750 40 7 70 200 20 20 **15147** 200	*Alternaria (Ulocladium)* *Ascospores* *Aspergillus/Penicillium*++ *Basidiospores* *Cladosporium* *Curvularia* *Eppicoccum* *Ganoderma* *Myxomycetes*++ *Pithomyces*++ *Rust* **Total Spore Count** Hyphal Fragment

Total Spores /m^3 = Count of Total Spores per cubic meter of air.
++ = Includes other spores with similar morphology.

Analysis of the samples indicates the total fungal spore counts in the interior areas were similar to or less than the ambient (outside) samples. Fungal spore types found on the interior samples were also similar to the spore types found on the exterior ambient samples.

Conclusions:

- The IAQ measurements collected indicate concentrations of CO_2, CO and T levels to be within acceptable industry ranges.

- IAQ Measurements for RH were reported at the higher range of the ASHRAE recommended guideline and may be attributed to seasonal conditions.

- A musty odor was present in Room 18 (area of concern) at the time of this assessment. A similar odor was also present in Room 19 but not as prevalent.

- Visible signs of water damage and/or suspect fungal growth were observed on the following surfaces/building materials as follows:

    - Room 18 (area of concern)
        - water staining observed below sink in cabinet
        - Visible signs of particulate/suspect fungal growth observed on interior of wall-mounted ventilation unit fan – fan was operational during the assessment – likely source causing distribution of odor
        - Particulate accumulation observed on ventilation diffuser in bathroom
        - Visible signs of suspect fungal growth on ceiling tiles in bathroom
    - Room 19
        - Particulate accumulation observed on ventilation diffusers in classroom and bathroom

- Elevated concentrations of moisture were not detected in any of the representative building components/surfaces tested during this assessment.

- While visible signs of suspect fungal growth and particulate matter were observed on the ventilation fans, ceiling tiles and diffusers, analysis of the air samples indicated the total fungal spore counts in the interior areas sampled were similar to or less than the ambient (outside) samples. Fungal spore types found on the interior samples were also similar to the spore types found on the exterior ambient samples.

Recommendations:

- Repair leak associated with sink in Room 18.

- Remove/dispose of ceiling tiles displaying signs of suspect fungal growth in Room 18 bathroom. Note: prior to removal/disturbance of ceiling tiles, ensure ceiling tiles have been tested to determine the presence of asbestos.

- Cleaning of HVAC diffusers displaying signs of particulate accumulation in Rooms 18 and 19, including bathrooms.

- Cleaning of interior of wall-mounted ventilation unit in Room 18 displaying signs of suspect fungal growth.

- Continued periodic maintenance of HVAC units, including respective unit filter changes.

A. USEPA 402-K-01-001 *Mold Remediation in Schools and Commercial Buildings, 2008.*
B. OSHA SHIB 11-08-13 *A Brief Guide to Mold in the Workplace, 2011.*
C. ACGIH *Bioaerosols Assessment and Control, 1999.*
D. ASHRAE Standard 62.1 *Ventilation for Acceptable Indoor Air Quality 2016*
E. ASHRAE Standard 55 *Thermal Environmental Conditions for Human Occupancy, 2013.*
F. SMACNA *Indoor Air Quality Guidelines for Occupied Buildings Under Construction, 2008.*
G. IESO *Standards of Practice for the Assessment of Indoor Environmental Quality, 2003.*
H. EPA *Building Air Quality; A Guide for Building Owners and Facility Managers, 1991.*
I. LEED-NC *Green Building Rating System for New Construction & Major Renovations, 2009*
J. AIHA *Assessment, Remediation and Post-Remediation Verification of Mold in Buildings*, 2004
K. IICRC S520 *Standard and Reference Guide for Professional Mold Remediation, December 20015*
L. NADCA, *ACR The NADCA Standard for Assessment, Cleaning, Restoration of HVAC Systems, 2013*

Please refer to the attachment for site photographs, chain-of custody and laboratory report. If you have any questions concerning this report, please call me directly at (860) 937-4370.
or email me at emarques@trccompanies.com.

Sincerely,

TRC Environmental Corporation

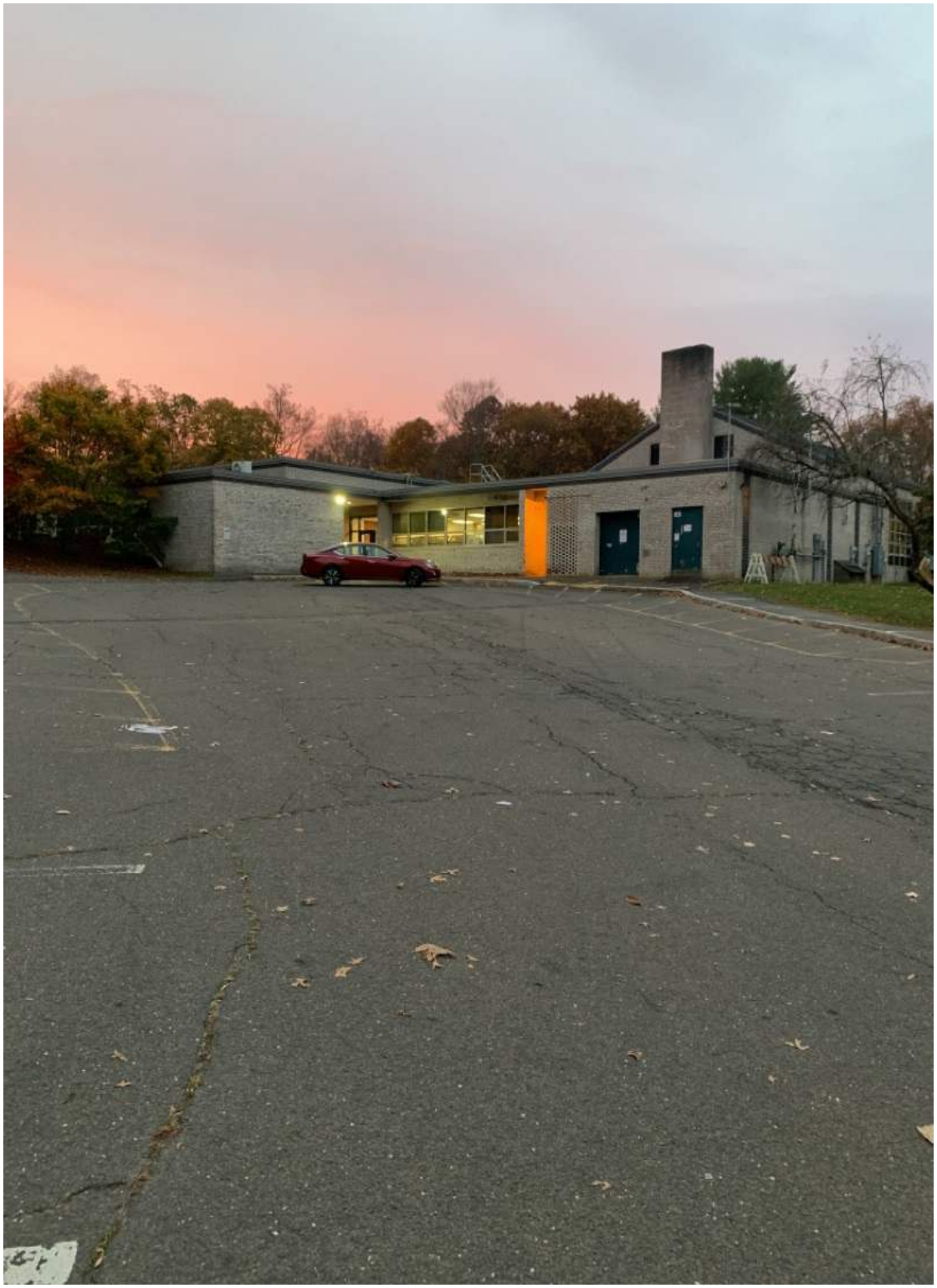
Eduardo Miguel Marques
Project Manager
Safety & Industrial Hygiene

Jonathan Gentile
Office Practice Leader
Safety & Industrial Hygiene

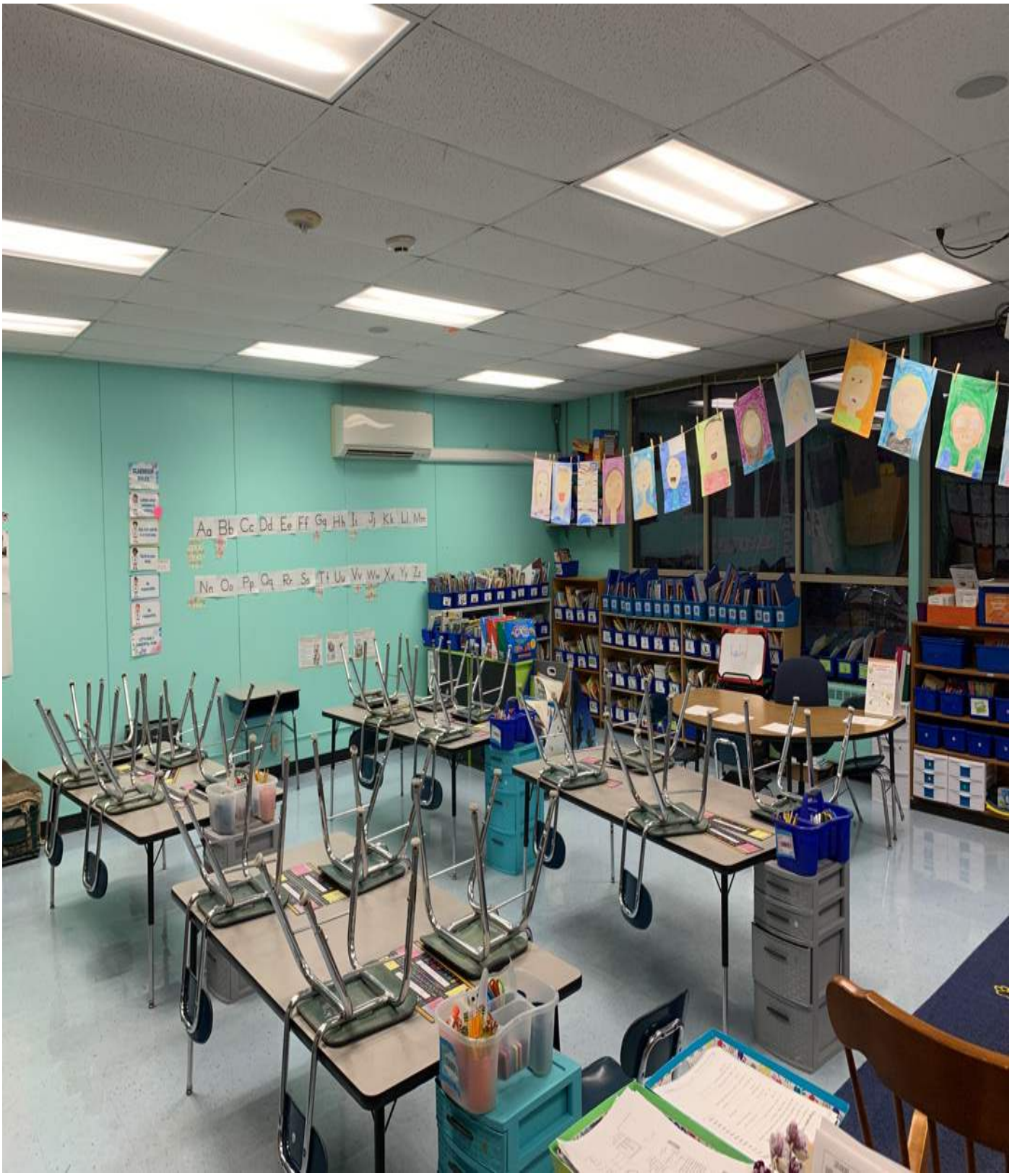
Attachment 1 – Site Photographs
Attachment 2 – Chain of Custody and Laboratory Report

ATTACHMENT 1

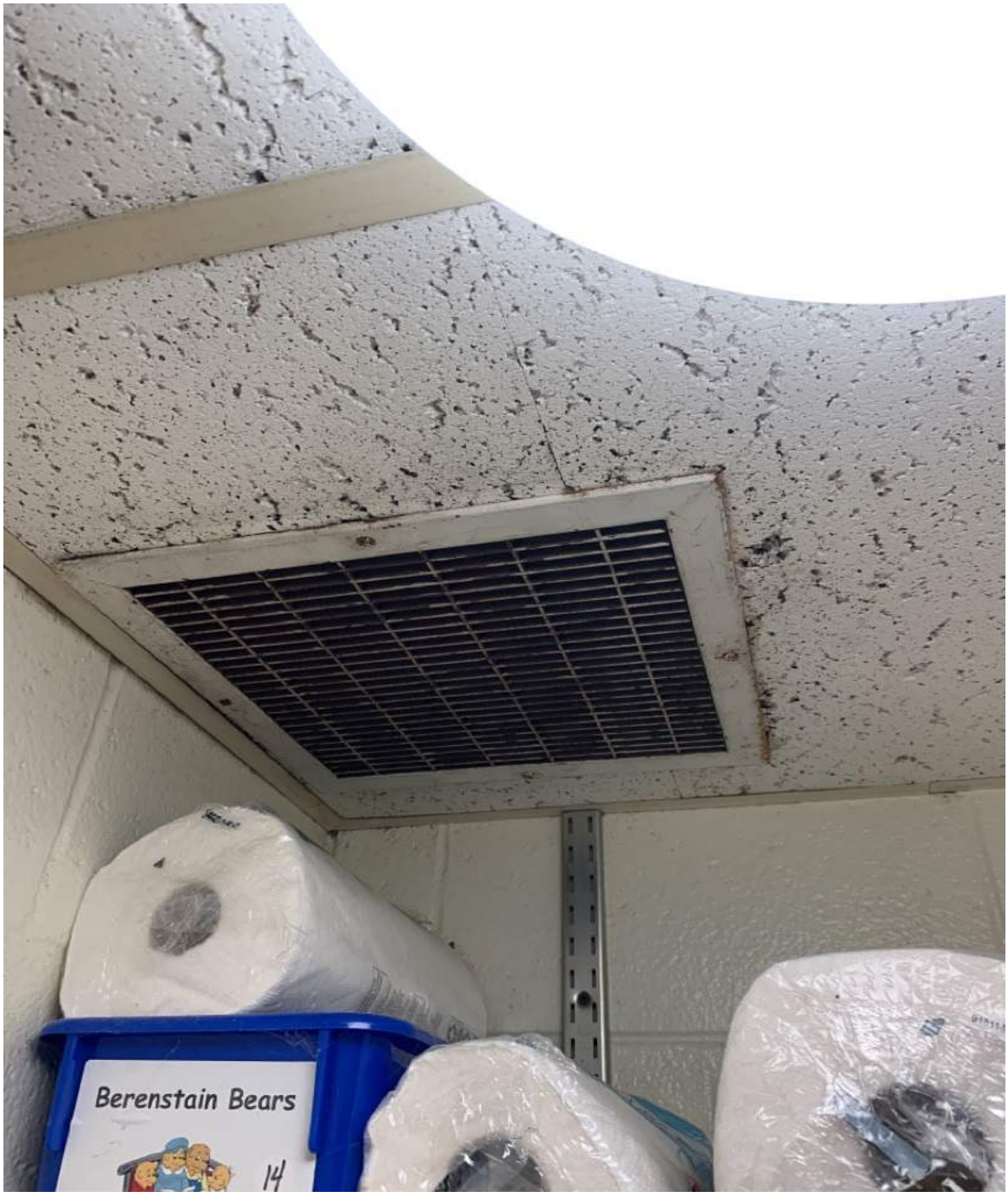
SITE PHOTOGRAPHS



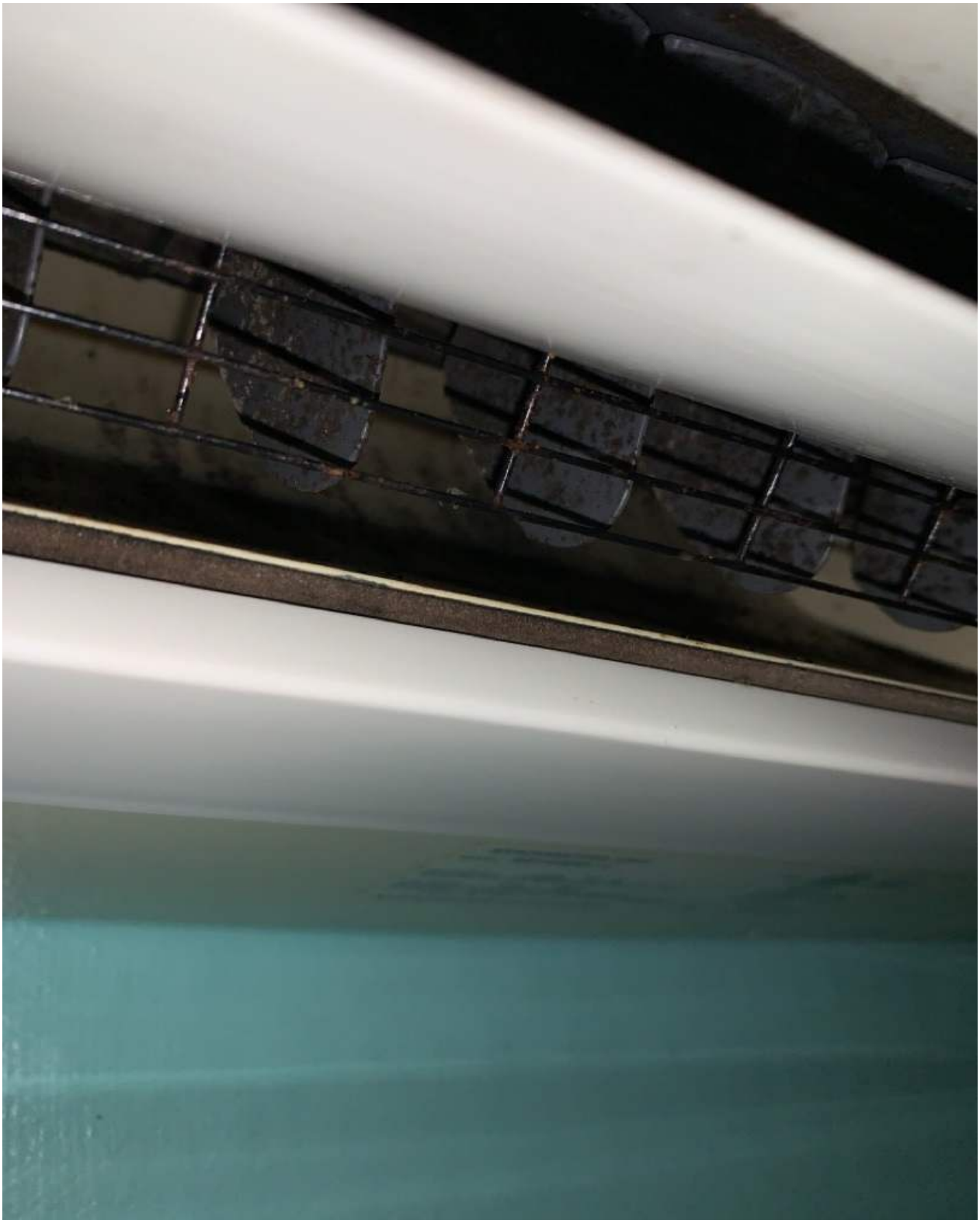
Exterior – Timothy Dwight Elementary School



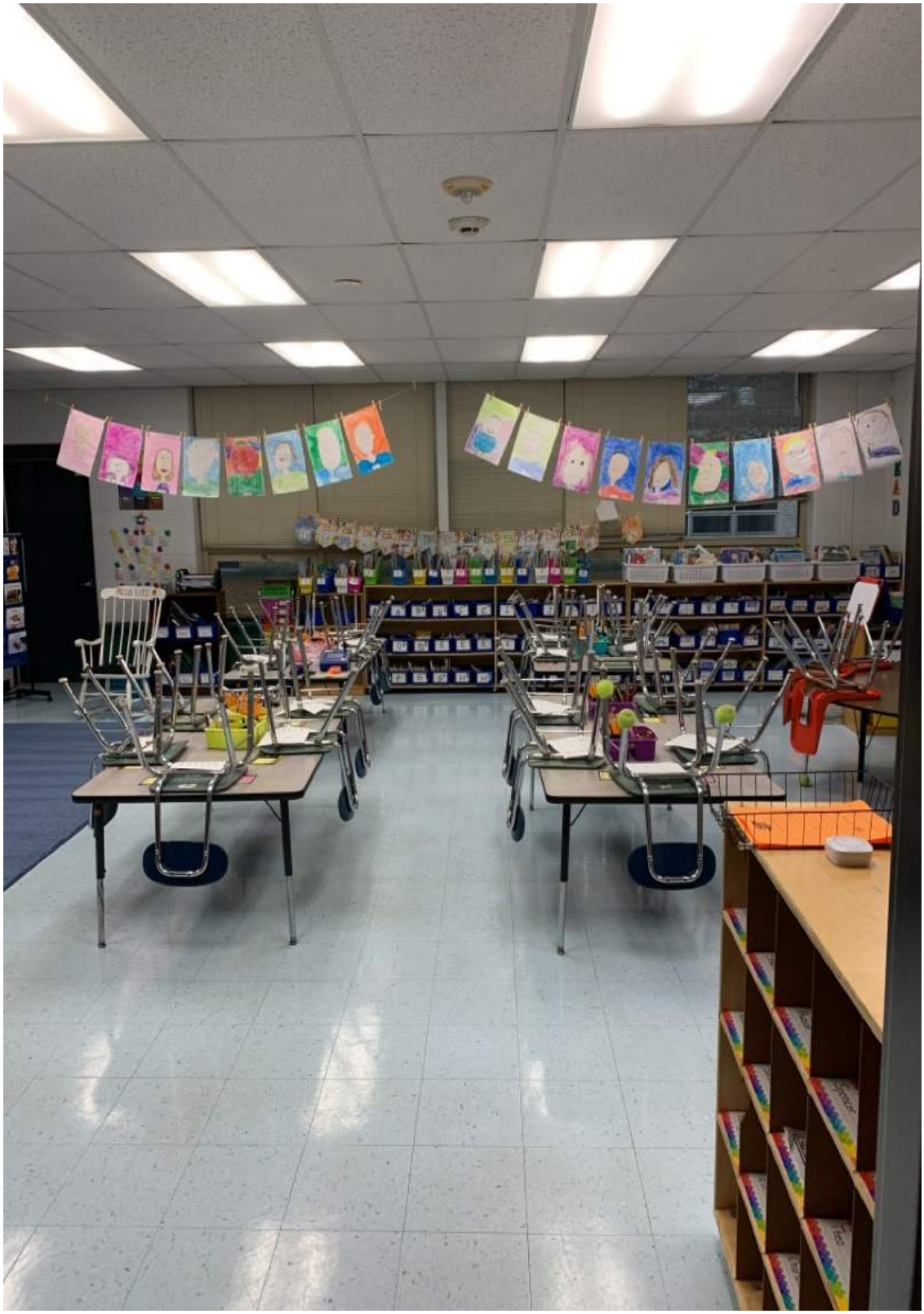
Room 18 – Area of Concern



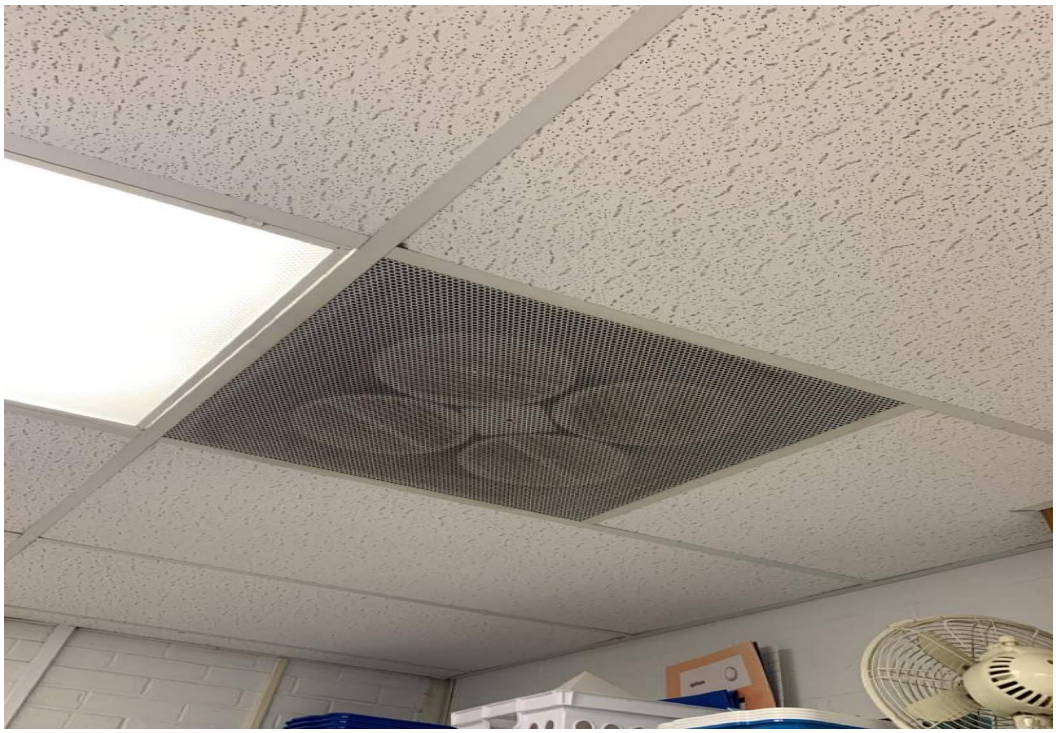
Room 18 - Bathroom
Particulate accumulation/suspect fungal growth on ventilation diffuser

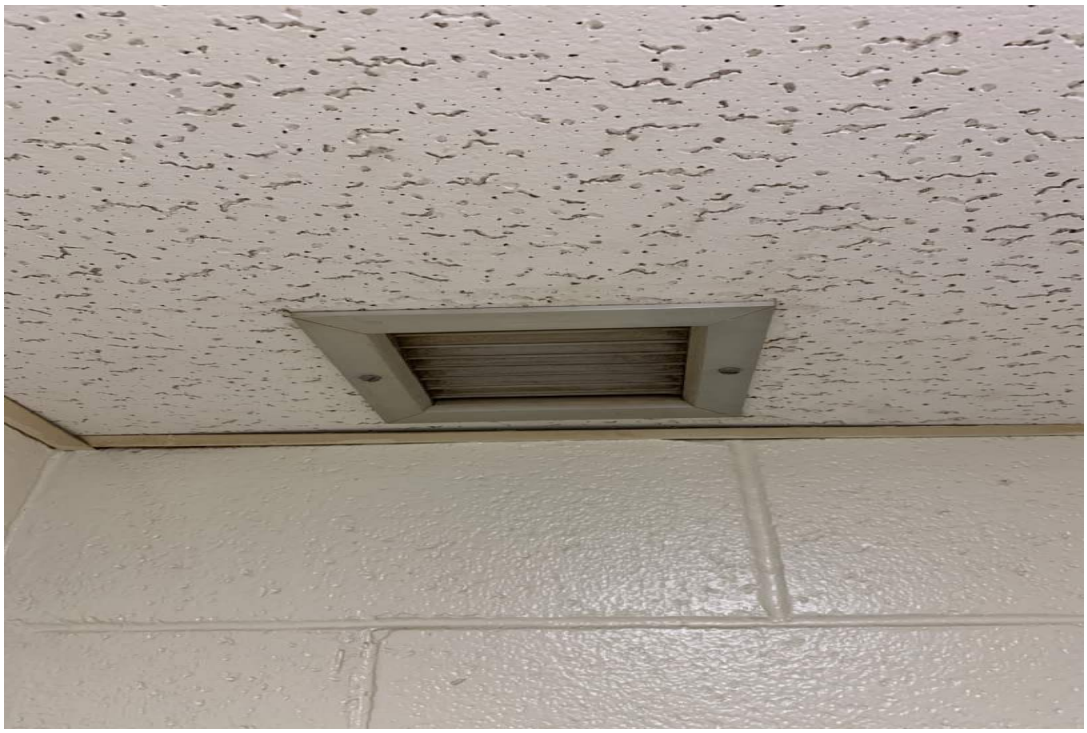


Room 18 – Wall -mounted ventilation unit
displaying signs of particulate accumulation/suspect fungal growth within unit.

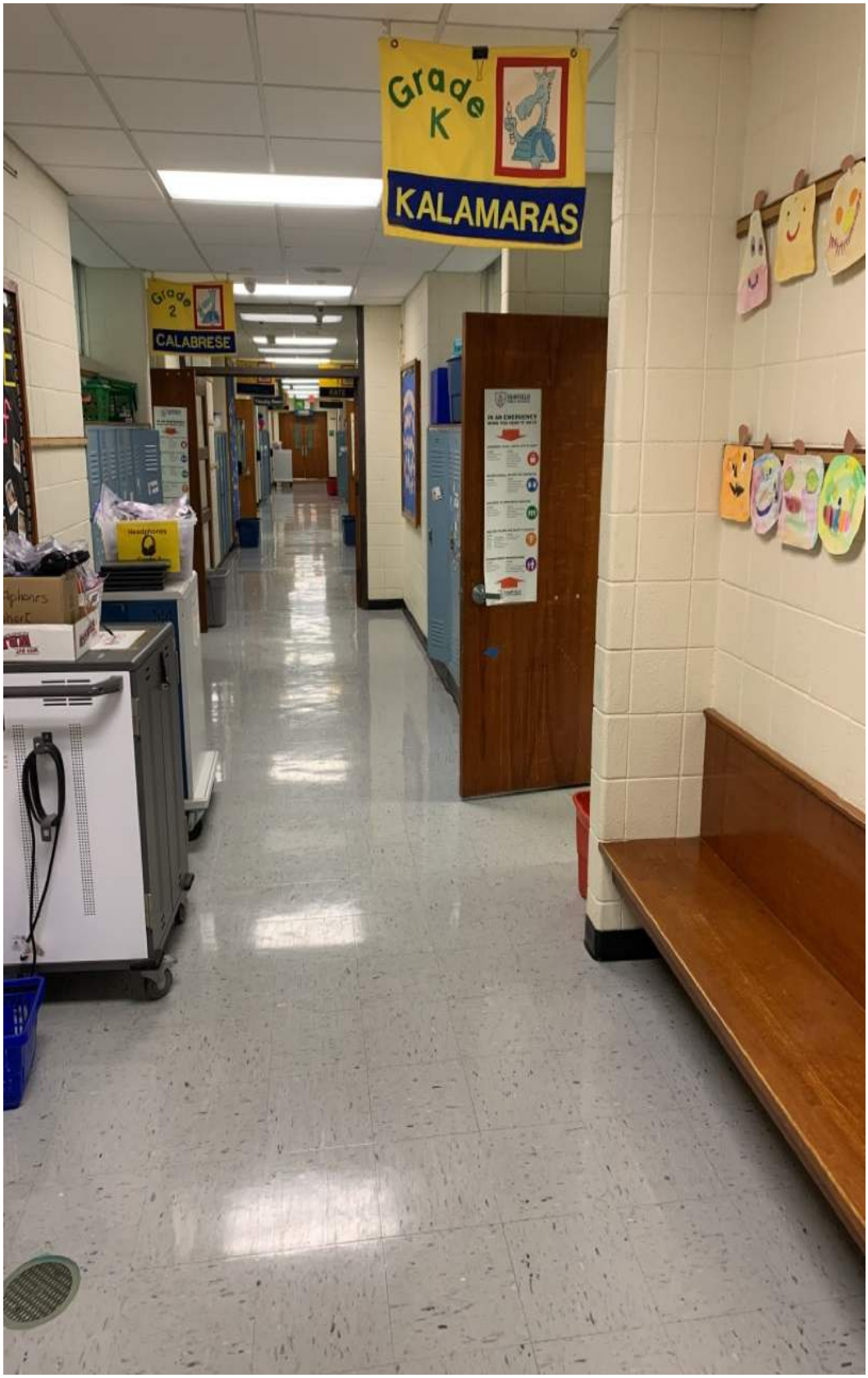


Room 19

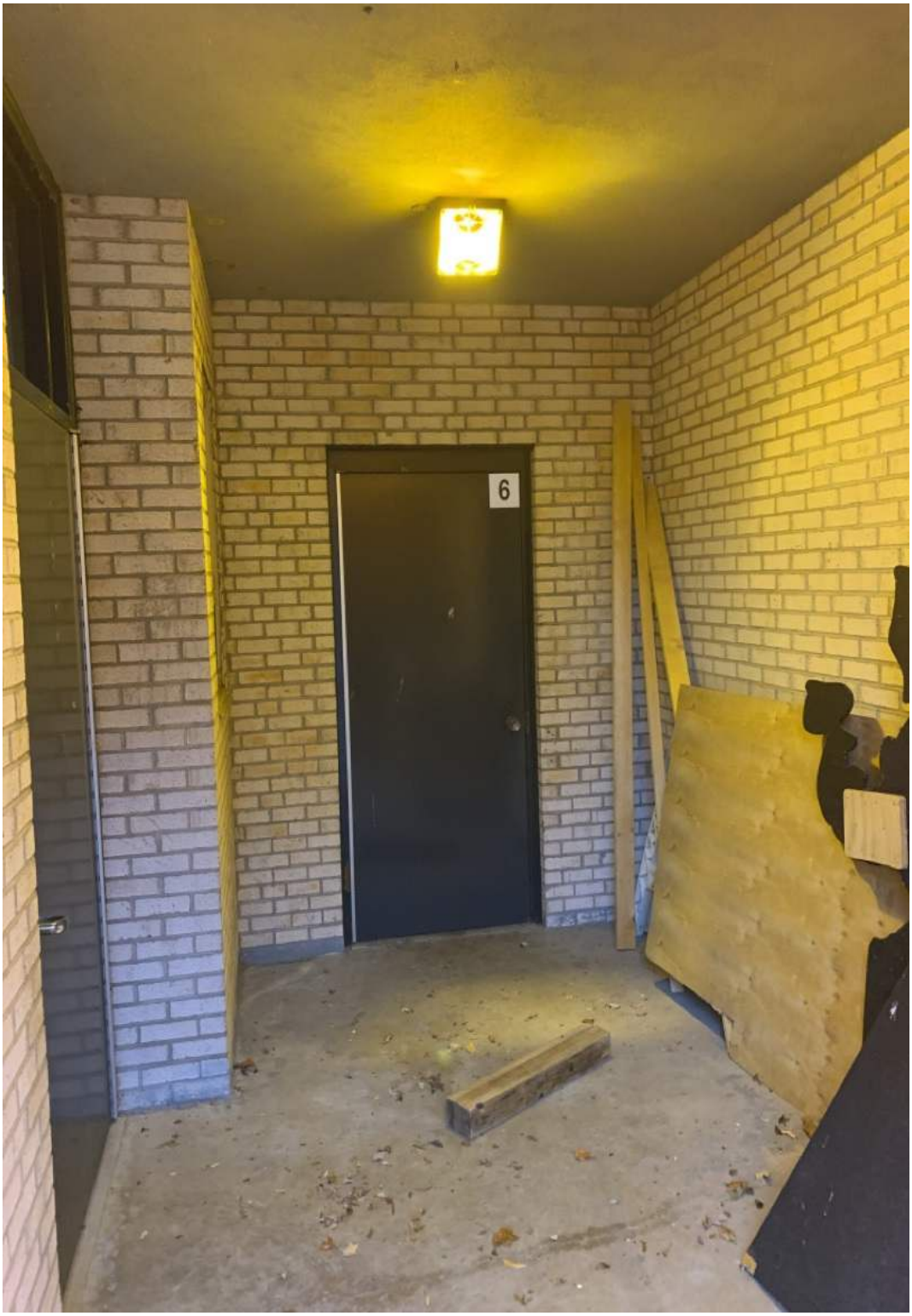




Room 19
Particulate accumulation on ventilation diffusers in classroom and bathroom



Hallway



Exterior - Doorway 6

ATTACHMENT 2

CHAIN OF CUSTODY/LABORATORY REPORT

OrderID: 242405891

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Microbiology Chain of Custody

EMSL Order Number (*Lab Use Only*): 242405891

EMSL ANALYTICAL, INC.
4 FAIRFIELD BLVD
WALLINGFORD, CT 06457
PHONE: (203) 284-5948
FAX:(203) 284- 5978

Company: TRC		EMSL-Bill to: ☑ Same ☐ Different If Bill to Is Different please note In Comments** *Third Party Billing requires written authorization from third party*	
Street: 21 Griffin Rd N			
City: Windsor CT	State/Province: CT	Zip/Postal Code: 06002	Country: U.S.
Report To (Name): Miguel Marques		Fax #:	
Telephone #: (860) 937-4370		E-mail Address: emarques@TRCcompanies.com	
Project Name/ Number: Timothy DWight Elementary Limited IAQ Room 18			
Please Provide Results: ☐ Fax ☑ E-mail	PO#	State Samples Taken: CT	

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hours | ☐ 6 Hours | ☐ 24 Hours | ☑ 48 Hours | ☐ 3 Days | ☐ 4 Days | ☐ 5 Days | ☐ 10 Days | ☐ 2 Weeks

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

Non Culturable Air Samples (Spore Traps)

• M001 Air-O-Cell • M049 BioSIS • M030 Micro 5	• M173 Allegro M2 • M003 Burkard • M174 MoldSnap	• M004 Allergenco • M043 Cyclex • M176 Relle Smart	• M032 Allergenco-D • M002 Cyclex-d • M130 Via-Cell	• M172 Versa Trap

Other Microbiology Test Codes

• M041 Fungal Direct Examination • M005 *Viable Fungi ID and Count* • M006 Viable Fungi ID and Count (Speciation) • M007 Culturable Fungi • M008 Culturable Fungi (Speciation) • M009 *Gram Stain Culturable Bacteria* • M010 Bacterial Count and ID – 3 Most Prominent • M011 Bacterial Count and ID – 5 Most Prominent • M013 Sewage Contamination in Buildings	• M014 Endotoxin Analysis • M015 *Heterotrophic Plate Count* • M180 Real Time Q-PCR-ERMI 36 Panel • M018 Total Coliform (Membrane Filtration) • M020 Fecal *Streptococcus* (Membrane Filtration) • M210-215 *Legionella* Detection • M026 Recreational Water Screen • M027 Mycotoxin Analysis	• M029 *Enterococci* • M019 Fecal Coliform • M133 MRSA Analysis • M028 *Cryptococcus neoformans* Detection • M120 *Histoplasma capsulatum* Detection • M033-39 Allergen Testing • M044 Group Allergen (Cat, Dog, Cockroach, Dustmites) • Other See Analytical Price Guide

Preservation Method (Water):

Name of Sampler: Andrew Smith

Signature of Sampler:

Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected
M-01	Ambient Ext, rear parking Lot	Air	M001	150L	11/1/24 07:15
M-02	Room 18	↓	↓	↓	11/1/24 07:36
M-03	Room 19				11/1/24 07:51
M-04	Hallway				11/1/24 08:04
M-05	Ambient ext, exit outside Rm. 6	↓	↓	↓	11/1/24 08:21

Client Sample # (s):

Total # of Samples: 5

Relinquished (Client): Andrew Smith Date: 11/1/24 Time: 11:30

Received (Client): Date: Time:

Comments:

RECEIVED
NOV 01 2024
By HRWI 4:00

EMSL Analytical, Inc.

165 Gracey Avenue Meriden, CT 06451

Tel/Fax: (203) 284-5948 / (203) 284-5978

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

EMSL Order: 242405891
Customer ID: TRC51
Customer PO:
Project ID:

Attention: Miguel Marques
TRC Environmental Consultants
21 Griffin Road North
Windsor, CT 06095

Phone: (860) 298-9692
Fax: (860) 298-6399
Collected Date: 11/01/2024
Received Date: 11/01/2024 04:00 PM
Analyzed Date: 11/04/2024

Project: TIMOTHY DWIGHT ELEMENTARY LIMITED IAQ ROOM 18

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

Lab Sample Number:	242405891-0001			242405891-0002			242405891-0003		
Client Sample ID:	M-01			M-02			M-03		
Volume (L):	150			150			150		
Sample Location:	Ambient ext, rear parking lot			Room 18			Room 19		
Spore Types	**Raw Count†**	**Count/m³**	**% of Total**	**Raw Count†**	**Count/m³**	**% of Total**	**Raw Count†**	**Count/m³**	**% of Total**
Alternaria (Ulocladium)	10	220	2.4	-	-	-	-	-	-
Ascospores	102	2230	24.3	5	100	18.3	8	200	17.7
Aspergillus/Penicillium++	13	280	3.1	1	20	3.7	2	40	3.5
Basidiospores	97	2100	22.9	4	90	16.5	7	200	17.7
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-
Cladosporium	105(128)	2790	30.4	15	330	60.3	17	370	32.7
Curvularia	-	-	-	-	-	-	1	20	1.8
Epicoccum	4	90	1	-	-	-	-	-	-
Fusarium++	4	90	1	-	-	-	-	-	-
Ganoderma	2	40	0.4	-	-	-	2	40	3.5
Myxomycetes++	32	700	7.6	-	-	-	9	200	17.7
Pithomyces++	2	10*	0.1	-	-	-	1	20	1.8
Rust	3	70	0.8	1	7*	1.3	1	20	1.8
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Cercospora++	3	70	0.8	-	-	-	-	-	-
Nigrospora	1	20	0.2	-	-	-	-	-	-
Paecilomyces++	14	310	3.4	-	-	-	-	-	-
Pestalotia++	2	40	0.4	-	-	-	1	20	1.8
Polythrincium	1	20	0.2	-	-	-	-	-	-
Torula++	6	100	1.1	-	-	-	-	-	-
Total Fungi	**424**	**9180**	**100**	**26**	**547**	**100**	**49**	**1130**	**100**
Hyphal Fragment	12	260	-	2	40	-	1	20	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	22	-	-	22	-	-	22	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	1	-	-	2	-

† Due to method stopping rules, extrapolated raw counts are reported in parenthesis.

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

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

Gloria V. Oriol-Aguilar, Microbiology Director
or other Approved Signatory

Initial report from: 11/05/2024 04:08 PM

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

EMSL Analytical, Inc.

165 Gracey Avenue Meriden, CT 06451

Tel/Fax: (203) 284-5948 / (203) 284-5978

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

EMSL Order: 242405891
Customer ID: TRC51
Customer PO:
Project ID:

Attention: Miguel Marques
TRC Environmental Consultants
21 Griffin Road North
Windsor, CT 06095

Phone: (860) 298-9692
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Collected Date: 11/01/2024
Received Date: 11/01/2024 04:00 PM
Analyzed Date: 11/04/2024

Project: TIMOTHY DWIGHT ELEMENTARY LIMITED IAQ ROOM 18

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

Lab Sample Number:	242405891-0004			242405891-0005		
Client Sample ID:	M-04			M-05		
Volume (L):	150			150		
Sample Location:	Hallway			Ambient ext, exit outside rm. 6		
Spore Types	**Raw Count†**	**Count/m³**	**% of Total**	**Raw Count†**	**Count/m³**	**% of Total**
Alternaria (Ulocladium)	-	-	-	3	70	0.5
Ascospores	178	3880	35.8	178	3880	25.6
Aspergillus/Penicillium++	2	40	0.4	16	350	2.3
Basidiospores	152	3320	30.6	34	740	4.9
Bipolaris++	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-
Cladosporium	104(127)	2770	25.6	122(447)	9750	64.4
Curvularia	-	-	-	2	40	0.3
Epicoccum	-	-	-	1	7*	0
Fusarium++	-	-	-	-	-	-
Ganoderma	-	-	-	3	70	0.5
Myxomycetes++	36	790	7.3	9	200	1.3
Pithomyces++	-	-	-	1	20	0.1
Rust	2	40	0.4	1	20	0.1
Stachybotrys/Memnoniella	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-
Paecilomyces++	-	-	-	-	-	-
Pestalotia++	-	-	-	-	-	-
Polythrincium	-	-	-	-	-	-
Torula++	-	-	-	-	-	-
Total Fungi	**497**	**10840**	**100**	**695**	**15147**	**100**
Hyphal Fragment	4	90	-	8	200	-
Insect Fragment	-	-	-	-	-	-
Pollen	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	22	-	-	22	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-
Background (1-5)	-	2	-	-	2	-

† Due to method stopping rules, extrapolated raw counts are reported in parenthesis.

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

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

Gloria V. Oriol-Aguilar, Microbiology Director
or other Approved Signatory

Initial report from: 11/05/2024 04:08 PM

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