Indoor Environmental Quality Sampling and Analysis Report

Site:
Beecher Elementary School
629 Penfield
Beecher, IL 60401

Client:
Beecher C.U.S.D. 200U
538 Miller Street
Beecher, IL 60401

Sample Collection Date:
April 14, 2021

Ideal Number:
23819

IDEAL ENVIRONMENTAL ENGINEERING, INC.

NARRATION

Ideal Environmental Engineering (IDEAL) performed limited Indoor Environmental Quality (IEQ) sampling for Beecher C.U.S.D. 200U at Beecher Elementary School, 629 Penfield in Beecher, IL. Samples were collected by Jerry L. Wilson on April 14, 2021, in various locations as noted below. The microbiological analysis was performed by Eurofins EMLab P&K Chicago.

Airborne sampling was performed to determine the presence of any indoor mold spores, to identify and provide brief characteristics of such molds, and to compare levels of any indoor mold spores with the levels found in the naturally-occurring outdoor environment.

SAMPLING LOCATIONS

Sample locations were selected by Mr. Mike Stanula, Beecher C.U.S.D. 200U.

Four (4) air samples were collected. One (1) air sample was collected from the outside to represent the naturally occurring environment. Three (3) air samples were collected from the following area(s) inside the building:

- Sample 01: Room 40
- Sample 02: Band Room
- Sample 03: Tunnel at Entry

SITE CONDITIONS

Per the direction of the client, no site condition assessment was done.

SAMPLING METHODOLOGY

At the onset of the sampling, the reasons and objectives for the sampling are discussed with the client. Surface, bulk, or airborne samples may be collected. The type of samples collected and testing methods chosen are based on the purpose of the sampling event.

Airborne sample locations are selected at specific locations of concern or at random if no problematic areas are noted. Air sample(s) are collected using a high-volume air pump and spore trap air cassettes. The pump is calibrated by the technician to draw air into the cassette at the manufacturer's recommended rate, typically 15 liters per minute. The pump runs for up to 10 minutes per air sample cassette. The amount of time is based on the specific sampling environment. Each cassette is identified with a sample number. A chain of custody is prepared to document the handling of the sample(s). Samples are shipped to a laboratory and analyzed. Industry-standard microbiological sampling techniques and analysis methods are used.

Surface sample locations are selected where mold is readily visible or where the surface of a material is suspected to contain mold. Appropriate sampling media is used. Surface area samples are collected with the sampling media. The size of a surface area is based on the quantity of visible or suspected mold present. Each sample is identified with a sample number. A chain of custody is prepared to document the handling of the sample(s). Samples are shipped to a laboratory and analyzed. Industry-standard microbiological sampling techniques and analysis methods are used.

Bulk sample locations are selected where mold is readily visible or is suspected to be present in/on a specific material, such as insulation, ceiling tile or carpet. Appropriate sampling tools are used. A small portion of each material to test is collected and placed into its own sample bag. Each sample is identified with a sample number. A chain of custody is prepared to document the handling of the sample(s). Samples are shipped to a laboratory and analyzed. Industry-standard microbiological sampling techniques and analysis methods are used.

SAMPLE ANALYSIS DATA

Airborne samples
The air collected in the spore trap media is analyzed by non-cultured techniques. Non-cultured testing identifies the presence of mold. The methodology is quantitative. Quantitative spore trap analysis includes identification to genus or group of all fungi present, quantification to spores/m^3, and a general assessment of background debris.

The airborne samples were submitted for non-cultured quantitative analysis.

Surface or Bulk Samples
The surface or bulk sample collected is analyzed by non-cultured techniques. Non-cultured testing identifies the presence of mold. The methodology is qualitative direct analysis. Qualitative direct includes a determination of whether spores present are indicative of mold growth or simply a mix of spores coming in from the outside (normal fallout). If mold growth is present, analysis includes identification to genus or group and a qualitative assessment of the amounts present. A general assessment of non-biological debris and other relevant commentary are also included.

No surface or bulk samples were collected.

SAMPLE ANALYSIS INFORMATION & INTERPRETATION

Several distinguished IEQ associations and health departments have established guidelines for sampling and interpreting sample analysis results.

Air Samples
The commonly recognized interpretation is that one can expect to find airborne mold spores in a naturally ventilated indoor environment. Generally, the individual mold genera/species are expected to be similar to those found outside and to be present at levels generally equal to or less than the levels found outside.

Surface and/or Bulk Samples
The commonly recognized interpretation is that there should be no mold growth in a building.

Mold is common both indoors and outdoors. Mold can enter buildings via open doorways, windows, vents, and heating and air conditioning systems. Airborne mold spores can also attach to clothing, shoes, and pets and then be carried indoors. When mold spores drop in areas with excessive moisture, such as where leaks have occurred in roofs, pipes, walls, plant pots, or where there has been flooding, they may grow. Building materials, such as wet cellulose materials, including paper and paper products, cardboard, ceiling tiles, wood, and wood products, are particularly conducive for the growth of some molds. Other materials such as dust, paints, wallpaper, insulation materials, drywall, carpet, fabric, and upholstery, also commonly support mold growth.

The most common indoor molds are Cladosporium and Penicillium/Aspergillus types.

For additional general information about molds, please refer to https://www.cdc.gov/mold/faqs.htm.

SUMMARY OF SAMPLING RESULTS

Air samples

The following indoor sample(s) contained mold genera/species, as identified, which were not found in the outside sample, however the mold score is low per the laboratory results:

- Sample 01: Room 40: Penicillium/Aspergillus types
- Sample 02: Band Room: Ascospores; Penicillium/Aspergillus types
- Sample 03: Tunnel at Entry: Penicillium/Aspergillus types

DEFINITIONS - BY SPECIES

- *Ascospores* are saprophytes and plant pathogens and are frequently found growing indoors on damp substrates.
- *Penicillium/Aspergillus types* are commonly found in nature in soil, on plant debris, compost piles, fruit rot, in indoor air and house dust. It typically grows in water damaged buildings on wallpaper, wallpaper glue, decaying fabrics, moist chipboards, and behind paint.

RECOMMENDATIONS

Pro-active recommendations are noted below and should be implemented as standard maintenance and custodial procedures to help mold levels be within the suggested guidelines and to help ensure mold spores are not being amplified:

- Initiate and maintain a regular cleaning schedule, including all ventilation systems, dehumidifiers, humidifiers, air ionizing machines and all cleaning equipment, such as vacuums, in all areas.
- Ensure all HVAC system equipment is in working order, drain pan is clean/clear and regularly scheduled filter maintenance is completed.
- Dry and thoroughly clean any carpets, rugs, fabrics, etc. that get wet within 24 to 48 hours to prevent the growth of fungi.
- Maintain humidity in the building below 60%. OSHA's recommended indoor comfort range is 68°-78°F with relative humidity of 30%-60%. ASHRAE recommends keeping relative humidity levels at 30%-60% for comfort and to avoid, eliminate and reduce microbial growth.[1]
  [1] *OSHA 3430-04 2011 Indoor Air Quality on Commercial and Institutional Buildings*
- Keep indoor temperatures consistent to help prevent mold from growing.
- Prohibit displays, maintaining, or promoting the use of live plants in this indoor environment. Live plants are allergens to some individuals. The soil in live plants harbor microbial growth and can cause sensitivities, allergic reactions, and respiratory ailments in some individuals.
- Perform follow-up sampling in approximately six (6) months to re-evaluate conditions.

CAUTION: Any time building materials are being removed or remediated, it is important that materials are inspected and sampled to determine asbestos content. Ensure all applicable asbestos rules are followed.

GENERAL COMMENTS

While outdoor air samples are used for base comparison with indoor samples, they may not represent all outdoor conditions.

Additional sampling is always an option.

No state or federal laws are in effect which regulate indoor environmental quality sampling, testing and remediation. Agencies have acknowledged the serious health effects of a poor indoor air environment. IEQ associations and government agencies have published sampling, testing and remediation guidelines. Details and characteristics of a specific mold may differ from one organization, laboratory or environmental group to another.

IDEAL provided general recommendations only. Employees of IDEAL are not healthcare providers licensed or trained to provide medical diagnosis, care, or advice. No opinions or recommendations are stated about possible health effects of mold genera/species. The client should consult a medical doctor/toxicologist for effects of mold on humans.

The recommended humidity levels are generally accepted as levels in which mold should not grow. If the building maintains consistent humidity within recommended levels and mold is found, IDEAL cannot be held responsible due to the recommendation. Several variables cause mold growth.

Assessments and testing are performed by personnel trained in indoor environmental quality issues and sampling techniques. The sampling performed during this sampling event is limited. Many types of sampling media, sample collection and analysis methods are available to determine indoor constituents. A variety of sampling methods may be necessary to offset the limitations of each individual sampling method. In order to help provide valid data, building owners need to report atypical occurrences which could contribute to abnormal building activity (i.e. upcoming or recent demolition or renovations, roof leaks, plumbing or sewage problems, water invasion, acts of God, etc.).

The recording of site conditions is limited. Readily identifiable sources of moisture are noted to help to identify moisture sources which may contribute to mold growth. In-depth moisture investigation was not included in the scope of this work.

It is beyond the scope of service to identify the presence of underlying substrate/materials. However, when detectable, materials may be identified.

Sample results reflect the conditions of the area(s) at the time of the sampling event. The sensitivity of microbial growth to environmental changes can cause particle, spore, and other reportable counts to fluctuate quickly (i.e. opening or closing windows or doors, changes in humidity levels, usage of the room, occupancy level, HVAC usage, indoor and outdoor temperature, etc.). Sample results indicate if mold is present or not and shall be used as a guideline and not a permanent quantification.

The sampling was non-destructive in nature and was limited to accessible areas only.

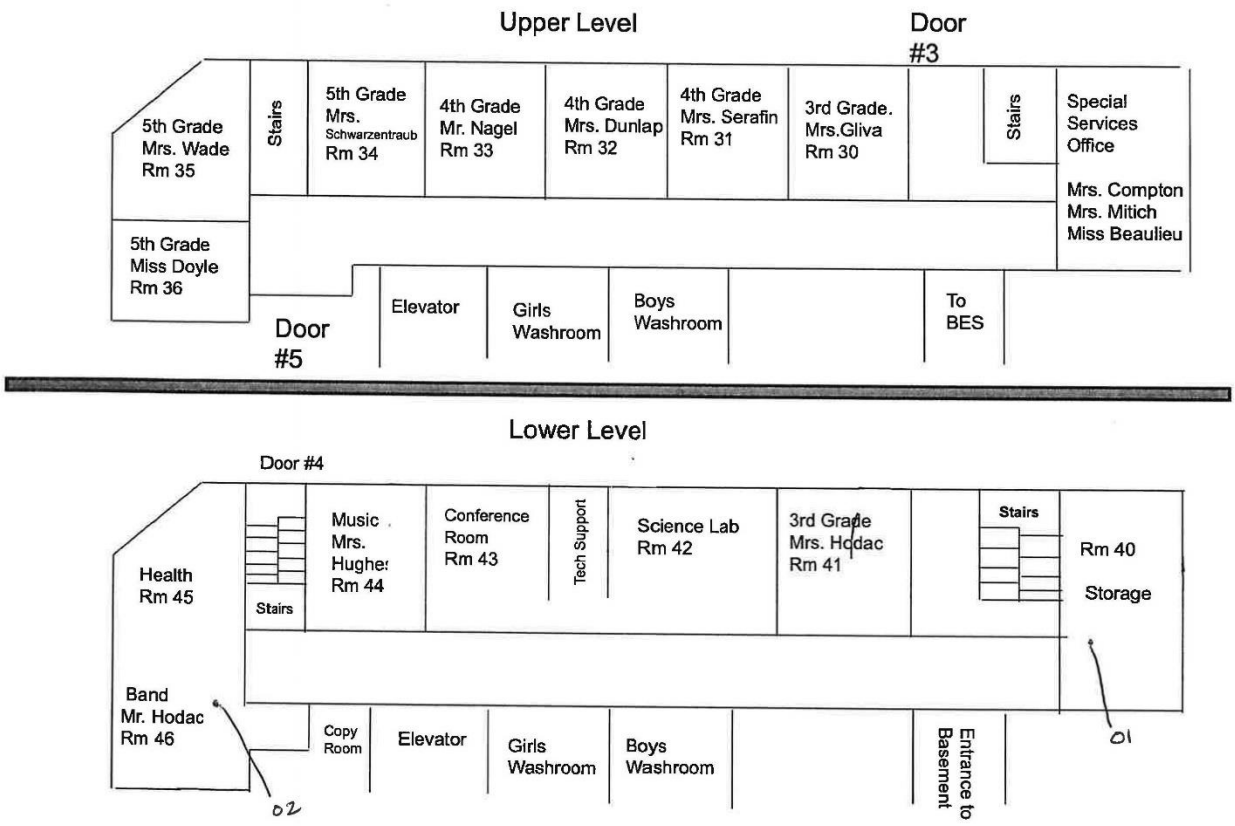
The scope of work presented in this report was based on an understanding between IDEAL and client, whether the understanding was from verbal conversation or written document(s). The scope of work and report shall be deemed accepted by client unless client advises to the contrary in writing to IDEAL within 10 days of the report shipping package postmark.

SAMPLE LOCATION DIAGRAM

Diagram Prepared By: **Jerry L. Wilson**

Description: **Indoor Environmental Quality - Sample Locations**

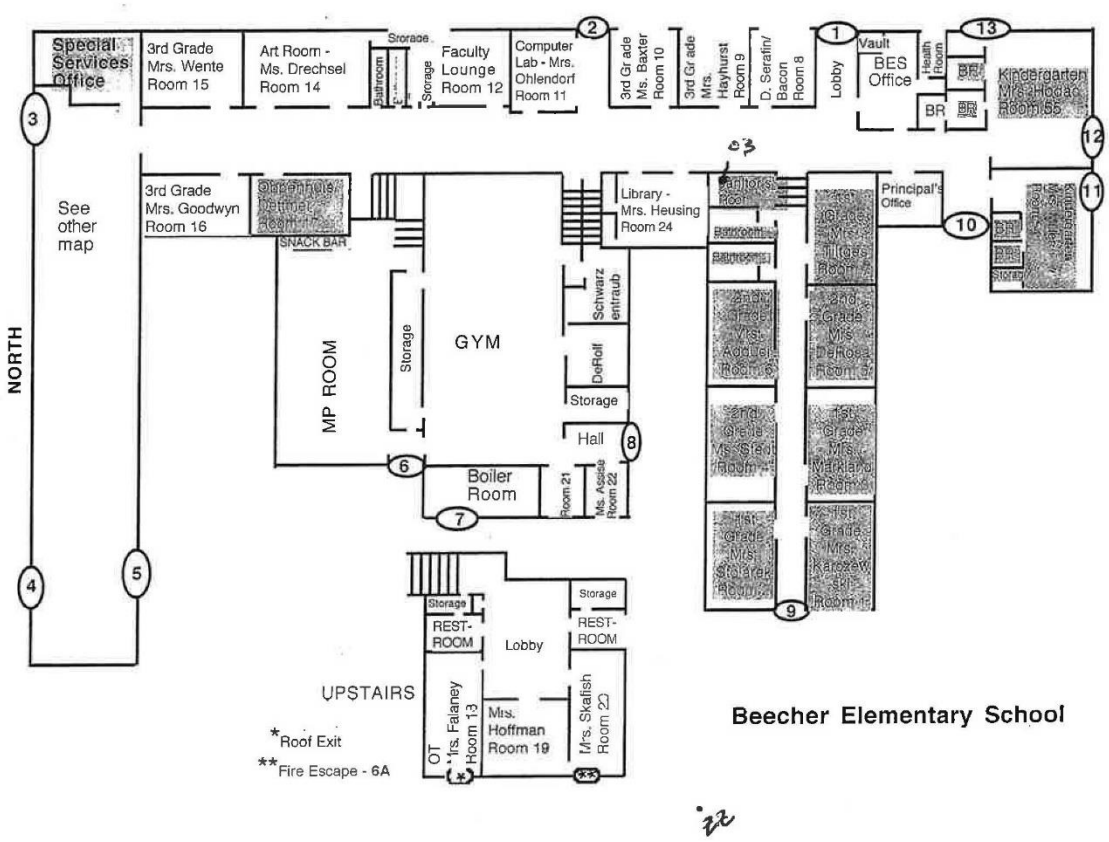
North Addition



SAMPLE LOCATION DIAGRAM

Diagram Prepared By: **Jerry L. Wilson**

Description: **Indoor Environmental Quality - Sample Locations**



LABORATORY RESULTS

eurofins | EMLab P&K

Report for:

Lab Assistant
Ideal Environmental Engineering, Inc.
2904 Tractor Lane
Bloomington, IL 61704

Regarding: Project: 23819 - Beecher CUSD 2004; Beecher Elem. School
EML ID: 2620477

Approved by:

Cluster Leader
Dr. Kamash Pillai

Dates of Analysis:
Spore trap analysis: 04-20-2021

Service SOPs: Spore trap analysis (EM-MY-S-1038)
AIHA-LAP, LLC accredited service, Lab ID #176641

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received and tested. Sample air volume is supplied by the client.

Eurofins EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Eurofins EMLab P&K's LabServe® reporting system includes automated fail-safes to ensure that all AIHA-LAP, LLC quality requirements are met and notifications are added to reports when any quality steps remain pending.

Eurofins EMLab P&K
1815 West Diehl Road, Suite 800, Naperville, IL 60563
(866) 871-1984 Fax (856) 334-1040 www.emlab.com

Client: Ideal Environmental Engineering, Inc.
C/O: Lab Assistant
Re: 23819 - Beecher CUSD 2004; Beecher Elem. School

Date of Sampling: 04-14-2021
Date of Receipt: 04-16-2021
Date of Report: 04-20-2021

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	01: Room 40		02: Bandroom		03: Tunnel at entry		ZZ: Outside in parking lot	
Comments (see below)	None		None		None		None	
Lab ID-Version‡:	12511458-1		12511459-1		12511460-1		12511461-1	
Analysis Date:	04/20/2021		04/20/2021		04/20/2021		04/20/2021	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria							2	13
Ascospores			1	27				
Basidiospores			1	27	1	27	6	160
Chaetomium								
Cladosporium			1	27			6	160
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Other colorless								
Penicillium/Aspergillus types†	2	53	1	27	1	27		
Pithomyces								
Rusts								
Smuts, Periconia, Myxomycetes								
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	2+		1+		1+		2+	
Hyphal fragments/m3	< 7		< 7		7		7	
Pollen/m3	< 7		< 7		< 7		7	
Skin cells (1-4+)	1+		< 1+		< 1+		< 1+	
Sample volume (liters)	150		150		150		150	
§ TOTAL SPORES/m3		53		110		53		330

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium, Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3. The limit of detection is the analytical sensitivity (in spores/m^3) multiplied by the sample volume (in liters) divided by 1000 liters.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".
§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Eurofins EMLab P&K
1815 West Diehl Road, Suite 800, Naperville, IL 60563
(866) 871-1984 Fax (856) 334-1040 www.emlab.com

Client: Ideal Environmental Engineering, Inc.
C/O: Lab Assistant
Re: 23819 - Beecher CUSD 2004; Beecher Elem. School

Date of Sampling: 04-14-2021
Date of Receipt: 04-16-2021
Date of Report: 04-20-2021

MoldRANGE™: Extended Outdoor Comparison

Outdoor Location: ZZ, Outside in parking lot

Fungi Identified	Outdoor data	Typical Outdoor Data for: April in Illinois† (n‡=3135)						Typical Outdoor Data for: The entire year in Illinois† (n‡=42739)					
	spores/m3	very low	low	med	high	very high	freq %	very low	low	med	high	very high	freq %
Generally able to grow indoors*													
Alternaria	13	7	11	13	40	67	25	13	13	53	170	320	54
Bipolaris/Drechslera group	-	7	7	13	21	50	3	7	7	13	27	47	8
Chaetomium	-	7	7	13	20	40	5	7	7	13	27	67	4
Cladosporium	160	50	53	190	620	1,200	78	53	110	640	2,700	4,900	86
Curvularia	-	7	7	13	27	37	1	7	7	13	40	80	11
Nigrospora	-	7	7	13	13	27	4	7	13	20	53	110	20
Penicillium/Aspergillus types	-	27	53	80	200	370	35	27	53	110	370	710	43
Stachybotrys	-	7	7	13	41	54	1	7	7	13	53	140	2
Torula	-	7	7	13	40	59	2	7	7	13	40	73	7
Seldom found growing indoors**													
Ascospores	-	27	53	110	480	1,000	64	53	110	440	1,600	3,000	77
Basidiospores	160	53	53	210	760	1,700	77	53	160	910	3,600	6,600	87
Rusts	-	7	7	13	33	57	4	7	13	27	100	190	30
Smuts, Periconia, Myxomycetes	-	7	10	20	53	93	24	13	13	40	120	220	52
§ TOTAL SPORES/m3	330												

†The 'Typical Outdoor Data' represents the typical outdoor spore levels for the location and time frame indicated. The last column represents the frequency of occurrence. The very low, low, med, high, and very high values represent the 10, 20, 50, 80, and 90 percentile values of the spore type when it is detected. For example, if the frequency of occurrence is 63% and the low value is 53, it would mean that the given spore type is detected 63% of the time and, when detected, 20% of the time it is present in levels above the detection limit and below 53 spores/m3. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

* The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

** These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

‡n = number of samples used to calculate data.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor data" are based on the results of the analysis of samples delivered to and analyzed by Eurofins EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. In addition, Eurofins EMLab P&K may not have received and tested a representative number of samples for every region or time period. Eurofins EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the use or interpretation of the data contained in, or any actions taken or omitted in reliance upon, this report.

Eurofins EMLab P&K
1815 West Diehl Road, Suite 800, Naperville, IL 60563
(866) 871-1984 Fax (856) 334-1040 www.emlab.com

Client: Ideal Environmental Engineering, Inc.
C/O: Lab Assistant
Re: 23819 - Beecher CUSD 2004; Beecher Elem. School

Date of Sampling: 04-14-2021
Date of Receipt: 04-16-2021
Date of Report: 04-20-2021

MoldSTAT™: Supplementary Statistical Spore Trap Report

Outdoor Summary: ZZ: Outside in parking lot

Species detected	Outdoor sample spores/m3 (<100 / 1K / 10K / >100K)	Typical outdoor ranges (North America)	Freq. %
Alternaria	13	7 - 33 - 400	40
Ascospores	< 7	13 - 270 - 6,300	76
Basidiospores	160	20 - 480 - 24,000	90
Cladosporium	160	27 - 480 - 8,300	88
Penicillium/Aspergillus types	< 7	13 - 210 - 2,800	64
Smuts, Periconia, Myxomycetes	< 7	7 - 53 - 1,100	67
Total	330		

The "Typical outdoor ranges" and "Freq. %" columns show the typical low, medium, and high spore counts per cubic meter and the frequency of occurrence for the given spore type. The low, medium, and high values represent the 2.5, 50, and 97.5 percentile values when the spore type is detected. For example, if the low value is 53 and the frequency of occurence is 63%, it would mean that we typically detect the given spore type on 63 percent of all outdoor samples and, when detected, 2.5% of the time it is present in levels below 53 spores/m3.

Indoor Samples

Location: 01: Room 40

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 15%	dF: 2 Result: 1.5000 Critical value: 5.9915 Inside Similar: Yes	Result: 0.0000	dF: 4 Result: -0.3500 Critical value: N/A Outside Similar: N/A	Score: 108 Result: Low

Species Detected	Spores/m3 (<100 / 1K / 10K / >100K)
Penicillium/Aspergillus types	53
Total	53

Eurofins EMLab P&K
1815 West Diehl Road, Suite 800, Naperville, IL 60563
(866) 871-1984 Fax (856) 334-1040 www.emlab.com

Client: Ideal Environmental Engineering, Inc.
C/O: Lab Assistant
Re: 23819 - Beecher CUSD 2004; Beecher Elem. School

Date of Sampling: 04-14-2021
Date of Receipt: 04-16-2021
Date of Report: 04-20-2021

MoldSTAT™: Supplementary Statistical Spore Trap Report

Location: 02: Bandroom

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 32%	dF: 2 Result: 1.5000 Critical value: 5.9915 Inside Similar: Yes	Result: 0.5714	dF: 5 Result: 0.3000 Critical value: 0.8000 Outside Similar: No	Score: 104 Result: Low

Species Detected	Spores/m3 <100 1K 10K >100K	
Ascospores		27
Basidiospores		27
Cladosporium		27
Penicillium/Aspergillus types		27
Total		110

Location: 03: Tunnel at entry

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 16%	dF: 2 Result: 1.5000 Critical value: 5.9915 Inside Similar: Yes	Result: 0.4000	dF: 4 Result: -0.0500 Critical value: N/A Outside Similar: N/A	Score: 104 Result: Low

Species Detected	Spores/m3 <100 1K 10K >100K	
Basidiospores		27
Penicillium/Aspergillus types		27
Total		53

* The Friedman chi-square statistic is a non-parametric test that examines variation in a set of data (in this case, all indoor spore counts). The null hypothesis (H0) being tested is that there is no meaningful difference in the data for all indoor locations. The alternative hypothesis (used if the test disproves the null hypothesis) is that there is a difference between the indoor locations. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

** An agreement ratio is a simple method for assessing the similarity of two samples (in this case the indoor sample and the outdoor summary) based on the spore types present. A score of one indicates that the types detected in one location are the same as that in the other. A score of zero indicates that none of the types detected indoors are present outdoors. Typically, an agreement of 0.8 or higher is considered high.

*** The Spearman rank correlation is a non-parametric test that examines correlation between two sets of data (in this case the indoor location and the outdoor summary). The null hypothesis (H0) being tested is that the indoor and outdoor samples are unrelated. The alternative hypothesis (used if the test disproves the null hypothesis) is that the samples are similar. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

Eurofins EMLab P&K
1815 West Diehl Road, Suite 800, Naperville, IL 60563
(866) 871-1984 Fax (856) 334-1040 www.emlab.com

Client: Ideal Environmental Engineering, Inc.
C/O: Lab Assistant
Re: 23819 - Beecher CUSD 2004; Beecher Elem. School

Date of Sampling: 04-14-2021
Date of Receipt: 04-16-2021
Date of Report: 04-20-2021

MoldSTAT™: Supplementary Statistical Spore Trap Report

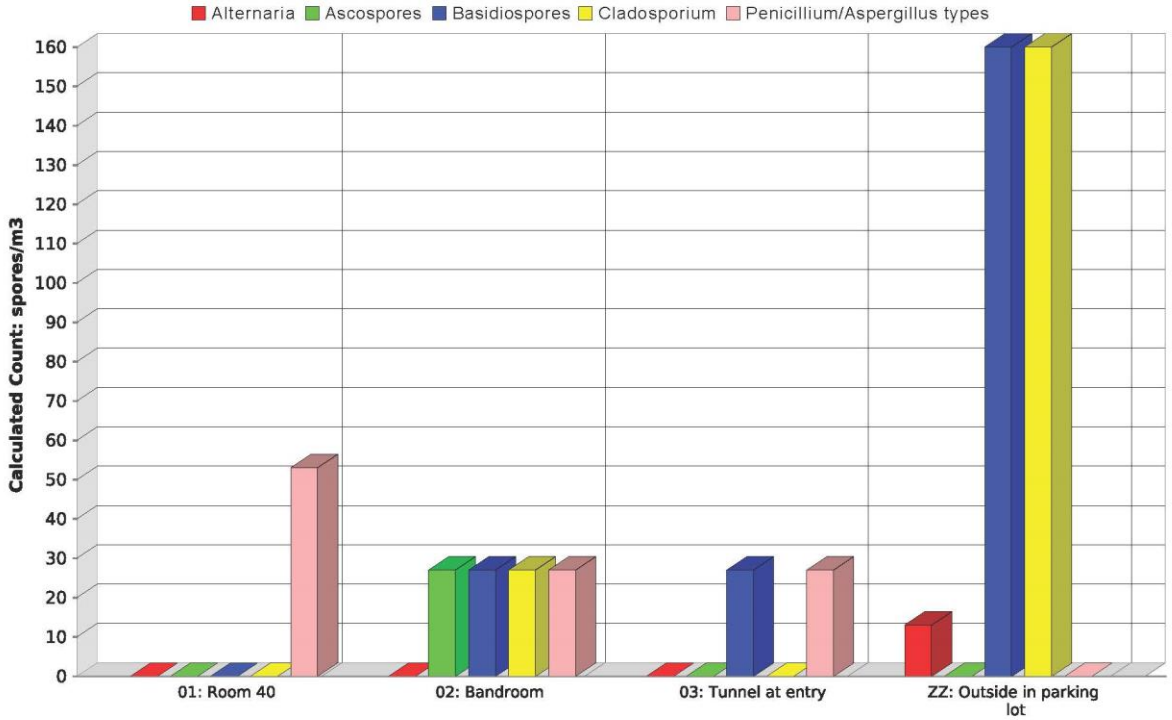
**** MoldSCORE™ is a specialized method for examining air sampling data. It is a score between 100 and 300, with 100 indicating a greater likelihood that the airborne indoor spores originated from the outside, and 300 indicating a greater likelihood that they originated from an inside source. The Result displayed is based on the numeric score given and will be either Low, Medium, or High, indicating a low, medium, or high likelihood that the spores detected originated from an indoor source. Eurofins EMLab P&Kreserves the right to, and may at anytime, modify or change the MoldScore algorithm without notice.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor ranges" are based on the results of the analysis of samples delivered to and analyzed by Eurofins EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. With the statistical analysis provided, as with all statistical comparisons and analyses, false-positive and false-negative results can and do occur. Eurofins EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the data contained in, or any actions taken or omitted in reliance upon, this report.

04-20-2021: 23819 - Beecher CUSD 2004

Eurofins EMLab P&K
1815 West Diehl Road, Suite 800, Naperville, IL 60563
(866) 871-1984 Fax (856) 334-1040 www.emlab.com

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY



Comments:

Note: Graphical output may understate the importance of certain "marker" genera.
Eurofins EPK Built Environment Testing, LLC

EMLab ID: 2620477, Page 1

CHAIN OF CUSTODY

eurofins | EMLab P&K

www.EMLabPK.com

Marlton, NJ: 3000 Lincoln Dr E, Ste. A, Marlton, NJ 08053 * **(866) 871-1984**
Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 * **(800) 651-4802**
SSF, CA: 6000 Shoreline Ct, Ste. 205, S. San Francisco, CA 94080 * **(866) 888-6653**

WEATHER	Fog	Rain	Snow	Wind	Clear
LEVEL None					
Light					
Moderate					
Heavy					

CONTACT INFORMATION		
Company:	Ideal Environmental Engineering, Inc.	Address: 2904 Tractor Lane, Bloomington, IL 61704
Contact:	LAB ASSISTANT	Special Instructions: Email Report To: info@idealenvironmental.com
Phone:	309-828-4259	

PROJECT INFORMATION			
Project ID:	23819 - BEECHER CUSD 200U		
Project Description:	BEECHER ELEM. SCHOOL		
Project Zip Code:	60401	Sampling Date/Time:	4/14/21 7-8am
PO Number:	23819	Sampled By:	Jerry L. Wilson

TURN AROUND TIME CODES - (TAT)	
STD - Standard (Default)	Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.
ND - Next Business Day	
SD - Same Business Day	
WH - Weekend/Holiday/ASAP	

SAMPLE ID	DESCRIPTION	Sample Type (Below)	TAT (Above)	Total Volume/Area (as applicable)	NOTES (Time of day, Temp, RH, etc.)
01	Room 40	ST	STD	150L	7:10a
02	Bathroom	ST	STD	150L	7:15a
03	Tunnel at Entry	ST	STD	150L	7:30a
22	Outside in parking lot	ST	STD	150L	7:45a

REQUESTED SERVICES

Non-Culturable					Other Requests
Spore Trap		Tape, Swab, Bulk			
Spore Trap Analysis	Other biological particles - supplement	Direct Microscopic Exam (Qualitative)	Quantitative spore count direct exam	Dust Characterization	1-Media Surface Fungi (Genus ID + Asp. spp.)
X					
X					
X					
X					

Culturable Air Fungi (Genus ID + Asp. spp.)	Gram Stain and Counts (Culturable Air and Surface	*Legionella* culture	Total Coliform, *E coli* (Presence/Absence)	QuantiTray-Sewage Screen	OTHER: (please specify test)	Asbestos in Air - PCM Airborne Fiber Count (NIOS	Asbestos Bulk - PLM	Lead (Pb) - Flame AA	PCR (please specify test)	Allergens (please specify test)

002620477

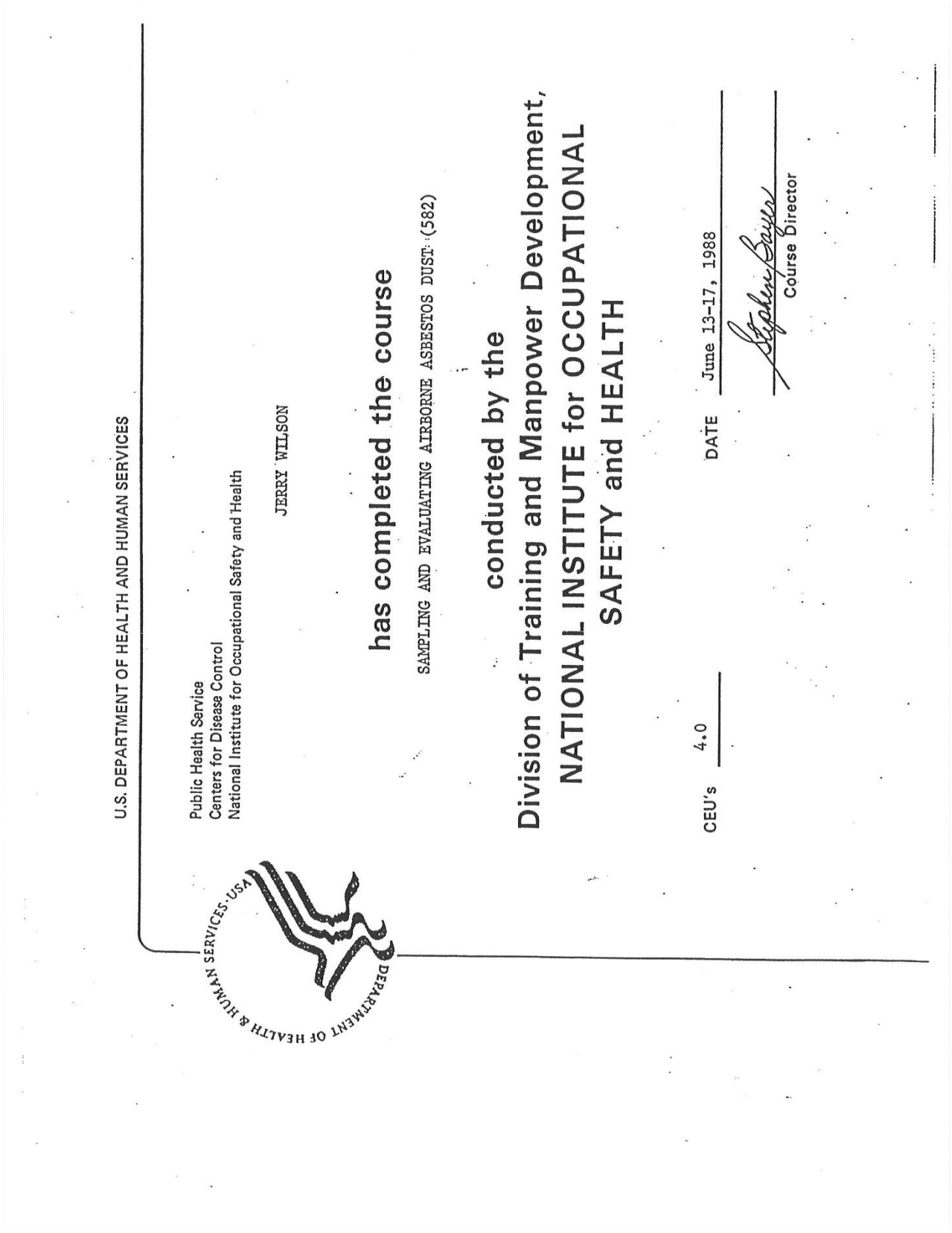
SAMPLE TYPE CODES			
BC - BioCassette™	CP - Contact Plate	T - Tape	O - Other:
A1S - Andersen	ST - Spore Trap	SW - Swab	
SAS - Surface Air Sampler	B - Bulk	SO - Soil	
NP - Non-potable Water	P - Potable Water	D - Dust	

RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
Jerry Wilson	4/15/2021 9:50a	[illegible]	4/16/21
			10:15

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at http://www.emlab.com/terms-of-service

Doc. # EM-CS-F-1192 , Rev 33, Revised 8/15/19, Page 1 of 1

ACCREDITATION



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service
Centers for Disease Control
National Institute for Occupational Safety and Health

JERRY WILSON

has completed the course

SAMPLING AND EVALUATING AIRBORNE ASBESTOS DUST (582)

conducted by the

Division of Training and Manpower Development,
NATIONAL INSTITUTE for OCCUPATIONAL
SAFETY and HEALTH

CEU's 4.0

DATE June 13-17, 1988

Course Director

DEPARTMENT OF HEALTH & HUMAN SERVICES-USA

AIHA Laboratory Accreditation Programs, LLC

acknowledges that

Eurofins EMLab P&K

1815 West Diehl Rd, Suite 800, Naperville, IL 60563-6421

Laboratory ID: LAP-176641

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

LABORATORY ACCREDITATION PROGRAMS

☐	**INDUSTRIAL HYGIENE**	Accreditation Expires:
☐	**ENVIRONMENTAL LEAD**	Accreditation Expires:
☑	**ENVIRONMENTAL MICROBIOLOGY**	Accreditation Expires: June 01, 2021
☐	**FOOD**	Accreditation Expires:
☐	**UNIQUE SCOPES**	Accreditation Expires:

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

Beth Bair

Elizabeth Bair
Chairperson, Analytical Accreditation Board

Cheryl O. Morton

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

Revision17: 09/11/2018

Date Issued: 08/21/2019

AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

Eurofins EMLab P&K
1815 West Diehl Rd, Suite 800, Naperville, IL 60563-6421

Laboratory ID: LAP-176641
Issue Date: 01/24/2020

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Environmental Microbiology Laboratory Accreditation Program (EMLAP)

Initial Accreditation Date: 09/01/2005

EMLAP Scope Category	Field of Testing (FOT)	Component, parameter or characteristic tested	Method	Method Description *(for internal methods only)*
Bacterial	Legionella	Water, Swabs	EM-BT-S-1045	Detection and Enumeration of Legionella from the Environment Using ISO 11731:2017
Bacterial	Legionella	Water, Swabs, Wipes, Bulk, Air	EM-BT-S-1687	Detection and Enumeration of Legionella bacteria (based on CDC method Procedures for the Recovery of Legionella from the Environment, 2005)
Fungal	Air - Culturable	Viable Impaction Samples	EM-MY-S-1043	Preparation and Analysis of Air Samples for Culturable Fungi
Fungal	Air - Direct Examination	Spore Trap Air Samples	EM-MY-S-1038	Preparation and Analysis of Spore Trap (Air) Samples for Fungal Spores, Other Biological and Non-Biological Particles
Fungal	Bulk - Culturable	Dust, Swab, Bulk, Water/Liquids, Wipes	EM-PR-S-1040	Preparation of Bulk, Dust/ Soil, Swab/Wipe and Water/Liquid Samples for Quantitative Fungal and /or Bacterial Analysis
Fungal	Bulk - Culturable	Dust, Swab, Bulk, Water/Liquids, Wipes, Contact Plates	EM-MY-S-2584	Analysis of Dust, Swab, Water, and Bulk Samples for Culturable Fungi
Fungal	Bulk - Direct Examination	Tape, Swab, Wipe, Bulk, Dust, Soil	EM-MY-S-1039	Preparation and Analysis of Tape, Swab, Wipe, Bulk and Dust - Soil Samples for Qualitative Direct Microscopic Examination
Fungal	Bulk - Direct Examination	Tape, Swab, Wipe, Bulk, Dust, Soil	EM-MY-S-1041	Preparation and Analysis of Tape, Swab, Wipe, Bulk and Dust - Soil Samples

Effective: 03/12/2013
Revision: 6
Page 1 of 2

EMLAP Scope Category	Field of Testing (FOT)	Component, parameter or characteristic tested	Method	Method Description *(for internal methods only)*
				for Quantitative Direct Microscopic Examination
Fungal	Surface - Culturable	Dust, Swab, Bulk, Water/Liquids, Wipes	EM-PR-S-1040	Preparation of Bulk, Dust/ Soil, Swab/Wipe and Water/Liquid Samples for Quantitative Fungal and /or Bacterial Analysis
Fungal	Surface - Culturable	Dust, Swab, Bulk, Water/Liquids, Wipes, Contact Plates	EM-MY-S-2584	Analysis of Dust, Swab, Water, and Bulk Samples for Culturable Fungi
Fungal	Surface - Direct Examination	Tape, Swab, Wipe, Bulk, Dust, Soil	EM-MY-S-1039	Preparation and Analysis of Tape, Swab, Wipe, Bulk and Dust - Soil Samples for Qualitative Direct Microscopic Examination
Fungal	Surface - Direct Examination	Tape, Swab, Wipe, Bulk, Dust, Soil	EM-MY-S-1041	Preparation and Analysis of Tape, Swab, Wipe, Bulk and Dust - Soil Samples for Quantitative Direct Microscopic Examination

A complete listing of currently accredited EMLAP laboratories is available on the AIHA-LAP, LLC website at: *http://www.aihaaccreditedlabs.org*

Effective: 03/12/2013
Revision: 6
Page 2 of 2

Environmental Services Provided by

IDEAL Environmental Engineering, Inc.

IDEAL Environmental Engineering, Inc. is a full-service environmental firm. Please call us at 1-309-828-4259 to assist you with the following:

Asbestos

Asbestos Inspections
Asbestos Laboratory Analysis (NVLAP, PAT)
Asbestos Management Planning
Asbestos Abatement Design
Asbestos Abatement Project Management
Asbestos Abatement Air Sampling
Asbestos Emergencies
Asbestos Repair
Asbestos Abatement
Asbestos Cleanup
Asbestos Documentation Organization

Training

Asbestos Worker Training
Asbestos Supervisor Training
Asbestos Worker and Supervisor Refresher Training
Asbestos Floor Tile Removal Worker & Competent Person Courses
Asbestos Roofers Course
Asbestos Awareness Training (Initial & Refresher)
OSHA Courses
LEAD RRP Training (Initial & Refresher)

Lead

XRF Inspections
Lead Sampling
Lead Design
Lead Monitoring
Lead in Water Sampling

Other Available Services

Indoor Environmental Quality Assessments (Mold)
Bleacher Inspections

Ideal Environmental Engineering, Inc. • Bloomington, IL 61704
(309) 828-4259 • www.idealenvironmental.com