

Limited Mold Assessment Report

Texas Health and Human Services Commission

**Building 636
4110 Guadalupe Street
Austin, Texas 78751**



Baer Engineering and Environmental Consulting, Inc.

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Baer Engineering Project No. 181006.06**

July 13, 2018

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SECTION 1

REPORT SUMMARY



July 13, 2018

Texas Health and Human Services Commission
4900 N. Lamar Blvd.
Austin, TX 78751

Sent via email to Joe.Rainosek@hhsc.state.tx.us

Attention: Mr. Joe Rainosek

Reference: LIMITED MOLD ASSESSMENT REPORT
Texas Health and Human Services Commission
Building 636
4110 Guadalupe Street
Austin, Texas 78751
Baer Engineering Document No. 181006-8i.060

Dear Mr. Rainosek:

Baer Engineering and Environmental Consulting, Inc. (Baer Engineering) is pleased to submit this limited mold assessment report for Building 636, located at 4110 Guadalupe Street, Austin, Texas (Site).

PROJECT INFORMATION

Baer Engineering was told that the Site previously had multiple water intrusion events, and suspect mold was observed by building occupants. Baer Engineering was asked to perform a mold assessment of the interior spaces at the Site. To better understand the indoor air quality (IAQ) inside Building 636, Baer Engineering set up five data loggers, distributed throughout the building, that measure temperature, humidity, and dewpoint. On June 22, 2018, Mr. Ahmad Nasser of Baer Engineering, and a Texas Department of Licensing and Regulation (TDLR)-licensed Mold Assessment Consultant (MAC), deployed the loggers in five different areas of the building. While Mr. Nasser was setting up the data loggers, building occupants informed him that carpet throughout the building was steam-cleaned in early 2018, and left for two days with no air conditioning.

On June 25, 2018, Mr. Victor Steeghs, a TDLR-licensed MAC, and representative of Baer Engineering, performed a mold assessment at the Site. The mold assessment was limited to Building 636, and included a visual inspection, the collection of air and surface samples for mold, and the recording of air quality measurements. No destructive sampling was conducted.

The purpose of the assessment was to determine if there were indications of a mold issue at the Site.

FIELD OBSERVATIONS

During the visual inspection, visible suspect mold was observed on desks, cabinets, chairs, carpet, walls, and around skylights. Building personnel stated that there had been ongoing cleaning of the visible suspect mold and that the majority had already been cleaned to remove

visible indications of the suspect mold. The building personnel also stated that previous water intrusions had occurred and seemed to only affect the lower portion of the walls of the building. Mr. Steeghs noticed a musty odor in Quad 1058 and investigated the space above the ceiling in the areas, including the ceiling tile system, drywall walls, and roof drain areas. However, the only visible indication of water intrusion observed was water-impacted drywall of the lower interior walls in Quads 1058, 1003, and 1110.

MOLD ASSESSMENT PROCEDURES AND SAMPLING ANALYSIS RESULTS

Moisture Testing

Moisture testing was performed using a Delmhorst™ moisture meter. The Delmhorst™ meter has two probes that were inserted approximately 5/16" into the tested materials. Drywall walls and other areas that may have been impacted by water were tested for moisture content. Multiple locations tested exhibited high moisture levels. The areas that exhibited high moisture content in the tested materials were located in Rooms 1004, 1008, 1012, 1059, 1067, 1071, 1111, and 1123. These walls are shared with their corresponding Quads (1058, 1003, and 1110).

Air Quality Measurements

Two different types of instruments were utilized to assess the IAQ inside Building 636: 1) TSI Q-Trak™ IAQ monitor, and 2) Lascar™ USB data loggers. The Q-Trak™ was used to measure the current temperature, relative humidity, carbon dioxide (CO₂), and carbon monoxide (CO) parameters in the same general locations as the spore trap air samples at the time of the assessment. The Lascar™ USB data loggers were used to see the variations of temperature, relative humidity, and dewpoint over a 67-hour span, logging data every 30 seconds.

Several readings taken, utilizing the Q-Trak™, indicated IAQ parameters were outside of the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) recommended levels. Relative humidity levels were above the ASHRAE's standard of 65% in seven areas where measurements were taken. Carbon dioxide concentrations were slightly higher in four areas than the ASHRAE's standard of 1,000 parts per million (ppm). Section 2, Table 2.2 provides a summary of all air quality measurements taken utilizing the Q-Trak™.

The Lascar™ data logger measurements of relative humidity, and dewpoint indicated substantial changes in the indoor humidity at various times.

The Summary reports of the data loggers are included in Section 2.

Air Sampling

Baer Engineering performed a mold investigation at the Site in accordance with generally accepted industry practices. The survey focused on visible signs of water damage, mold, and moisture intrusion.

All of the air samples were submitted for analysis to Hayes Microbial Consulting in Midlothian, Virginia, a TDLR-licensed Mold Analysis Laboratory. Air samples were analyzed microscopically, and counts were made of total mold spores. The laboratory does not differentiate between viable and non-viable spores. Viable spores will grow new fungal colonies if they come in contact with

water and a source of food. Non-viable spores will not propagate but can still cause physical reactions in hypersensitive individuals, such as those who are allergic to mold.

Twelve air samples were collected throughout the building (ST-1 to ST-12). Additionally, one control air sample (ST-Out) was collected outside the building. Each air sample was collected using a Zefon™ spore trap cassette connected to a sampling pump calibrated to provide an air flow of 15 liters per minute for a period of five minutes.

There are no state or federal statutes or regulations regarding mold concentrations or general indoor air quality (IAQ) parameters related to building occupant comfort levels. Acceptable levels for individual mold species vary because species' toxicity varies widely as does spore size, weight, and other features that might affect building occupants. There are various public agency publications regarding mold and IAQ available to the public. Generally, spore counts, by genus, in indoor air samples should be less than those of the outdoor control sample.

Analytical results of the air samples collected from the subject areas indicated total mold spore concentrations were significantly lower than the total mold spore concentration of the outside sample, with the exception of some anomalies discussed below. Copies of the laboratory license and the analytical reports are included in Section 3.

Analysis of the mold genera concentrations and relative percentages of total mold within individual samples, as compared to the outside sample, indicate the following anomalies:

- **Sample ST-01 – Room 1067**

Room 1067 - visible suspect mold was first observed in this area of the building by the building personnel. The total mold concentration in this area was the highest of all the indoor air samples collected; of particular note are levels of *Aspergillus/Penicillium* which accounted for 97.9% of the total mold count in this area, as compared to only 2.0% of the total mold count in the outside sample. These mold genera are very common in both indoor and outdoor environments, but flourish when humid or wet conditions are present.

- **Sample ST-02 – Room 1063**

This sample was taken in Room 1063 of Quad 1058. The percentage of *Aspergillus/Penicillium* to total spores in the sample was 81.9%, compared to 2.0% in the outside sample.

- **Sample ST-03 – Room 1059**

This sample was taken in Room 1059 of Quad 1058. The percentage of *Aspergillus/Penicillium* to total spores in the sample was 84.8%, compared to 2.0% in the outside sample.

- **Sample ST-04 – Room 1071**

This sample was taken in Room 1071 of Quad 1058. The percentage of *Aspergillus/Penicillium* to total spores in the sample was 79.9%, compared to 2.0% in the outside sample.

- **Sample ST-05 – Room 1057**

This sample was taken in Room 1057. The percentage of *Aspergillus/Penicillium* to total spores in the sample was 78.3%, compared to 2.0% in the outside sample.

- **Sample ST-06 – Quad 1029**
This sample was taken in Quad 1029. The percentage of *Aspergillus/Penicillium* to total spores in the sample was 78.7%, compared to 2.0% in the outside sample.
- **Sample ST-07 – Room 1020**
This sample was taken in Room 1020. The percentage of *Aspergillus/Penicillium* to total spores in the sample was 57.3%, compared to 2.0% in the outside sample.
- **Sample ST-08 – Quad 1003**
This sample was taken in Quad 1003. The percentage of *Aspergillus/Penicillium* to total spores in the sample was 52.9%, compared to 2.0% in the outside sample.
- **Sample ST-09 – Quad 1110**
This sample was taken in Quad 1110. The percentage of *Aspergillus/Penicillium* to total spores in the sample was 90.8%, compared to 2.0% in the outside sample.
- **Sample ST-10 – Room 1090**
This sample was taken in Room 1090. The percentage of *Aspergillus/Penicillium* to total spores in the sample was 75.9%, compared to 2.0% in the outside sample.
- **Sample ST-11 – Room 1098**
This sample was taken in Room 1098. The percentage of *Aspergillus/Penicillium* to total spores in the sample was 76.1%, compared to 2.0% in the outside sample.
- **Sample ST-12 – Room 1102**
This sample was taken in Room 1102. The percentage of *Aspergillus/Penicillium* to total spores in the sample was 64.8%, compared to 2.0% in the outside sample.

Section 2, Table 2.1 provides a summary of the fungal types and amounts identified in each air sample. The sample locations are indicated in Section 3, Figure 3.1.

Direct-Contact Sampling

The levels of various mold genera identified through laboratory analyses of direct-contact samples are qualitative and expressed as Rare, Light, Moderate, Heavy, Very Heavy, or None Detected. Nine (9) tape-lift samples were collected. Samples with anomalous results are discussed below:

- **Tape-Lift Sample T-01 – Room 1067**
A “Very Heavy” concentration of *Penicillium* was found in this sample.
- **Tape-Lift Sample T-02 – Room 1057**
A “Very Heavy” concentration of *Aspergillus* was found in this sample.
- **Tape-Lift Sample T-03 – Room 1057**
A “Heavy” concentration of *Cladosporium*, a “Moderate” concentration of *Aspergillus*, and a “Rare” concentration of *Alternaria* were found in this sample.
- **Tape-Lift Sample T-04 – Air Handling Unit (AHU) South**
A “Very Heavy” concentration of *Cladosporium* was found in this sample.

- **Tape-Lift Sample T-05 – AHU Central**
A “Heavy” concentration of *Cladosporium* was found in this sample.
- **Tape-Lift Sample T-06 – AHU North**
A “Heavy” concentration of *Cladosporium* was found in this sample.
- **Tape-Lift Sample T-07 – Room 1067**
A “Very Heavy” concentration of *Aspergillus* and a “Moderate” concentration of *Cladosporium* was found in this sample.
- **Tape-Lift Sample T-08 – Quad 1110**
A “Very Heavy” concentration of *Cladosporium* was found in this sample.
- **Tape-Lift Sample T-09 – Room 1130**
A “Very Heavy” concentration of *Aspergillus* was found in this sample.

Section 2, Table 2.2 provides a summary of the fungal types and relative amounts identified in the direct contact samples. The sample locations are indicated in Section 2, Figure 2.1.

CONCLUSIONS

Based on the limited visual assessment, analytical results, and IAQ measurements collected utilizing the Q-Trak™ IAQ monitor and Lascar™ data loggers, there is an indication of an issue with the heating, ventilation, and air conditioning (HVAC) system. Usually, high CO₂ and relative humidity levels indoors are indicators of deficiencies in the HVAC system. Additionally, higher concentrations of some mold genera inside the building compared to those outside are indicators of a mold concern that might be related to the deficiency of the HVAC system.

RECOMMENDATIONS

For improved IAQ, Baer Engineering makes the following recommendations:

1. All furniture (chairs, desks, etc.) that have been contaminated by mold, or affected by water intrusion, should be professionally cleaned, or if they cannot be cleaned, they should be disposed of.
2. The damaged drywall walls in Quads 1058, 1003, and 1110 should be removed and replaced with new material.
3. The HVAC cycling at nights and weekends is causing temperature and humidity issues that promote mold growth. Relative humidity levels should be kept at, or below 65%, or the temperature should be kept at, or below, 82 degrees Fahrenheit.
4. The HVAC system should be evaluated by a professional HVAC contractor to determine if it is operating correctly. Elevated CO₂ levels indicate that there may be a performance issue related to the HVAC system.

SURVEY QUALIFICATIONS

Observations made and sampling performed during this assessment are likely to be a reasonable assessment of conditions in the areas of the building visited. Environmental measurements within a building, however, can vary from day to day and represent a snapshot of conditions on the day and the time of the assessment. Baer Engineering observed existing conditions in the building

using generally accepted procedures. This assessment did not include destructive sampling to check wall cavities or concealed areas for mold (i.e. cutting holes in walls, etc.).

Photographs taken during this assessment are included in Section 5 of this report. Copies of Baer Engineering and laboratory certifications are included in Section 6. A copy of the Consumer Mold Information Sheet, issued by the TDSHS, is included in Section 7.

We appreciate the opportunity to assist you on this project. If you need further assistance, or have questions about this report, feel free to contact us.

Sincerely,

BAER ENGINEERING AND ENVIRONMENTAL CONSULTING, INC.



Victor Steeghs

TDSHS Mold Assessment Consultant - License No. MAC1398



Ahmad Nasser

TDSHS Mold Assessment Consultant - License No. MAC1345

SECTION 2
SAMPLE LOGS, FIGURES, AND DATA LOGGERS' SUMMARY
REPORTS

FIGURE 2.1

MOLD SAMPLE LOCATIONS – BUILDING 636



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**Figure 2.1 - Mold Sample Locations -
Building 636**

DRAWN BY: J. M. C.
APPROVED BY: J. KLINGER
SCALE: NOT SPECIFIED
DATE: JULY 2018
CHECKED BY: V. STEEGHS
DRAWING NO: 181006.06

4110 Guadalupe Street
Austin, TX 78751
1 of 2



LEGEND




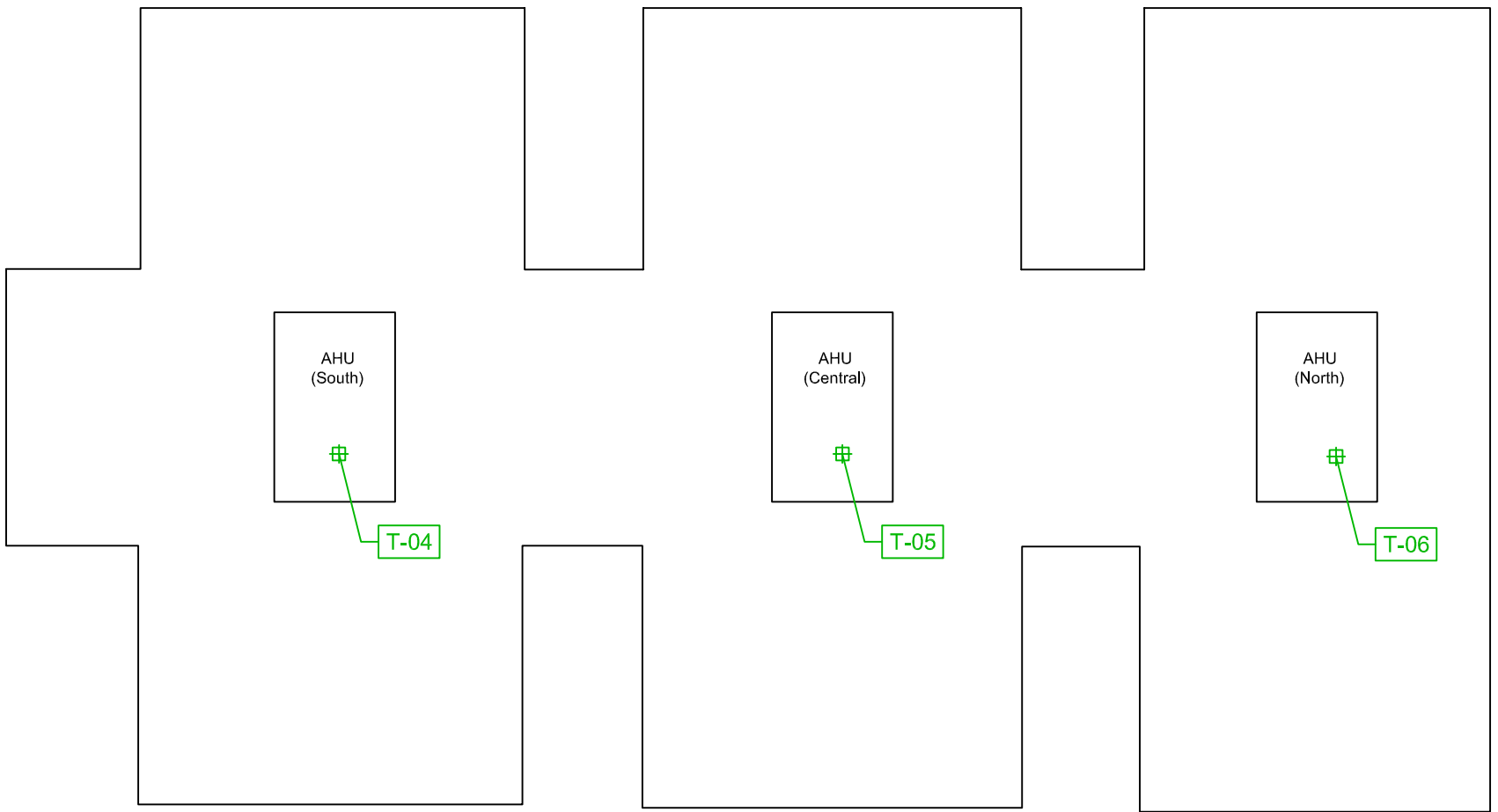
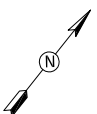

-  DATA LOGGER LOCATION
-  SPORE TRAP AIR SAMPLE LOCATION
-  TAPE LIFT SAMPLE LOCATION

FIGURE 2.2

MOLD SAMPLE LOCATIONS – BUILDING 636 ROOF



LEGEND

 SPORE TRAP AIR SAMPLE LOCATION


 TAPE LIFT SAMPLE LOCATION

TABLE 2.1
SPORE TRAP AIR SAMPLE RESULTS

Table 2.1

Spore Trap Air Sample Results

	Sample Number and Location												
Spore Type (Spores/m ³)	ST-OUT Outside	ST-1 Room 1067	ST-2 Room 1063	ST-3 Room 1059	ST-4 Room 1071	ST-5 Room 1057	ST-6 Quad 1029	ST-7 Room 1020	ST-8 Quad 1003	ST-9 Quad 1110	ST-10 Room 1090	ST-11 Room 1098	ST-12 Room 1102
<i>Alternaria</i>	1,080	27	13	-	40	-	-	13	-	-	13	-	27
Ascospores	1,147	93	53	67	40	80	27	93	67	53	27	27	13
<i>Aspergillus/ Penicillium</i>	133	8213	720	1040	853	573	200	160	120	1573	293	213	147
Basidiospores	453	-	13	-	-	13	-	-	-	-	-	-	-
<i>Bipolaris/ Drechslera</i>	360	-	-	-	27	13	-	13	-	-	-	-	-
<i>Cercospora</i>	27	-	-	-	-	-	-	-	-	-	-	-	-
<i>Cladosporium</i>	2,640	40	80	120	107	53	27	-	40	107	40	40	40
<i>Curvularia</i>	107	13	-	-	-	-	-	-	-	-	-	-	-
<i>Epicoccum</i>	67	-	-	-	-	-	-	-	-	-	13	-	-
<i>Myxomycetes</i>	120	-	-	-	-	-	-	-	-	-	-	-	-
<i>Pithomyces</i>	240	-	-	-	-	-	-	-	-	-	-	-	-
<i>Torula</i>	120	-	-	-	-	-	-	-	-	-	-	-	-
Total Fungi	6,494	8386	879	1227	1067	732	254	279	227	1733	386	280	227

Note: Laboratory results are reported as the actual number of fungal (i.e., mold) spores counted per cubic meter of air filtered (Spores/m³).

Laboratory results are reported using the number of significant digits, as calculated; however, because of the nature of these types of biological data, the number of significant digits that is used for interpretation is generally one or two.

TABLE 2.2
AIR QUALITY MEASUREMENTS

Table 2.2

Air Quality Measurements

Test Number and Location		Temperature (°F)	Relative Humidity (%)	Carbon Dioxide (ppm*)	Carbon Monoxide (ppm)
ST-1	Room 1067	72.9	63.4	635	0.0
ST-2	Room 1063	72.4	67.6	695	0.0
ST-3	Room 1059	73.0	62.4	630	0.1
ST-4	Room 1071	71.6	66.8	716	0.0
ST-5	Room 1057	72.0	67.7	699	0.0
ST-6	Room 1029	74.1	70.6	917	0.0
ST-7	Room 1020	74.2	73.2	919	0.0
ST-8	Room 1003	74.2	76.2	1,031	0.0
ST-9	Room 1110	73.2	69.1	655	0.0
ST-10	Room 1090	71.1	57.1	1,121	0.0
ST-11	Room 1098	72.1	56.1	1,075	0.0
ST-12	Room 1102	73.7	53.7	1,119	0.1
ST-Out	Outside Building	93.7	52.1	480	0.0
ASHRAE Recommended Level		67°F to 82°F	At or below 65%	< 1,000 ppm	< 9 ppm

*ppm – parts per million

Source: American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE).
Thermal Environmental Conditions for Human Occupancy. ASHRAE www.ashrae.org

DATA LOGGERS' SUMMARY REPORTS



Summary Report

Serial Number 010220524
Logger Name Logger 1

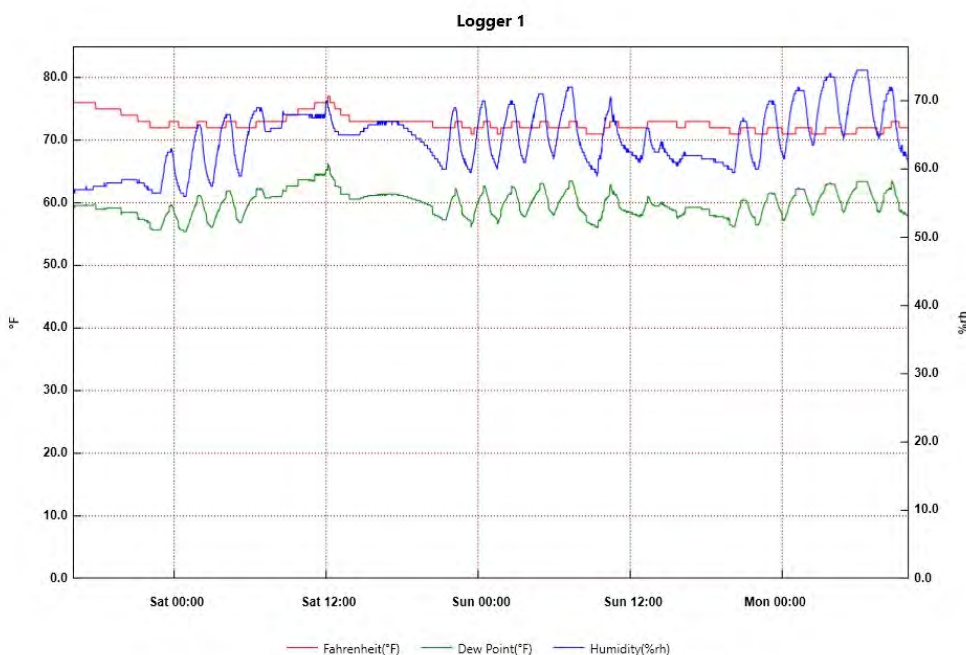
First Reading 4:00:00 PM 6/22/2018
Last Reading 10:00:00 AM 6/25/2018
Elapsed Time 2d, 18h, 0m, 0s
Total Readings 7921

Alarm Not Set
Logging Rate 30 Seconds

Fahrenheit	Low Alarm	Not Set	High Alarm	Not Set
Minimum 71.0°F 11:25:30 PM 6/23/2018	Alarm Occurrences N/A	●	Alarm Occurrences N/A	●
Maximum 77.0°F 12:07:30 PM 6/23/2018	Total time in alarm N/A		Total time in alarm N/A	
Average Reading 72.67°F	First Alarm Triggered N/A		First Alarm Triggered N/A	
Mean Kinetic Temperature 72.70°F ($\Delta H83.14472$)	Longest Alarm N/A		Longest Alarm N/A	
Standard Deviation 1.24°F				

Humidity	Low Alarm	Not Set	High Alarm	Not Set
Minimum 56.0%rh 12:45:30 AM 6/23/2018	Alarm Occurrences N/A	●	Alarm Occurrences N/A	●
Maximum 74.5%rh 5:51:30 AM 6/25/2018	Total time in alarm N/A		Total time in alarm N/A	
Average Reading 64.40%rh	First Alarm Triggered N/A		First Alarm Triggered N/A	
Standard Deviation 4.32%rh	Longest Alarm N/A		Longest Alarm N/A	

Dew Point	
Minimum 55.4°F 12:45:30 AM 6/23/2018	Maximum 66.3°F 12:07:30 PM 6/23/2018
Average Reading 59.90°F	Standard Deviation 2.04°F





Summary Report

Serial Number 010219927
Logger Name Logger 2

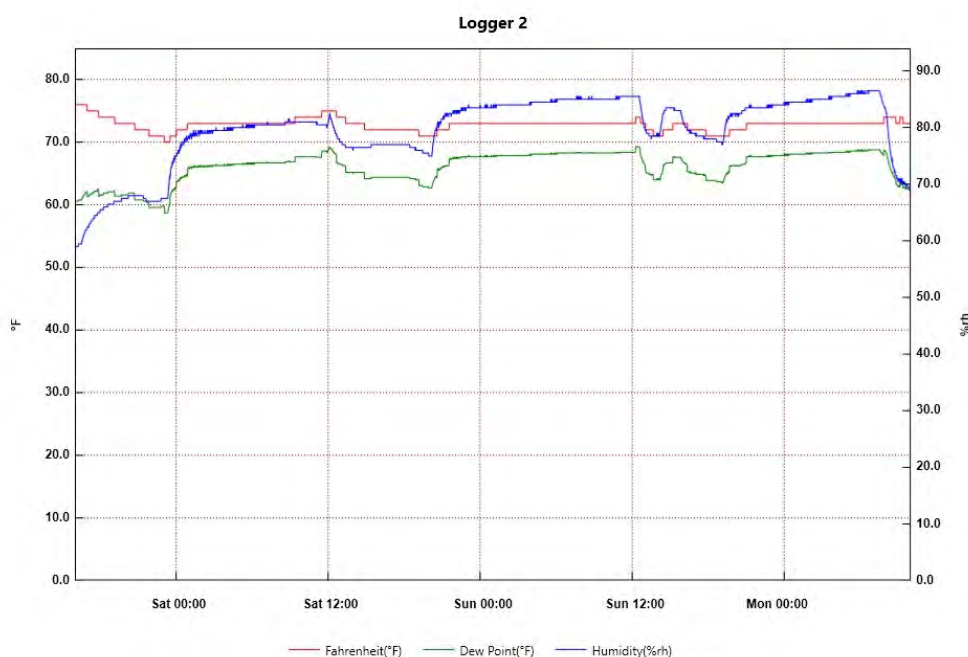
First Reading 4:00:00 PM 6/22/2018
Last Reading 10:00:00 AM 6/25/2018
Elapsed Time 2d, 18h, 0m, 0s
Total Readings 7921

Alarm Not Set
Logging Rate 30 Seconds

Fahrenheit	Low Alarm	Not Set	High Alarm	Not Set
Minimum 70.0°F 11:05:00 PM 6/22/2018	Alarm Occurrences N/A	●	Alarm Occurrences N/A	●
Maximum 76.0°F 4:00:00 PM 6/22/2018	Total time in alarm N/A		Total time in alarm N/A	
Average Reading 72.82°F	First Alarm Triggered N/A		First Alarm Triggered N/A	
Mean Kinetic Temperature 72.80°F ($\Delta H83.14472$)	Longest Alarm N/A		Longest Alarm N/A	
Standard Deviation 0.95°F				

Humidity	Low Alarm	Not Set	High Alarm	Not Set
Minimum 59.0%rh 4:00:00 PM 6/22/2018	Alarm Occurrences N/A	●	Alarm Occurrences N/A	●
Maximum 86.5%rh 5:44:30 AM 6/25/2018	Total time in alarm N/A		Total time in alarm N/A	
Average Reading 79.60%rh	First Alarm Triggered N/A		First Alarm Triggered N/A	
Standard Deviation 6.06%rh	Longest Alarm N/A		Longest Alarm N/A	

Dew Point	
Minimum 58.7°F 11:05:00 PM 6/22/2018	Maximum 69.3°F 12:32:30 PM 6/24/2018
Average Reading 66.09°F	Standard Deviation 2.45°F





Summary Report

Serial Number 010221023

Logger Name Logger 3

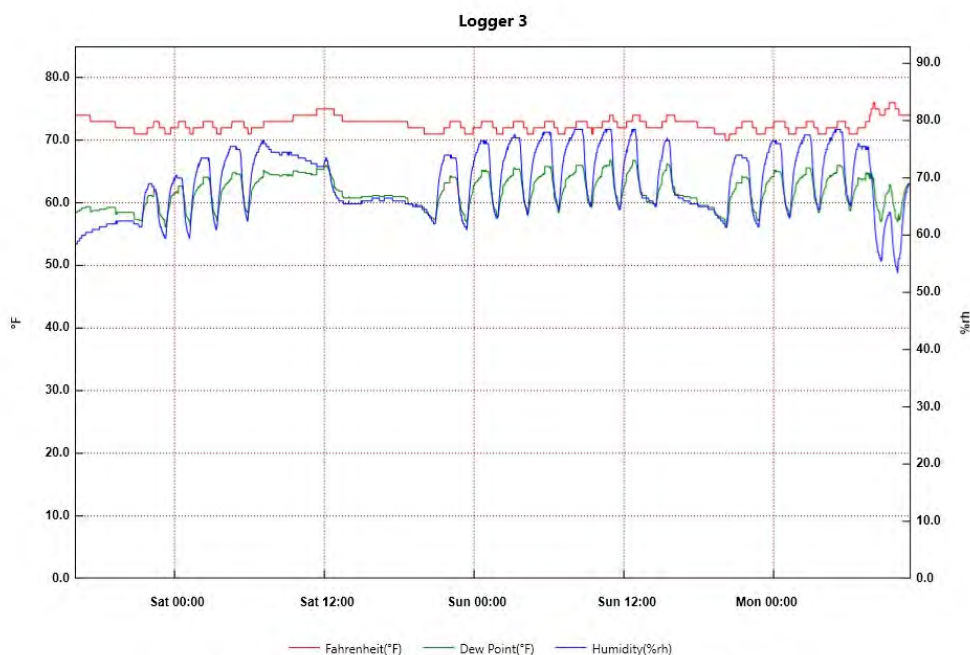
First Reading 4:00:00 PM 6/22/2018
Last Reading 11:00:00 AM 6/25/2018
Elapsed Time 2d, 19h, 0m, 0s
Total Readings 8041

Alarm Not Set
Logging Rate 30 Seconds

Fahrenheit	Low Alarm	Not Set	High Alarm	Not Set
Minimum 70.0°F 8:06:30 PM 6/24/2018	Alarm Occurrences N/A	●	Alarm Occurrences N/A	●
Maximum 76.0°F 7:57:30 AM 6/25/2018	Total time in alarm N/A		Total time in alarm N/A	
Average Reading 72.55°F	First Alarm Triggered N/A		First Alarm Triggered N/A	
Mean Kinetic Temperature 72.60°F ($\Delta H83.14472$)	Longest Alarm N/A		Longest Alarm N/A	
Standard Deviation 1.06°F				

Humidity	Low Alarm	Not Set	High Alarm	Not Set
Minimum 53.5%rh 9:54:00 AM 6/25/2018	Alarm Occurrences N/A	●	Alarm Occurrences N/A	●
Maximum 78.5%rh 8:01:30 AM 6/24/2018	Total time in alarm N/A		Total time in alarm N/A	
Average Reading 69.14%rh	First Alarm Triggered N/A		First Alarm Triggered N/A	
Standard Deviation 5.63%rh	Longest Alarm N/A		Longest Alarm N/A	

Dew Point	
Minimum 56.1°F 8:07:00 PM 6/24/2018	Maximum 66.8°F 12:55:30 PM 6/24/2018
Average Reading 61.78°F	Standard Deviation 2.53°F



From: Friday, June 22, 2018 4:00:00 PM - To: Monday, June 25, 2018 11:00:00 AM



Summary Report

Serial Number 010220699
Logger Name Logger 4

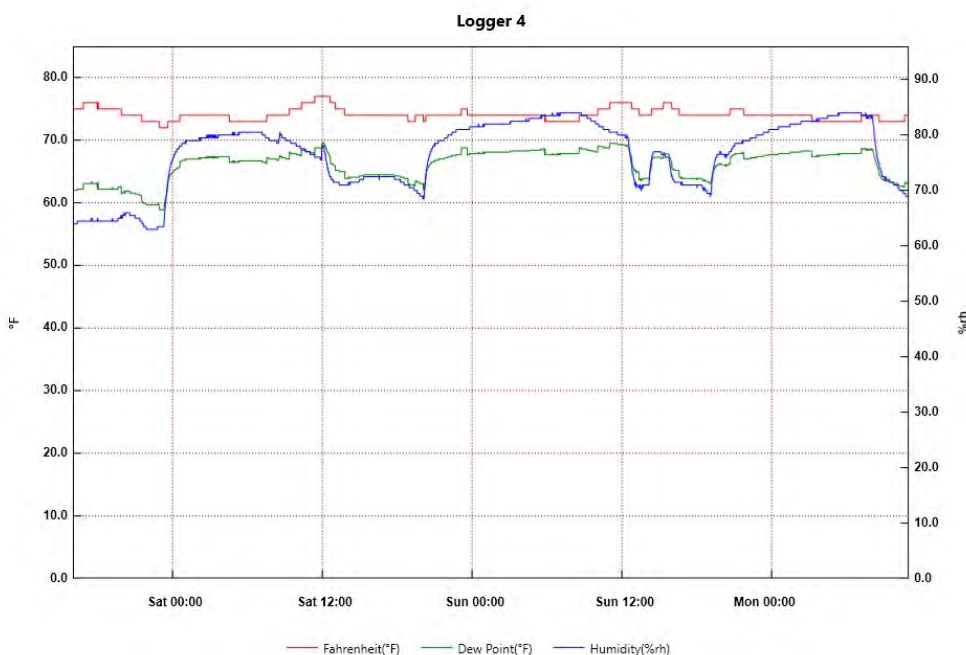
First Reading 4:00:00 PM 6/22/2018
Last Reading 11:00:00 AM 6/25/2018
Elapsed Time 2d, 19h, 0m, 0s
Total Readings 8041

Alarm Not Set
Logging Rate 30 Seconds

Fahrenheit	Low Alarm	Not Set	High Alarm	Not Set
Minimum 72.0°F 10:57:30 PM 6/22/2018	Alarm Occurrences N/A	●	Alarm Occurrences N/A	●
Maximum 77.0°F 11:23:00 AM 6/23/2018	Total time in alarm N/A		Total time in alarm N/A	
Average Reading 74.10°F	First Alarm Triggered N/A		First Alarm Triggered N/A	
Mean Kinetic Temperature 74.10°F ($\Delta H83.14472$)	Longest Alarm N/A		Longest Alarm N/A	
Standard Deviation 0.93°F				

Humidity	Low Alarm	Not Set	High Alarm	Not Set
Minimum 63.0%rh 9:55:00 PM 6/22/2018	Alarm Occurrences N/A	●	Alarm Occurrences N/A	●
Maximum 84.0%rh 6:25:00 AM 6/24/2018	Total time in alarm N/A		Total time in alarm N/A	
Average Reading 76.58%rh	First Alarm Triggered N/A		First Alarm Triggered N/A	
Standard Deviation 6.08%rh	Longest Alarm N/A		Longest Alarm N/A	

Dew Point	
Minimum 58.9°F 10:57:30 PM 6/22/2018	Maximum 69.6°F 12:07:00 PM 6/23/2018
Average Reading 66.15°F	Standard Deviation 2.38°F





Summary Report

Serial Number 010221186
Logger Name Logger 5

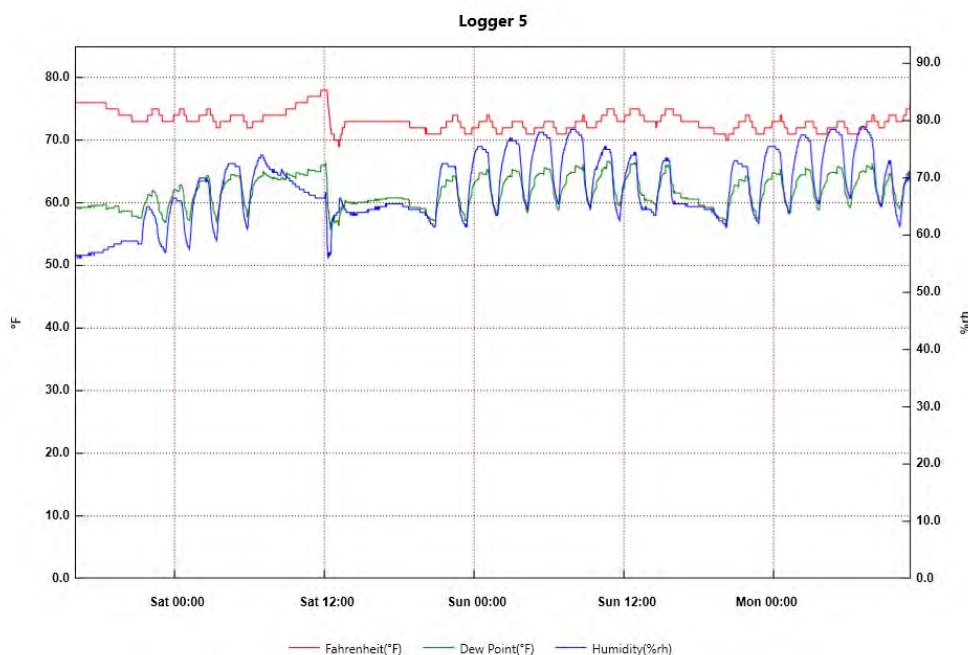
First Reading 4:00:00 PM 6/22/2018
Last Reading 11:00:00 AM 6/25/2018
Elapsed Time 2d, 19h, 0m, 0s
Total Readings 8041

Alarm Not Set
Logging Rate 30 Seconds

Fahrenheit	Low Alarm	Not Set	High Alarm	Not Set
Minimum 69.0°F 1:07:30 PM 6/23/2018	Alarm Occurrences N/A	●	Alarm Occurrences N/A	●
Maximum 78.0°F 11:42:30 AM 6/23/2018	Total time in alarm N/A		Total time in alarm N/A	
Average Reading 73.09°F	First Alarm Triggered N/A		First Alarm Triggered N/A	
Mean Kinetic Temperature 73.10°F ($\Delta H83.14472$)	Longest Alarm N/A		Longest Alarm N/A	
Standard Deviation 1.49°F				

Humidity	Low Alarm	Not Set	High Alarm	Not Set
Minimum 56.0%rh 4:13:00 PM 6/22/2018	Alarm Occurrences N/A	●	Alarm Occurrences N/A	●
Maximum 79.0%rh 6:59:00 AM 6/25/2018	Total time in alarm N/A		Total time in alarm N/A	
Average Reading 67.96%rh	First Alarm Triggered N/A		First Alarm Triggered N/A	
Standard Deviation 5.80%rh	Longest Alarm N/A		Longest Alarm N/A	

Dew Point	
Minimum 55.7°F 12:29:00 PM 6/23/2018	Maximum 66.6°F 10:51:00 AM 6/24/2018
Average Reading 61.79°F	Standard Deviation 2.52°F



From: Friday, June 22, 2018 4:00:00 PM - To: Monday, June 25, 2018 11:00:00 AM

SECTION 3
LABORATORY REPORTS &
CHAIN-OF-CUSTODY DOCUMENTATION



contact@hayesmicrobial.com
<http://hayesmicrobial.com/>

Analysis Report prepared for

Baer Engineering and Environmental Consulting, Inc.

**7756 Northcross Drive Suite 211
Austin, TX. 78757
Phone: (512) 453-3733**

**Job Number: 181006.06
Job Name: Building No. 636
PO # HHSTX-8-0000023570
Date Sampled: 06-25-2018
Date Analyzed: 06-26-2018
Report Date: 06-26-2018**

EPA Laboratory ID# VA01419



AIHA EMPAT Lab ID# 188863



Mold License: LAB1021



License: #PH-0198

**Baer Engineering and Environmental Consulting, Inc.
7756 Northcross Drive
Suite 211
Austin, TX 78757**

June 26, 2018

Client Job Number: 181006.06
Client Job Name: Building No. 636
PO # HHSTX-8-0000023570

Dear Baer Engineering and Environmental Consulting, Inc.,

We would like to thank you for trusting Hayes Microbial for your analytical needs. On June 26, 2018 we received 22 samples by FedEx for the job referenced above. 22 samples were received in good condition.

The results in this analysis pertain only to this job, collected on the stated date and should not be used in the interpretation of any other job. This report may not be duplicated, except in full, without the written consent of Hayes Microbial Consulting, LLC.

This laboratory bears no responsibility for sample collection activities, analytical method limitations, or your use of the test results. Interpretation and use of test results are your responsibility. Any reference to health effects or interpretation of mold levels is strictly the opinion of Hayes Microbial Consulting. In no event, shall Hayes Microbial Consulting or any of its employees be liable for lost profits or any special, incidental or consequential damages arising out of your use of the test results.



Steve Hayes, BSMT(ASCP)
Laboratory Director
Hayes Microbial Consulting, LLC



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Baer Engineering and Environmental Consulting, Inc.
7756 Northcross Drive, Suite 211
Austin, TX 78757
Phone: (512) 453-3733

Spore Trap Analysis
SOP #HMC101

HMC #18019952

Job Number: 181006.06	Job Name: Building No. 636	Date Collected: 06/25/2018
Collected by: Victor Steeghs	PO # HHSTX-8-0000023570	Date Received: 06/26/2018
Email: vsteeghs@baereng.com		Date Reported: 06/26/2018

HMC ID Number	18019952 - 1	18019952 - 2	18019952 - 3	18019952 - 4
Sample ID#	ST-Out	ST-01	ST-02	ST-03
Sample Name	Outside	Room 1067	Room 1063	Room 1059
Sample Volume	75 liters	75 liters	75 liters	75 liters
Reporting Limit	13 spores/M3	13 spores/M3	13 spores/M3	13 spores/M3
Background	2	2	2	2
Fragments	333/M3	93/M3	40/M3	27/M3

Organism	Raw Count	Count / M3	% of Total	Raw Count	Count / M3	% of Total	Raw Count	Count / M3	% of Total	Raw Count	Count / M3	% of Total
Alternaria	81	1080	16.6%	2	27	< 1%	1	13	1.5%			
Ascospores	86	1147	17.7%	7	93	1.1%	4	53	6.0%	5	67	5.5%
Aspergillus Penicillium	10	133	2.0%	616	8213	97.9%	54	720	81.9%	78	1040	84.8%
Basidiospores	34	453	7.0%				1	13	1.5%			
Bipolaris Drechslera	27	360	5.5%									
Cercospora	2	27	< 1%									
Chaetomium												
Cladosporium	198	2640	40.7%	3	40	< 1%	6	80	9.1%	9	120	9.8%
Curvularia	8	107	1.6%	1	13	< 1%						
Epicoccum	5	67	1.0%									
Fusarium												
Memnoniella												
Myxomycetes	9	120	1.8%									
Pithomyces	18	240	3.7%									
Stachybotrys												
Stemphylium												
Torula	9	120	1.8%									
Ulocladium												
Total	487	6494		629	8386		66	879		92	1227	

Water Damage Indicator

Common Allergen

Signature: Stephen N. Hayes

Date: 06/26/2018

Reviewed by: P. Ramesh

Date: 06/26/2018



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Spore Trap Analysis
SOP #HMC101

HMC #18019952

Job Number: 181006.06	Job Name: Building No. 636	Date Collected: 06/25/2018
Collected by: Victor Steeghs	PO # HHSTX-8-0000023570	Date Received: 06/26/2018
Email: vsteeghs@baereng.com		Date Reported: 06/26/2018

HMC ID Number	18019952 - 5	18019952 - 6	18019952 - 7	18019952 - 8
Sample ID#	ST-04	ST-05	ST-06	ST-07
Sample Name	Room 1071	Room 1057	Quad 1029	Room 1020
Sample Volume	75 liters	75 liters	75 liters	75 liters
Reporting Limit	13 spores/M3	13 spores/M3	13 spores/M3	13 spores/M3
Background	2	2	2	2
Fragments	53/M3	ND	ND	ND

Organism	Raw Count	Count / M3	% of Total	Raw Count	Count / M3	% of Total	Raw Count	Count / M3	% of Total	Raw Count	Count / M3	% of Total
Alternaria	3	40	3.7%							1	13	4.7%
Ascospores	3	40	3.7%	6	80	10.9%	2	27	10.6%	7	93	33.3%
Aspergillus Penicillium	64	853	79.9%	43	573	78.3%	15	200	78.7%	12	160	57.3%
Basidiospores				1	13	1.8%						
Bipolaris Drechslera	2	27	2.5%	1	13	1.8%				1	13	4.7%
Cercospora												
Chaetomium												
Cladosporium	8	107	10.0%	4	53	7.2%	2	27	10.6%			
Curvularia												
Epicoccum												
Fusarium												
Memnoniella												
Myxomycetes												
Pithomyces												
Stachybotrys												
Stemphylium												
Torula												
Ulocladium												
Total	80	1067		55	732		19	254		21	279	

Water Damage Indicator

Common Allergen

Signature: Stephen N. Hayes

Date: 06/26/2018

Reviewed by:

P. Ramez

Date: 06/26/2018



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Spore Trap Analysis
SOP #HMC101

HMC #18019952

Job Number: 181006.06	Job Name: Building No. 636	Date Collected: 06/25/2018
Collected by: Victor Steeghs	PO # HHSTX-8-0000023570	Date Received: 06/26/2018
Email: vsteeghs@baereng.com		Date Reported: 06/26/2018

HMC ID Number	18019952 - 9	18019952 - 10	18019952 - 11	18019952 - 12
Sample ID#	ST-08	ST-09	ST-10	ST-11
Sample Name	Quad 1110	Quad 1110	Room 1090	Room 1098
Sample Volume	75 liters	75 liters	75 liters	75 liters
Reporting Limit	13 spores/M3	13 spores/M3	13 spores/M3	13 spores/M3
Background	2	2	2	2
Fragments	ND	27/M3	27/M3	13/M3

Organism	Raw Count	Count / M3	% of Total	Raw Count	Count / M3	% of Total	Raw Count	Count / M3	% of Total	Raw Count	Count / M3	% of Total
Alternaria							1	13	3.4%			
Ascospores	5	67	29.5%	4	53	3.1%	2	27	7.0%	2	27	9.6%
Aspergillus Penicillium	9	120	52.9%	118	1573	90.8%	22	293	75.9%	16	213	76.1%
Basidiospores												
Bipolaris Drechslera												
Cercospora												
Chaetomium												
Cladosporium	3	40	17.6%	8	107	6.2%	3	40	10.4%	3	40	14.3%
Curvularia												
Epicoccum							1	13	3.4%			
Fusarium												
Memnoniella												
Myxomycetes												
Pithomyces												
Stachybotrys												
Stemphylium												
Torula												
Ulocladium												
Total	17	227		130	1733		29	386		21	280	

Water Damage Indicator

Common Allergen

Signature: Stephen N. Hayes

Date: 06/26/2018

Reviewed by:

P. Ramesh

Date: 06/26/2018



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Spore Trap Analysis
SOP #HMC101

HMC #18019952

Job Number: 181006.06	Job Name: Building No. 636	Date Collected: 06/25/2018
Collected by: Victor Steeghs	PO # HHSTX-8-0000023570	Date Received: 06/26/2018
Email: vsteeghs@baereng.com		Date Reported: 06/26/2018

HMC ID Number	18019952 - 13			
Sample ID#	ST-12			
Sample Name	Room 1102			
Sample Volume	75 liters			
Reporting Limit	13 spores/M3			
Background	2			
Fragments	ND			

Organism	Raw Count	Count / M3	% of Total			
Alternaria	2	27	11.9%			
Ascospores	1	13	5.7%			
Aspergillus Penicillium	11	147	64.8%			
Basidiospores						
Bipolaris Drechslera						
Cercospora						
Chaetomium						
Cladosporium	3	40	17.6%			
Curvularia						
Epicoccum						
Fusarium						
Memnoniella						
Myxomycetes						
Pithomyces						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Total	17	227				

Water Damage Indicator

Common Allergen

Signature: Stephen N. Hayes

Date: 06/26/2018

Reviewed by: P. Ramez

Date: 06/26/2018



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Direct ID Analysis
SOP #HMC102

HMC #18019952

Job Number: 181006.06	Job Name: Building No. 636	Date Collected: 06/25/2018
Collected by: Victor Steeghs	PO # HHSTX-8-0000023570	Date Received: 06/26/2018
Email: vsteeghs@baereng.com		Date Reported: 06/26/2018

HMC ID Number: 18019952 - 14		Sample Media: Bio-Tape	
Sample ID Number: T-01		Sample Name: Room 1067	
Organism	Spore Estimate	Mycelial Estimate	Note
Penicillium	Very Heavy	Many	

HMC ID Number: 18019952 - 15		Sample Media: Bio-Tape	
Sample ID Number: T-02		Sample Name: Room 1057	
Organism	Spore Estimate	Mycelial Estimate	Note
Aspergillus	Very Heavy	Many	

HMC ID Number: 18019952 - 16		Sample Media: Tape	
Sample ID Number: T-03		Sample Name: Room 1057	
Organism	Spore Estimate	Mycelial Estimate	Note
Alternaria	Rare	ND	
Aspergillus	Moderate	Trace	
Cladosporium	Heavy	Few	

HMC ID Number: 18019952 - 17		Sample Media: Bio-Tape	
Sample ID Number: T-04		Sample Name: AHU South	
Organism	Spore Estimate	Mycelial Estimate	Note
Cladosporium	Very Heavy	Many	

Signature: Stephen N. Hayes

Date: 06/26/2018

Reviewed by: P. Ramez

Date: 06/26/2018



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Direct ID Analysis
SOP #HMC102

HMC #18019952

Job Number: 181006.06	Job Name: Building No. 636	Date Collected: 06/25/2018
Collected by: Victor Steeghs	PO # HHSTX-8-0000023570	Date Received: 06/26/2018
Email: vsteeghs@baereng.com		Date Reported: 06/26/2018

HMC ID Number: 18019952 - 18		Sample Media: Bio-Tape	
Sample ID Number: T-05		Sample Name: AHU Central	
Organism	Spore Estimate	Mycelial Estimate	Note
Cladosporium	Heavy	Few	

HMC ID Number: 18019952 - 19		Sample Media: Bio-Tape	
Sample ID Number: T-06		Sample Name: AHU North	
Organism	Spore Estimate	Mycelial Estimate	Note
Cladosporium	Heavy	Few	

HMC ID Number: 18019952 - 20		Sample Media: Bio-Tape	
Sample ID Number: T-07		Sample Name: Room 1067	
Organism	Spore Estimate	Mycelial Estimate	Note
Aspergillus	Very Heavy	Many	
Cladosporium	Moderate	Few	

HMC ID Number: 18019952 - 21		Sample Media: Bio-Tape	
Sample ID Number: T-08		Sample Name: Room 1003	
Organism	Spore Estimate	Mycelial Estimate	Note
Cladosporium	Very Heavy	Many	

Signature: Stephen N. Hayes

Date: 06/26/2018

Reviewed by: P. Ramesh

Date: 06/26/2018



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Direct ID Analysis
SOP #HMC102

HMC #18019952

Job Number: 181006.06	Job Name: Building No. 636	Date Collected: 06/25/2018
Collected by: Victor Steeghs	PO # HHSTX-8-0000023570	Date Received: 06/26/2018
Email: vsteeghs@baereng.com		Date Reported: 06/26/2018

HMC ID Number: 18019952 - 22		Sample Media: Bio-Tape	
Sample ID Number: T-09		Sample Name: Room 1130	
Organism	Spore Estimate	Mycelial Estimate	Note
Aspergillus	Very Heavy	Many	

Signature: _____

Stephen N. Hayes

Date: _____

06/26/2018

Reviewed by: _____

P. Ramesh

Date: _____

06/26/2018



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Spore Trap Information

HMC #18019952

Reporting Limit	The Reporting Limit is the lowest number of spores that can be detected based on the total volume of the sample collected and the percentage of the slide that is counted. At Hayes Microbial, 100% of the slide is read so the LOD is based solely on the total volume. Raw spore counts that exceed 500 spores will be estimated.
Blanks	Results have not been corrected for field or laboratory blanks.
Background	<p>The Background is the amount of debris that is present in the sample. This debris consists of skin cells, dirt, dust, pollen, drywall dust and other organic and non-organic matter. As the background density increases, the likelihood of spores, especially small spores such as those of <i>Aspergillus</i> and <i>Penicillium</i> may be obscured. The background is rated on a scale of 1 to 4 and each level is determined as follows:</p> <p>ND : No background detected. (Pump or cassette malfunction.) Recollect sample.</p> <p>1 : <5% of field occluded. No spores will be uncountable.</p> <p>2 : 5-25% of field occluded.</p> <p>3 : 25-75% of field occluded.</p> <p>4 : 75-90% of field occluded.</p> <p>5 : >90% of field occluded. Suggest recollection of sample.</p>
Fragments	Fragments are small pieces of fungal mycelium or spores. They are not identifiable as to type and when present in very large numbers, may indicate the presence of mold amplification.
Indoor/Outdoor Comparisons	There are no national standards for the numbers of fungal spores that may be present in the indoor environment. As a general rule and guideline that is widely accepted in the indoor air quality field, the numbers and types of spores that are present in the indoor environment should not exceed those that are present outdoors at any given time. There will always be some mold spores present in "normal" indoor environments. The purpose of sampling and counting spores is to help determine whether an abnormal condition exists within the indoor environment and if it does, to help pinpoint the area of contamination. Spore counts should not be used as the sole determining factor of mold contamination. There are many factors that can cause anomalies in the comparison of indoor and outdoor samples due to the dynamic nature of both of those environments.
Water Damage Indicators	These molds are commonly seen in conditions of prolonged water intrusion and usually indicate a problem.
Common Allergens	Although all molds are potential allergens, these are the most common allergens that may be found indoors.
Color Note	Fungi that are present in indoor samples at levels lower than 200 per cubic meter are not color coded on the report, unless they are one of the water damage indicators.



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Direct Information

HMC #18019952

Additional Information for Direct Identification Analysis

Spore Estimate		Percentages
ND	None Detected	0%
Rare	Less than 10 spores	< 1%
Light	10 - 99 spores	1-10%
Moderate	100 - 999 spores	11-25%
Heavy	1000 - 9999 spores	26-50%
Very Heavy	10000 or greater spores	51-100%

Mycelial Estimate		
ND	None Detected	No active growth at site
Trace	Very small amount of Mycelium	Probably no active growth at site
Few	Some Mycelium	Possible active growth at site
Many	Large amount of Mycelium	Probable active growth at site

Alternaria

Habitat: Commonly found outdoors in soil and decaying plants. Indoors, it is commonly found on window sills and other horizontal surfaces.

Health Effects: A common allergen and has been associated with hypersensitivity pneumonitis. Alternaria is capable of producing toxic metabolites which may be associated with disease in humans or animals. Occasionally an agent of onychomycosis, ulcerated cutaneous infection and chronic sinusitis, principally in the immunocompromised patient.

Ascospores

Habitat: A large group consisting of more than 3000 species of fungi. Common plant pathogens and outdoor numbers become very high following rain. Most of the genera are indistinguishable by spore trap analysis and are combined on the report.

Health Effects: Health affects are poorly studied, but many are likely to be allergenic.

Aspergillus

Habitat: One of the most common fungi isolated from the environment. Found in soil, decomposing plant material, and indoors on a wide variety of cellulose containing materials.

Health Effects: Known to be allergenic and many species also produce mycotoxins. They are a common cause of extrinsic asthma and hypersensitivity pneumonitis. Many species are opportunistic pathogens and are known to cause sinus lesions, ear infections, respiratory infections, and invasive systemic disease.

Aspergillus|Penicillium

Habitat: The most common fungi isolated from the environment. Very common in soil and on decaying plant material. Are able to grow well indoors on a wide variety of substrates.

Health Effects: This group contains common allergens and many can cause hypersensitivity pneumonitis. They may cause extrinsic asthma, and many are opportunistic pathogens. Many species produce mycotoxins which may be associated with disease in humans and other animals. Toxin production is dependent on the species, the food source, competition with other organisms, and other environmental conditions.

Basidiospores

Habitat: A common group of Fungi that includes the mushrooms and bracket fungi. They are saprophytes and plant pathogens. In wet conditions they can cause structural damage to buildings.

Health Effects: Common allergens and are also associated with hypersensitivity pneumonitis.

Bipolaris|Drechslera

Habitat: They are found in soil and as plant pathogens. Can grow indoors on a variety of substrates.

Health Effects: They may be allergenic and are very commonly involved in allergic fungal sinusitis. They are opportunistic pathogens but occasionally infect healthy individuals, causing keratitis, sinusitis and osteomyelitis.

Cercospora

Habitat: Found on wood and decaying plant matter.

Health Effects: Health effects are poorly studied.

Cladosporium

Habitat: One of the most common genera worldwide. Found in soil and plant debris and on the leaf surfaces of living plants. The outdoor numbers are lower in the winter and often relatively high in the summer, especially in high humidity. The outdoor numbers often spike in the late afternoon and evening. Indoors, it can be found growing on textiles, wood, sheetrock, moist window sills and in HVAC supply ducts.

Health Effects: A common allergen, producing more than 10 allergenic antigens and a common cause of hypersensitivity pneumonitis.

Curvularia

Habitat: They exist in soil and plant debris, and are plant pathogens.

Health Effects: They are allergenic and a common cause of allergic fungal sinusitis. An occasional cause of human infection, including keratitis, sinusitis, onychomycosis, mycetoma, pneumonia, endocarditis and disseminated infection, primarily in the immunocompromised.

Epicoccum

Habitat: It is found in soil and plant litter and is a plant pathogen. It can grow indoors on a variety of substrates, including paper and textiles and is commonly found on wet drywall.

Health Effects: It is a common allergen. No cases of infection have been reported in humans.

Myxomycetes

Habitat: Found on decaying plant material and as a plant pathogen.

Health Effects: Some allergenic properties reported, but generally pose no health concerns to humans.

Penicillium

Habitat: Often the most common type of fungi isolated from the environment. They are common indoors as well, and are found in house dust, water-damaged papers, fabrics, behind or on paint, and in fiberglass duct insulation. They are also found in a variety of food products.

Health Effects: It is a common allergen and an agent of hypersensitivity pneumonitis. Toxins are produced by various species. The production of volatile organic compounds has also been demonstrated. Most species are non-pathogenic, but *Penicillium marneffe* is a human pathogen in immunocompromised people.

Pithomyces

Habitat: Common fungus isolated from soil, decaying plant material. Rarely found indoors.

Health Effects: Allergenic properties are poorly studied. No cases of infection in humans.

Torula

Habitat: Found in soil and on wood and grasses. Occasionally found growing indoors on cellulose containing materials.

Health Effects: A known allergen. No known cases of human infection.



HAYES

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Company: Baer Engineering & Environmental Consulting, Inc.

Chain of Custody

Form v.2101208.1

HMC #
019952

Job Number: 181006.06 Job Name: Building No. 636 Collector: Victor Steeghs Email: Vsteeghs@baereng.com
Date Collected: 6/25/18 P.O.# HHSTX-8-0000023570 Notes: C.C. John Klingler
Mobile: 210-315-6922 jklingler@baereng.com

Sample #	Sample Name	Analysis Type	Volume	TAT	Notes
ST-Out	Outside	S	75 Liters	24 hr	
ST-01	Room - 1067				
ST-02	Room - 1063				
ST-03	Room - 1059				
ST-04	Room - 1071				
ST-05	Room - 1057				
ST-06	Room - 1029				
ST-07	Room - 1020				
ST-08	Room - 1003				
ST-09	Room - 1119				
ST-10	Room - 1090				
ST-11	Room - 1098				

Analysis Type	Description	TAT	Acceptable Sample Types
Spore Trap S	Identification & Enumeration of Fungal Spores	24 Hour	Spore Trap cassettes, Impact slides
S+	I & E of Fungal Spores + total dander, fiber and pollen count	24 Hour	Spore Trap cassettes, Impact slides
Direct ID D	ID and Semi-quantative enumeration of spores and mycelium	24 Hour	Tape, Bio-tape, swab, bulk, agar plate for ID only
D+	ID and Enumeration with spores count	24 Hour	Tape, Bio-tape, swab, bulk, agar plate for ID only
Culture C1	Identification & Enumeration of Mold only	7 Day	Anderson Air Plate, Swab, Bulk
C2	Identification & Enumeration of Bacteria only	4 Day	Anderson Air Plate, Swab, Bulk
C3	Identification & Enumeration of Mold and Bacteria	7 Day	Anderson Air Plate, Swab, Bulk
C5	Coliform Screen for Sewage Bacteria	2 Day	Anderson Air Plate, Swab, Bulk
Dust Mite A1	Semi-quantative analysis of dust mite allergen	24 Hour	Bulk Dust
Particle P	Total Particulate Analysis	24 Hour	Spore Trap cassettes, Impact slides, Bio-Tape

Relinquished by: [Signature] Date: 6/25/18 Rcvd By: [Signature] Date: 6/26/18 Time: _____

Hayes Microbial Consulting :: 3005 East Boundary Terrace, Suite F :: Midlothian, VA 23112 :: USA :: www.hayesmicrobial.com :: info@hayesmicrobial.com

**HAYES**

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Midlothian, VA 23112, USA
804.562.3435 Fax: 804.447.5562

Company: Baer Engineering

Chain of Custody

Form v.2101208.1

HMC #

019952

Job Number: 181006.06Job Name: Building No. 636Collector: Vicor SteeghsEmail: vsteeghs@baereng.comDate Collected: 6/25/18P.O. # HHSTX-8-0000023570

Notes:

jklingler@baereng.comMobile: 210-315-6922

Sample #	Sample Name	Analysis Type	Volume	TAT	Notes
ST-12	Room - 1102	S	75 Ltrs	24hr	
T-01	Room - 1067	D	-		
T-02	Room - 1057	D	-		
T-03	Room - 1057	D	-		
T-04	Room AHU - South	D	-		
T-05	Room AHU - Central	D	-		
T-06	Room AHU - North	D	-		
T-07	Room - 1067	D	-		
T-08	Room - 1003	D	-		
T-09	Room - 1130	D	-		



Analysis Type	Description	TAT	Acceptable Sample Types
Spore Trap S	Identification & Enumeration of Fungal Spores	24 Hour	Spore Trap cassettes, Impact slides
S+	I & E of Fungal Spores + total dander, fiber and pollen count	24 Hour	Spore Trap cassettes, Impact slides
Direct ID D	ID and Semi-quantitative enumeration of spores and mycelium	24 Hour	Tape, Bio-tape, swab, bulk, agar plate for ID only
D+	ID and Enumeration with spores count	24 Hour	Tape, Bio-tape, swab, bulk, agar plate for ID only
Culture C1	Identification & Enumeration of Mold only	7 Day	Anderson Air Plate, Swab, Bulk
C2	Identification & Enumeration of Bacteria only	4 Day	Anderson Air Plate, Swab, Bulk
C3	Identification & Enumeration of Mold and Bacteria	7 Day	Anderson Air Plate, Swab, Bulk
C5	Coliform Screen for Sewage Bacteria	2 Day	Anderson Air Plate, Swab, Bulk
Dust Mite A1	Semi-quantitative analysis of dust mite allergen	24 Hour	Bulk Dust
Particle P	Total Particulate Analysis	24 Hour	Spore Trap cassettes, Impact slides, Bio-Tape

Relinquished by: [Signature]Date: 6/25/18Rcvd By: M.S.Date: 06/26/18

Time:

SECTION 4
PHOTOGRAPHIC DOCUMENTATION

SITE PHOTO	PHOTO DESCRIPTION
	<p data-bbox="1209 520 1485 653">Photo #1 Visible Suspect Mold on Cabinets</p>
	<p data-bbox="1185 1299 1502 1432">Photo #2 Visible Suspect Mold on Chairs</p>

SITE PHOTO	PHOTO DESCRIPTION
	<p data-bbox="1281 520 1403 552">Photo #3</p> <p data-bbox="1206 588 1477 653">Visible Suspect Mold around Skylight</p>
	<p data-bbox="1284 1302 1399 1333">Photo #4</p> <p data-bbox="1187 1369 1497 1434">Visible Suspect Mold on Desk</p>

SITE PHOTO

PHOTO DESCRIPTION



Photo #5

Visible Water Impacted
Drywall

SECTION 5
CONSULTANT'S AND LABORATORY'S
CERTIFICATIONS AND LICENSES

BAER ENGINEERING LICENSES

Mike Arismendez
Chair

Thomas F. Butler
Vice Chair



Helen Callier
Rick Figueroa
Ravi Shah
Deborah A. Yurco

Mold Assessment Company
**BAER ENGINEERING AND ENVIRONMENTAL
CONSULTING**

License Number: ACO0138

The entity named above is licensed by the Texas Department of Licensing and Regulation.

License Expires: January 14, 2020

Brian E. Francis
Executive Director



TEXAS DEPARTMENT OF STATE HEALTH SERVICES

BE IT KNOWN THAT

VICTOR J STEEGHS

is hereby licensed and authorized to perform as a

Mold Assessment Consultant

in the State of Texas and is hereby governed by the rights, privileges, and responsibilities set forth in
Title 25, Texas Administrative Code, Chapter 295, relating to Texas Mold Assessment and Remediation
Rules, as long as this license is not suspended or revoked.

John Hellerstedt, M.D.
Commissioner of Health

License Number: MAC1398

Control Number: 8702

Expiration Date: 1/24/2019

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE

STATE OF TEXAS

AHMAD F NASSER

MOLD ASSESSMENT CONSULTANT



LICENSE NUMBER MAC1345

EXPIRES 03/14/2020

TEXAS DEPARTMENT OF LICENSING AND REGULATION

LABORATORY ACCREDITATIONS



SECTION 6
CONSUMER MOLD INFORMATION SHEET

CONSUMER MOLD INFORMATION SHEET

Regulation of Mold Assessment and Remediation in Texas



State rules require licensed mold assessors and remediators to give a copy of this Consumer Mold Information Sheet to each client and to the property owner, if not the same person, before starting any mold-related activity [25 TAC 295.306(c)] .

How does Texas regulate businesses that do testing for mold or that do mold cleanup?

The Department of State Health Services (DSHS) regulates such businesses in accordance with the [Texas Occupations Code, Chapter 1958](#). Under the **Texas Mold Assessment and Remediation Rules (Rules)** ([25 Tex. Admin. Code Sections 295.301 - 295.338](#)), all companies and individuals who perform mold-related activities in Texas must be licensed by DSHS unless exempt. (See Page 2 regarding owner exemptions.) Applicants must meet certain qualifications, have required training, and pass a state exam in order to receive their licenses. Mold remediation workers must have training and be registered with DSHS. Laboratories that analyze mold samples must also be licensed and meet certain qualifications. The Rules set minimum work standards and require licensees to follow a code of ethics. To prevent conflicts of interest, the Rules also prohibit a licensee from conducting both mold assessment and mold remediation on the same project. While the Rules regulate the activities of mold licensees when they are doing mold-related activities, the Rules do not require any property owner or occupant to clean up mold or to have it cleaned up.

How can I know if someone is licensed?

A licensed individual is required to carry a current DSHS photo identification card with the license number on it. A search tool and listings of currently licensed companies and individuals can be found at: www.dshs.state.tx.us/mold/profession.shtm.

What is “mold assessment?”

Mold assessment is an inspection of a building by a **mold assessment consultant** or **technician** to evaluate whether mold growth is present and to what extent. Samples may be taken to determine the amount and types of mold that are present; however, sampling is not necessary in many cases. When mold cleanup is necessary a licensed mold assessment consultant can provide

you with a **mold remediation protocol**. A protocol must specify the estimated quantities and locations of materials to be remediated, methods to be used and clearance criteria that must be met.

What is meant by “clearance criteria?”

Clearance criteria refer to the level of “cleanliness” that must be achieved by the persons conducting the mold cleanup. You should understand and agree with the mold assessment consultant prior to starting the project as to what an acceptable clearance level will be, including what will be acceptable results for any air sampling or surface sampling for mold. There are no national or state standards for a “safe” level of mold. Mold spores are a natural part of the environment and are always present at some level in the air and on surfaces all around us.

What is “mold remediation?”

Mold remediation is the cleanup and removal of mold growth from surfaces and/or contents in a building. It also refers to actions taken to prevent mold from growing back. Licensed **mold remediation contractors** must follow a mold remediation protocol as described above and their own **mold remediation work plan** that provides specific instructions and/or standard operating procedures for how the project will be done.

Before a remediation project can be deemed successful, a mold assessment consultant must conduct a **post-remediation assessment**. This is an inspection to ensure that the work area is free from all visible mold and wood rot, the project was completed in compliance with the remediation protocol and remediation work plan, and that it meets all clearance criteria that were specified in the protocol. The assessment consultant must give you a **passed clearance report** documenting the results of this inspection. If the project fails clearance, further remediation as prescribed by a consultant will be necessary.

What is a Certificate of Mold Damage Remediation?

No later than 10 days after a mold remediation project has passed a clearance inspection, the remediation contractor must sign and give you a **Certificate of Mold Damage Remediation**. The licensed mold assessment consultant who conducted the post-remediation assessment must also sign the certificate. The consultant must truthfully state on the certificate that the mold contamination identified for the project has been remediated and whether the underlying cause of the mold has been corrected. (That work may involve other types of professional services that are not regulated by the mold Rules, such as plumbing or carpentry.) Receiving a certificate documenting that the underlying cause of the mold was remediated is an advantage for a homeowner. It prevents an insurer from making an underwriting decision on the residential property based on previous mold damage or previous claims for mold damage. If you sell your property, the law requires that you provide the buyer a copy of all certificates you have received for that property within the preceding five years.

How is a property owner protected if a mold assessor or remediator does a poor job or actually damages the property?

The Rules require licensees to have commercial general liability insurance in the amount of \$1 million, or to be self-insured, to cover any damage to your property. Before hiring anyone you should ask for proof of such insurance coverage. You may wish to inquire if the company carries additional insurance, such as professional liability/errors and omissions (for consultants) or pollution insurance (for contractors), that would provide additional recourse to you should the company fail to perform properly.

How is my confidentiality protected if I share personal information about myself with a company?

Under the code of ethics in the Rules, to the extent required by law, licensees must keep confidential any personal information about a client (including medical conditions) obtained during the course of a mold-related activity. Further, you may be able to negotiate a contract to include language that other personal information be kept confidential unless disclosure “is required by law.” However, licensees are required to identify dates and addresses of projects and other details that can become public information.

How do I file a complaint about a company?

Anyone who believes a company or individual has violated the Rules can file a complaint with DSHS. For information on this process and/or to obtain the complaint form, call 1-800-293-0753, or download the form at www.dshs.state.tx.us/mold/complaint.shtm.

Can property owners do mold assessment or remediation on their own property without being licensed?

Yes. A homeowner can take samples for mold or clean it up in the home without a license. An owner, or a managing agent or employee of an owner of a residential property is not required to be licensed, **unless** the property has 10 or more residential dwelling units. For non-residential properties, an owner or tenant, or a managing agent or employee of an owner or tenant, is not required to be licensed to do mold assessment or remediation on property owned or leased by the owner or tenant, **unless** the mold contamination affects a total surface area of 25 contiguous square feet or more. Please refer to 25 TAC §295.303 for further details on exceptions and exemptions to licensing requirements.

For more information about mold and the Texas Mold Assessment and Remediation Rules, contact:

Texas Department of State Health Services, P.O. Box 149347, MC 1987, Austin, TX 78714-9347.

Phone: 512-834-6787 or 800-293-0753. Fax: 512-834-6726. www.dshs.state.tx.us/mold
