Herbert Layman, BS, SM, CIEC Microbial consultant

Customer: Firewater Response Address: 1130 Lebanon Rd. Pittsburgh, PA 15122 Contact: Stefan Schaming Customer Project: Fort Cherry Elementary Report Date: November 3, 2021

Project Summary

Herbert Layman, BS, SM, CIEC; Microbial Consultant was contacted by Stefan Schaming of Firewater Response on October 29, 2021, regarding the results of a post-remediation-verification (PRV) spore trap air test of Room 132 in the Fort Cherry Elementary School. As related to this investigator, Firewater Response had repeated the cleaning of the Room 132 after a spore trap air test performed on October 14, 2021, revealed (1379 spore/m3 of air) of *Aspergillus/Penicillium* like spores. The spore trap air count performed on October 20, 2021, showed 1092 spores/m3 of air) of *Aspergillus/Penicillium* like spores. The School District wanted a final report generated for the air test results of Classroom 132.

Field Impression & Interpretation

This investigator uses criteria from various sources when evaluating indoor environments. Published working papers include documents from professional industrial hygienists, microbiologists, and indoor environmental scientists, e.g., *Recognition*, *Evaluation, and Control of Indoor Mold (AIHA – 2020)*, and the *Institute of Inspection*, *Cleaning and Restoration Certification's IICRC) S-520/2015 Standard for Professional Mold Remediation 3rd Ed.* The investigator also applies knowledge gained from numerous past investigations in determining when laboratory and visual results indicate a normal fungal ecology for each type of structure.

Indoor to outdoor (distribution) – Generally, is it favorable to have lower indoor spore counts as compared to outdoor spore counts and to see similar types and distribution of fungi indoors and outdoors. The results of the air samples represent a short sampling time frame and should not be considered an exposure assessment. There are no methods currently available for assessing the health effects of human exposure to mold. These air tests are area sampling of classroom 132 and provide an indication as to the fungal ecology of the indoor environment.

This survey involved spore trap air samples (non-culturable) of Room 132 (on the 14th and 20th of October 2021), and a visual assessment of the room. Any appropriate disinfection for mold remediation cannot remove all fungal spores from an indoor space. When proper relative humidity is controlled, viable spores cannot sporulate or grow.

Settled fungal spores may remain in a room without further growth. The definition of a Condition 1 is described below. Therefore, the results of the spore trap air samples for mold in Classroom 132 represent a **Condition 1** or a "**normal fungal ecology**" as stated in the *Institute of Inspection, Cleaning and Restoration Certification's ANSI/IICRC S-520-2015 Standard for Professional Mold Remediation 3rd* Edition. A **Condition 1** is defined as "an indoor environment that may have settled spores, fungal fragments or traces of actual growth whose identity, location, and quantity are reflective of a normal fungal ecology for a similar indoor environment."

Recommendations

Recommendations are based upon scientific findings from laboratory and visual data. As with any recommendations, no one single action is guaranteed to eliminate building-related complaints.

1. Indoor relative humidity should be maintained between 35% and 50% year-round. Maintaining these levels discourages mold growth. Maintaining humidity levels below 50% will also inhibit the reproductive cycle of dust mites. Further, dust mites cannot survive humidity levels below 45%. Dust mites are a major allergen source for people in indoor environments.

All opinions discussed in this report are expressed within a reasonable degree of expert certainty.

<u>Contacts</u>

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Herbert Caryman Microbial Consultant,

Microbial Consultant, Herbert Layman, BS, SM, CIEC