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Centennial Lane Elementary School Portables: Mold Remediation

May, 21, 2016

Prepared by: Ed Light, CIH

Prepared for: Howard County Public School System

Building Dynamics, LLC (BDL) was asked by Howard County Public School System (HCPSS) to conduct a mold and moisture assessment of Portables 88 and 90 at Centennial Lane Elementary School (CLES) on May 20, 2016 and recommend corrective actions. BDL also reviewed past HCPSS IAQ inspection reports and interviewed school staff. On May 21, BDL returned to the site while HCPSS' remediation contractor, BMS CAT, was performing cleanup and made additional recommendations. BDL re-inspected May 23, verified that remediation had been completed and cleared the portables for re-occupancy.

In summary, a small amount of suspect growth was observed behind a poster and white board. BDL determined that the moisture sources responsible for this condition (thermostat set too low and leaks from the HVAC unit and roof) had been resolved last year by HCPSS and were not an ongoing problem. The suspect growth was remediated, all surfaces dried and sanitized and HVAC units replaced in Portable 90 and repaired in Portable 88. Both portables have been restored to conditions pre-existing the moisture issues and are safe for occupancy.

Investigation Summary:

Portable 90-

1. *Suspect growth was observed behind a poster by the back door and a white board by the front door (about one square foot each).*
2. *Other classroom surfaces were free of suspect growth and dry.*
3. *Suspect growth appears to have been due to elevated relative humidity caused by setting the thermostat too low during past cooling seasons. Localized mold formed by the front and rear doors where humid outside air contacted air conditioned surfaces.*
Recommendation- Do not set thermostat below 74 degrees during the cooling season.
4. *In the past, water leaked from an air conditioning unit. This unit is now being replaced.*
5. *In the past, ceiling tiles were stained by roof leaks. These leaks were repaired by HCPSS and it has remained dry above the ceiling.*
6. *Drywall with suspect growth was cut out and exposed cavity surfaces sanitized (with Microban Disinfectant Spray Plus, a non-bleach disinfectant used in hospitals).*
7. *Carpet was sanitized and extracted as a precaution (scheduled for removal this summer).*
8. *All walls and furniture were sanitized as a precaution.*
9. *All exposed surfaces, including ceiling, were fogged with Microban Disinfectant Spray Plus.*
10. *HVAC unit was replaced.*
11. *Work orders submitted to repair door and insulation under portable.*

Portable 88-

1. Classroom surfaces were dry and free of suspect growth. There was a small water stain on ceiling the ceiling (dry; resolved).
 2. Air conditioning unit free of suspect growth, but outside air damper was stuck shut.
Damper was repaired by HCPSS.
 - 3 Open screw holes were observed outside on the metal siding. These were repaired by HCPSS.
 4. Front door damaged and rusty at the bottom (adjacent carpet wet during rain). Door scheduled for replacement.
 5. Carpet was sanitized and extracted as a precaution (scheduled for removal this summer).
 6. Dehumidifiers operated two days.
 7. All exposed surfaces, including ceiling, were fogged with Microban Disinfectant Spray Plus.
 8. Air return grille was becoming loose.
Recommendation- Repair air grille.
 9. Air diffusers dirty.
Recommendation- Clean diffusers.
 10. The textured ceiling around the air diffusers has collected particulate.
Recommendation – remove diffusers and clean and/or paint those areas of the ceiling.
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BDL President, Ed Light, CIH, holds degrees in Environmental Science from the University of Massachusetts (B.S.) and Marshall University (M.S.), is a Senior Fellow of the American Industrial Hygiene Association, has authored over 40 scientific publications on assessment and control of the indoor environment and chaired several national scientific committees. In the 1980s, Mr. Light established the West Virginia Department of Health IAQ Program, pioneering efforts to resolve exposure issues related to formaldehyde, asbestos, and termiticides. In the 1990's, he developed widely used protocols for addressing IEQ complaints (published by EPA, NIOSH and ISIAQ) and managing air quality in occupied buildings under construction (now an ANSI standard). As a consultant, Mr. Light has directed more than 1000 multi-disciplinary IEQ investigations, ranging from the White House to the South Pole Station.