

School/Facility: Elkridge Elementary
Location: 3rd Grade Storage Closet and Therapy Room
Date of IEQ Report Form: November 30, 2017
Date(s) Investigated: December 5, 2017
Date of Report: December 19, 2017

IEQ Concern:

Discoloration was observed on the Concrete Masonry Unit (CMU) block located in the 3rd grade storage closet. It should be noted that this concern was also documented during a previous Indoor Environmental Quality (IEQ) walkthrough. The concern was previously assessed on March 24, 2017 and found to be exposed concrete within the divots of the CMU. The divots were not painted, causing a discoloration.

A discolored ceiling tile was also observed in the adjoining occupational therapy room, directly above a swing, mounted into the building's steel frame.

IEQ Investigation Process:

Identify deficiencies that may impact IEQ and/or sources of odor concerns. Typically includes the following depending on the nature of concern, but not limited to:

- interview/questionnaire of concern individual(s)
- inspection above drop ceiling (condition of roof deck, pipe insulation, return air plenum)
- inspection of ventilation system (operation of variable air volume box and outdoor air dampers, check controls, measurements of carbon dioxide, temperature and relative humidity, sources near outdoor air intake, measure return and supply air volume, cleanliness of coils, liner and condensate pan)
- inspection of exterior
- inspection below drop ceiling (housekeeping, sink and floor drain traps, signs of past and present moisture concern via visual and/or moisture meter, mold growth, ensure connection of current and capping of abandoned sanitary vents, odorizers, excessive plants and fabric items, identify potential pathways, and measure volatile organic compounds, carbon monoxide, and lighting)

Findings:

3rd Grade Storage Closet

- After close examination with a high lumen LED flashlight, it was determined that exposed concrete within the divots of the CMU block was causing a discoloration. Suspect mold growth was not observed.
- Dust/Dirt was observed on the CMU block in the area in question. The dust/dirt appeared more concentrated in this area compared to other areas within the storage closet. This accumulation is likely related to the return air duct located above the subject area. The duct

may cause a thermal differential in the wall causing particles to more readily adhere to the wall (thermophoresis). The accumulation may also be related to pressure differentials caused by the return.

- Blue prints indicate another room behind the closet with no mechanical equipment to negatively impact the wall.

Therapy

- A black stain (likely grease) was observed on the ceiling tile directly above the swing. The ceiling tile was damaged in the location of the stain. It is likely something contacted the ceiling tile causing the damage and staining.
- No suspect mold was observed.

Corrective Actions:

3rd Grade Storage Closet

- School administration may create a standard work order in School Dude to have the closet wall painted during the summer and have custodial staff periodically inspect the wall after it has been painted for possible discoloration.
- Custodial staff could increase the frequency of cleaning within the storage closet (especially the walls near the return duct).

Therapy

- As the ceiling tile will have to be “cut” to accommodate the swing, administration should submit a standard work order via School Dude for the replacement of the damaged ceiling.