School/Facility: Elkridge Elementary

Location: 4th Grade Pod

Date of IEQ Report Form: September 27, 2016

Date(s) Investigated: September 19 and October 6, 2016

Date of Report: December 8, 2016

IEQ Concern:

Some staff reported a dampness odor and humid conditions within the 4th grade pod.

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:

- The two right classrooms have base heat within the back of the exterior casework. It is assumed by looking down the vents within the casework, the chase has not been cleaned.

- The grilles of the ducted air return located at the base of the walls in each classroom of the pod are dusty. The floor of the returns are dusty.

- The back left corner wall of the back left classroom had grime/dirt and suspect mold growth on the paint of the CMU wall.

- Exterior downspout was disconnected near back left corner wall of the back left classroom.

- Exterior rain gutter leaking near back left corner wall of the back left classroom.

- Joints around base of exterior wall near back left corner wall of the back left classroom were sealed with caulking to prevent water entry.

- An outstanding or damp odor was not detected.

- Relative humidity was not evaluated based on seasonal changes where elevated humidity would not be prevalent, thus data inconclusive.

Corrective Actions:

- The chases within the casework containing base heat element were cleaned by Building Services.

- The return air grilles and floor/base of the return were cleaned by Building Services.

- The back left corner wall of the back left classroom was cleaned and disinfected using Q128. The wall will be observed periodically and further investigated as necessary.

- Exterior deficiencies (down spout, sealing joints, and rain gutter) were addressed.

- A data logger measuring relative humidity, temperature, and dew point will be placed out next cooling season to observe relative humidity trends within the pod. The HVAC system was modified (operated boilers to reheat air to assist with drying the cool air / air conditioning) this past summer break to successfully address bouts of continuous elevated relative humidity which is a condition not uncommon in unoccupied commercial buildings depending upon type of HVAC system and weather patterns.