

School/Facility: Marriotts Ridge High
Location: Classrooms 202, 204, 206, 208, 210, 212, and 214
Date of IEQ Report Form: September 28, 2016
Date(s) Investigated: October 17, 2016
Date of Report: January 6, 2017

IEQ Concern:

Staff report continuous odors and seems worse after rain events.

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 rooms are served by a dedicated outdoor air roof top unit #5 (RTU 5). RTU 5 was not operating.
- Each room has a fan coil unit (FCU) to heat and cool the room. The coils of the FCUs had moderate particulate buildup.
- The condensate lines of the FCUs tie into the storm water system. During heavy periods of rain, the storm water system becomes overwhelmed and backs rain water into the FCU through the condensate line. Reported to have happen once last school year and this past summer.
- The rooms' FCUs were operating when others in a nearby hallway were not initially then came on. This posed the question on FCU hours of operation.

Corrective Actions:

- RTU-5 disconnect switch was turned off. The unit was started back up and evaluated operation.
- The rooms' FCUs were cleaned during October 24th to 31st. Building Services brushed debris from underside of coil, sprayed front and back sides of coil with coil cleaner and rinsed with plain water.
- A bid package is being prepared for contractors to replace all back-flow preventers to address storm water from back flowing into the FCUs. The work is to be completed summer 2017.
- On December 2nd, Building Services found large amounts of equipment offline on LON trunk JACE 1, LON 2. After evaluating, a controller in room 231 (FCU-233) had lost its program which was bringing the whole trunk down. The issues has been resolved and FCUs are operating as scheduled.