

School/Facility: Marriotts Ridge High
Location: Classroom 326
Date of IEQ Report Form: November 4, 2016
Date(s) Investigated: November 15, 2016
Date of Report: April 4, 2017

IEQ Concern:

An individual reported a musty smell coming from the fan coil unit (FCU).

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:

- An odor was not detected during the investigation.
- Fan coil unit's (FCU) coils had some particulate buildup.
- The air filter within the FCU was last changed November 2015.
- The outdoor air volume being introduced via the classroom's supply air diffusers was deficient by the +/- 10% rule. The mechanical prints indicate 225 cubic feet per minute (cfm), but actually providing approximately 136 and 152 cfm.
- As in a past investigation (May 2016), the weather experienced extreme fluctuations (upper 60's in beginning of November 2016) during the single odor incidents. The short transitions in weather may produce an inherent odor associated with components of the HVAC system (i.e. burning smell when heat hasn't been used in a while and same for cooling with a damp and/or cold metallic aroma).

Corrective Actions:

- Work order 12909 was generated.
- The FCU coils were cleaned.
- The FCU air filter was changed on January 19, 2017.
- Building Services HVAC shop will evaluate the outdoor air CFM deficiency during 2017 spring break. If not able to address internally, the services of a mechanical contractor will be rendered to review and address during the summer break.