School/Facility: Glenwood Middle

Location: Administrative Workroom

Date of IEQ Report Form: September 29, 2016

Date(s) Investigated: September 6, 2016 through January 5, 2017 (on-going verbal communication)

Date of Report: February 7, 2017

IEQ Concern:

An individual expressed a health concern while in the work room with the door closed.

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 air exchanges per hour were less (~5) than in a 2008 investigation. The prior investigation pertained to a similar concern reported by this same individual.

- The mechanical engineer involved with the current HVAC renovation originally designed as a conference room not a work room. Thus the cfm was based on occupancy. The mechanical engineer indicated the American Society of Heating, Refrigeration, Air Conditioning and Heating Engineers does not have a ventilation rate for work rooms, but found that International Mechanical Code does which would make the exhaust 153 cubic feet per minute (cfm). The mechanical engineer could increase exhaust from 100 cfm to 155 cfm.

Corrective Actions:

- The mechanical engineer anticipates having the exhaust increased to 155 within the next month in order to achieve more air exchanges per hour.
- Ensure proper operation of laminator and use appropriate laminate film.

- Continue to maintain proper maintenance and service of all copiers. If any doubt, contact service provider to schedule a maintenance visit.

- The school administration may consider moving the work room (i.e. copiers and laminator) to another room away from the administrative area.

- An earlier suggestion to install another door to separate the work room from front office area is not feasible or practical since a sprinkler head is present and along with other controls.

- Installing a door to the work room from the front main hallway was another suggestion. However, if feasible, budget constraints would make this a low priority and the existing door would have to be removed to prevent the original concern from occurring.

- Bullet points 5 and 6 would have to be submitted to Building Services and considered a minor renovation project.