

**School/Facility:** Glenwood Middle  
**Location:** Classrooms 1, 4, and 7  
**Date of IEQ Report Form:** December 16, 2016  
**Date(s) Investigated:** January 5 and 12, 2017  
**Date of Report:** February 1, 2017

**IEQ Concern:**

Musty and/or chemical like odor.

**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:**

- Science island to the right when entering room 1 had a pipe within a sleeve with a semi gap between the two (cabinet doors below sink are screwed closed). The other pipes within the cabinet were sealed.
- Utility access panels (glass doors) are within the walls of science rooms 1 and 7. Room 4 is between these two science rooms and has metal access panels to the utility chase. A pipe in each chase was found uncapped.
- Based on the type or location of the trap within the science sinks, it could not be determined if they are filled with water or dried out. Dried out traps have the potential to allow for the back flow of sewer gases/odor. No odor was emanating from the sinks at time of the inspection. Not all sinks were said to be routinely used.
- The ceiling HVAC cassette unit in room 1 is beginning to accumulate particulate buildup on the air distribution louvers.
- The air volume (cubic feet per minute / cfm) discharging from the outdoor air unit's air supply diffusers in room 1 was outside the +/- 10% allowance. Actual was 305 cfm (total from both diffusers) while design calls for 369 – 395 cfm.

### Corrective Actions:

- School administration is to inform custodial and science staff to set a schedule to ensure water is used (~ 5 gallons) at least monthly in all science sinks and eyewashes to prevent traps from drying out. This includes the sink in the fume hood within the science prep room which is located behind room 4 between rooms 1 and 7.
- School administration is to inform custodial personnel to clean the fins of the ceiling HVAC cassettes in room 1 and ensure the fins in all rooms are cleaned per recommended cleaning frequency for air supply diffusers/HVAC vents.
- The deficiency in the outdoor air CFMs in room 1 will be addressed by the end of February as part of closing out the HVAC commissioning process.
- Building Service Plumbing Shop checked all science rooms, capped all piping in glass doors, and marked as abandoned gas piping in 3 rooms.
- Building Services Plumbing Shop checked all science sinks, removed doors to seal pipe sleeves and unused electrical conduits on 18 island sinks.
- The piping mentioned were not considered a potential odor source. The sleeves serve as a secondary containment.