

**School/Facility:** Waverly Elementary  
**Location:** Gymnasium  
**Date of IEQ Report Form:** September 22, 2017  
**Date(s) Investigated:** September 22 and October 16, 2017  
**Date of Report:** December 14, 2017

**IEQ Concern:**

The smell of varnish and/or paint from the gymnasium was reported by staff members.

**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 gymnasium was newly constructed as part of the school's Phase I renovation / addition and was completed at the beginning of the 2017 school year.
- The gymnasium was sampled for Total Volatile Organic Compounds (TVOC) as part of the Leadership in Energy and Environmental Design (LEED) certification. LEED is a rating system devised by the United States Green Building Council (USGBC) to evaluate the environmental performance of a building and encourage market transformation towards sustainable design. Testing is completed by an environmental consultant before releasing area for occupancy. TVOCs were below the maximum concentrations established by LEED.
- During the investigation, a gym floor finish odor could be detected within the gymnasium on both visits. The exterior doors were open with workers touch-up painting door hardware on the initial visit.
- The ventilation system was not 100% functional at the time of the reported concern or during the initial visit. Upon the second visit, the ventilation system was functional.

- Product safety data sheets used for the gym floor finish (Buckeye Coliseum 100 & 350 and Bona X Sport Court Lines) were obtained to compare chemical components with the LEED's TVOC listing and what can be detected by a photoionization detector (PID) used during the investigation.
- The PID was able to measure the VOCs within the products. The PID was used to sample the ambient air and at the floor's surface. No VOCs (in parts per million) were detected.

**Corrective Actions:**

- In general, VOCs have lower odor thresholds in comparison to health / safety hazard thresholds, thus individuals will detect an odor without it representing a health concern.
- Time and ventilation will assist with diluting and weakening the odor.
- No further action is required.