

EXECUTIVE SUMMARY

Ramboll Environ conducted an indoor environmental quality (IEQ) evaluation at Fairview Elementary School on February 9, 2016. The scope of the evaluation included visual assessments and air and water quality testing to identify those conditions consistent or inconsistent with good IEQ. The purpose of the survey was to screen the building for potential IEQ concerns in accordance with the school districts policy of proactive screening every 4 years. The previous survey at Fairview was performed in 2012 (report dated May 11, 2012).

Measurements were made for temperature, relative humidity (RH), carbon monoxide (CO), and carbon dioxide (CO₂). Air samples were collected and analyzed for mold spores. Water samples were analyzed for lead, copper, and iron. The visual inspection focused on accessible areas of ventilation systems, hallways, classrooms and mechanical areas.

Overall environmental quality in the school was found to be very good. Temperature, RH, and CO values were within recommended ranges. All water quality parameters for lead, copper, and iron were also within recommended ranges. CO₂ levels were above guidelines in the gym during the afternoon. This would not be a health risk, but indicates that the amount of outside air being provided by the ventilation system should be increased. CO₂ levels in all other areas of the school were within guidelines.

Water analysis found lead, copper and iron levels to be below U.S. Environmental Protection Agency (EPA) drinking water standards.

There was no visually apparent mold growth or obvious signs of water damage on accessible surfaces. The airborne mold spore concentrations collected inside the school showed similar concentrations in all of the areas tested and typical for winter months. The types of mold identified in the music room were different than other classrooms, however, levels were low. Visual inspection did not identify any obvious mold growth or water damage in the music room. Based on this data, airborne mold in the building was indicative of normal/typical conditions and would not be a concern.

A few items in need of follow-up were identified. These were mostly related to conditions that would not present immediate IEQ concerns, however, if left unaddressed, could create problems in the future. Recommendations and follow-up action that has been taken is summarized as follows:

- Based on inconclusive findings, follow-up inspection and re-testing for airborne mold in the music room 146 was recommended. The follow-up assessment for this room was performed on May 13, 2016. There was no evidence of visual mold growth or moisture damage on surfaces or in the univent that provided ventilation to this room. Airborne mold spore levels were lower in this classroom when compared to outdoors with similar mold types identified indoors and outdoors (indoor levels were less than 5% of levels measured outdoors).
- On the day of the assessment, airflow through AHU #3 that served the gymnasium appeared to be low. Follow up discussion with maintenance staff indicated that air volume delivered by this unit is modulated by carbon dioxide sensors. The sensors increase the amount of air based on occupancy of the gym. Decreased airflow when the gym is unoccupied would be expected. It is recommended that the HVAC contractor that services this unit verify calibration of the carbon dioxide sensors annually.
- Consider installing a condensate pan liner in AHU #1 to prevent further corrosion and damage to the AHU and verify that water drains properly from this pan. This is not current IEQ concern but over time corrosion could further deteriorate the pan resulting in water damage to the building. "Pour-in" polyurethane pan liners are available to prevent corrosion from occurring.

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Mount Prospect, Illinois**

Installation of a pan liner should be done over the summer when the building is not occupied. It was discussed with the maintenance coordinator and will be investigate over the summer when school is not in session.

- Continue the Univent condensate drain tray summer cleaning. This is not so much a recommendation, as a reminder to include this in the annual cleaning that is performed in the summer since these types of pans are difficult to inspect and are common causes of IEQ concerns.