



Eric J. Holcomb
Governor

Lindsay M. Weaver, MD, FACEP
State Health Commissioner

March 1, 2024

99 RDC 574

Tim Waltz, Principal
Saint John Lutheran School
301 S. Oak Street
Kendallville, IN 46755

Dear Principal Waltz:

The purpose of this letter is to report the result of our indoor air quality evaluation of St. John Lutheran School on February 26th. This evaluation was conducted at the request of a*concerned citizen to address the health concerns of the occupants that may be related to indoor air quality of the school. They expressed concerns that there was mold growing in the kindergarten classroom.

The Indiana State Department of Health's Microbiological Laboratory incubated and counted the fungal and bacterial units. The colony forming units per cubic meter of air (CFU/M³) were computed taking the fungal or bacterial counts and dividing by the total volume of the sampled air. The indoor fungal concentrations were lower than the outdoor concentration. Please refer to Table 1 for further details. There are no limits established as an acceptable concentration of fungal counts indoors. There are guidelines that recommend fewer counts indoors than outdoors. The indoor bacteria concentrations were within the range typically seen indoors.

The Carbon dioxide (CO₂) levels inside were measured with the highest reading 1573 parts CO₂ per million parts of air (ppm) in the kindergarten room. The School Indoor Air Quality rule, 410 IAC 33-4-2 states "(a) "Outdoor Air shall be supplied to classrooms when occupied. (b) Carbon dioxide concentrations in the breathing zone shall never

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exceed 700 ppm over the outdoor concentration”, in this case giving an upper limit of 1128 ppm. ASHRAE (American Society of Heating, Refrigeration, and Air Conditioning Engineers) recommends 15 cfm (cubic feet per minute) of outdoor air per person for classrooms.

The outdoor relative humidity was measured at 32 percent (%) and the indoor relative humidity had a range of 37 to 39%. The American Society of Heating, Refrigeration and Air-conditioning Engineers (ASHRAE) recommends the relative humidity in habitable spaces preferably should be maintained between 30% and 60% to minimize growth of allergenic and pathogenic organisms. Humidity levels above 50% have been found to increase the population size of molds, fungi and mites that may cause allergies. The evidence suggests that humidity levels should be maintained between 40% and 50% to reduce the incidence of upper respiratory infections and to minimize the adverse effect on people suffering from asthma or allergies. Such a range would be hard to maintain, however, exposure to higher or lower levels are unlikely to affect the health of most people.

Based on sample results and our visual inspection we note the following:

- 1) Our sample results did not indicate that there is a mold issue in any of the rooms sampled.
- 2) **410 IAC 33-4-6 (c) states “When a water leak or intrusion is discovered, corrective action shall be taken within forty-eight (48) hours.”** There were water-stained ceiling tile in the kindergarten classroom. We recommend checking to ensure there are no active leaks then replacing the stained tile, so any new leaks are easily identified and addressed.
- 3) **410 IAC 33-4-2(b) states “carbon dioxide concentrations in the breathing zone shall never exceed 700 ppm over the outdoor concentration”,** The carbon dioxide concentrations were higher than allowed. The HVAC dampers should be checked to ensure that sufficient outside air is being supplied to the classrooms.
- 4) **410 IAC 33-3-1(b) states “The IAQ coordinator’s contact information shall also be published: (1) on the school or state agency’s website; and (2) in the**



school or state agency's handbook" The school needs to designate an individual as their Indoor Air Coordinator and include their contact information as stated above.

410 IAC 33 requires you to respond within 60 days of any actions you take based upon this report.

The School Indoor Air Quality rule 410 IAC 33-6-2 requires this report, within 5 days of receipt, to be posted for 14 days both at the school building stated in the report, and on the school's website, where it is accessible to students, parents, and employees. The rule also requires your response to this report to be posted within 5 days of sending the response to us. That too is to be posted for 14 days. Please respond back providing the links where these are posted on the website.

Individuals experiencing any health problems should seek medical advice from a physician.

If you have questions, I can be reached at 317.682.9033.

Sincerely,

RON CLARK,
Industrial Hygienist
Indoor Air Section, Environmental Public Health

Enclosure



TABLE 1
Saint John Lutheran School

Computed Microbiological Air Sample Results
Taken February 26, 2024

Sample	Location	Occupants	Temp °F	RH %	CO2 ppm	Fungal cfu/m3	Bacterial cfu/m3
1	Kindergarten	16	69	39	1573	20	15
2	1st grade	17	70	37	1484	15	5
3	2nd grade	19	70	37	1454	5	15
4	Outside, south side of bldg.	0	58	32	428	120	5

Notes:

% -----percent

ppm-----parts per million

CFU/M³—colony forming units per cubic meter of air