Indiana Department of Health

Mike Braun
Governor

Lindsay M. Weaver, MD, FACEP
State Health Commissioner

January 30, 2025

RDC 610
Dr. Stephen Bournes, Superintendent
School City of East Chicago
Administration Building,
1401 E 144th Street
East Chicago, IN 46312

Dear Dr. Bournes:

The purpose of this letter is to report on the result of our indoor air quality evaluation of the East Chicago Central High School on January 27th. Our office received a complaint regarding excessive temperatures in classrooms.

The Carbon dioxide (CO_2) levels inside were measured with the highest reading 889 parts CO_2 per million parts of air (ppm) in room A218. 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 exceed 700 ppm over the outdoor concentration", in this case giving a limit of 1105 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 33 percent (%) and the indoor relative humidity had a range of 10 to 14%. 410 IAC 33-4-4 sets the maximum relative humidity level in air-conditioned schools at 65% during periods of student occupancy. In the US EPA's publication "Mold Remediation in Schools and Commercial Buildings" they recommend maintaining a relative humidity level below 60% but ideally 30 – 50% if possible. Studies have shown that low relative humidity can cause dryness and irritation of the respiratory tract making individuals more susceptible to infections while high relative humidity levels can promote the growth of allergens such as dust mites or mold.

Based on our measurements and our visual inspection we note the following:

1) **410 IAC 33-4-4 (a) states "Heating facilities shall be capable of and shall be operated to maintain a temperature during periods of student occupancy not less than the following:**
    a. **(1) Sixty-eight (68) degrees Fahrenheit (F) in all:**
    b. **(A) instructional rooms;**
    c. **(B) offices;**
    d. **(C) locker rooms; and**
    e. **(D) cafeterias**

    And 410 IAC 33-4-4 (b) states "Where provided air-conditioning systems shall be capable of providing and shall be operated to maintain a temperature not to exceed seventy-eight (78) degrees Fahrenheit and sixty-five percent (65%) relative humidity during periods of student occupancy."
    There were occupied classrooms at 82 degrees, 4 degrees above the maximum allowed temperature. We understand that a new air conditioning system is being installed and is currently not operational, but as this is wintertime, we feel that it is reasonable for either classroom dampers or the building fresh air dampers to be adjusted as needed to help maintain classroom temperatures between the allowed 68 to 78 degree range.

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 working 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 working 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.

If you have questions I can be reached at 317.682.9033.

Sincerely,

Ron Clark

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

Enclosure

TABLE 1
East Chicago Central High School

Indoor Air Quality Measurements
Taken January 27, 2025

Sample	Location	Persons	Temp °F	RH %	CO2 ppm
1	A109	18	75	14	744
2	A150	14	76	10	572
3	ZC8	7	73	11	692
4	A340	19	75	14	717
5	A323	0	74	12	704
6	A330	19	74	13	806
7	A318	8	79	11	731
8	A319	14	79	11	753
9	A270	21	76	13	851
10	A272	9	74	12	717
11	A281	8	75	10	568
12	A262	24	82	12	889
13	A218	12	82	12	889
14	Outdoors	---	24	33	405

Notes: Windows were open in rooms A150 and A281
% ---------percent
ppm-------parts per million