

**INTERPRETATION IC 62-1989-10 OF**  
**ASHRAE STANDARD 62-1989**  
**VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY**

October 18, 1993

**Request from:** David R. Aldridge, U.S. Army Engineer Division - Huntsville, CEHND-ED-ME, Huntsville, AL 35807-4301

**Reference.** This request refers to the requirements given in ASHRAE Standard 62-1989, Subsection 6.1 Ventilation Rate Procedure, and paragraph 6.1.3.4 Intermittent or Variable Occupancy.

**Background.** Paragraph 6.1.3.4 reads in part:

"Where peak occupancies of less than three hours duration occur, the outdoor air flow rate may be determined on the basis of average occupancy for buildings for the duration of operation of the system, provided the average occupancy used is not less than one-half the maximum."

Mr. Aldridge's letter presupposes a case where the peak occupancy of a classroom is 300 students and the occupancy period is less than three hours. His letter opines that the "less than three hours duration" stipulated in 6.1.3.4 is to be used as a fixed elapsed time period over which to average the occupancy loading; i.e., paragraph 6.1.3.4 allows averaging the occupant loading over the period of occupancy which is to be less than three hours. Thus, 300 persons for 1.5 hours and zero persons for 1.5 hours is an average of 150 persons over 3 hours. This results in an outdoor air requirement of 150 persons x 15 cfm/person = 2250 cfm.

**Question.** Is Mr. Aldridge's interpretation correct?

**Answer.** No

**Comment.** It is coincidence that the numerical result happens to be correct for the example presented. The occupancy is to be averaged over "the duration of operation of the system," not "over the period of occupancy which is to be less than 3 hours."

The intermittent occupancy provision contained in 6.1.3.4 of the Standard also can be applied to multiple daily episodes of peak occupancy as long as each is for less than three hours. It is intended to apply to occupancy profiles that permit pollutant reduction through over-ventilation (on a per person basis) during intervening periods of reduced occupancy between peaks.

More precise guidelines will be studied for possible incorporation into the next revision of the standard.