

IAQ Procedure Panel
Addendum #1, Enabling Section
4/26/98

This addendum is intended to replace section 6.2, plus fix a few other problems related to the IAQ procedure. It describes the requirements of the IAQ procedure in mandatory and enforceable language. It does not tell one when to use it, only what to do. It does not go as far as 62R, it only serves as a short-term replacement for the material in 62-1989.

The addendum consists of the following four items:

- 1. Delete the last two bullets of section 6.1 as these are relevant to the IAQ Procedure but are listed here under the Ventilation Rate Procedure.**
- 2. Delete the last two paragraphs of section 6.1.3.2. They are only applicable to the IAQ Procedure, but are included here under the Ventilation Rate Procedure.**
- 3. Replace section 6.2 as follows:**

6.2 Indoor Air Quality Procedure

The IAQ Procedure is a performance-based design approach in which the building and its ventilation system are designed to maintain the concentrations of specific contaminants at or below certain limits identified during the building design and to achieve an 80% target level of indoor air quality acceptability by building occupants.

6.2.1 Design Criteria

6.2.1.1 Contaminants.

The airborne contaminants that are expected to exist in the space shall be considered. Those that are contaminants of concern for purposes of design, and their sources and estimated source strengths, shall be identified. For each contaminant of concern, a concentration limit, its corresponding exposure period (e.g., one hour, 8 hours, or continuous), and reference to an authoritative reference for that concentration limit shall be specified. See Table 3 and Appendix C for some contaminant concentration guidelines.

6.2.1.2 In addition to specifying concentration limits, the criteria to achieve an 80% target level of occupant acceptability with the indoor air quality shall be specified at the design stage. In addition to bioeffluents, the impact of other contaminants on odor and other aspects of occupant perception of indoor air quality shall also be considered in establishing the criteria to achieve the target level of occupant acceptability.

6.2.1.3 These concentration limits and target levels of occupant acceptability shall constitute the design criteria.

6.2.2 Design

Acceptable approaches to implementing the design goals within the IAQ procedure include any of the following: mass balance analysis, the use of design approaches that have proved successful in similar buildings, and the use of contaminant monitoring and subjective occupant evaluations in

the completed building as a means of demonstrating compliance with the design goals. An acceptable approach to subjective evaluation is presented in Appendix C.

6.2.2.1 Appendix E presents steady-state mass balance equations that describe the impact of air cleaning on outdoor air and recirculation rates. These equations are acceptable for implementing the IAQ procedure.

(Committee note: We need to prepare another addendum that revises Appendices E and F by making it relevant to ASHRAE Standard 129 and converting it into normative language.)

6.2.3 Documentation

When the IAQ Procedure is used, the following information shall be included in the design documentation: the contaminants considered, the contaminants of concern included in the design process, the sources and estimated source strengths of the contaminants of concern, the design criteria referred to in Section 6.2.1, the design approach used to control the contaminants of concern, and the background or justification for this design approach. If the design is based on approaches that have proved successful in similar buildings, the documentation shall include the basis for concluding that the design was successful in the other buildings and the basis for concluding that the previous buildings are relevant to the new design. If contaminant monitoring and occupant evaluation are to be used to demonstrate compliance, then the monitoring and evaluation plans shall also be included in the documentation.

IAQ Procedure Panel
Addendum #2, Triggering Section
4/26/98

This addendum replaces material in sections 4 and 6. It describes situations in which the IAQ procedure can or must be used, and it does so in mandatory and enforceable language. It does not tell one how to use it, only when. The how is contained in the so-called "enabling" addendum.

The addendum consists of the following two items:

1. Delete section 4.2 Classification.

This section should be deleted for a few reasons: it serves no purpose, it is not in code language, and the issue of "which procedure is used when" is better located in section 6 on procedures. Steve has proposed replacing section 4 with a section on Application that describes when to use the standard and what we mean by compliance, but that is a separate issue.

2. Reorganize section 6 as follows:

Eliminate all the language under 6. in 62-1989.

Add a new section 6.1 General that describes the procedures or options for design, i.e. the ventilation rate procedure and the IAQ procedure.

[Committee note: Need to coordinate with Steve Taylor's proposed change if both are accepted.]

6.1 GENERAL. Either the Ventilation Rate Procedure or the IAQ Procedure shall be used to design each ventilation system in a building, subject to the following considerations and restrictions.

6.1.1 Ventilation Rate Procedure. This is a prescriptive procedure in which outdoor air intake rates are determined based on occupancy levels and floor area. It is assumed to provide acceptable indoor air quality by virtue of the outdoor air ventilation rates provided.

6.1.2 IAQ Procedure. This is a performance-based design procedure that provides acceptable indoor air quality by use of air cleaning, source control, ventilation, or a combination thereof. The IAQ Procedure shall be used when credit is taken for controls that may enable a reduction in outdoor air intake rates (such as cleaning of recirculated air or use of lower-emitting materials). The IAQ Procedure shall also be used when the ventilation system is serving spaces expected to contain contaminants or sources that are not typical for those space types. The IAQ Procedure may also be used where specified contaminant concentrations are to be achieved.

Delete the exception 1 in section 6.1.3; this material is covered above under the 6.1.2.

Renumber sections 6.1, 6.2 and 6.3 as 6.2, 6.3 and 6.4.