ADDENDA

ASHRAE Addendum e to
ASHRAE Guideline 10-2011

Interactions Affecting the Achievement of Acceptable Indoor Environments

Approved by ASHRAE on November 1, 2014.

This addendum was approved by a Standing Guideline Project Committee (SGPC) for which the Standards Committee has established a documented program for regular publication of addenda or revisions, including procedures for timely, documented, consensus action on requests for change to any part of the guideline. The change submittal form, instructions, and deadlines may be obtained in electronic form from the ASHRAE website (www.ashrae.org) or in paper form from the Senior Manager of Standards.

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 ISSN 1049-894X

SPECIAL NOTE

This Guideline was developed under the auspices of ASHRAE. ASHRAE Guidelines are developed under a review process, identifying a Guideline for the design, testing, application, or evaluation of a specific product, concept, or practice. As a Guideline it is not definitive but encompasses areas where there may be a variety of approaches, none of which must be precisely correct. ASHRAE Guidelines are written to assist professionals in the area of concern and expertise of ASHRAE's Technical Committees and Task Groups.

ASHRAE Guidelines are prepared by Project Committees appointed specifically for the purpose of writing Guidelines. The Project Committee Chair and Vice-Chair must be members of ASHRAE; while other committee members may or may not be ASHRAE members, all must be technically qualified in the subject area of the Guideline.

Development of ASHRAE Guidelines follows procedures similar to those for ASHRAE Standards except that (a) committee balance is desired but not required, (b) an effort is made to achieve consensus but consensus is not required, (c) Guidelines are not appealable, and (d) Guidelines are not submitted to ANSI for approval.

The Senior Manager of Standards of ASHRAE should be contacted for

a. interpretation of the contents of this Guideline,
b. participation in the next review of the Guideline,
c. offering constructive criticism for improving the Guideline, or
d. permission to reprint portions of the Guideline.

(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

This addendum adds a more appropriate reference for the third paragraph of Section 6.5.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

Addendum e to Guideline 10-2011

Modify Section 6.5 as follows.

6.5 Indoor Air Quality—Illumination (Electric). Electric lighting fixtures can be the source of direct pollutant emissions through off-gassing of plasticizers from the insulation on electrical wires and through polychlorinated biphenyl (PCB) leakage from transformers or ballasts in old lighting installations. Plasticizers can degrade due to heating caused by the current passing through an undersized wire, due to interaction with ozone or other oxidants in the air, or due to the normal off-gassing characteristic of soft plastics.

Lighting fixtures can also transform chemicals and particles that contact hot surfaces on the illumination source or encounter the UV or infrared (IR) wavelengths in the emitted radiation spectrum. UV radiation can degrade materials and accelerate their aging and disintegration. IR and visible portions of the radiation spectrum can result in higher temperatures, thereby leading to more rapid evaporation/emission.

UV from electrical lighting may be used to control microbial contaminants in HVAC systems or in upper-room air (e.g., in tuberculosis treatment areas), especially in hospitals (Menzies et al. 2003; Xu et al. 2003; Mudarri and Fisk 2007).

Modify Section 10 as follows.

10. REFERENCES AND BIBLIOGRAPHY

Menzies, D., J. Popa, J.A. Hanley, T. Rand, and D.K. Milton. 2003. Effect of ultraviolet germicidal lights installed in office ventilation systems on workers' health and wellbeing: Double-blind multiple crossover trial. *The Lancet* 362:1785–91.

POLICY STATEMENT DEFINING ASHRAE'S CONCERN FOR THE ENVIRONMENTAL IMPACT OF ITS ACTIVITIES

ASHRAE is concerned with the impact of its members' activities on both the indoor and outdoor environment. ASHRAE's members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted Standards and the practical state of the art.

ASHRAE's short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the Standards and Guidelines as established by itself and other responsible bodies.

As an ongoing goal, ASHRAE will, through its Standards Committee and extensive Technical Committee structure, continue to generate up-to-date Standards and Guidelines where appropriate and adopt, recommend, and promote those new and revised Standards developed by other responsible organizations.

Through its *Handbook*, appropriate chapters will contain up-to-date Standards and design considerations as the material is systematically revised.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating Standards and Guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.

ASHRAE · 1791 Tullie Circle NE · Atlanta, GA 30329 · www.ashrae.org

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1/15