EXHIBIT
13

Environmental Tobacco Smoke

Position Document
Approved by ASHRAE Board of Directors
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The ASHRAE Position Document on Environmental Tobacco Smoke was developed by the Society's Environmental Tobacco Smoke Position Document Committee.

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Executive Summary

This position document has been written to provide the membership of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) and other interested persons with information on the health consequences of exposure of nonsmokers to tobacco smoke in indoor environments, and on the implications of this knowledge for the design, installation and operation of heating, ventilating, and air-conditioning (HVAC) systems. ASHRAE's sole objective is to advance the arts and sciences of heating, refrigeration, air conditioning and ventilation, and their allied arts and sciences and related human factors, for the benefit of the public. Therefore, the health effects of indoor exposure to emissions from cigarettes, cigars, pipes, and other tobacco products have long been relevant to ASHRAE.

For more than three decades, researchers have investigated the health and irritant effects among non-smokers exposed to tobacco smoke in indoor environments. The preponderance of credible evidence links passive smoking to specific diseases and other adverse health effects in people. A number of national and global review groups and agencies have concluded that exposure of nonsmokers to tobacco smoke causes adverse effects to human health. No cognizant authorities have identified an acceptable level of environmental tobacco smoke (ETS) exposure, nor is there any expectation that further research will identify such a level.

International experience has been gained over several decades with using various strategies to reduce ETS exposure, including separation of smokers from nonsmokers, ventilation, air cleaning and filtration, and smoking bans. Only the last provides the lowest achievable exposures for nonsmokers and is the only effective control method recognized by cognizant authorities (see *Findings of Cognizant Authorities*). At the time of this writing, several nations, eleven states in the U.S. and hundreds of municipalities and other jurisdictions have banned tobacco smoking completely in all public buildings and workspaces. The U.S. government has banned smoking in its workplaces. Experience with such bans documents that they can be effective, practically eliminating ETS exposure of non-smokers. While exposure is decreasing internationally because of these smoking bans in public and private buildings, and a decrease in the prevalence of smoking, substantial portions of the population are still regularly exposed in workplaces, homes and public places, such as entertainment venues.

ASHRAE concludes that:

- It is the consensus of the medical community and its cognizant authorities that ETS is a health risk, causing lung cancer and heart disease in adults, and exacerbation of asthma, lower respiratory illnesses and other adverse effects on the respiratory health of children.
- At present, the only means of effectively eliminating health risk associated with indoor exposure is to ban smoking activity.
- Although complete separation and isolation of smoking rooms can control ETS exposure in non-smoking spaces in the same building, adverse health effects for the occupants of the smoking room cannot be controlled by ventilation.
- No other engineering approaches, including current and advanced dilution ventilation or air cleaning technologies, have been demonstrated or should be relied upon to control health risks from ETS exposure in spaces where smoking occurs. Some engineering measures may reduce that exposure and the corresponding risk to some degree while also addressing to some extent the comfort issues of odor and some forms of irritation.
- An increasing number of local and national governments, as well as many private building owners, are adopting and implementing bans on indoor smoking.
- At a minimum, ASHRAE members must abide by local regulations and building codes and stay aware of changes in areas where they practice, and should educate and inform their clients of the substantial limitations and the available benefits of engineering controls.
- Because of ASHRAE's mission to act for the benefit of the public, it encourages elimination of smoking in the indoor environment as the optimal way to minimize ETS exposure.