

**NC Department of Insurance
Office of the State Fire Marshal - Engineering Division
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Hookah Lounge Ventilation

Code: 2012 NC Mechanical Code
Section: 403.1, Table 403.3

Date: September 3, 2014

Question:

For ventilation purposes, what occupancy classification in Table 403.3 is a hookah lounge or bar?

Answer:

Smoking lounges.

NCMC Section 403.3 reads "...Ventilation rates for occupancies not represented in Table 403.3 shall be those for a listed occupancy classification that is most similar in terms of occupant density, activities and building construction; or shall be determined by an approved engineering analysis..."

The Smoking lounge classification¹ is the closest prescriptive category there is in the North Carolina Mechanical Code to hookah lounges. The permit holder has the option of utilizing the services of a registered design professional to engineer a ventilation system that will prevent the maximum concentration of contaminant from exceeding that obtainable by the rate of outdoor air ventilation determined in accordance with Section 403.3, refer to the Exception to NCMC 403.2.

The ventilation rates Table 403.3 are, for the most part, based on values contained within the ASHRAE 62.1-2004 standard. However, in the smoking lounge category, this standard did not offer a prescriptive value, and has not done so in any subsequent standard either.

The ASHRAE 62.1-2004 standard, section 6.2.9 Ventilation in Smoking Areas states:

Smoking areas shall have more ventilation and/or air cleaning than comparable no-smoking areas. Specific ventilation rate requirements cannot be determined until cognizant authorities determine the concentration of smoke that achieves an acceptable level of risk.

The smoke (or vapor) of the hookah process has nicotine and other contaminants² and it will be difficult for a design professional to establish a safe ventilation rate other than the prescriptive rates; the code official also would typically not be in a position to establish an acceptable

¹ The code, or this interpretation, makes no effort to prohibit smoking, or provide the legal definition of smoking.

² <http://www.cdc.gov/features/hookahsmoking/>

ventilation rate other than the prescriptive value. However, the option does remain in the code for a registered design professional to design a system that will meet the intent of Table 403.3 ventilation rates.

Keywords:

Charcoal, carbon monoxide, sublimation