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Santa Maria Brazil Nightclub Fire

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An early morning fire on January 27 in a nightclub in Santa Maria Brazil took the lives of 239, making it the third-deadliest nightclub fire in history. Santa Maia is a college town and the Club Boate Kiss was hosting an event for the Federal University of Santa Maria according to local media reports. It was the last

weekend of summer break for many of the students who attend one of the universities and colleges in Santa Maria. Officials estimated that at least half of the people who died were students.

The cause of the fire has been reported as the band pyrotechnics ignited the foam insulation that was

installed for sound proofing on the ceiling. There also have been reports that security guards held people back because they had not paid their bar bill. The pyrotechnics and foam are sad reminders to West Warwick, RI in 2003 where 100 were killed at the Station nightclub.

As we did here I'm sure

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officials in Brazil will strengthen their fire and building codes. We do need to do that, plus vigorous enforcement of those codes, especially occupant loads. They need to include aggressive enforcement of pyrotechnics, built in fire protection (sprinklers), crowd managers, public announcements, life safety evaluations. However everyone must become active in making these clubs safe, this includes you!

John Barylick, author of *Killer Show: The Station Nightclub Fire, America's Deadliest Rock Concert* said it best. *"One of the most important lessons I learned from my experience in this case was that we all need to be aware that we cannot count on bands, concert promoters, club owners, bouncers—or even fire officials—to ensure our safety. We need to be our own best fire marshals. To be safe, go with your gut. If it feels wrong, or dangerous, leave. No show is worth your life."*

One of the most important code requirement is crowd managers. The following are the Crowd Manager requirements in NFPA 1 Fire Code.

NFPA 1 Code Requirements for Fire Code Crowd Managers

20.1.5.6* Crowd Managers.

A.20.1.5.6 The training program in crowd management should develop a clear appreciation of factors of space, energy, time, and information, as well as specific crowd management techniques such as metering. Published guidelines on these factors and techniques are found in the SFPE Handbook of Fire Protection Engineering, Section 3, Chapter 13.

20.1.5.6.1 Assembly occupancies shall be provided with a minimum of one trained crowd manager or crowd manager supervisor. Where the occupant load exceeds 250, additional trained crowd managers or crowd manager supervisors shall be provided at a ratio of 1 crowd manager or crowd manager supervisor for every 250 occupants, unless otherwise permitted by the following:

- (1) This requirement shall not apply to assembly occupancies used exclusively for religious worship with an occupant load not exceeding 2000.
- (2) The ratio of trained crowd managers to occupants shall be permitted to be reduced where, in the opinion of the AHJ, the

existence of an approved, supervised automatic sprinkler system and the nature of the event warrant.

20.1.5.6.2 The crowd manager shall receive approved training in crowd management techniques.

The material in Section 3, Chapter 13, of the third edition of the SFPE Handbook of Fire Protection Engineering, which is referenced in A.20.1.5.6, makes a distinction between the required crowd management and the more extreme, but nonmandatory, crowd control. Crowd management meshes the design features of a facility, the established operating features of the facility, and an understanding of the occupants' expected natural behavior in the facility for a specific type of event. Crowd control, on the other hand, is often necessitated when crowd management fails.

20.1.5.7* Fire Detail. Fire details, if deemed necessary in any assembly occupancy, shall be determined by the AHJ.

A.20.1.5.7 Because of the variety of types of places of assembly covered in this Code, no general requirement for patrols or fire watchers has been included. The NFPA 102 Commit-

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tee fully recognizes the importance of this feature of fire protection, however, and believes that a system of well trained patrols or fire watchers should be maintained in every place of assembly where fire hazards might develop. Such locations would include, among others, the spaces underneath grandstands and the areas inside and outside tents and air-supported structures. The fire watchers serve to detect incipient fires and to prevent an accumulation of materials that will carry fire. The number of such watchers required will, of course, vary for the different types of assembly occupancies, depending upon the combustibility of the construction and the number of persons accommodated. Provided with an adequate supply of portable fire extinguishing equipment located at readily accessible points, such a fire watch or detail should be able to prevent small fires from reaching serious proportions.

20.1.5.8* Drills.

A.20.1.5.8 It is important that an adequate number of competent attendants are on duty at all times when the assembly occupancy is occupied.

20.1.5.8.1 The employees or attendants of assembly occu-

pancies shall be trained and drilled in the duties they are to perform in case of fire, panic, or other emergency to effect orderly exiting.

20.1.5.8.2 Employees or attendants of assembly occupancies shall be instructed in the proper use of portable fire extinguishers and other manual fire suppression equipment where provided.

20.1.5.8.3* In the following assembly occupancies, an audible announcement shall be made, or a projected image shall be shown, prior to the start of each program that notifies occupants of the location of the exits to be used in case of a fire or other emergency:

- (1) Theaters
- (2) Motion picture theaters
- (3) Auditoriums
- (4) Other similar assembly occupancies with occupant loads exceeding 300 where there are noncontinuous programs

A.20.1.5.8.3 It is not the intent of this provision to require an announcement in bowling alleys, cocktail lounges, restaurants, or places of worship.

20.1.5.8.4 The require-

ment of 20.1.5.8.3 shall not apply to assembly occupancies in schools where used for nonpublic events.

The relatively simple requirement of 20.1.5.8.3 for notifying occupants of the location of exits can make a significant difference during an emergency. Note that the requirement does not apply to assembly occupancies where the flow of people is constantly changing, such as in a restaurant. Movie theaters commonly meet the provisions of 20.1.5.8.3 through means of sound and screen projection that are presented prior to the main feature, during the same period that notifications of restroom, trash container, and snack bar locations are made and previews are shown. The same complete message is thereby delivered to each audience without the need for human intervention.

REFERENCES THIS MATERIAL CAN BE FOUND IN:

Commentary Reference
NFPA 1, Fire Code, 2012 edition

Commentary comments are in italic font

Code References
NFPA 1, Fire Code, 2012 edition