

## LETTERS TO THE EDITOR

### COMMENTS FROM AMERICAN FOREST & PAPER ASSOCIATION

I would like to comment on the paper *Analysis of the Happyland Social Club Fire with Hazard I* by Bukowski and Spetzler, which appeared in No. 4, Vol. 4 of the *Journal of Fire Protection Engineering*.

The paper is an excellent illustration of the type of detailed analyses that can be performed with a state-of-the-art fire hazard assessment software package such as Hazard I. The authors present a reconstruction of the fire, analyze four potential mitigating strategies to avoid such disasters in the future, and make recommendations for the most cost-effective solution. However, the authors fail to mention one very important fact, i.e., that the building did not comply with the local building code. In addition, I feel the principal recommendation is not warranted, and I would like to substantiate my viewpoint as follows:

- A feature article in the May/June 1990 issue of the BOCA magazine mentions that the Happy Land Social Club had multiple building code infractions, and lists explicitly the lack of two means of egress at the first and second floors, absence of emergency lighting, and the absence of exit signs (see *The Building Official and Code Administrator*, May/June 1990, p. 28.) Furthermore, the New York City building code requires for F-4 type buildings with over 75 occupants that lining materials in exit ways be class A (flame spread index of 25 or less in ASTM E84.) This clearly was not the case. The main question is, what would the life loss and fire damage have been if the building had been code complaint? Unfortunately, the Bukowski/Spetzler analysis does not answer this question. However, New York City Building Commissioner Rudolph Rinaldi seems to be confident that the code requirements are adequate (see *The Building Official and Code Administrator*, May/June 1990, p. 30.)
- The authors recommend the use of noncombustible interior finish as the most cost-effective mitigating strategy. However, the hazard analysis software they used is not ca-

pable of evaluating flame spread over wall and ceiling surfaces. Their assessment of the involvement of linings is therefore very conservative. The code complying alternative of noncombustible linings in the entry might have been adequate in significantly reducing or even eliminating the death toll. However, this option was not and could not be evaluated with the software used by the authors. Moreover, the authors' recommendation to use non-combustible interior finish is not consistent with the findings of an earlier study on fire risk of interior finish in restaurants (see *Fire Risk Assessment Method: Case Study 4, Interior Finish in Restaurants*, NISTIR 90-4246, National Institute of Standards and Technology, Gaithersburg, MD, May 1990.) This study was part of a larger project under the auspices of the National Fire Protection Association. The study concluded that interior finish in restaurants does not present a major fire risk. The fire risk assessment in this study was based on multiple runs with a modified version of Hazard I, so that fire spread over wall linings could be evaluated. Finally, Bukowski and Spetzler admit that the requirement for noncombustible finish does not eliminate fire hazard associated with the contents. The aforementioned NFPA study indicates that this in fact may be a bigger problem. Consequently, the sprinkler option suggested by the authors as an alternative, but more expensive, solution actually seems to be preferable.

I look forward to the publication of my letter in the *Journal*, and to a response from the authors.

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