



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

JUN 26 1979

MEMORANDUM FOR: D. B. Vassallo, Assistant Director  
for Light Water Reactors, DPM

FROM: Voss A. Moore, Acting Assistant Director  
for Plant Systems, DSS

SUBJECT: BOARD NOTIFICATION - FIRE RETARDANT CABLE COATINGS

By letters dated April 16 and June 1, 1979, the Flamemaster Corporation, Sun Valley, California, claims that a fire retardant cable coating not properly qualified may be a safety problem.

Cable coatings are fire retardants and are not considered to be fire barriers. In implementing the defense-in-depth approach to nuclear power plant safety, the role of the cable coating is to retard the spread of the fire. Its failure to do so should not result in the impairment of the ability to shutdown the plant safely; however, where the coatings are applied and are required by our guidelines, we expect them to work. All the cable coatings tested at Sandia which are UL/FM listed offered some fire protection to the cables that they covered.

NRR Office Letter No. 19 calls for a determination of the safety significance of new information by evaluating "whether this information could reasonably be regarded as putting a new or different light upon an issue before Boards or raising a new issue." A study of the Flamemaster letters suggests that failure of a cable coating to prevent propagation of a fire to adjacent cable trays, and possibly between redundant circuits could be unsafe. Therefore, I conclude that appropriate Boards should be notified. In accordance with NRR Office Letter No. 19 requirements, I am providing you with the following:

1. The item of notification;
2. Considerations regarding relevancy and materiality;
3. Statement of perceived significance; and
4. Relation to Projects.

1. The Item of Notification

The two letters from Flamemaster Corporation contend that "a product with no rigorous proof of performance is not properly qualified to do

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that safety job and yet is being specified for use in a nuclear generating plant."

2. Relevancy and Materiality

The allegation is relevant and material to all nuclear power plants using a fire retardant coating. However, as explained later, I do not agree with this allegation.

3. Significance

We consider fire retardant coatings to be effective in reducing the fire propagation rate in cables. We do not consider such coatings to be a complete and effective fire barrier that will prevent ignition or electrical failure of cables that are exposed to fire. Because of the NRC defense-in-depth approach to nuclear power plant safety, the failure of the cable coating to perform its function of retarding the spread of the fire would not, by itself, result in impairment of shutting down the plant safely.

4. Relations to Projects

The NRC guidelines recommend the application of fire retardant coatings to cables that have not passed the IEEE-383 fire test. Tests performed at Sandia indicate that all UL/FM listed cable coatings offered some fire protection to the cables that they covered. During the fire protection program review of each plant, the NRC reviewer ascertains that adequate test data and other information are available to justify whatever credit is taken for any coating in the fire safety analysis. Because this is done for every plant and every cable coating proposed for use, we do not agree with the allegation that specifying a coating which has not been tested at Sandia, for a nuclear power plant which we have not yet completed the fire protection program review is a safety concern.

I recommend that all Licensing Boards in existence be notified of this allegation.



Voss A. Moore, Acting Assistant Director  
for Plant Systems  
Division of Systems Safety

cc: See next page

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D. B. Vassallo

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