

No. 92-130
Tel. 301-504-2240

FOR IMMEDIATE RELEASE
(Monday, August 31, 1992)

NRC STAFF DIRECTS LICENSEES TO TAKE ADDITIONAL
ACTIONS RELATED TO THERMO-LAG FIRE BARRIER MATERIALS

The Nuclear Regulatory Commission staff has directed utilities licensed to operate nuclear power plants to take additional actions if Thermo-Lag 330 fire barrier systems are installed in their facilities.

The actions are to be taken as the result of additional tests sponsored by Texas Utilities and, separately, by the NRC staff. The test results led the staff to conclude that these systems should be treated as inoperable in the absence of successful, applicable plant-specific tests.

Accordingly, to assure that the level of fire protection for the safe shutdown capability in nuclear power plants using Thermo-Lag 330 fire barrier systems meets the standards required by the NRC's regulations, utilities are to:

- 1) in cases where either one-hour or three-hour pre-formed Thermo-Lag panels and conduit shapes are used, identify the areas where they are used for the protection and separation of the safe shutdown capability;

- 2) in those plant areas where the fire barriers are used in raceways, walls ceilings, equipment enclosures or other areas to protect cable trays, conduits or separate redundant safe shutdown equipment, implement appropriate compensatory measures, such as fire watches, and maintain them until the fire barriers can be declared operable on the basis of applicable tests demonstrating successful one-hour or three-hour barrier performance; and

- 3) advise the NRC staff in writing within 30 days of whether or not it has taken these actions and describing the measures being taken to restore fire barrier operability.

The directive supplements one issued in June this year which directed utilities to identify where Thermo-Lag 330 fire barriers were being used to protect small diameter conduit or wide (widths greater than 14 inches) trays that protect safe shutdown

capability and, if the material was being used for that purpose, to take compensatory measures such as the use of fire watches.

- 2 -

The NRC's regulations require licensees to ensure that one train of the electrical cabling and components used to safely shut down nuclear power plants remains free from possible fire damage.

This can be done by separating the primary shutdown train from a redundant one by a fire barrier, such as physical separation, capable of preventing a fire in one train from damaging the other for a period of three hours. Alternatively, a redundant shutdown train can be enclosed in a fire barrier capable of preventing damage for a period of one hour if fire detection and suppression equipment are present.

The August tests sponsored by Texas Utilities consisted of one-hour fire endurance tests on a variety of cable tray and conduit mock-ups. The results of these tests led to the staff to conclude that potential early failures of Thermo-Lag barriers are not limited to specific sizes and that the resulting openings at the joints and seams of Thermo-Lag barriers are of significance.

The July and August tests sponsored by the NRC staff and conducted at the National Institute of Standards and Technology (NIST) consisted of a series of fire barrier endurance tests on one-hour and three-hour Thermo-Lag 330 pre-formed barrier panels. The results of these tests led the staff to conclude that they are indicative of an inability of the Thermo-Lag material itself to provide protection according to its specified fire resistive rating, depending on its configuration.

#