Wayne H. Jens
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August 4, 1984
EF2-69,218

Director of Nuclear Reactor Regulation
Attention: Mr. B. J. Youngblood, Chief
Licensing Branch No. 1
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Youngblood:

Reference: (1) Fermi 2
NRC Docket No. 50-341

(2) Underwriters Laboratories, Inc.
File R10125, Project 82NK21937,
"Report on Electrical Circuit
Materials", October 19, 1983

(3) Detroit Edison to NRC Letter, "Submittal of Deviations from Staff Interpretations of Fire Protection Features in 10CFR50, Appendix R and Justification", EF2-72717, dated August 3, 1984

Subject: Transmittal of Fire Protection Information

In accordance with an agreement made in an April 1, 1984 meeting between Edison and NRC personnel, Edison is hereby providing the following information in support of the present Fermi 2 fire protection position:

1. TSI Technical Note 42584, "Analysis of the Thermal Response of the Junction Between a Partially Protected Member Which Protrudes the Thermo-Lag 330 Fire Barrier and a Cable Tray", April, 1984.

2. Summaries of Test Results for Fermi 2 Configurations of the 3M Fire Protective Envelope (5 summaries).

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The TSI report is being provided in support of the Fermi 2 design of fire stops being used for "cross-over" cables in the relay room stairwell as discussed in the meeting with your staff in June 1983. The configuration in the analysis (square tube not filled with silicone) is considered more conservative than the Fermi 2 configuration of conduit filled with silicone.

The reference (2) UL report and additional information concerning the 3M fire protective envelope design were previously provided to your staff at the April, 1984 meeting. The 3M fire protective envelope is the preferred design for fire barriers used in the plant for cable protection, outside of the relay room stairwell. Since the reference (2) report is complex and many of the configurations discussed in the report are not applicable to Fermi 2, the five summaries are provided to outline and reference the information and configurations which are applicable. The summaries provide the information relevant to all the basic configurations of the 3M fire protective envelope design at Fermi 2. The justification that the 3M fire protective envelope provides adequate one (1) hour protection is contained in reference (3).

If you have any questions, please contact Mr. Keener Earle at (313) 586-4211.

Sincerely,

Wayne H. Jens

cc: Mr. P. M. Byron*
Mr. M. D. Lynch*
Mr. R. Eberly*
USNRC, Document Control Desk*
Washington, D. C. 20555

*With Attachment

The attached analysis demonstrates that the crossover protection used at Fermi 2 in the relay room stairwell area provides the required protection.

The crossovers protrude through the T.S.I. three (3) hour barrier on cable tray 1K-034. The analysis concludes that by protecting the protruding member 18 inches from the barrier interface, in all directions; the maximum temperature attained at the junction at the end of the three (3) hour fire exposure is 295°F. This is true as indicated in the analysis, even if the unprotected conduit outside the 18 inches of protected surface was infinite. Additionally, the conduit is sealed with a three (3) hour fire rated stop.

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