

December 4, 1995

Mr. D. L. Farrar  
Manager, Nuclear Regulatory Services  
Commonwealth Edison Company  
Executive Towers West III  
1400 Opus Place, Suite 500  
Downers Grove, Illinois 60515

Dear Mr. Farrar:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING THERMO-LAG FIRE  
BARRIERS - BYRON STATION (TAC NOS. M85528 AND M85529)

On December 16, 1994, and March 29, 1995, Commonwealth Edison Company submitted responses to previous NRC Requests for Additional Information (RAI) dated September 19 and December 29, 1994, related to the use of Thermo-Lag 330-J Fire Barriers at Byron Station. Our assessment of the previous responses indicates that further information is required before we can complete the review. Please provide the responses to the enclosed questions within 60 days of receipt of this letter. The questions and proposed response schedule have been discussed with your staff.

This request affects nine or fewer respondents and, therefore, is not subject to Office and Management Review under P.L. 96-511.

Sincerely,

Original signed by:

George F. Dick, Jr., Project Manager  
Project Directorate III-2  
Division of Reactor Projects III/IV  
Office of Nuclear Reactor Regulation

Docket Nos. STN 50-454, STN 50-455

Enclosure: RAI

cc w/encl: See next page

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REQUEST FOR ADDITIONAL INFORMATION

REGARDING THERMO-LAG FIRE BARRIERS

GENERIC LETTER 92-08

COMMONWEALTH EDISON COMPANY

BYRON STATION, UNITS 1 AND 2

DOCKET NOS. STN 50-454 AND STN 50-455

The subject of this Request for Additional Information (RAI) concerns the calculational methodology and test data related to the issue of ampacity derating parameters.

BACKGROUND

1.0 REQUEST FOR ADDITIONAL INFORMATION OF SEPTEMBER 19, 1994

In the RAI of September 19, 1994, the NRC staff requested information regarding important barrier parameters, Thermo-Lag barriers outside the scope of the Nuclear Energy Institute (NEI) program, ampacity derating, alternatives, and schedules.

In its submittal of December 16, 1994, the licensee asserted that the original Thermo-Lag design used an analytical method to evaluate ampacity derating parameters. The licensee compared test results documented in NRC Information Notice (IN) 94-22, "Fire Endurance and Ampacity Derating Test Results for 3 Hour Fire-Rated Thermo-Lag 330-1 Fire Barriers," with the analytical methods applied to Thermo-Lag enclosed cables installed at Byron Station. The comparison determined that the analytical method used at Byron Station is conservative and specifies more severe ampacity derating values than the values cited in IN 94-22.

On March 14, 1995, during a public meeting with the licensees for the four lead plants for the resolution of Thermo-Lag issues, the staff responded to the question, "Will the resolution of the ampacity derating concern be deferred until agreement is reached on the appropriate testing protocol (i.e., IEEE P848)?" The staff reiterated its position, which was previously stated in the September 1994 RAI, that the ampacity derating concern could be resolved independently of the fire endurance concerns. After a review of the tests performed under the draft IEEE standard P848, the staff transmitted comments which were designated to ensure the repeatability of test results to the IEEE working group responsible for the test procedure.

2.0 REQUEST FOR ADDITIONAL INFORMATION OF DECEMBER 29, 1994

In the RAI of December 29, 1994, the staff requested information describing the examinations and inspections that will be performed to obtain the important barrier parameters for the Thermo-Lag configurations installed at the Byron Station.

ENCLOSURE

In its submittal of March 29, 1995, the licensee restated its position regarding the comparison of previously analyzed values to actual test results. The licensee stated that there were no future plans to conduct ampacity tests.

On May 18, 1995, members of the NRC staff held a telephone conference call with NEI representatives on ampacity derating issues for Thermo-Lag fire barriers. The staff indicated that the latest IEEE P848 draft procedure can be used by licensees or NEI as the basis for an ampacity derating test program. In addition, a copy of the Comanche Peak Steam Electric Station Safety Evaluation dated June 14, 1995, was sent to those licensees who rely on Thermo-Lag installations.

#### STAFF QUESTIONS AND REQUESTS

1. Please provide a copy of the typical calculation(s) depicting the use of the subject analytical methodology which were used to determine the ampacity derating parameters for the Thermo-Lag fire barriers that are installed at Byron Station.
2. In its submittal of December 16, 1994, the licensee referred to a site specific comparison regarding the acceptability of plant ampacity derating parameters when compared to the test results cited in IN 94-22. The staff recognizes that most licensees may have excess ampacity margin using valid test data. However, those licensees who utilize industry test data must evaluate whether installed configurations are representative of the tested configurations. The subject evaluations should also analyze any deviations of the installed configuration with respect to the test configuration. It should be noted that the methodology used in the ampacity test differs significantly from the methodology utilized by the draft industry test procedure IEEE P848.

In the event that the licensee wishes to use the test results cited in IN 94-22, the licensee must indicate whether the subject test configuration is representative of the Thermo-Lag enclosed configurations which are installed at Byron Station.