

September 15, 1995

MEMORANDUM TO: John F. Stolz, Director
 Project Directorate I-2
 Division of Reactor Projects I/II

FROM: José A. Calvo, Chief (Original signed by J. Calvo)
 Electrical Engineering Branch
 Division of Engineering

SUBJECT: RESPONSE TO THE FOLLOWUP TO THE REQUEST FOR
 ADDITIONAL INFORMATION REGARDING GENERIC
 LETTER 92-08 (TAC NOS. M85565 AND M85566)

Plant: Limerick Generating Station, Units 1 and 2
 Licensee: PECO Energy Company
 Review Status: Open

We have reviewed PECO Energy Company's responses of December 19, 1994; March 29, 1995; and August 2, 1995; to the requests for additional information (RAI) of September 20, 1994; December 29, 1994; and May 30, 1995; respectively, regarding Generic Letter 92-08, "Thermo-Lag 330-1 Fire Barriers." The licensee was required, pursuant to Section 182A of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f), to submit written reports, under oath of affirmation, that provided the information specified in the RAIs. On the basis of our review, we have determined that the licensee's responses to the RAIs are incomplete. The specific areas where we found the licensee's responses to be incomplete are discussed in the attachment. Please forward this RAI to the licensee expeditiously so that the outstanding issues can be resolved for the application of Thermo-Lag 330-1 Fire Barriers at Limerick Generating Station.

Docket Nos.: 50-352
 50-353

Attachment: As stated

CONTACT: R. Jenkins, EELB/DE
 415-2985

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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CONTACT: R. Jenkins, EELB/DE
415-2985

LIMERICK GENERATING STATION, UNITS 1 AND 2
DOCKET NOS. 50-352 AND 50-353
FOLLOWUP REQUEST FOR ADDITIONAL INFORMATION REGARDING
GENERIC LETTER 92-08
"THERMO-LAG 330-1 FIRE BARRIERS"

1.0 REQUEST FOR ADDITIONAL INFORMATION OF SEPTEMBER 20, 1994

In the RAI of September 20, 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 19, 1994, the licensee endorsed the NEI position that ampacity derating issues should be resolved separately from fire endurance issues. The licensee also stated that the immediate resolution of ampacity derating concern is not necessary because it is a long-term cable life issue, and significant margin exists due to conservative design assumptions, such as continuously energized circuits, actual loads, and operation at cable rating temperatures.

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 Limerick Generating Station (LGS).

In its submittal of March 29, 1995, the licensee stated that the determination that the chemical composition and density of the tested Thermo-Lag material is representative of the installed Thermo-Lag barriers will allow generic tests of ampacity derating to be applied to LGS Thermo-Lag assemblies.

During a public meeting on March 14, 1995, 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 Institute of Electrical and Electronics Engineers (IEEE) Standard P848, "Procedure for the Determination of the Ampacity Derating of Fire Protected Cables," the staff transmitted comments which were designated to ensure the repeatability of test results to the IEEE working group responsible for the test procedure. At this time the staff is not aware of any NEI initiative to address the ampacity derating issue.

3.0 REQUEST FOR ADDITIONAL INFORMATION OF MAY 30, 1995

In the RAI of May 30, 1995, the staff requested that the licensee submit its ampacity derating evaluations, including any applicable test reports, in order to provide an adequate response to Generic Letter 92-08 reporting requirement 2(c).

In its submittal of August 2, 1995, the licensee acknowledged receipt of the Comanche Peak Steam Electric Station (CPSES), Unit 2 Safety Evaluation (SE) and commented that the NRC did not endorse the revision of IEEE P848 which was used in the CPSES tests. The licensee will use an appropriate test protocol to develop a derating factor when designing the required encapsulation assemblies. The design of the required encapsulation assemblies is scheduled to be completed by December 1997.

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. The memorandum dated May 22, 1995, which documents the subject telephone conference meeting, is attached for your information.

Please submit prior to the final resolution of the Thermo-Lag 330-1 issue the anticipated test procedures or alternatively, a description of the anticipated analytical methodology including typical calculations which will be used to determine the ampacity derating parameters for the Thermo-Lag fire barriers that are installed at Limerick Generating Station.

May 22, 1995

NOTE TO: Brian W. Sheron, Director, DE, NRR

FROM: Carl H. Berlinger, Chief, EELB, DE, NRR

SUBJECT: MEMORANDUM OF RECORD

On May 18, 1995, members of the NRC staff (B. Sheron, C. Berlinger, P. Gill, M. Gamberoni and R. Jenkins) held a telephone conference call with Mr. Alex Marion and Mr. Biff Bradley of the Nuclear Energy Institute (NEI) on ampacity derating issues for Thermo-Lag fire barriers. Mr. Marion contacted the staff regarding two topics: (1) Status of the Safety Evaluation (SE) on the Comanche Peak Steam Electric Station (CPSES), Unit 2 Ampacity Derating Test Program; and (2) Staff Acceptance of the IEEE Standard PB48, "Procedure for the Determination of the Ampacity Derating of Fire Protected Cables."

Dr. Berlinger stated that the subject SE for CPSES 2 had been completed and we expected that it will be transmitted to the licensee within the next two weeks. Dr. Berlinger agreed to notify Mr. Marion by phone after the SE had been issued by the staff. Due to potential generic applications the staff will provide a copy of the CPSES, Unit 2 SE to licensees with Thermo-Lag fire barriers.

The staff has been interfacing with the IEEE Task Force responsible for IEEE PB48 over the last 2 years to improve the subject procedure. This effort has resulted in recent revisions to the subject procedure which addressed the majority of the concerns raised by EELB (reference: Letter dated 10/13/94 from C. Berlinger to A. K. Gwal). Although not all of the concerns were addressed by the IEEE Task Force Dr. Berlinger indicated that the latest IEEE PB48 draft procedure can be used by licensees or NEI as the basis for an ampacity derating test program. The latest procedure revision (Draft 16) addresses the major test concerns regarding inductive heating and conduit surface emissivities effects.

The staff emphasized that licensees should submit the actual test procedures or plans to the staff for comment. After discussion of the various options to develop a generic test program NEI agreed to review the CPSES 2 SE and then contact the staff as necessary for further discussions or questions on this matter.

cc: Alex Marion, NEI

CONTACT: Ronaldo Jenkins, EELB/DE
415-2985

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