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SUBJECT: Informs that CA identified in response to concerns identified in NRC GL 92-08 & subsequent RAI have been completed at plant in response to GL 92-08, "Thermo-Lag 330-1 Fire Barriers."

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December 27, 1996

AEP:NRC:0692DB

Docket Nos.: 50-315
50-316

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

Donald C. Cook Nuclear Plant Units 1 and 2
RESPONSE TO GENERIC LETTER (GL) 92-08,
"THERMO-LAG 330-1 FIRE BARRIERS"

This letter is to inform you that the corrective actions identified in response to the concerns identified in NRC Generic Letter 92-08 and subsequent requests for additional information have been completed at Cook Nuclear Plant. This completes the activities described in the Thermo-Lag resolution schedule provided in our letter, AEP:NRC:0692DA, dated December 21, 1994.

Supplemental information and clarifications supporting the resolution of the Thermo-Lag fire barrier material issue are included in the attachment to this letter.

We anticipate using the entire 90-day response period for your December 2, 1996, extensive request for additional information regarding Thermo-Lag related ampacity derating issues.

Sincerely,

E. E. Fitzpatrick
Vice President

jen

Attachment

cc: A. A. Blind
A. B. Beach
MDEQ - DW & RPD
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ATTACHMENT TO AEP:NRC:0692DB

RESPONSE TO GENERIC LETTER (GL) 92-08,

"THERMO-LAG 330-1 FIRE BARRIERS"

Resolution of the Thermo-Lag Fire Barrier Issue
Donald C. Cook Nuclear Plant

As discussed in our letter, AEP:NRC:0692CV, dated February 4, 1994, Thermo-Lag fire barrier material was installed at Cook Nuclear Plant to comply with 10 CFR 50, Appendix R, sections III.G.2.a and c. Several of these one-hour fire barriers were installed to enclose intervening combustibles. Thermo-Lag was also used in the construction of a non-Appendix R radiant energy barrier outside containment and on a structural support of Appendix R instrumentation inside containment. Neither of these applications is intended as a rated fire barrier.

Several approaches were used to resolve the Thermo-Lag fire barrier issue at Cook Nuclear Plant. These methods included a re-assessment of the need for fire barrier protection, the replacement of Thermo-Lag with alternate fire barrier materials, and the limited use of Thermo-Lag as a fire area boundary.

These methods of Thermo-Lag fire barrier resolution have been previously transmitted to the Nuclear Regulatory Commission (NRC) and discussed with the NRC staff. Items of clarification and items which have changed since previous submittals are provided below.

Appendix R Revalidation

As discussed in our previous letters regarding the Thermo-Lag issue, AEP:NRC:0692CV, dated February 4, 1994, and AEP:NRC:0692DA, dated December 21, 1994, an engineering analysis was performed to provide a basis for a reduction in the number of required Thermo-Lag fire barriers. A significant reduction in the number of required Thermo-Lag barriers resulted from work performed as part of the Cook Nuclear Plant Appendix R revalidation project from 1993 to 1996.

Analyses required to support reduction in the required fire barriers have been completed and are reflected in the Cook Nuclear Plant safe shutdown capability assessment (SSCA, Revision 4, Change Sheet 1) and fire protection program manual (FPPM, Revision 1). Revisions to the SSCA and other technical evaluations performed to reduce the reliance on Thermo-Lag fire barrier materials were evaluated in accordance with our 10 CFR 50.59 program. Several items of clarification are provided below regarding our previous correspondence on Thermo-Lag resolution.

- 1) In our letter, AEP:NRC:0692DA, dated December 21, 1994, we stated any revisions to existing exemptions would be submitted to the NRC. The technical evaluation addressed in exemption request 7.2 of the FPPM was revised to include a more detailed assessment. The assessment concluded the Thermo-Lag barriers in fire area A, the residual heat removal/containment spray pump area, were no longer required in order to achieve and maintain safe shutdown. The revision to technical evaluation 7.2 of the FPPM was reviewed in accordance with our 10 CFR 50.59 program and discussed with the NRC Project Manager for Cook Nuclear Plant.

- 2) In our letter, AEP:NRC:0692DA, dated December 21, 1994, we stated the three-hour rated fire barriers protecting embedded conduits located in the pilasters in the diesel generator rooms would be downgraded to one-hour barriers. In lieu of downgrading the fire barrier to a one hour rating, the safe shutdown analysis was revised to take credit for alternative shutdown, in accordance with sections III.G.3 and III.L of Appendix R to 10 CFR 50, for a postulated fire in the areas. These areas are both equipped with automatic detection and suppression. Therefore, the Thermo-Lag fire barrier material is not required and will not be maintained.

Use of Alternate Fire Barrier Materials

Other Thermo-Lag fire barriers installed at Cook Nuclear Plant to meet separation criteria of sections III.G.2.a and III.G.2.c, or to support exemption requests, have been replaced with qualified fire barrier materials. These materials include Darmatt fire barrier material for different raceway and junction box configurations and a gypsum wall installed between the unit 1 and unit 2 component cooling water pumps. Thermo-Lag used to provide a 20-foot zone without intervening combustibles has been replaced by cable tray fire stops at specified intervals. Physical installation of alternate fire barrier materials associated with the replacement of Thermo-Lag was performed under request for change 12-3126 and design change package 054.

Use of Thermo-Lag

Thermo-Lag will no longer be relied upon as a fire barrier to provide separation of redundant equipment within the same fire area per the requirements of section III.G.2 of 10 CFR 50, Appendix R. The only Thermo-Lag material that will be relied upon at Cook Nuclear Plant as a fire protection feature is in the unit 1 and unit 2 hot shutdown panel enclosures. This Thermo-Lag installation is used as part of a fire area boundary to separate fire areas. A technical evaluation, supported by fire testing, has been performed to assess the adequacy of the fire barrier as a fire area boundary per the guidance in sections D.1(j), F.2, and F.3 of Appendix A to branch technical position (BTP) auxiliary power conversion systems branch (APCSB) 9.5-1. This technical evaluation is contained in section 11.36 of the FPPM, revision 1. Technical evaluation 11.36 of the FPPM was reviewed in accordance with our 10 CFR 50.59 program.

Ampacity Derating

Information regarding ampacity derating associated with Thermo-Lag fire barrier material at Cook Nuclear Plant was previously transmitted by our letters, AEP:NRC:0692CV, dated February 4, 1994, AEP:NRC:0692DA, dated December 21, 1994, and AEP:NRC:0692DF, dated May 12, 1995.

We received your December 2, 1996, request for additional information regarding Thermo-Lag related ampacity derating issues. Due to the extensive inquisitory nature, we anticipate using the entire 90 days for a complete response.