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POWER PLANT DEPARTMENT

March 27, 1990

U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit No. 1 Docket No. 50-317
Penetration Fire Barrier Special Report
Technical Specification 3.7.12.a

Gentlemen:

Per the requirements of Technical Specification 3.7.12.a, we hereby submit the following Special Report concerning a penetration fire barrier, specifically an inoperable fire damper in the Unit 1 Penetration Room exhaust duct.

Should you have any further questions regarding this matter, we will be pleased to discuss them with you.

Very truly yours,

RED/JV/ad

Attachment

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ATTACHMENT (I)

PENETRATION FIRE BARRIER SPECIAL REPORT

BACKGROUND

On February 28, 1990 while performing a routine replacement of a fusible link in a fire damper it was found that both of the closure springs for the damper had broken. Specifically, the fire damper involved is in the Unit 1 Penetration Room exhaust system where the duct penetrates the floor into the Unit 1 69' Main Plant Exhaust Equipment Room. Since this damper is in a horizontal configuration, the springs are necessary to close the damper and as such the damper was inoperable. This condition was reported to the Shift Supervisor and Technical Specification Action Statement 3.7.12.a was entered. This Action Statement requires hourly fire watch patrols as operable fire detection is located on both sides of the barrier. The springs were replaced and the damper was returned to operable status on March 16, 1990. The Action Statement was exited at this time. Unit 1 was in Mode 5 the entire time the damper was inoperable.

To complete the requirements of Technical Specification Action Statement 3.7.12.a, a Special Report, pursuant to Specification 6.9.2, is needed if the inoperable penetration is not restored within 7 days. This Special Report is to outline the actions taken, the cause of the inoperable penetration and plans and schedule to restore the penetrations to operable status. The information contained in this document fulfills these requirements.

EFFECT ON UNIT OPERATION

Upon discovery of the inoperable fire barrier penetration (damper), appropriate actions were taken to satisfy the Action Statement for Technical Specification 3.7.12.a, "Penetration Fire Barriers". Actions were also initiated to restore the fire damper to its operable status. This effort was accomplished by replacing the springs in the damper. On March 16, 1990 the damper was tested (consistent with Technical Specification 4.7.12.b) and returned to operable status.

During the period of time the damper was inoperable its affect on the level of fire protection was mitigated by the following:

- o The area on the lower elevation (Room 225) of this floor/ceiling assembly has wet pipe sprinklers. It is a fire in this area which has the potential to challenge the barrier. The sprinkler system will prevent a fire in this area from threatening the barrier.
- o The duct has no openings in either the room or the lower elevation or in the 69' elevation Main Plant Exhaust Room. In fact, the duct is routed to the exterior. Therefore, any heat would travel directly to the exterior.
- o There is smoke detection on both sides of the barrier.

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TASKS TO ASSURE FUTURE COMPLIANCE

The cause of the broken springs is currently under investigation. This damper was last inspected approximately 7 months prior to this discovery and apparently the springs were not broken at that time. The springs were found broken prior to the fusible link being replaced so this activity did not affect the springs. Calvert Cliffs is in the process of a fire damper review process and this is the first (and only) evidence of this type of occurrence. Upon obtaining the results of the investigation, the applicability to other dampers will be considered.

The broken springs were replaced with new springs and the damper operation tested to assure proper function and closure. This occurred March 16, 1990, and the damper was declared operable.