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January 17, 1997

U. S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

ATTENTION: Mr. H. J. Miller, Regional Administrator

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit No. 2; Docket No. 50-318
Inoperable Main Steam Header Radiation Monitor - Special Report

The attached special report is submitted in accordance with Calvert Cliffs Unit 2 Technical specification 3.3.3.1. The report concerns the inoperability of Unit 2 No. 22 Main Steam Header Radiation Monitor for a period in excess of seven days.

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

Very truly yours,

PEK/RCG/dlm

Attachment: Unit 2 No. 22 Main Steam Header Radiation Monitor Special Report

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ATTACHMENT (1)

UNIT 2 NO. 22 MAIN STEAM HEADER RADIATION MONITOR SPECIAL REPORT

We submit this Special Report concerning an inoperable Main Steam Header Radiation Monitor, as required by Technical Specification 3.3.3.1, Table 3.3-6, Item 2.b.ii.

ACTION TAKEN

Number 22 Main Steam Header Radiation Monitor has experienced three independent failures, each of which appears to be age-related degradation.

On December 20, 1996, the Unit 2 No. 22 Main Steam Header Radiation Monitor was removed from service at approximately 1600 due to the monitor intermittently failing into low alarm. Troubleshooting determined that the Control Room ratemeter cable connector was not providing good electrical contact, and thus, the signal being provided by the detector to the ratemeter was being interrupted.

On January 2, 1997, troubleshooting determined that there was an additional intermittent electrical contact within the cable to the ratemeter from the detector. Interim actions were taken to minimize the probability of the intermittent electrical contact within the signal cable.

On January 10, 1997, additional troubleshooting found that the alarm relay was unexpectedly closing. The reason for the false alarm relay closures has not yet been determined, and the investigation is ongoing.

Calvert Cliffs previously initiated actions to replace the Unit 2 Nos. 21 and 22 Main Steam Radiation Monitor Systems during the scheduled 1997 refueling outage.

EFFECT ON OPERATION

Unit 2 Technical Specification 3.3.3.1 Action Statement (30) was entered each time No. 22 Main Steam Header Radiation monitor was removed from service. In accordance with this Action Statement and our Accidental Radioactivity Release Monitoring and Sampling Methods procedure (ERPIP-821), alternate sampling methods were implemented. The inoperability of No. 22 Main Steam Header Radiation Monitor did not affect Unit 2 operation.

CAUSES OF INOPERABILITY

The cause of the December 20, 1996 inoperability was the intermittent electrical contact of the ratemeter connector for the signal cable from the detector, and the cause of the January 2, 1997 inoperability was the intermittent electrical contact in the cable. The cause of the inoperability due to the false alarm relay closures is not known at this time, and investigation is on-going.

PLANS AND SCHEDULES FOR RESTORING THE SYSTEM TO OPERABLE STATUS

Number 22 Main Steam Header Radiation Monitor was originally returned to operable status on December 30, 1996, at approximately 0920, following the replacement of the cable connector.

ATTACHMENT (1)

UNIT 2 NO. 22 MAIN STEAM HEADER RADIATION MONITOR SPECIAL REPORT

It was then removed from operable status on January 2, 1997, at approximately 1210, and then returned to operable status on January 6, 1997, at approximately 0950, following implementation of actions to minimize the probability of intermittent electrical contact within the signal cable.

It was removed from operable status on January 10, 1996, at approximately 1030, and remains inoperable pending further investigation of the false alarm relay closures.

Investigation is on-going to determine the cause of the unexpected alarm relay closure. The estimated completion date is January 17, 1997.

Numbers 21 and 22 Main Steam Radiation Monitor Systems will be replaced in their entirety during the scheduled 1997 refueling outage.