



April 24, 2009

U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit No. 2; Docket No. 50-318
Post-Accident Monitoring Report

The attached report is submitted in accordance with Calvert Cliffs Nuclear Power Plant Technical Specification 3.3.10.B. The report is required due to the Unit 2 Reactor Vessel Water Level Monitoring System having less than required minimum number of operable channels.

Should you have questions regarding this matter, please contact Mr. Jay S. Gaines at (410) 495-5219.

Very truly yours,

A handwritten signature in black ink, appearing to read "T. E. Trepanier".

Thomas E. Trepanier
Plant General Manager

TET/RDW/bjd

Attachment: (1) Unit 2 Post-Accident Monitoring Report

cc: D. V. Pickett, NRC
S. J. Collins, NRC

Resident Inspector, NRC
S. Gray, DNR

ADD/UPR

ATTACHMENT (1)

UNIT 2

POST-ACCIDENT MONITORING REPORT

ATTACHMENT (1)

UNIT 2 POST-ACCIDENT MONITORING REPORT

Calvert Cliffs Nuclear Power Plant, Inc. (CCNPP) submits this Post-Accident Monitoring Report concerning an inoperable Unit 2 Reactor Vessel Water Level Monitoring System (RVLMS) channel. This report is required by Technical Specification 3.3.10, Required Action B.1.

ACTION TAKEN

During the 2009 refueling outage, attempts were made to repair the Channel A RVLMS by replacing the cable from the reactor head to the Q-panel and 40 pin transition connector. The reactor was reassembled and testing of the repairs during plant heat-up indicated the Channel A RVLMS was failed. On March 13, 2009 at approximately 1430 hours, the CCNPP Unit 2 RVLMS, Channel A was declared inoperable. Calvert Cliffs Technical Specification Bases Section B3.3.10, "Post-Accident Monitoring (PAMS) Instrumentation," requires one of the upper three (vessel head region) and three of the lower five (plenum region) sensors for operability of each Reactor Vessel Water Level Monitor Channel. Currently seven of eight sensors are inoperable. As a result of the Channel being declared inoperable, CCNPP immediately entered Technical Specification 3.3.10, Condition A. When the Completion Time of Condition A expired, CCNPP entered Technical Specification 3.3.10, Condition B, which requires submission of this report in accordance with Technical Specification 5.6.7.

EFFECT ON OPERATION

The RVLMS instrumentation is designated for post-accident monitoring use. It provides the plant operator with information to assess void formation in the reactor vessel head region and the trend of liquid level in the reactor vessel plenum. The RVLMS consists of two redundant channels. Reactor Vessel Water Level Monitoring Channel B remains operable with all eight of its sensors functioning normally. The removal of Channel A from operable status eliminates a means of redundant indication. However, alternate methods of monitoring for core and Reactor Coolant System voiding, using pressurizer level, Reactor Coolant System subcooling, hot and cold leg temperature, and core exit thermocouple instrumentation, have been initiated as required by plant procedures.

CAUSES OF INOPERABILITY

Currently, the most likely causes of inoperability are the failure of the level sensors (RVLMS probe). The cable and associated connections will be reevaluated. An apparent cause evaluation is in progress to determine the cause of the failure.

PLANS AND SCHEDULES FOR RESTORING THE SYSTEM TO OPERABLE STATUS

Calvert Cliffs Nuclear Power Plant performed repairs on the Channel A Reactor Vessel Water Level cable and associated connectors during the Unit 2 2009 Refueling Outage. Testing of the repairs was not possible until after the reactor was reassembled. Testing of the repairs during plant heat-up indicated that Channel A Reactor Vessel Water Level Monitor was still not operable. Troubleshooting and repair of the channel A sensors would have required disassembly of the reactor (removal of the reactor vessel head and upper guide structure). Such extensive activity at this stage of the outage was not commensurate with the safety benefit associated with the repair. Troubleshooting and repair (including replacement of the Reactor Vessel Water Level Monitor Channel A sensors, if needed) will be performed during the scheduled Unit 2 2011 Refueling Outage or during a forced outage of sufficient duration and scope. Following these maintenance activities, it is expected that the Reactor Vessel Water Level Monitor Channel A will be returned to operable status.