Calvert Cliffs Nuclear Power Plant
Constellation Generation Group, LLC

1650 Calvert Cliffs Parkway
Lusby, Maryland 20657

Constellation Energy

May 17, 2007

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 the 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,

for
Joseph E. Pollock
Plant General Manager

JEP/CAN/bjd

Attachment: (1) Unit 2 Reactor Vessel Water Level Monitoring System Report

cc: D. V. Pickett, NRC
S. J. Collins, NRC
Resident Inspector, NRC
R. I. McLean, DNR

A001

ATTACHMENT (1)

UNIT 2

REACTOR VESSEL WATER LEVEL MONITORING SYSTEM REPORT

Calvert Cliffs Nuclear Power Plant, Inc.
May 17, 2007

ATTACHMENT (1)

UNIT 2 REACTOR VESSEL WATER LEVEL MONITORING SYSTEM 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 channel. This report is required by Technical Specification 3.3.10, Required Action B.1.

ACTION TAKEN

On April 11, 2007 at approximately 1145 hours, the CCNPP Unit 2 Reactor Vessel Water Level Monitoring System, Channel A experienced the failure of the six of the eight level position sensors. The failure of these sensors resulted in Channel A being 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. As a result of the subject failures, 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 Reactor Vessel Water Level Monitoring System 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 Reactor Vessel Water Level Monitoring System 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

The cause of inoperability is the failure of six sensors (one is located in the upper region and five are located in the lower region of the reactor vessel). The cause of these failures is unknown at this time. An apparent cause evaluation is in progress to determine the cause of these failures.

PLANS AND SCHEDULES FOR RESTORING THE SYSTEM TO OPERABLE STATUS

Calvert Cliffs Nuclear Power Plant will repair or replace as necessary the Channel A Reactor Vessel Water Level cable and associated connectors during the next forced outage of sufficient duration. If these activities do not resolve the problem, the Channel A Reactor Vessel Water Level sensors will be replaced during the scheduled Unit 2 2009 Refueling Outage. Following these maintenance activities, it is expected that the Reactor Vessel Water Level Monitor Channel A will be returned to operable status.