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TS 3.3.10 and 5.6.7

January 13, 2021

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

Calvert Cliffs Nuclear Power Plant, Unit No. 1
Renewed Facility Operating License No. DPR-53
NRC Docket No. 50-317

Subject: **Reactor Vessel Level Monitoring System Special Report**

This special report is submitted in accordance with Calvert Cliffs Nuclear Power Plant Technical Specification 3.3.10. The report is required due to the Unit 1 Reactor Vessel Level Monitoring System having less than the required minimum number of operable channels.

ACTION TAKEN

On December 10, 2020 at 1517, Unit 1 Control Room received an unexpected alarm at window E-10 on 1C06, "RVLMS [Reactor Vessel Level Monitoring System] CH A 1C144A" and responded in accordance with the applicable alarm response procedure. The Channel A Post-Accident Monitoring Display at 1C06 System Health screen indicated a fan malfunction, and showed a Fan Fail Red light illuminated at the same time. In accordance with site procedure the associated cabinet should be considered inoperable. This rendered Channel A RVLMS inoperable. Calvert Cliffs Technical Specification "Post-Accident Monitoring (PAMS) Instrumentation," Table 3.3.10-1, Function 5, requires two channels of RVLMS to be operable. Because of the subject failure, Calvert Cliffs entered Technical Specification 3.3.10, Condition A. When the Completion Time of Condition A expired, Calvert Cliffs entered Technical Specification 3.3.10, Condition B.1, which requires submission of this report in accordance with Technical Specification 5.6.7.

PREPLANNED ALTERNATE METHOD OF MONITORING

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 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,

Document Control Desk

January 13, 2021

Page 2

Reactor Coolant System subcooling, hot and cold leg temperature, and core exit thermocouple instrumentation, were initiated as required by plant procedures.

CAUSES OF INOPERABILITY

The cause of inoperability is the failure of channel A RVLMS cabinet cooling fan. The most probable cause of this failure is age-related degradation.

PLANS AND SCHEDULES FOR RESTORING THE SYSTEM TO OPERABLE STATUS

Currently, Maintenance is waiting on the replacement fan assembly to arrive onsite. The expected return to service date is January 31, 2021.

There are no regulatory commitments contained in this correspondence.

Should you have questions regarding this matter, please contact me at (410) 495-5219.

Respectfully,



Larry D. Smith
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LDS/KLG/lmd

cc: NRC Project Manager, Calvert Cliffs
NRC Regional Administrator, Region I
NRC Resident Inspector, Calvert Cliffs

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Document Control Desk

January 13, 2021

Page 3

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