

From: [Marshall, Michael](#)
To: ["Mascitelli, Francis J:\(Exelon Nuclear\)"](#)
Cc: [Danna, James](#); [Rogers, Bill](#)
Subject: Calvert Cliffs Nuclear Power Plant, Units 1 and 2 – Request for Confirmatory Information Regarding License Amendment Request Concerning Emergency Diesel Generator Surveillance Requirements for Frequency and Voltage Tolerances (EPID L-2019-LLA-0281)
Date: Monday, June 15, 2020 3:37:00 PM

Hello Frank,

By letter dated December 11, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19346E536), Exelon Generation Company, LLC (Exelon; licensee) submitted license amendment requests (LAR) for Calvert Cliffs Nuclear Power Plant, Units 1 and 2 (Calvert Cliffs). The proposed amendments would revise certain frequency and voltage acceptance criteria for steady-state emergency diesel generator surveillance testing in Calvert Cliffs Technical Specification Section 3.8.1, "AC Sources - Operating." The calculations supporting the request were revised using methodology described in WCAP-17308-NP-A, Rev. 0, "Treatment of Diesel Generator (DG) Technical Specification Frequency and Voltage Tolerances," dated July 2017.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the information provided in the LAR and made available by Exelon during regulatory audit performed by the NRC staff between March 16 and April 24, 2020 (ADAMS Accession No. ML20052E985) has determined that confirmation of the NRC staff's understanding of information in one of the documents reviewed during the audit is correct and the information is applicable to the LAR dated December 11, 2019. This request for confirmatory information was discussed with you on May 27 and June 12, 2020, and it was agreed that your response would be provided within 30 days of the date of this email.

REQUEST FOR CONFIRMATORY INFORMATION

Insufficient net positive suction head (NPSH) margin can result in pump cavitation and pump performance degradation. Changes in pump frequency affect the available and required NPSH. The proposed frequency tolerance could affect the available and required NPSH of the affected pumps. The submittal does not provide information to describe how the proposed frequency tolerance affects available and required NPSH for the analyzed pumps.

In the NRC staff's audit of Appendix C, "Adjustment of Pump IST [Inservice Testing] Acceptance Criteria and Comparison to Existing Test Results," to Analysis Number CA10309, Revision 0000, "Evaluation of Fans, Pumps, and MOVs [Motor Operated Valves] for the Effects of Emergency Diesel Generator [EDG] Voltage and Frequency Variations", which evaluated the EDG-powered pumps by determining and comparing new IST limits for the pumps based on the methodology specified in WCAP-17308-NP-A, Rev. 0, the staff inferred from the calculations that all affected pumps fall within analytical limits, and thus have sufficient NPSH margin after the proposed frequency and voltage tolerance change.

Please confirm the NRC staff's understanding that the analysis demonstrates sufficient NPSH margin for the affected pumps and the applicability of this information to the LAR.

Best Regards,

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301-415-2871

Docket No. 50-317 and 50-318