

From: Guzman, Richard
Sent: Thursday, May 12, 2016 12:41 PM
To: Craig D Sly (Generation - 6) (craig.d.sly@dom.com)
Cc: Michael L Whitlock (Generation - 6) (michael.l.whitlock@dom.com); wanda.d.craft@dom.com
Subject: Millstone 2 LAR to Remove Charging Credit - Request for Additional Information (CAC No. MF7297)

Craig,

The NRC staff is reviewing the information provided in the subject license amendment request dated January 25, 2016 (ADAMS Accession No. ML16029A168), and has determined that additional information is needed to complete its review. Shown below are the NRC staff's request for additional information questions. Please provide your official response by June 30, 2016. If you have any questions, please contact me.

Thanks,

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Rich Guzman  
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REQUEST FOR ADDITIONAL INFORMATION

PROPOSED LICENSE AMENDMENT REQUEST

TO AMEND TECHNICAL SPECIFICATION 3/4.5.2 AND UFSAR CHAPTER 14 TO REMOVE CHARGING

DOMINION NUCLEAR CONNECTICUT, INC.

MILLSTONE POWER STATION, UNIT 2

DOCKET NO. 50-336

CAC NO. MF7297

By letter dated January 25, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16029A168), Dominion Nuclear Connecticut, Inc. (DNC, the licensee), submitted a license amendment request (LAR) to revise MPS2 Technical Specification (TS) 3.5.2, "Emergency Core Cooling Systems, ECCS Subsystems - Tavg > 300°F," to remove the charging system and eliminate Surveillance Requirement 4.5.2.e from the TSs. The proposed amendment would also revise MPS2 Final Safety Analysis Report (FSAR) Chapter 14 relative to the long-term analysis in Section 14.6.1, "Inadvertent Opening of a Pressurized Water Reactor Pressurizer Pressure Relief Valve," and would clarify the existing discussion regarding the application of single failure criteria.

To complete its review, the NRC staff requests the following additional information:

RAI-1:

In Attachment 1 of the LAR, Section 3.1.2, it states that "...a review of the MPS2 Analyses of Record (AOR) for the FSAR Chapter 14 events was performed and concluded that flow from charging pumps is not credited for event mitigation." Section 14.2.7, "Loss of Normal Feedwater Flow," in the updated final safety analysis report (UFSAR) shows charging flow in response to Pressurizer level control in the sequence of events (Tables 14.2.7-3 and 14.2.7-4). Please confirm that flow from the charging pumps is not credited to mitigate the Loss of Normal Feedwater Flow accident.

RAI-2:

In Attachment 1 of the LAR, Figure 2 Pressurizer Level Indication, the pressurizer level is at 100% for about 35 minutes. The new long-term Inadvertent Opening of Pressurizer Pressure Relief Valve (IOPPRV) analysis would be the only UFSAR Chapter 14 event that fills the pressurizer and can have a pressurizer safety valve (PSV) or power-operated relief valve (PORV) discharge water or a two-phase liquid/vapor mixture. UFSAR Section 4.3.7 states that the structural analysis for the PSV and PORV discharge piping system was re-analyzed as part of the pressurizer replacement. Describe how the current structural analysis for the PSV and PORV discharge piping system supports the discharge of water or a two-phase liquid/vapor mixture associated with the new long-term IOPPRV analysis.

RAI-3:

In Attachment 1 of the LAR, Figure 2 Pressurizer Level Indication, what causes the rapid decrease in pressurizer level from 100% to ~85% at about t=2100s?

RAI-4:

Attachment 1 of the LAR, Section 4.3, states the proposed change to UFSAR Section 14.6.1.1: "the limiting event is obtained by assuming the inadvertent opening of a pressurizer safety valve which bounds the capacity of two pressurizer power-operated relief valves." From Reference 5 (ANF-87-161 Rev. 0), the limiting event for the short-term departure from nucleate boiling (DNB) analysis is the inadvertent opening of both PORVs. Based on the data in UFSAR Chapter 4, the capacity of 1 PSV (at set pressure) is less than the minimum capacity of 2 PORVs. Provide additional justification to support why opening of one PSV will bound two PORVs for both the short-term and long-term IOPPRV event.

RAI-5:

Describe the key SRELAP-5 input parameters and assumptions used for the long-term IOPPRV analysis. Also, discuss the conservatism used in the analysis inputs and the operator actions assumed during this event.

RAI-6:

By submittal dated March 17, 2006 (ADAMS Accession No. ML060790325), DNC requested a license amendment to change pressurizer water level limits in MPS2 TS 3.4.4. The 2006 LAR states, "The maximum level limit prevents filling the pressurizer during FSAR Chapter 14 anticipated operational occurrences, ensuring that the pressure relief devices (PORVs or pressurizer safety valves) can control pressure by steam relief rather than water relief, thereby preventing a challenge to the integrity of the RCS fission product barrier." The limiting event with respect to pressurizer overfill was the Loss of Normal Feedwater event at the time of the 2006 LAR.

The new long-term IOPPRV analysis is inconsistent with the assumptions of the pressurizer not filling used in the 2006 LAR and the NRC safety evaluation dated January 30, 2007 (ADAMS Accession No. ML062920334) to justify changes to TS 3.4.4. Provide discussion to support the maximum pressurizer level in TS 3.4.4 with the new long-term IOPPRV analysis that allows the pressurizer to fill.