

April 18, 2019

L-MT-19-024
10 CFR 50.90

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Monticello Nuclear Generating Plant
Docket No. 50-263
Renewed Facility Operating License No. DPR-22

Response to a Request for Additional Information for Removal of a Note Associated with Technical Specification 3.5.1

- References:
- 1) Letter from NSPM to NRC, "License Amendment Request: Revise Limiting Condition for Operation (LCO) of Specification 3.5.1, "Emergency Core Cooling System – Operating, to Remove the LCO Note," (L-MT-18-009) dated November 12, 2018 (ADAMS Accession Number ML18317A172)
 - 2) Email from the NRC to NSPM, "Request for additional information RE: Monticello license amendment request to remove note [Technical Specification] TS LCO 3.5.1," dated March 21, 2019 (ADAMS Accession Number ML19008A218)

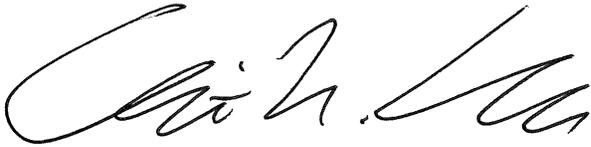
Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (hereafter "NSPM"), submitted in Reference 1 a license amendment request (LAR) for the Monticello Nuclear Generating Plant (MNGP). The LAR proposes to revise the Limiting Condition for Operation (LCO) of Technical Specification 3.5.1, "[Emergency Core Cooling System] ECCS – Operating", to remove an associated note. This letter provides the response to an NRC request for additional information in Reference 2.

Summary of Commitments

This letter makes no new commitments and no revisions to existing commitments.

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I declare under penalty of perjury, that the foregoing is true and correct.
Executed on April 18, 2019

A handwritten signature in black ink, appearing to read "Chris Church". The signature is fluid and cursive, with a large initial "C" and "H".

Christopher R. Church
Site Vice President, Monticello Nuclear Generating Plant
Northern States Power Company – Minnesota

Enclosure

cc: Administrator, Region III, USNRC
Project Manager, Monticello, USNRC
Resident Inspector, Monticello, USNRC
State of Minnesota

Response to a Request for Additional Information for
Removal of a Note Associated with Technical Specification 3.5.1

Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (hereafter "NSPM"), submitted on November 12, 2018, a license amendment request (LAR) for the Monticello Nuclear Generating Plant (MNGP). The LAR proposes to revise the Limiting Condition for Operation (LCO) of Specification 3.5.1, "[Emergency Core Cooling System] ECCS – Operating", to remove an associated note.

RAI

Regulatory Basis:

AEC Proposed General Design Criterion (GDC) 6, "Reactor Core Design (Category A)," states:

The reactor core shall be designed to function throughout its design lifetime, without exceeding acceptable fuel damage limits which have been stipulated and justified. The core design, together with reliable process and decay heat removal systems, shall provide for this capability under all expected conditions of normal operation with appropriate margins for uncertainties and for transient situations which can be anticipated, including the effects of the loss of power to recirculation pumps, tripping out of a turbine generator set, isolation of the reactor from its primary heat sink, and loss of off-site power.

The corresponding 10 CFR 50, Appendix A, GDC Criterion 34, "Residual heat removal," states in part:

A system to remove residual heat shall be provided. The system safety function shall be to transfer fission product decay heat and other residual heat from the reactor core at a rate such that specified acceptable fuel design limits and the design conditions of the reactor coolant pressure boundary are not exceeded.

Background

Updated Safety Analysis Report (USAR) Section 10.2.4.3 states:

The reactor shutdown cooling system is placed into operation during a normal plant cooldown when reactor dome pressure is below 81.8 psig. Operation of this portion of the RHR system for shutdown cooling does not compromise the ability of the RHR system to operate in the low pressure coolant injection system (LPCI) mode. During shutdown, the probability of requiring LPCI operation is very low. However, if LPCI operation is required, the operator can manually terminate shutdown cooling and start LPCI operation from the main control room.

The LAR states that:

NSPM does not have an analysis to demonstrate that realignment of an RHR subsystem from SDC to the LPCI mode does not result in thermal-hydraulic transients which could potentially challenge the system under certain scenarios during realignment to the LPCI for injection.

The Bases for TS 3.5.1, under the title "APPLICABILITY," states:

All ECCS subsystems are required to be OPERABLE during MODES 1, 2, and 3, when there is considerable energy in the reactor core and core cooling would be required to prevent fuel damage in the event of a break in the primary system piping. In MODES 2 and 3, when reactor steam dome pressure is 150 psig, ADS [Automatic Depressurization System] and HPCI [High Pressure Coolant Injection] are not required to be OPERABLE because the low pressure ECCS subsystems can provide sufficient flow below this pressure.

Request

The last sentence in USAR Section 10.2.4.3 states that, "However, if LPCI operation is required, the operator can manually terminate shutdown cooling and start LPCI operation from the main control room." The USAR statement allows for the realigning of SDC to the LPCI mode; however the LAR states that NSPM does not have an analysis that supports this realignment and hence the change proposed in the LAR. Clarify if alignment to LPCI would still be permitted and describe any changes to plant operation based on the proposed amendment.

RAI Response

During reactor shutdown when pressure decreases below the RHR shutdown cooling supply isolation interlock (81.8 psig) shutdown cooling is placed in service. The region between this interlock and cold shutdown / refueling conditions is where NSPM does not have a water (steam) hammer analysis for the MNGP. LPCI is declared inoperable in this region in accordance with plant procedures. However, alignment to LPCI is still permitted, if required, and entails both out-plant and control room operations accomplished in accordance with established plant procedures.