

**ENCLOSURE 1 CONTAINS PROPRIETARY INFORMATION
WITHHOLD FROM PUBLIC DISCLOSURE IN ACCORDANCE WITH 10 CFR 2.390**



Monticello Nuclear Generating Plant
2807 W County Rd 75
Monticello, MN 55362

December 8, 2015

L-MT-15-081
10 CFR 50.90

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

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

License Amendment Request for AREVA Extended Flow Window
Supplement to Provide Revised Analysis of
Anticipated Transient Without Scram Instability (TAC No. MF5002)

- References:
- 1) Letter from Karen D. Fili (NSPM), to Document Control Desk (NRC), "License Amendment Request for AREVA Extended Flow Window," L-MT-14-044, dated October 3, 2014. (ADAMS Accession No. ML14283A125)
 - 2) Email T. Beltz (NRC) to G. Adams (NSPM), "Monticello Nuclear Generating Plant – Requests for Additional Information (SRXB/SNPB) re: AREVA Extended Flow Window License Amendment Request (TAC No. MF5002)," dated August 5, 2015.
 - 3) Letter from Peter A. Gardner (NSPM) to Document Control Desk (NRC), "License Amendment Request for AREVA Extended Flow Window Supplement to Respond to NRC Staff Questions (TAC No. MF5002)," L-MT-15-065, dated September 29, 2015.

In Reference 1, Northern States Power Company, a Minnesota corporation (NSPM), doing business as Xcel Energy, requested approval of an amendment to the Monticello Nuclear Generating Plant (MNGP) Renewed Operating License (OL) and Technical Specifications (TS). The proposed change would revise MNGP TS and would approve certain analytical methods that together would support operation in the expanded power-flow operating domain described as the Extended Flow Window (EFW). The purpose of the requested amendment is to transition from the General Electric methodology called Maximum Extended Load Line Limit Analysis Plus (MELLLA+) to the AREVA methodology called EFW.

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In Reference 2, NRC Reactor Systems Branch and Nuclear Performance and Code Review Branch (SRXB/SNPB) Staff requested additional information to support their review. Reference 3 provided information responsive to that request, including a summary of the revised analysis of the Anticipated Transient Without Scram – Instability (ATWS-I) event for MNGP. That information was enclosed in Reference 3 as AREVA Reports ANP-3435P and ANP-3435NP (collectively referred to as ANP 3435P/NP), Revision 0. As discussed in Reference 3 and subsequently confirmed under the AREVA corrective action program, the results of ANP-3435P/NP Revision 0 were affected by an error in the AREVA core depletion code (MICROBURN-B2) that generated certain inputs for ANP-3435P/NP. That first error dealt with hydraulic solution convergence at low-flow conditions. A second error was subsequently discovered and communicated to NRC Staff by electronic mail dated November 11, 2015. That second error dealt with void quality correlation values at low-flow conditions.

The purpose of this letter is to provide Revision 1 to ANP-3435P/NP, which uses corrected inputs from MICROBURN-B2 to provide new results for the ATWS-I event. Correction of the convergence error and the void quality correlation (Dix-Findlay) error resulted in the following net changes to results of the ATWS-I analysis:

- 7 degree Fahrenheit (°F) decrease in the peak clad temperature (PCT) calculated for the ATWS-I mitigated case (limiting case) presented in ANP-3435P/NP. The resulting PCT of 1537°F still provides ample margin to the acceptance criterion of 2200°F.
- A relatively small reduction in margin for ATWS-I operator response. The previously-submitted analysis provided a margin of more than 55 seconds beyond the 90-second operator response time that precludes a temperature excursion. The revised analysis would reduce that margin from 55 seconds to 48 seconds.

These corrections to AREVA's MICROBURN-B2 core depletion code affect inputs to the analysis in ANP-3435P/NP, but do not affect the analytical methodology being reviewed. The effects of these errors and the results of the revised analyses were discussed with NRC Staff in a teleconference on November 24, 2015. Also discussed was the effect that the errors had on non-limiting transient cases. Based on the non-limiting nature of these transient results, and the fact that the analysis conclusions and safety limits do not change, other non-consequential effects are being managed under the AREVA and NSPM corrective action programs.

Enclosure 1 provides AREVA Report ANP-3435P, Revision 1. Enclosure 1 is proprietary to AREVA. Enclosure 2 provides the non-proprietary AREVA Report ANP-3435NP, Revision 1.

Enclosure 3 provides an affidavit executed to support withholding Enclosure 1 from public disclosure. Enclosure 1 contains proprietary information as defined by 10 CFR 2.390. The affidavit sets forth the basis on which the information may be withheld from public disclosure by the NRC and addresses with specificity the considerations listed in 10 CFR 2.390(b)(4). Accordingly, NSPM respectfully requests that the AREVA

proprietary information in Enclosure 1 be withheld from public disclosure in accordance with 10 CFR 2.390(a)4, as authorized by 10 CFR 9.17(a)4. Correspondence with respect to the copyright or proprietary aspects of the AREVA information in Enclosure 1 or the supporting AREVA affidavit in Enclosure 3 should be addressed to Mr. Alan Meginnis, Manager – Product Licensing, AREVA Inc., 2101 Horn Rapids Road, Richland, Washington 99354.

The information offered herein does not affect the conclusions of the Significant Hazards Consideration and the Environmental Consideration evaluations provided in the Reference 1 license amendment request.

In accordance with 10 CFR 50.91(b), a copy of this application supplement is being provided to the designated Minnesota Official without enclosures.

If there are any questions or if additional information is needed, please contact Glenn Adams at 612-330-6777.

Summary of Commitments

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

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: December 8, 2015



Peter A. Gardner
Site Vice President
Monticello Nuclear Generating Plant
Northern States Power Company-Minnesota

Enclosures (3)

cc: Administrator, Region III, USNRC
Project Manager, Monticello Nuclear Generating Plant, USNRC
Resident Inspector, Monticello Nuclear Generating Plant, USNRC
Minnesota Department of Commerce (w/o enclosures)