



August 19, 2009

L-MT-09-027  
10 CFR 50.90

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

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

Monticello Extended Power Uprate: Response to Instrumentation and Controls Branch  
RAI No. 3 dated April 6, 2009 (TAC No. MD9990)

Pursuant to 10 CFR 50.90, the Northern States Power Company, a Minnesota corporation (NSPM), requested in Reference 3 of Enclosure 1, an amendment to the Monticello Nuclear Generating Plant Renewed Operating License and Technical Specifications to increase the maximum authorized power level from 1775 megawatts thermal (MWt) to 2004 MWt.

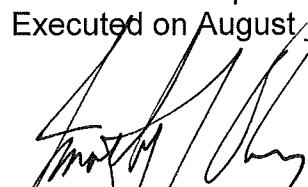
The U.S. Nuclear Regulatory Commission (NRC) Instrumentation and Controls Branch (EICB) provided a Request for Additional Information (RAI), denoted as RAI No. 3, in an email dated April 6, 2009 (Reference 1 of Enclosure 1). This RAI requested the NSPM evaluate and affirm that the Technical Specification functions revised by the Extended Power Uprate license amendment request and that are within the scope of the NRC and industry agreement letter in Reference 2 of Enclosure 1, will have TSTF-493 style footnotes applied. Enclosure 1 provides the NSPM response to EICB RAI Number 3.

In accordance with 10 CFR 50.91, a copy of this letter is being provided to the designated Minnesota Official.

Summary of Commitments

No new commitments or changes to any existing commitments are proposed by this letter.

I declare under penalty of perjury that the foregoing is true and correct.  
Executed on August 19, 2009.



Timothy J. O'Connor  
Site Vice President, Monticello Nuclear Generating Plant  
Northern States Power Company – Minnesota

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

**ENCLOSURE 1**

**MONTICELLO NUCLEAR GENERATING PLANT**

**NSPM RESPONSE TO EICB RAI NO. 3 DATED APRIL 6, 2009**

**NRC EICB RAI No. 3:**

Please affirm that all setpoints or allowable value changes in Technical Specifications, within scope of the agreement letter of February 23, 2009, will have the footnotes applied. The Background below provides the context to the request for this item.

**===== Background to RAI-EICB-item 3 =====**

In the license amendment request (LAR) for extended power uprate which was submitted on November 5, 2008, Nuclear Management Company, LLC (the licensee) requested allowable value changes for various Monticello Technical Specification functions. In the LAR the licensee claimed that these functions did not meet the identified criteria for Limiting Safety System Settings (LSSS) that protect a Safety Limit that was under development by the BWR Owners Group in support of Technical Specification Task Force (TSTF)-493, Revision 3, and, therefore, did not propose to add TSTF-493 footnotes for these functions.

Since 2008, discussions between industry and the staff have resulted in agreement on the scope of TS functions which should be annotated with footnotes in TSTF-493 as well as agreement on strategies for adopting TSTF-493. These agreements for the development and adoption of TSTF-493, Revision 4, are reflected in the TSTF letter to the NRC, "Industry Plan to Resolve TSTF-493, Clarify Application of Setpoint Methodology for LSSS Functions," dated February 23, 2009 (ML090540849). The TSTF agreement letter states that TSTF-493 footnotes should be added to all instrument functions in the LCOs for Reactor Trip System (also called Reactor Protection System), the Engineered Safety Feature Actuation System (also called Emergency Core Cooling System) and some instrument functions in other LCOs identified by the BWROG in TSTF-493, Revision 3.

Although the content of TSTF-493, Revision 4, LCOs was finalized by the February 23, 2009 agreement letter, the TSTF-493 Bases are still being worked on. In the interim time period, until the TSTF-493 Bases are finalized and TSTF-493 is issued, it is the NRR staff's expectation that setpoint and allowable value changes that are currently under review should follow the guidance of the TSTF agreement letter. Therefore, Monticello TS functions revised by this amendment request should be annotated with TSTF-493 footnotes.

It should be noted that the licensee has adopted TSTF-493 footnotes for other TS functions for which they agreed were LSSS that protect a Safety Limit.

It is recommended that the licensee submit a revision to their LAR that references the TSTF agreement letter and propose TSTF-493 footnotes for these TS functions. This will ensure that the licensee complies with the requirements of 10 CFR 50.36. The staff will accept footnotes for this function that are identical to footnotes (c) and (d) that are currently included in the Monticello TS for other TS functions.

### **NSPM RESPONSE:**

This Instrumentation and Controls Branch (EICB) RAI (Reference 1) requested the Northern States Power Company (NSPM) to affirm that all the Technical Specification (TS) setpoints or allowable values related to Extended Power Uprate (EPU) within the scope of the February 23, 2009, NRC and industry agreement letter (Reference 2) will have Technical Specification Task Force (TSTF) – 493 style footnotes applied. Enclosure 17 of the EPU license amendment request (Reference 3) discussed the methodology for the instrument setpoint calculations, determination of which functions were Limiting Safety System Settings (LSSS) that protect a Safety Limit, and provided a discussion of the measures taken to address the NRC concerns expressed within the September 7, 2005, letter from the NRC to the Nuclear Energy Institute (NEI) Setpoint Methods Task Force (Reference 4). Since the November 5, 2008, submittal of the EPU license amendment request, the NRC approval of the Power Range Neutron Monitoring System (PRNMS) license amendment (Reference 7) together with the industry NRC agreement established by the February 23, 2009, agreement letter (Reference 2) have established a clear licensing basis for TS allowable value changes associated with the Monticello Nuclear Generating Plant (MNGP) EPU, as discussed below. Two allowable value changes in the MNGP technical specifications have been identified for EPU, which required evaluation against the considerations laid out in the February 23, 2009, agreement letter.

The first allowable value changes involved the Average Power Range Monitor (APRM) Simulated Thermal Power – High function. Enclosure 1 and 2 of the EPU license amendment request (Reference 3) identified the following function within TS Table 3.3.1.1-1, “Reactor Protection System (RPS) Instrumentation,” as one for which a change to the stated allowable value was required:

- Function 2.b, Average Power Range Monitor Simulated Thermal Power – High (two loop operation)

Note (b) specifies the function values for single loop operation.

At a public meeting on January 8, 2009, the industry and the NRC discussed actions to resolve TSTF-493. It was agreed the industry would develop and submit a course of action for resolution. This proposed course of action was described in a letter from the TSTF to the NRC entitled, “Industry Plan to Resolve TSTF-493, Clarify Application of

Setpoint Methodology for LSSS Functions,” dated February 23, 2009 (Reference 2). As described therein, the letter provides a mutually acceptable approach incorporating both industry and NRC concerns and preferences. The section discussing the scope of functions to be addressed states:

In order to reach resolution with the NRC on TSTF-493, the industry agrees to add the TSTF-493 footnotes to all instrument functions in the LCOs for the Reactor Trip System (also called Reactor Protection System), the Engineered Safety Feature Actuation System (also called Emergency Core Cooling System) and some instrument functions in other LCOs identified by the BWROG in TSTF-493, Revision 3.

Attachment A, "Identification of Functions to be Annotated with the TSTF-493 Footnotes," includes the disposition of Functions to be included in TSTF-493. The indicated generic dispositions were discussed with the NRC in a teleconference held on February 11, 2009 and the NRC staff agreed that the Attachment indicates those functions applicable to all licensees for which no plant-specific analysis is required.

Licensees may choose to submit analysis to support plant-specific deviations from the list when adopting TSTF-493.

Reference 2 indicates that licensees with licensing actions in process during the development, review and approval of TSTF-493, Revision 4, are encouraged to apply approaches consistent with those proposed in Reference 2, with the exception that the TSTF-493 footnotes would be applied only to the specific setpoints being changed.

In conjunction with the licensing of the digital Power Range Neutron Monitoring System (PRNMS) (Reference 5), several of the same functions required to be revised under EPU were modified. The APRM Simulated Thermal Power – High function (Function 2.b), which is being revised to reflect the higher power level under EPU, was one of the functions included and revised as part of PRNMS license amendment request. In the response to an RAI (Reference 6) associated with the PRNMS license amendment request, the NSPM established that several functions, including this one, did not meet the criteria for Limiting Safety System Settings (LSSS) that protect a Safety Limit, and, hence did not propose to add TSTF-493 type footnotes for these functions.

The U.S. Nuclear Regulatory Commission (NRC) Staff agreed with this assessment and within the Safety Evaluation for PRNMS (Amendment 159), dated January 30, 2009 (Reference 7), indicated that the Simulated Thermal Power - High function in TS Table 3.3.1.1-1, for both single and two loop operational conditions, is not a LSSS that protects a Safety Limit.<sup>(1)</sup>

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1. U.S. NRC Safety Evaluation Section 3.3, "Setpoint Methodology," page 12, last paragraph.

In addressing the setpoint methodology issues, the licensee identified TS Table 3.3.1.1-1, Function 2.a, "APRM Neutron Flux-High (Setdown)," Function 2.b, "APRM Simulated Thermal Power – High," and Function 2.f, "OPRM Upscale," as functions that are not LSSS SL-related. The NRC staff agrees with the licensee's determination that the above functions are not LSSS.

Therefore, in accordance with the plant-specific analysis provided by the NSPM as approved by the NRC Safety Evaluation for the PRNMS amendment, the NSPM is not proposing TSTF-493 style footnotes for the APRM Simulated Thermal Power – High function.

The second allowable value change involved a change to the Main Steam Line Flow – High function. It was identified that Function 1.c within TS Table 3.3.6.1-1, "Primary Containment Isolation Valves," which provides isolation of the Main Steam Lines on high flow, should also have been revised as part of the EPU license amendment request as a function requiring a change to the associated allowable value. The allowable value for Function 1.c within TS Table 3.3.6.1-1 will be revised as follows:

	<u>Current Allowable Value</u>	<u>Proposed Allowable Value</u>
Function 1.c, Main Steam Line Flow – High	142 percent	123.6 percent

The revision to the allowable value for Function 1.c will be provided to the NRC in a separate letter.

Attachment A to Reference 2, "Identification of Functions to be Annotated with the TSTF-493 Footnotes," provides the disposition of Functions to be included in TSTF-493. As stated in Reference 2:

The indicated generic dispositions were discussed with the NRC in a teleconference held on February 11, 2009 and the NRC staff agreed that the Attachment indicates those functions applicable to all licensees for which no plant-specific analysis is required.

The Main Steam Line Flow – High function (Function 1.c) in TS Table 3.3.6.1-1 is not included in the list of functions contained in Attachment A (see section for NUREG-1433, Boiling Water Reactor / 4 Plants) and hence application of the interim TSTF-493 style footnotes is not required nor is proposed for this function by the NSPM.

### Conclusion

In accordance with the NRC Safety Evaluation for the PRNMS license amendment, the NSPM is not adopting interim TSTF-493 footnotes for the APRM Simulated Thermal

Power – High function. Also, in accordance with the NRC agreed upon guidance within Attachment A to the TSTF letter entitled, “Industry Plan to Resolve TSTF-493, Clarify Application of Setpoint Methodology for LSSS Functions,” dated February 23, 2009, the NSPM is not proposing interim TSTF-493 footnotes for the Main Steam Line Flow – High function, because the notes are not applicable. No TS allowable values that were modified for EPU require adoption of the TSTF-493 footnotes and the NSPM is not proposing their adoption.

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## REFERENCES

1. Email K. Feintuch (NRC) to K. Pointer (NSPM), dated April 6, 2009, “MD9990-Monticello EPU Additional RAI Item”, (TAC No. MD999) (Accession No. ML091030034)
2. Letter from the Technical Specification Task Force (TSTF) to the NRC, TSTF-09-07, ‘Industry Plan to Resolve TSTF-493, "Clarify Application of Setpoint Methodology for LSSS Functions",’ dated February 23, 2009. (ADAMS Accession No. ML090540849)
3. NSPM letter to NRC, “License Amendment Request: Extended Power Uprate,” (L-MT-08-052), dated November 5, 2008. (ADAMS Accession No. ML083230111)
4. NRC to NEI (NEI Setpoint Methods Task Force), “Technical Specification for Addressing Issues Related to Setpoint Allowable Values,” dated September 7, 2005. (ADAMS Accession No. ML0525000004)
5. NSPM letter to NRC, “License Amendment Request: Power Range Neutron Monitoring System Upgrade,” (L-MT-08-004), dated February 6, 2008. (ADAMS Accession No. ML08344081)
6. NSPM letter to NRC, “Response to Requests for Additional Information for License Amendment Request for Power Range Neutron Monitoring System Upgrade (TAC No. MD8064),” (L-MT-08-049), dated September 16, 2008. (ADAMS Accession No. ML082620582)
7. NRC letter to NSPM, “Monticello Nuclear Generating Plant (MNGP) -Issuance of Amendment Regarding the Power Range Neutron Monitoring System (TAC No. MD8064),” dated January 30, 2009. (ADAMS Accession No. ML083440681)