



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

December 27, 2013

L-MT-13-077  
10 CFR 50.90

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
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 License Amendment Request  
Re: TSTF-522 (TAC No. MF0477)

- References:
- 1) NSPM to NRC, "License Amendment Request: Adoption of Technical Specifications Task Force (TSTF) Traveler TSTF-522, Revision 0, "Revise Ventilation System Surveillance Requirements to Operate for 10 hours per Month," (L-MT-12-102) dated January 4, 2013 (ADAMS Accession No. ML13008A329).
  - 2) NRC e-mail to NSPM, "Monticello Nuclear Generating Plant - Draft Request for Additional Information for License Amendment Request re: TSTF-522 (TAC No. MF0477)," dated June 24, 2013.
  - 3) Teleconference between the NRC and NSPM personnel on November 19, 2013, concerning which revision(s) of Regulatory Guide 1.52 are implemented at Monticello and scope of the applicability of the regulatory guide.

On January 4, 2013, in accordance with 10 CFR 50.90, the Northern States Power Company – Minnesota (NSPM), doing business as Xcel Energy, Inc., submitted a License Amendment Request (LAR) (Reference 1) proposing changes to the Technical Specifications (TS) for the Monticello Nuclear Generating Plant (MNGP). The proposed change would adopt Technical Specifications Task Force (TSTF) Traveler TSTF-522, Revision 0, "Revise Ventilation System Surveillance Requirements to Operate for 10 hours per Month."

On June 24, 2013, the U.S. Nuclear Regulatory Commission (NRC) requested additional information (RAI) from NSPM (Reference 2) to complete their review. Enclosure 1 provides the requested information. On November, 19, 2013, a teleconference was held between the NRC and NSPM personnel to clarify the extent of the information requested under the RAI (Reference 3).

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

Summary of Commitments

This letter proposes no new commitments and does not revise any existing commitments.

Should you have questions regarding this letter, please contact Mr. Richard Loeffler at (763) 295-1247.

I declare under penalty of perjury that the foregoing is true and correct.  
Executed on December 27, 2013.

  
Karen D. Fili  
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  
Minnesota Department of Commerce

**ENCLOSURE**

**MONTICELLO NUCLEAR GENERATING PLANT**

**RESPONSE TO A REQUEST FOR ADDITIONAL INFORMATION**

**FOR LICENSE AMENDMENT REQUEST FOR ADOPTION OF TSTF-522**

(4 pages follow)

**RESPONSE TO A REQUEST FOR ADDITIONAL INFORMATION  
FOR LICENSE AMENDMENT REQUEST FOR ADOPTION OF TSTF-522**

By letter dated January 4, 2013 (ADAMS Accession No. ML13008A329), the Northern States Power Company – Minnesota (NSPM), doing business as Xcel Energy, Inc., proposed changes to the Technical Specifications (TS) for the Monticello Nuclear Generating Plant (MNGP). The proposed change would adopt Technical Specifications Task Force (TSTF) Traveler TSTF-522, Revision 0, "Revise Ventilation System Surveillance Requirements to Operate for 10 hours per Month."

**Request for Additional Information (RAI)**

The NRC staff evaluated the proposed change against the applicable regulatory guidance in Regulatory Guide (RG) 1.52, "Design, Testing, and Maintenance Criteria for Post-Accident Engineered-Safety-Feature Atmosphere Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants" (ADAMS Accession No. ML011710176), the guidance specified in the Standard Technical Specification as modified by TSTF-522, and the regulatory requirements of 10 CFR 50.36.

Please discuss which version of RG 1.52 is currently being implemented at MNGP and identify any deviations taken from the guidance provided.

**Response**

As discussed during the November 19, 2013, teleconference, the scope of the RAI has been clarified to be those provisions of RG 1.52, directly applicable to the changes proposed under TSTF-522 (Reference 1), as approved in the September 20, 2012, model safety evaluation Federal Register Notice (Reference 2), that both reference the RG 1.52, Revision 3 (Reference 3), methodology for iodine adsorber testing. A discussion of the applicable guidance from the RG 1.52 revisions for the MNGP follows.

NSPM tests the Standby Gas Treatment (SGT) and the Control Room Emergency Filtration (CREF) Systems in accordance with Specification 5.5.6, "Ventilation Filter Testing Program" (VFTP), to the following specified provisions of ANSI N510-1989 (Reference 4) as modified by RG 1.52, Revision 2 (Reference 5):

- 1) charcoal adsorber and High Efficiency Particulate Adsorption (HEPA) filter penetration and system bypass when tested at the required flowrates,

- 2) charcoal adsorber penetration of laboratory samples when tested at a relative humidity of 95%,
- 3) pressure drop across the combined filters when tested at the required flowrates,
- 4) proper system heater operation.

### Sample Testing Criteria

Laboratory testing of activated carbon for the SGT and CREF Systems is performed in accordance with RG 1.52, Revision 2, Regulatory Position C.6.b. Also, in accordance with RG 1.52, Revision 4 (Reference 6), Table 2, representative samples can be obtained applying the methodology described in Appendix 1 of ASME N509-2002.

NSPM applies the guidance provided in Revisions 2 and 4 of RG 1.52 for obtaining and testing representative samples. Requirements for individual samplers are consistent between the two revisions, and have the same general requirements to ensure each sample is representative of the charcoal bed, i.e., have the same process flow, are from the same charcoal batch, and have similar sampler dimensions. Test conditions are for air at a relative humidity of 95% and temperature of 30°C.

The SGT System samplers are exposed to the same process flow in accordance with the regulatory guide. The samplers are filled with the same lot and batch of activated carbon. The SGT System also has spare trays with modified adsorber cells to permit sampling in accordance with the guidance of ASME N509-2002, Appendix 1. Sampling procedures have guidance to sample using the appropriate method for the installed tray design. An in-place filter test is performed following installation of new samplers and trays.

The CREF System samplers are also exposed to the same process flow in accordance with the regulatory guide. The samplers are filled with the same lot and batch of activated carbon. An in-place filter test is performed following installation of new samplers and trays.

### Humidity Control

Both the SGT and the CREF Systems are designed for conditions where the relative humidity of the air entering the system is greater than 70%. Both systems have installed humidity control (heaters) to lower the relative humidity to less than 70%. NSPM, however, does not apply the lower relative humidity testing allowance permitted for systems designed with humidity control, and tests the iodine adsorbers in accordance with the provisions of Specification 5.5.6.c (which specifies RG 1.52, Revision 2, Regulatory Position C.6.b) in accordance with ASTM D3803-1989 at a temperature of 30°C and 95% relative humidity.

One of the reasons for the previous 10-hour run-time surveillance requirement specified in RG 1.52, Revision 2, Regulatory Position 4.d, for operating the systems with the heaters operating was to verify the ability to minimize the effects of moisture on the adsorber's ability to capture gaseous activity. This condition is already accounted for since the MNGP TS VFTP requires testing charcoal adsorbers in a manner to account for the effects of moisture on the adsorber's ability to capture gaseous activity (i.e., by performing testing at a relative humidity of 95 percent). Table 2 in RG 1.52, Revision 2, indicates that the relative humidity of the charcoal adsorber should be controlled and tested to 70% with an assumption that humidity control is provided.

The TSTF-522 and the response to the March 22, 2012, Federal Register Notice for TSTF-522 (Reference 7), references RG 1.52, Revision 3 (Reference 8), for acceptance of iodine adsorber testing acceptability. Removal of humidity control is allowed by RG 1.52, Revision 3, if the representative samples are laboratory tested at 95% relative humidity. The current MNGP TS required testing requirements meet the regulatory guidance by testing at a 95% relative humidity per license requirements. Therefore, heater operation for humidity control is not required.

NSPM takes representative samples from the applicable MNGP ventilation systems as discussed previously. Sample frequency is per TS requirements. The 24-month test frequency reflects the later guidance of RG 1.52, Revision 3, Section 7.2, rather than the previous 18-month frequency specified in RG 1.52, Revision 2.

Both the SGT and the CREF Systems are operated once every 31 days in accordance with TS requirements for 10 continuous hours with the heaters on. The principal sections that regulatory guidance that this proposed TS change is based upon is from the following section of RG 1.52, Revision 3:

Section 6.1 Each ESF atmosphere cleanup train should be operated continuously for at least 15 minutes each month, with the heaters on (if so equipped), to justify the operability of the system and all its components.

Section 4.9 ... and systems without humidity control should perform laboratory testing of representative samples of activated carbon at a relative humidity of 95% (see Table 1 of this guide).

In conclusion, revising the TS surveillance requirements to align with the more current guidance of RG 1.52, Revision 3, Section 6.1, in concert with the guidance from Section 4.9, continues to demonstrate the operability of the system(s) and its components without reliance upon humidity control (heaters).

## REFERENCES

1. Letter from TSTF to NRC, 'Transmittal of TSTF-522, Revision 0, "Revise Ventilation System Surveillance Requirements to Operate for 10 hours per Month," (Letter No. TSTF-10-04) dated March 30, 2010
2. Federal Register Notice, Volume 77, No. 183, Nuclear Regulatory Commission, Model Safety Evaluation for Plant-Specific Adoption of Technical Specifications Task Force Traveler TSTF-522, Revision 0, "Revise Ventilation System Surveillance Requirements to Operate for 10 Hours per Month," Using the Consolidated Line Item Improvement,' dated September 20, 2012
3. NRC RG 1.52, Revision 3, "Design, Inspection, and Testing Criteria for Air Filtration and Adsorption Units of Post-Accident Engineered-Safety-Feature Atmosphere Cleanup Systems Light-Water-Cooled Nuclear Power Plants," dated June 2001
4. ASME N510-1989, "Testing of Nuclear Air Treatment Systems"
5. NRC Regulatory Guide (RG) 1.52, Revision 2, "Design, Testing, and Maintenance Criteria for Post Accident Engineered-Safety-Feature Atmosphere Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants," dated March 1978
6. NRC RG 1.52, Revision 4, "Design, Inspection, and Testing Criteria for Air Filtration and Adsorption Units of Post-Accident Engineered-Safety-Feature Atmosphere Cleanup Systems Light-Water-Cooled Nuclear Power Plants," dated September 2012
7. Letter from TSTF to C. Bladey, NRC, Technical Specification Task Force (TSTF) Response to the March 22, 2012, Federal Register Notice, "Proposed Models for Plant-Specific Adoption of Technical Specifications Task Force Traveler TSTF-522, Revision 0, 'Revise Ventilation System Surveillance Requirements to Operate for 10 Hours per Month'," (Letter No. TSTF-12-10) dated April 23, 2012
8. NRC RG 1.52, Revision 3, "Design, Inspection, and Testing Criteria for Air Filtration and Adsorption Units of Post-Accident Engineered-Safety-Feature Atmosphere Cleanup Systems Light-Water-Cooled Nuclear Power Plants," dated June 2001