



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

September 29, 2010

L-MT-10-062  
10 CFR 50.55a(g)(5)(iii)

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

Subject: Response to Request for Additional Information Regarding 10 CFR 50.55a Request No. 19 (RR-19): Relief from Impractical Examination Coverage Requirements Pursuant to 10 CFR 50.55a(g)(5)(iii) for the Fourth Ten-Year Inservice Inspection Interval (TAC No. ME3937)

References:

- 1) Letter from Northern States Power – Minnesota (NSPM) to the U.S. Nuclear Regulatory Commission (NRC), “10 CFR 50.55a Request No. 19: Relief from Impractical Examination Coverage Requirements Pursuant to 10 CFR 50.55a(g)(5)(iii) for the Fourth Ten-Year Inservice Inspection Interval,” dated May 6, 2010 (ADAMS Accession No. ML072710119)
- 2) Electronic mail from P. Tam (NRC) to NSPM, “Monticello – Draft RAI re. Relief Request 19 dated 5/6/10” (TAC No. ME3937), dated July 27, 2010 (ADAMS Accession No. ML102080492)
- 3) Electronic mail from P. Tam (NRC) to NSPM, “Monticello – Revised draft RAI re. Relief Request 19 dated 5/6/10 (TAC No. ME3937)”, dated August 9, 2010 (ADAMS Accession No. ML102210157)

By letter dated May 6, 2010 (Reference 1), and pursuant to 10 CFR 50.55a(g)(5)(iii), Northern States Power – Minnesota (NSPM) requested U.S. Nuclear Regulatory Commission (NRC) review and approval of 10 CFR 50.55a Request No. 19 (RR-19).

NSPM submitted this request for the Fourth Ten-Year Inservice Inspection Interval scheduled to end on May 31, 2012.

RR-19 requests relief for the Monticello Nuclear Generating Plant (MNGP) from certain examination coverage requirements imposed by the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components." Request RR-19 is for weld examinations performed during the 2009 refueling outage where the required coverage of "essentially 100 percent" could not be obtained when examined to the extent practical. The basis for the 10 CFR 50.55a request is that compliance with the specified requirements is impractical due to plant design.

On July 27, 2010, the NRC staff notified NSPM by electronic mail (Reference 2) that additional information was necessary for the staff to complete the review. A conference call between NSPM and NRC staff was held on August 9, 2010, to clarify the requests for additional information (RAI). Following the conference call, the NRC staff sent a revised RAI to NSPM by electronic mail (Reference 3). The NSPM response to the NRC RAI is included in Enclosure 1.

If you have further questions regarding this request, please contact Mr. Randy Rippey at 612-330-6911.

#### Summary of Commitments

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



Timothy J. O'Connor  
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 1**  
**Response to Request for Additional Information**  
**Regarding 10 CFR 50.55a Request No. 19 (RR-19)**

By letter dated May 6, 2010, and pursuant to 10 CFR 50.55a(g)(5)(iii), Northern States Power Company – Minnesota (NSPM) requested U.S. Nuclear Regulatory Commission (NRC) review and approval of 10 CFR 50.55a Request RR-19 (Reference 1).

Under RR-19, NSPM requested relief for the Monticello Nuclear Generating Plant (MNGP) from certain examination coverage requirements imposed by the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components." As indicated in RR-19, seven nozzle-to-vessel (NV) welds were examined to the extent practical during the 2009 refueling outage (RFO). Enclosure 4 of RR-19 provided the prior examination history for all of the subject welds which were examined during the 2009 RFO.

On July 27, 2010, the NRC staff notified NSPM by electronic mail (Reference 2) that additional information was necessary for the staff to complete the review. A conference call between NSPM and NRC staff was held on August 9, 2010, to clarify the requests for additional information (RAI). Following the conference call, the NRC staff sent a revised RAI to NSPM by electronic mail (Reference 3). The NRC RAI is repeated below with the NSPM response following the RAI.

**NRC Request:**

- 1. A number of the welds for which relief was requested are not unique in the Monticello plant (i.e., relief was requested for a subset of multiple, similar welds). Please indicate how many additional welds of the same type (recirculation inlet nozzle, feedwater inlet, etc.) exist and have been inspected during this or the prior interval. For those similar welds that have been inspected during this or the prior interval, please provide the percentage of the required weld volume that was inspected, whether any indications were identified, and how those indications were dispositioned.**

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**NSPM Response:**

In Table A, which follows, the subject nozzle-to-vessel welds of RR-19 are listed (*Welds Examined in 2009*). For each of the subject welds, Table A also includes:

- a description of the Reactor Pressure Vessel (RPV) nozzle type associated with the weld (*RPV Nozzle Type*),
- the total quantity of that type installed on the Monticello RPV, e.g. recirculation inlet nozzle, feedwater inlet, etc. (*Total Qty on RPV*),
- the number of additional exams of the same type performed to date during the 4<sup>th</sup> Interval (this Interval), excluding the 2009 exams (*Add'l 4<sup>th</sup> Int Exams*), and
- the number of additional exams of the same type performed during the 3<sup>rd</sup> Interval (prior Interval), excluding the historical exams of the subject welds provided in RR-19 submittal (*Add'l 3<sup>rd</sup> Int Exams*).

<b>Table A</b>				
<b>Weld Examined in 2009</b>	<b>RPV Nozzle Type</b>	<b>Total Qty on RPV</b>	<b>Add'l 4<sup>th</sup> Int Exams</b>	<b>Add'l 3<sup>rd</sup> Int Exams</b>
N-2A NV	Recirculation Inlet (N2)	10	5	9
N-3C NV	Main Steam Outlet (N3)	4	1	3
N-4B NV	Feedwater Inlet (N4)	4	2	3
N-6B NV	Reactor Head Spare (N6)	2	1	1
N-7 NV	Reactor Head Vent (N7)	1	N/A	N/A
N-8B NV	Jet Pump Instrumentation (N8)	2	1	1
N-10 NV	Standby Liquid Control Inlet / Core Differential Pressure (N10)	1	N/A	N/A

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**NSPM Response (continued):**

Table B of this Enclosure provides the examination history applicable to this and/or the prior Interval for the same weld types as the subject welds of RR-19. Table B also includes the percentage of examination coverage obtained for all of these welds.

Each of the subject welds were examined during the current or previous Interval shown in the Table. Review of historical examination results for these similar welds found that no indications were identified, therefore no disposition of indications has been necessary.

The N7 and N10 nozzles listed in RR-19 are each a set of one. Therefore, since they have no similar welds, there are no additional N7 or N10 entries in Table B.

Also, as noted previously, Enclosure 4 of RR-19 provided the examination history for all of the specified welds examined in 2009, therefore, they are not included in Table B.

**Table B: Historical Nozzle-to-Vessel Weld Examination for  
This Interval (4<sup>th</sup> Interval) or the Prior Interval (3<sup>rd</sup> Interval)**

**Notes:**

Note 1 Code Coverage was not determined for limited exams prior to 1997 (Reference 1)

Note 2 Relief was not requested for limited exams prior to 1997 (Reference 1)

Note 3 Limited nozzle-to-vessel weld exams for N-2C, N-2F, N-3D, N-5A<sup>1</sup>, N-6B, and N-10<sup>2</sup> were errantly omitted from 3rd Interval ISI 10CFR50.55a Request 11 which was submitted for the 2000 refueling outage and approved by the NRC on October 25, 2000. (References 1, 4, 5, 6, and 7)

Weld	ISI Interval	Exam Year	Exam Coverage	Exam Results	10CFR50.55a Request	NRC Approval Date
N-2B	3 <sup>rd</sup>	2001	62%	no indications	RR-16 (Ref. 8)	May 19, 2003 (Ref. 10)
	4 <sup>th</sup>	2007	78%	no indications	RR-15 (Ref. 9)	May 19, 2008 (Ref. 11)
N-2C	3 <sup>rd</sup>	2000	61%	no indications	Note 3	Note 3

<sup>1</sup> N-5 nozzle type exams are not applicable to the RR-19 subject population. Therefore, examination history information for N-5A and similar type weld N-5B are not included in Table B of this RAI response.

<sup>2</sup> N-10 and its examination history was included in the RR-19 submittal and is therefore not included in Table B of this RAI response.

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**Table B: Historical Nozzle-to-Vessel Weld Examination for  
This Interval (4<sup>th</sup> Interval) or the Prior Interval (3<sup>rd</sup> Interval)**

**Notes:**

Note 1 Code Coverage was not determined for limited exams prior to 1997 (Reference 1)

Note 2 Relief was not requested for limited exams prior to 1997 (Reference 1)

Note 3 Limited nozzle-to-vessel weld exams for N-2C, N-2F, N-3D, N-5A<sup>1</sup>, N-6B, and N-10<sup>2</sup> were errantly omitted from 3rd Interval ISI 10CFR50.55a Request 11 which was submitted for the 2000 refueling outage and approved by the NRC on October 25, 2000. (References 1, 4, 5, 6, and 7)

Weld	ISI Interval	Exam Year	Exam Coverage	Exam Results	10CFR50.55a Request	NRC Approval Date
N-2D	3 <sup>rd</sup>	1994	Note 1	no indications	Note 2	Note 2
	4 <sup>th</sup>	2005	82%	no indications	RR-13 (Ref. 12)	July 18, 2006 (Ref. 13)
N-2E	3 <sup>rd</sup>	1994	Note 1	no indications	Note 2	Note 2
	4 <sup>th</sup>	2005	78%	no indications	RR-13 (Ref. 12)	July 18, 2006 (Ref. 13)
N-2F	3 <sup>rd</sup>	2000	61%	no indications	Note 3	Note 3
N-2G	3 <sup>rd</sup>	1998	51%	no indications	RR-10 (Ref. 14)	August 4, 1999 (Ref. 15)
	4 <sup>th</sup>	2007	78%	no indications	RR-15 (Ref.9)	May 19, 2008 (Ref. 11)
N-2H	3 <sup>rd</sup>	1998	47%	no indications	RR-10 (Ref.14)	August 4, 1999 (Ref. 15)
N-2J	3 <sup>rd</sup>	1994	Note 1	no indications	Note 2	Note 2
	4 <sup>th</sup>	2005	78%	no indications	RR-13 (Ref.12)	July 18, 2006 (Ref. 13)
N-2K	3 <sup>rd</sup>	2001	62%	no indications	RR-16 (Ref. 8)	May 19, 2003 (Ref. 10)
N-3A	3 <sup>rd</sup>	1994	Note 1	no indications	Note 2	Note 2
	4 <sup>th</sup>	2005	83%	no indications	RR-13 (Ref. 12)	July 18, 2006 (Ref. 13)
N-3B	3 <sup>rd</sup>	2000	61%	no indications	RR-11 (Ref. 4)	October 25, 2000 (Ref. 7)
N-3D	3 <sup>rd</sup>	2000	61%	no indications	Note 3	Note 3
N-4A	3 <sup>rd</sup>	1996	Note 1	no indications	Note 2	Note 2
	4 <sup>th</sup>	2007	79%	No indications	RR-15 (Ref. 9)	May 19, 2008 (Ref. 11)

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This Interval (4<sup>th</sup> Interval) or the Prior Interval (3<sup>rd</sup> Interval)**

**Notes:**

Note 1 Code Coverage was not determined for limited exams prior to 1997 (Reference 1)

Note 2 Relief was not requested for limited exams prior to 1997 (Reference 1)

Note 3 Limited nozzle-to-vessel weld exams for N-2C, N-2F, N-3D, N-5A<sup>1</sup>, N-6B, and N-10<sup>2</sup> were errantly omitted from 3rd Interval ISI 10CFR50.55a Request 11 which was submitted for the 2000 refueling outage and approved by the NRC on October 25, 2000. (References 1, 4, 5, 6, and 7)

Weld	ISI Interval	Exam Year	Exam Coverage	Exam Results	10CFR50.55a Request	NRC Approval Date
N-4C	3 <sup>rd</sup>	1994	Note 1	no indications	Note 2	Note 2
	4 <sup>th</sup>	2005	79%	no indications	RR-13 (Ref. 12)	July 18, 2006 (Ref. 13)
N-4D	3 <sup>rd</sup>	2000	61%	no indications	RR-11 (Ref. 4)	October 25, 2000 (Ref. 7)
N-6A	3 <sup>rd</sup>	1996	Note 1	no indications	Note 2	Note 2
	4 <sup>th</sup>	2007	86%	no indications	RR-15 (Ref. 9)	May 19, 2008 (Ref. 11)
N-8A	3 <sup>rd</sup>	1994	Note 1	no indications	Note 2	Note 2
	4 <sup>th</sup>	2005	83%	no indications	RR-13 (Ref. 12)	July 18, 2006 (Ref. 13)

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**REFERENCES**

1. NSPM letter to NRC, "10 CFR 50.55a Request No. 19: Relief from Impractical Examination Coverage Requirements Pursuant to 10 CFR 50.55a(g)(5)(iii) for the Fourth Ten-Year Inservice Inspection Interval," dated May 6, 2010 (ADAMS Accession No. ML072710119)
2. Electronic mail from P. Tam (NRC) to NSPM, "Monticello – Draft RAI re. Relief Request 19 dated 5/6/10" (TAC No. ME3937), dated July 27, 2010 (ADAMS Accession No. ML102080492)
3. Electronic mail from P. Tam (NRC) to NSPM, "Monticello – Revised draft RAI re. Relief Request 19 dated 5/6/10 (TAC No. ME3937)," dated August 9, 2010 (ADAMS Accession No. ML102210157)
4. MNGP letter to NRC, "Request for Relief No. 11 for the 3rd 10-Year Interval Inservice Inspection Program," dated May 25, 2000 (ADAMS Accession No. ML003720899)
5. MNGP letter to NRC, "Supplemental Information Request for Relief No. 11 for the 3rd 10-Year Interval Inservice Inspection Program," dated July 11, 2000 (ADAMS Accession No. ML003734843)
6. MNGP Corrective Action Program Action Request (CAP A/R) 01013875, "6 limited ISI exams not included in Cycle 19 Relief Request," origination date February 7, 2006
7. NRC letter to NMC, "Monticello Nuclear Generating Plant – Evaluation of Relief Request Number 11 for the Third 10-Year Interval Inservice Inspection Program Plan (TAC No. MA9114)," dated October 25, 2000 (ADAMS Accession No. ML003763033)
8. MNGP letter to NRC, "Request for Review and Approval of Relief Request Nos. 15 and 16 for the Monticello 3<sup>rd</sup> 10-Year Interval Inservice Inspection Examination Plan," dated May 30, 2002 (ADAMS Accession No. ML021680035)
9. MNGP letter to NRC, "10 CFR 50.55a Request No. 15: Relief from Impractical Examination Coverage Requirements Pursuant to 10 CFR 50.55a(g)(5)(iii) for the Fourth Ten-Year Inservice Inspection Interval," dated September 26, 2007 (ADAMS Accession No. ML072710119)



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10. NRC letter to MNGP, "Monticello Nuclear Generating Plant (MNGP) – Third 10–Year Interval Inservice Inspection Relief Request No. 16 (TAC No. MB5487)," dated May 19, 2003 (ADAMS Accession No. ML03140019)
11. NRC letter to MNGP, "Monticello Nuclear Generating Plant (MNGP) – Granting of Relief Regarding Limited Ultrasonic Examination Coverage of Five Welds (TAC No. MD6854)," dated May 19, 2008 (ADAMS Accession No. ML081050678)
12. MNGP letter to NRC, "10 CFR 50.55a Request No. 13: Relief from Impractical Examination Coverage Requirements Pursuant to 10 CFR 50.55a(g)(5)(iii) for the Fourth Ten–Year Inservice Inspection Interval," dated September 27, 2005 (ADAMS Accession No. ML052760169)
13. NRC letter to MNGP, "Monticello Nuclear Generating Plant (MNGP) – Fourth 10–Year Interval Inservice Inspection (ISI) Program Plan Relief Request No. 13 (TAC No. MC8882)," dated July 18, 2006 (ADAMS Accession No. ML061780172)
14. NSP letter to NRC, "Request for Relief for the 3<sup>rd</sup> 10–Year Interval Inservice Inspection Program," dated July 24 1998
15. NRC letter to NSPM, "Monticello Nuclear Generating Plant – Evaluation of Relief Request Number 10 for the Third 10–Year Interval Inservice Inspection Program Plan (TAC No. MA3397)," dated August 4, 1999