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August 31, 1994

10 CFR Part 50
Section 50.55a

US Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DPR-22

Request for Review and Approval of
Inservice Testing Program Relief Request PR-9

Enclosed for NRC staff review and approval is a new relief request (PR-9; HPCI, RCIC) necessary to support Revision 1 to the Monticello Third Ten Year Interval ASME Section XI Inservice Testing (IST) program. The relief request addresses an alternative to the code requirements concerning the ranges of instrumentation used for HPCI and RCIC pump testing. The need for this relief request was brought to our attention during a combined IST and Check Valve inspection performed by A. Dunlop (NRC-Region III) and J. Colaccino (NRC-NRR) at the Monticello plant during the weeks of August 8 and August 22, 1994.

Revision 1 to the Monticello Third Ten Year Interval ASME Section XI IST program was submitted to the NRC staff on December 7, 1992. Approval of the program, with comments, was granted by the staff on July 6, 1993. NSP's resolution of the NRC staff's outstanding comments was submitted to the staff in a letter dated February 15, 1994.

Included in NSP's February 15, 1994 submittal were revisions to Third Ten Year Interval IST Program relief requests PR-6 and SC-1, which are still undergoing NRC review. In order to minimize the number of administrative revisions to our IST program, it is our intention to wait until the revisions to PR-6 and SC-1 and the new relief request PR-9 are all approved before we issue an update to Section 5.0 ("PUMP TEST PROGRAM AND RELIEF REQUESTS") to Monticello Third Ten Year Interval IST Program manual holders.

This letter contains no new NRC commitments, nor does it modify any prior commitments. Please contact Marv Engen, Sr Licensing Engineer, at (612) 295-1291 if you require further information.

Roger O Anderson
Director
Licensing and Management Issues

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NORTHERN STATES POWER COMPANY

c: Regional Administrator - III, NRC
NRR Project Manager, NRC
Sr Resident Inspector, NRC
State of Minnesota
Attn: Kris Sanda

Enclosure: Relief Request PR-9

RELIEF REQUEST NUMBER PR-9

System: High Pressure Coolant Injection (HPCI)
Reactor Core Isolation Coolant (RCIC)

P&ID: M-124 HPCI
M-126 RCIC

Pumps: P-209 HPCI
P-207 RCIC

Class: 2

Function: Inject Coolant into the Reactor Independent of AC Power

Test Requirement from which Relief is Sought:

OMa-1988 Part 6 paragraph 4.6.1.2(a), analog instrument range shall not exceed 3 times the reference value.

Basis for Relief:

10 CFR Part 50, Section 50.55a(a)(3), which states (in part):

"Proposed alternatives to the requirements of paragraphs (c), (d), (e), (f), (g), and (h) of this section or portions thereof may be used when...."

- (i) *The proposed alternatives would provide an acceptable level of quality and safety,..."*

Inservice pump testing is performed in accordance OMa-1988 Part 6. The differential pressure for the HPCI and RCIC pumps is determined by subtracting the indicated suction pressure from the indicated discharge pressure. The HPCI pump suction pressure is read in the control room from instrument PI-23-116, which is sent a 10 to 50 mAmp signal from local transmitter PT-23-100. The RCIC pump suction pressure is read locally from instrument PI-13-66. The relevant data for the instruments is as follows:

INSTRUMENT	PUMP	RANGE	REFERENCE VALUE	RATIO (Range/ Ref Value)
PI-23-116	P-209	30" Hg Vacuum to 100 PSI	33.7 PSI	$114.7/33.7 = 3.4$ (See Note 1)
PT-23-100	P-209	10 to 50 mAmps	21.7 mAmps	$40/11.7 = 3.4$ (See Note 2)
PI-13-66	P-207	30" Hg Vacuum to 100 PSI	33.7 PSI	$114.7/33.7 = 3.4$ (see Note 1)

Note 1: The vacuum range for the pressure indicators was converted to PSI for determining the ratio. 30 " HG Vacuum = 14.7 PSI; thus the RANGE = $100 + 14.7 = 114.7$ PSI. The same principle was applied to the reference value (REF VAL). With a reference value of 19 PSI indicated on the instrument, the reference value used for the ratio determination is $19 + 14.7 = 33.7$ PSI.

Note 2: The pressure transmitter has a 10 to 50 mAmp range, or a span of 40 mAmps. The ratio for this instrument must be determined by reducing the reference value to its value on the 40 mAmp span (i.e., 21.7 mAmps equates to 11.7 mAmps on the 40 mAmp span).

The code requires the instrument range to be less than 3 time the test parameter reference value. The 2% code allowable instrument tolerance is then taken from this range requirement. The same instrument calibration tolerance can be applied to these instruments by simply calculating the code required tolerance from the code equivalent range as follows:

INSTRUMENT	REFERENCE VALUE	CODE EQUIVALENT RANGE	2% OF CODE EQUIVALENT RANGE
PI-23-116	33.7 PSI	$3 \times 33.7 = 101$ PSI	± 2 PSI
PT-23-100	21.7 mAmps	$3 \times 11.7 = 35.1$ mAmps	± 0.7 mAmps
PI-13-66	33.7 PSI	$3 \times 33.7 = 101$ PSI	± 2 PSI

The existing instrument calibration tolerances are ± 2 PSI for the pressure indicators and ± 0.8 mAmps for the pressure transmitter. The calibration history for these instruments

shows that they easily meet these existing tolerances. Recent calibration records show the instruments' as-found accuracy of 1% or less of the code equivalent range.

Under the provisions of 10 CFR 50.55a(a)(3), this alternative to the Code requirement is proposed in that the alternative provides an equivalent level of quality and safety. The proposed alternative satisfies the code intent in that the accuracy of the instrumentation to assess the operational readiness of the HPCI and RCIC pumps will be maintained within Code requirements.

Alternative Testing:

The instruments identified above will be calibrated to 2% of a code equivalent range. The code equivalent range will be calculated by multiplying the test parameter reference value by three. For pressure indicators PI-23-116 and PI-13-66 this will result in a allowable tolerance equal to ± 2 PSI on the output or ± 0.7 mAmps on the input (Note: PI-23-116 may be calibrated by determining the mAmps input signal required to establish a set PSI output).

Pressure transmitter PT-23-100 will be calibrated to ± 0.7 mAmps for the reasons discussed above.

Approval:

Approval for the 3rd ten year interval is pending.