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10 CFR 50.55a

U S Nuclear Regulatory Commission
ATTN: Document Control Desk
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Prairie Island Nuclear Generating Plant Units 1 and 2
Dockets 50-282 and 50-306
Renewed License Nos. DPR-42 and DPR-60

Supplement to 10 CFR 50.55a Requests RR-01, RR-03, RR-05, RR-06 and RR-07
Associated with the Fifth Ten-Year Interval for the Inservice Test Program (TAC Nos.
MF3928 and MF3929)

By letter dated April 9, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14099A283), Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (hereafter "NSPM"), submitted for NRC approval 10 CFR 50.55a Requests numbered RR-01, RR-03, RR-05, RR-06 and RR-07 for the fifth ten-year interval for the Prairie Island Nuclear Generating Plant (PINGP), Units 1 and 2, Inservice Test (IST) Program. By email dated August 22, 2014 (ML14234A287), NRC Staff requested additional information (RAI) on the April 9, 2014, 10 CFR 50.55a Requests (ML14099A283). The enclosure to this letter provides the responses to the NRC Staff RAIs.

If there are any questions or if additional information is needed, please contact Mr. Dale Vincent, P.E., at 651-267-1736.

Summary of Commitments

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

A handwritten signature in cursive script that reads 'Kevin Davison'.

Kevin Davison
Site Vice President, Prairie Island Nuclear Generating Plant
Northern States Power Company - Minnesota

Enclosures (1)

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cc: Administrator, Region III, USNRC
Project Manager, PINGP, USNRC
Resident Inspector, PINGP, USNRC

ENCLOSURE

Supplement to 10 CFR 50.55a Requests RR-01, RR-03, RR-05, RR-06 and RR-07 Associated with the Fifth Ten-Year Interval for the Inservice Test Program (TAC Nos. MF3928 and MF3929)

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RAI-RR-01-1:

Relief Request RR-01 is related to use of Code Case OMN-16, Revision 1. Please confirm and verify that while using Code Case OMN-16, comprehensive pump test will be performed within plus or minus 20 percent of pump design flow as required by ASME OM Code Subsection ISTB.

NSPM Response:

Reference value establishment for subsequent tests will be done commensurate with the requested OMN-16 Code Case Section 16-3300 and ISTB-3100 (as dictated by 16-3300). ISTB-3100 requires reference values be established in accordance with ISTB-3300, and specifically for Comprehensive Pump Testing, the applicable Section ISTB-3300(e)(1).

RAI-RR-05-1:

In Relief Request RR-05, Section 4, "Reason for Request," Sixth paragraph, last sentence states "the Prairie Island Nuclear Generating Plant (PINGP) Predictive Maintenance (PdM) Program currently employs predictive monitoring techniques for vibration monitoring and analysis when evaluating IST vibration data." As specified in NUREG-1482, Revision 2, Section 5.12, "Smooth-Running Pumps," that PdM programs normally include bearing temperature trending, oil sampling and analysis, thermography analysis, and enhanced vibration monitoring. Please verify and confirm that PdM Program at PINGP includes bearing temperature trending, oil sampling and analysis, thermography analysis, and enhanced vibration monitoring.

NSPM Response:

The PINGP Predictive Maintenance (PdM) Program performs vibration analysis beyond the trending of overall vibration levels required by the ASME OM Code Sections ISTB 5321(d) and ISTB 5323(d), including spectral and waveform analysis to provide early identification of equipment issues. When warranted, the PdM Program can also employ infrared thermography (including bearing temperature trending) and ultrasonic technologies to provide diverse understanding of pump degradation identified by vibration trends as deemed necessary under the NSPM Corrective Action Program (CAP). While oil sampling and analysis is also a part of the PINGP PdM, it is not applicable to the control room chilled water pumps which have grease lubricated bearings.

RAI-RR-07-1:

In Relief Request RR-07, Section 4, "Reason for Request," Second paragraph, states that "Current fuel cycle lengths are at an approximate 20 months frequency; however NSPM is considering extending the cycle length to 24 months during the fifth 10-year interval. In doing so, this will create a hardship for testing the valves as the number of available refueling outage to complete testing will decrease, and results in testing half of the MSSV each outage thereafter (5 of 10 valves)." Please provide and elaborate details about hardship.

NSPM Response:

Refueling on a 24 month cycle would require testing half (5 of 10) of the Main Steam Safety Valves (MSSV) each refueling outage to meet the ASME OM Mandatory Appendix I, Section I-1350, requirement to test all MSSVs within five years. PINGP maintains three spare MSSVs for both units. Section I-1350 of ASME OM CODE MANDATORY APPENDIX I, states that Pressurized Water Reactor (PWR) MSSVs shall be tested in accordance with Section I-1320. Section I-1320(b)(1) states that the owner may satisfy testing requirements by replacing with a partial complement of valves. Removal and replacement with pretested spares allows for additional actions to be taken to assess the condition of the valves for preventative maintenance (PM) purposes, such as, disassembly and inspection practices. In order to meet the testing requirement however, PINGP would need to either test five valves in place, or replace three valve locations with the three pre-tested spares and send two additional valves during the outage to be tested, repaired as needed and sent back. Additionally, if the valves are to be tested in place, and removal of the valves is desired to implement disassembly, inspection, and other PM strategies, this would increase cost on the implementation of the PM activities by having to do both replacement and testing.

NRC approval for use of OMN-17 would allow both testing and PM activities to be merged by decreasing the frequency allotted for testing, and offering the ability to better utilize the existing spare valves. The extended frequency of OMN-17 would allow for lowering the number of valves needing to be tested per outage from five valves per refueling outage to three valves per refueling outage, with one refueling outage needing four valves.