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June 10, 2022

L-PI-22-033
10 CFR 50.90

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Prairie Island Nuclear Generating Plant, Units 1 and 2
Docket Nos. 50-282 and 50-306
Renewed Facility Operating License Nos. DPR-42 and DPR-60

Response to Request for Additional Information RE: Prairie Island Nuclear Generating Plant, Units 1 and 2, Amendment to Adopt 24-Month Operating Cycles

- References: 1) Letter L-PI-21-016, "Application for License Amendment to Implement 24-Month Operating Cycle," dated August 6, 2021 (ADAMS Accession Number ML21218A093)
- 2) Letter L-PI-21-047, "Response to Request for Additional Information RE: 24-Month Operating Cycle Amendment Prairie Island Nuclear Generating Plant, Units 1 and 2, dated December 7, 2021 (ADAMS Accession Number ML21341B375)
- 3) Letter L-PI-22-024, "Supplement to Application for License Amendment to Implement 24-Month Operating Cycle," dated March 7, 2022 (ADAMS Accession Number ML22066B341)
- 4) Email from the NRC to NSPM, "Request for Additional Information RE: Prairie Island Nuclear Generating Plant, Units 1 and 2, Amendment to Adopt 24-Month Operating Cycles," dated June 9, 2022

In Reference 1, Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (hereafter "NSPM"), submitted a license amendment request (LAR) proposing changes to the Prairie Island Nuclear Generating Plant (PINGP) license basis to implement a 24-month operating cycle for PINGP Units 1 and 2 and corresponding changes to the PINGP Technical Specifications (TS). In Reference 2, NSPM enclosed NSPM calculation SPC-AF-EA-RC-RP-001 in response to NRC request for additional information (RAI). In Reference 3, NSPM supplemented the calculation provided by Reference 2 with a Glossary of Terms. In Reference 4, the NRC requested additional information needed for the NRC staff to complete its review. The enclosure to this letter provides NSPM's response to the NRC RAI.

The information provided with this letter does not alter the evaluations performed in accordance with 10 CFR 50.92 in Reference 1. In accordance with 10 CFR 50.91 (b)(1), a copy of this application, with the enclosure, is being provided to the designated Minnesota Official.

Please contact Mr. Jeff Kivi at (612) 330-5788 or Jeffrey.L.Kivi@xcelenergy.com if there are any questions or if additional information is needed.

Summary of Commitments

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

I declare under penalty of perjury, that the foregoing is true and correct.
Executed on June 10, 2022.

Martin C. Murphy Digitally signed by Martin C. Murphy
Date: 2022.06.10 11:15:21 -05'00'

Martin C. Murphy
Director of Nuclear Licensing and Regulatory Services
Northern States Power Company – Minnesota

Enclosure

cc: Administrator, Region III, USNRC
Project Manager, Prairie Island, USNRC
Resident Inspector, Prairie Island, USNRC
State of Minnesota

Response to Request for Additional Information RE:

Prairie Island Nuclear Generating Plant, Units 1 and 2, Amendment to Adopt 24-Month Operating Cycles

1.0 BACKGROUND

In Reference 1, Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (hereafter "NSPM"), submitted a license amendment request (LAR) proposing changes to the Prairie Island Nuclear Generating Plant (PINGP) license basis to implement a 24-month operating cycle for PINGP Units 1 and 2 and corresponding changes to the PINGP Technical Specifications (TS). In Reference 2, NSPM enclosed NSPM calculation SPC-AF-EA-RC-RP-001 in response to NRC request for additional information (RAI). In Reference 3, NSPM supplemented the calculation provided by Reference 2 with a Glossary of Terms. In Reference 4, the NRC requested additional information needed for the NRC staff to complete its review. The NSPM response to the NRC RAI is provided below.

2.0 NRC REQUEST FOR ADDITIONAL INFORMATION AND NSPM RESPONSE

Requirements and Guidance:

The regulation at 10 CFR 50.36(c)(3) states:

Surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.

Generic Letter 91-04 (GL 91-04) "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," (ADAMS Accession No. ML013100215) provides guidance for evaluating surveillance intervals to support 24-month fuel cycles.

Issue:

The Prairie Island Nuclear Generating Plant, Units 1 and 2 license amendment request (LAR) dated August 6, 2021, Section 3.1 states that "The Following SRs [surveillance requirements] in the PI [Prairie Island] STI [Surveillance Test Interval] have limitations on application of grace and will be revised to allow grace of up to six months or 30 months total." Included in Section 3.1 of the LAR are TS 3.3.1, "Reactor Trip System (RTS) Instrumentation," SR 3.3.1.13 "Perform Channel Operational Test (COT)" and TS 3.3.6 "Control Room Special Ventilation System (CRSVS) Actuation Instrumentation," SR 3.3.6.3, "Perform TADOT." Enclosure 2 of LAR, Section A "Non-Calibration Changes" provides the basis for concluding the interval extension is acceptable for each of the non-calibration SRs consistent with the guidance in GL

91-04. However, the evaluation that would support the proposed extension of SRs 3.3.1.13 and 3.3.6.3 are not included in LAR Enclosure 2.

Request:

Would the proposed interval extension of up to 30 months be applied to SRs 3.3.1.13 and 3.3.6.3? If so, provide the evaluation that supports this extension.

NSPM Response to RAI

Yes, the proposed interval extension of up to 30 months applies to SRs 3.3.1.13 and SR 3.3.6.3. The GL 91-04 evaluation that supports the extension for these two SRs is provided below. These additional evaluations do not impact the conclusion in Enclosure 2 of Reference 1 that the effect of these changes on plant safety, if any, is small; that the changes do not invalidate any assumption in the plant licensing basis; and that the impact, if any, on system availability is minimal.

TS 3.3.1 Reactor Trip System (RTS) Instrumentation

SR 3.3.1.13 Perform COT

Table 3.3.1-1 Function 16a, Intermediate Range Neutron Flux, P-6

Table 3.3.1-1 Function 16b1, Low Power Reactor Trips Block, P-7, Power Range Neutron Flux

Table 3.3.1-1 Function 16c, Power Range Neutron Flux, P-8

Table 3.3.1-1 Function 16d, Power Range Neutron Flux, P-9

Table 3.3.1-1 Function 16e, Power Range Neutron Flux, P-10

The SR interval for this SR is being increased from a maximum of 24 months to a maximum interval of 30 months which includes the 25% extension afforded by TS SR 3.0.2.

SR 3.3.1.13 is the performance of a Channel Operational Test (COT). The COTs associated with SR 3.3.1.13 inject simulated or actual signals to verify channel permissive functions for the Intermediate and Power Range instruments.

The current 24 month maximum interval is based on the known reliability of the affected equipment and the multichannel redundancy available and has been shown to be acceptable through operating experience. Extending the maximum interval to 30 months does not invalidate this basis.

A review of SR test history did not identify any failures during the COTs specified in Table 3.3.1-1 for Functions 16a, 16b1, 16c, 16d, and 16e in the last five operating cycles.

Based on the SR test history and the demonstrated reliability of the affected components that generate the channel permissive functions, the impact of this change on safety, if any, is small.

TS 3.3.6 Control Room Special Ventilation System (CRSVS) Actuation Instrumentation

SR 3.3.6.3 Perform TADOT

The SR interval for this SR is being increased from a maximum of 24 months to a maximum interval of 30 months which includes the 25% extension afforded by TS SR 3.0.2.

SR 3.3.6.3 demonstrates the manual actuation of the Control Room Clean Up System for both CRSVS trains. The current 24 month test interval is based on the known reliability of the function and the redundancy available, and has been shown to be acceptable through operating experience.

A review of SR test history did not identify any failures for this TS function in the last five operating cycles.

Based on the SR test history and the known reliability of the actuating device, the impact of this change on safety, if any, is small.

3.0 REFERENCES

1. Letter L-PI-21-016, "Application for License Amendment to Implement 24-Month Operating Cycle," dated August 6, 2021 (ADAMS Accession Number ML21218A093)
2. Letter L-PI-21-047, "Response to Request for Additional Information RE: 24-Month Operating Cycle Amendment Prairie Island Nuclear Generating Plant, Units 1 and 2, dated December 7, 2021 (ADAMS Accession Number ML21341B375)
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