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December 6, 2018

L-PI-18-063
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: Revise License Condition Associated with Implementation of NFPA 805 (EPID L-2018-LLA-0147)

References:

1) Letter (L-PI-18-005) from NSPM to the NRC, "License Amendment Request to Revise License Condition Associated with Implementation of NFPA 805", dated May 18, 2018 (ADAMS Accession No. ML18138A402)

2) Letter (L-PI-16-090) from NSPM to the NRC, "License Amendment Request to Adopt NFPA 805 Performance-Based Standard for Fire Protection for Light Water Reactors – Response to Request for Additional Information (CAC Nos. ME9734 and ME9735)", dated December 14, 2016 (ADAMS Accession No. ML16350A105)

3) Email from the NRC to NSPM, "Request for Additional Information RE: Prairie Island NFPA-805 License Condition Modification Amendment Request", dated November 7, 2018 (ADAMS Accession No. ML18313A083)

Pursuant to 10 CFR 50.90, Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (hereafter "NSPM"), requested in Reference 1, an amendment to the Renewed Facility Operating Licenses (RFOLs) for the Prairie Island Nuclear Generating Plant (PINGP), Units 1 and 2. Specifically, NSPM requested that License Condition 2.C.(4)(c) be revised in each PINGP RFOL to reflect the deletion of five plant modifications from Table S-2, "Plant Modifications Committed", as submitted in Reference 2. The NRC identified the need for additional information and provided the Request for Additional Information (RAI) in Reference 3. The enclosure to this letter provides NSPM's response to the NRC RAI.

The information provided in this letter does not alter the evaluations performed in accordance with 10 CFR 50.92 in Reference 1.

Please contact Mr. Peter Gohdes at (612) 330-6503 or Peter.Gohdes@xenuclear.com if additional information or clarification is required.

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 December 6, 2018.

Scott Sharp
Site Vice President, Prairie Island Nuclear Generating Plant
Northern States Power Company – Minnesota

Enclosure

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

Response to Request for Additional Information:

Revise License Condition Associated with Implementation of NFPA 805

Pursuant to 10 CFR 50.90, Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (hereafter "NSPM"), requested in Reference 1, an amendment to the Renewed Facility Operating Licenses (RFOLs) for the Prairie Island Nuclear Generating Plant (PINGP), Units 1 and 2. Specifically, NSPM requested that License Condition 2.C(4)(c) be revised in each PINGP RFOL to reflect the deletion of five plant modifications from Table S-2, "Plant Modifications Committed", as submitted in Reference 2. The NRC identified the need for additional information and provided the Request for Additional Information (RAI) in Reference 3. The enclosure to this letter provides NSPM's response to the NRC RAI.

PRA RAI 01

National Fire Protection Association Standard 805, "Performance Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants" (2001 Edition), (NFPA 805), as referenced in paragraph 50.48(c) of Title 10 of the Code of Federal Regulations (10 CFR), Section 4.2.4.2, requires that the use of fire risk evaluation for the performance based approach shall consist of an integrated assessment of the acceptability of risk, defense in depth (DID), and safety margins. Element 3 of DID is met by providing an adequate level of fire protection for structures, systems and components important to safety, so that a fire that is not promptly extinguished will not prevent essential plant safety functions from being performed.

The LAR dated May 18, 2018, proposed to not complete modification 20 and included discussions on risk, DID, and safety margins. In the DID discussion for DID element 3, the licensee stated that an adequate level of fire protection is maintained because the impact of the lack of electrical coordination is included in the FPRA model and the results remain acceptable. Based on this information, the NRC staff is unable to determine if the proposed change meets DID element 3.

Provide information that fully explains how DID element 3 is met for this proposed change, including justification that an adequate level of fire protection is maintained for structures, systems and components important to safety, so that a fire that is not promptly extinguished will not prevent essential plant safety functions from being performed.

NSPM Response

The third echelon of Fire Protection Defense in Depth to provide an adequate level of fire protection for structures, systems, and components important to safety, so that a fire that is not promptly extinguished will not prevent essential plant safety functions from being performed is maintained after deletion of this modification for breaker coordination.

Panel 217

As stated in Reference 1, re-powering Panel 211 and Panel 213 from Panel 217 is no longer credited in the Fire PRA model to perform essential safety functions for a fire in Fire Area 31.

However, re-powering Panel 211 and Panel 213 from Panel 217 to provide process monitoring indication in the main control room remains as a defense in depth action. While a lack of electrical coordination on Panel 217 exists between the main fuses and the upstream circuit breaker, electrical coordination is achieved with the branch fuses and the main fuses. Therefore, a fire in Fire Area 31 affecting a branch circuit will not fail the main fuses on Panel 217 and Panel 217 will remain available to support re-powering Panel 211 and Panel 213.

Panels 136 and 137

As stated in Reference 1, the Fire PRA model was updated to include failure of the un-coordinated load cables as causing a failure of the upstream un-coordinated supply breaker, which causes a loss of power for Panels 136 and 137 that lack selective fuse/breaker coordination. Panels 136 and 137 provide AC power to the cooling water strainers backwash controller and the diesel driven cooling water pumps' fuel oil transfer pumps.

- Power from Panels 136 and 137 to the cooling water strainer backwash function is no longer credited because the cooling water flow will be available to support essential safety functions for the mission time without the cooling water strainer backwash function being available. Therefore, since cooling water strainer backwash is not required to maintain cooling water flow, cooling water remains available to support safe and stable conditions for defense in depth.

- PINGP has two diesel driven and three motor driven cooling water pumps supplying a cooling water ring header to support safe shutdown equipment. The lack of electrical coordination on Panels 136 and 137 is incorporated into the Nuclear Safety Capability Assessment calculation along with the five cooling water pumps and other safe shutdown support systems such as the Condensate Storage Tanks and off-site power availability, leading to demonstration that for each fire area, safe and stable conditions can be achieved and maintained. Therefore, defense in depth is maintained because there are no fire areas for which loss of power to Panel 136 or Panel 137 for the fuel oil transfer pumps to the diesel driven cooling water pumps results in a loss of the ability to achieve safe and stable conditions.

References

1. Letter (L-PI-18-005) from NSPM to the NRC, "License Amendment Request to Revise License Condition Associated with Implementation of NFPA 805", dated May 18, 2018 (ADAMS Accession No. ML18138A402)

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