



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 16, 2016

Mr. Scott D. Northard
Acting Vice President
Northern States Power Company - Minnesota
Prairie Island Nuclear Generating Plant
1717 Wakonade Drive East
Welch, MN 55089-9642

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2 - INTERIM STAFF RESPONSE TO REEVALUATED FLOOD HAZARDS SUBMITTED IN RESPONSE TO 10 CFR 50.54(f) INFORMATION REQUEST – FLOOD-CAUSING MECHANISM REEVALUATION (CAC NOS. MF7710 AND MF7711)

Dear Mr. Northard:

The purpose of this letter is to provide a summary of the U.S. Nuclear Regulatory Commission (NRC) staff's assessment of the reevaluated flood-causing mechanisms described in the May 9, 2016 (Agencywide Document Access and Management System (ADAMS) Accession No. ML16133A041), flood hazard reevaluation report (FHRR) submitted by Northern States Power Company, a Minnesota corporation (the licensee), doing business as Xcel Energy, for Prairie Island Nuclear Generating Plant, Units 1 and 2 (Prairie Island), as well as supplemental information resulting from the NRC's audit of the FHRR.

By letter dated March 12, 2012, the NRC issued a request for information pursuant to Title 10 of the *Code of Federal Regulations*, Section 50.54(f) (hereafter referred to as the 50.54(f) letter) (ADAMS Accession No. ML12053A340). The request was issued as part of implementing lessons-learned from the accident at the Fukushima Dai-ichi nuclear power plant. Enclosure 2 to the 50.54(f) letter requested licensees to reevaluate flood-causing mechanisms using present-day methodologies and guidance. Concurrent with the reevaluation of flooding hazards, licensees were required to develop and implement mitigating strategies in accordance with NRC Order EA-12-049, "Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" (ADAMS Accession No. ML12054A735). On March 30, 2015, the Commission provided the staff requirements memoranda (SRM) (ADAMS Accession No. ML15089A236) to COMSECY-14-0037, "Integration of Mitigating Strategies for Beyond-Design-Basis External Events and the Reevaluation of Flooding Hazards," dated November 21, 2014 (ADAMS Accession No. ML14309A256), affirming that licensees need to address the reevaluated flooding hazards within their mitigating strategies for beyond-design-basis external events.

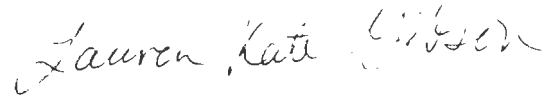
The NRC staff has reviewed the information submitted by the licensee and has summarized the results of the NRC's review in the tables provided as an enclosure to this letter.

S, Northard

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If you have any questions, please contact me at (301) 415-1056 or e-mail at Lauren.Gibson@nrc.gov.

Sincerely,

A handwritten signature in cursive script that reads "Lauren K. Gibson".

Lauren K. Gibson, Project Manager
Hazards Management Branch
Japan Lessons-Learned Division
Office of Nuclear Reactor Regulation

Docket Nos. 50-282 and 50-306

Enclosure:
Summary of Results of Flooding
Hazard Re-Evaluation Report

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ENCLOSURE:

SUMMARY TABLES OF
REEVALUATED FLOOD HAZARD LEVELS

Table 1. Current Design Basis Flood Hazards for Use in the MSA

Mechanism	Stillwater Elevation	Waves/ Runup	Design Basis Hazard Elevation	Reference
Local Intense Precipitation	Not included in DB	Not included in DB	Not included in DB	FHRR Sections 1.5, 2.1.3 & Table 4
Streams and Rivers Mississippi River Probable Maximum Precipitation	703.6 ft NGVD29	3.1 ft	706.7 ft NGVD29	FHRR Section 1.5.1 & Table 4
Failure of Dams and Onsite Water Control/Storage Structures	676.5 ft NGVD29	Not applicable	676.5 ft NGVD29	FHRR Section 1.5.2 & Table 4
Storm Surge	Not included in DB	Not included in DB	Not included in DB	FHRR Section 1.5 & Table 4
Seiche	Not included in DB	Not included in DB	Not included in DB	FHRR Section 1.5 & Table 4
Tsunami	Not included in DB	Not included in DB	Not included in DB	FHRR Section 1.5 & Table 4
Ice-Induced Flooding	Not included in DB	Not included in DB	Not included in DB	FHRR Section 1.5 & Table 4
Channel Migrations/Diversions	Not included in DB	Not included in DB	Not included in DB	FHRR Section 1.5 & Table 4

Note 1: Reported values are rounded to the nearest one-tenth of a foot.

Table 2. Reevaluated Flood Hazards for Flood-Causing Mechanisms for Use in the MSA

Mechanism	Stillwater Elevation	Waves/Runup	Reevaluated Hazard Elevation	Reference
Local Intense Precipitation	695.4 ft NGVD29	Minimal	695.4 ft NGVD29	FHRR Section 2.1.2 & Tables 4 and 5

Note 1: The licensee is expected to develop flood event duration parameters and applicable flood associated effects to conduct the MSA. The staff will evaluate the flood event duration parameters (including warning time and period of inundation) and flood associated effects during its review of the MSA.

Note 2: Reevaluated hazard mechanisms bounded by the current design basis (see Table 1) are not included in this table

Note 3: Reported values are rounded to the nearest one-tenth of a foot.

S. Northard

- 3 -

If you have any questions, please contact me at (301) 415-1056 or e-mail at Lauren.Gibson@nrc.gov.

Sincerely,

/RA/

Lauren K. Gibson, Project Manager
Hazards Management Branch
Japan Lessons-Learned Division
Office of Nuclear Reactor Regulation

Docket Nos. 50-282 and 50-306

Enclosure:
Summary of Results of Flooding
Hazard Re-Evaluation Report

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ADAMS Accession Nos.: PKG ML16248A005; LTR: ML16248A006; ENCL: ML16245A763 *via email

OFFICE	NRR/JLD/JHMB/PM	NRR/JLD/LA	NRO/DSEA/RHM2/TR*	NRO/DSEA/RHM2/BC*
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DATE	09/ 15 /2016	09/ 16/2016		

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