



Prairie Island Nuclear Generating Plant
1717 Wakonade Drive East
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U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

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

Extension Request Regarding the Flooding Hazard Reevaluation Report Required by NRC Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendation 2.1, Flooding, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident

References:

1. NRC Letter, "Request for Information Pursuant to Title 10 of the *Code of Federal Regulations* 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated March 12, 2012 (ADAMS Accession No. ML12053A340).
2. NRC Letter, "Prioritization of Response Due Dates for Request for Information Pursuant to Title 10 of the *Code of Federal Regulations* 50.54(f) Regarding Flooding Hazard Reevaluations for Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated May 11, 2012 (ADAMS Accession No. ML12097A509).
3. NRC Letter, "Supplemental Information Related to Request for Information Pursuant to Title 10 of the *Code of Federal Regulations* 50.54(f) Regarding Flooding Hazard Reevaluations for Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated March 1, 2013 (ADAMS Accession No. ML13044A561).

On March 12, 2012, the Nuclear Regulatory Commission (NRC) Staff issued the Reference 1 letter to all NRC power reactor licensees and holders of construction permits in active or deferred status. Enclosure 2 of Reference 1 contains specific

Requested Actions, Requested Information, and Required Responses associated with Near-Term Task Force (NTTF) Recommendation 2.1 for flooding hazards. Enclosure 2 of Reference 1 directed reevaluation of flooding hazards at sites and indicated that a Hazard Reevaluation Report (HRR) would be due within one to three years from the date of the Reference 1 letter. On May 11, 2012, the NRC issued the Reference 2 letter that contained the NRC's prioritization plan and due dates for licensees' submittal of HRRs. The Prairie Island Nuclear Generating Plant (PINGP), Units 1 and 2, operated by Northern States Power Company, a Minnesota corporation (NSPM), d/b/a Xcel Energy, were identified as Category 2 sites in Reference 2 and were required to submit the HRR by March 12, 2014.

In Reference 3, the NRC provided supplemental information that states incomplete HRRs that only contain an analysis of some flooding hazard mechanisms would not be of substantive benefit for staff review and would not be acceptable. Therefore, Reference 3 recommends licensees not submit partial reports, but instead submit an extension request.

The purpose of this letter is to request an extension of the March 12, 2014 due date for submittal of the HRR for PINGP, Units 1 and 2. The Enclosure to this letter contains the extension request. The extension request was prepared using the guidance in Reference 3 and includes the reasons for the delay, a proposed schedule for the submittal of a complete HRR, and the basis for acceptability of the revised schedule.

If there are any questions or if additional information is needed, please contact Jennie Wike, Licensing Engineer, at 612-330-5788.

Summary of Commitments

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

- NSPM will submit the required flood HRR for PINGP, Units 1 and 2, within 10 months of receiving the US Army Corps of Engineers' final information.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on

A handwritten signature in cursive script that reads "Scott Sharp".

Scott Sharp
Director Site Operations, Prairie Island Nuclear Generating Plant
Northern States Power Company - Minnesota

cc: Administrator, Region III, USNRC
Director of Nuclear Reactor Regulation (NRR), USNRC
NRR Project Manager, Prairie Island Nuclear Generating Plant, USNRC
Senior Resident Inspector, Prairie Island Nuclear Generating Plant, USNRC

ENCLOSURE

PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2

**Extension Request Regarding the Flooding Hazard Reevaluation Report Required
by NRC Request for Information Pursuant to Title 10 of the *Code of Federal
Regulations* 50.54(f) Regarding Recommendation 2.1, Flooding, of the Near-Term
Task Force Review of Insights from the Fukushima Dai-ichi Accident**

Request For Extension: Reason for the Delay, Proposed Schedule,
and Basis for Acceptability

1.0 Introduction

On March 12, 2012, the Nuclear Regulatory Commission (NRC) Staff issued the Reference 1 letter to all NRC power reactor licensees and holders of construction permits in active or deferred status. Enclosure 2 of Reference 1 contains specific Requested Actions, Requested Information, and Required Responses associated with Near-Term Task Force (NTTF) Recommendation 2.1 for flooding hazards. Enclosure 2 of Reference 1 directed reevaluation of flooding hazards at sites and indicated that a Hazard Reevaluation Report (HRR) would be due within one to three years from the date of Reference 1 letter. On May 11, 2012, the NRC issued the Reference 2 letter that contained the NRC's prioritization plan and due dates for licensees' submittal of HRRs. The Prairie Island Nuclear Generating Plant (PINGP), Units 1 and 2, operated by Northern States Power Company, a Minnesota corporation (NSPM), d/b/a Xcel Energy, were identified as Category 2 sites in Reference 2 and were required to submit the HRR by March 12, 2014.

In Reference 3, the NRC provided supplemental information stating incomplete HRRs that only contain an analysis of some flooding hazard mechanisms would not be of substantive benefit for staff review and would not be acceptable. Therefore, Reference 3 recommends licensees not submit partial reports, but instead submit an extension request.

The purpose of this Enclosure is to request an extension to the March 12, 2014 due date for the submittal of the HRR for PINGP, Units 1 and 2. As recommended in Reference 3, the reasons for the delay, the proposed schedule for the submittal of the complete HRR, and the basis for the acceptability of the revised schedule are described below.

2.0 Reasons for the Delay

Completion of Site-Specific Analyses:

NSPM plans to follow the hierarchical hazard approach (HHA) concept described in the Reference 1 letter to refine site specific data. The HHA is a progressively refined, stepwise estimation of site-specific hazards that evaluates the safety of Systems, Structures and Components (SSCs) with the most conservative plausible assumptions consistent with available data. The HHA process starts with the most conservative simplifying assumptions that maximize the hazards from the probable maximum event for each natural flood-causing phenomenon expected to occur in the vicinity of a proposed site. If the site is not inundated by floods from any of the phenomena to an elevation critical for safe operation of the SSCs, a conclusion that the SSCs are not susceptible to flooding would be valid, and no further flood-hazard assessment would

be needed. However, if the level of assessed hazards results in an adverse effect or exposure to any safety related SSC, a more site-specific hazard assessment should be performed for the probable maximum event. Several iterations of the flood hazard assessment, each based on inclusion of additional site-specific data, may be needed to demonstrate that the assessed hazards from the probable maximum event are still based on conservative assumptions yet do not adversely affect the safety-related SSCs.

NSPM is working to refine the hazards assessment using more site-specific inputs and assumptions. The extended due date provides the additional time required for NSPM to perform the analytical refinements per the methodology described above.

US Army Corps of Engineers (USACE) Dam Information:

Additional detailed technical information is needed to facilitate evaluation of the dams as part of the HHA approach. NSPM understands that the NRC is interfacing with the USACE to obtain dam information and NSPM has submitted a request for technical assistance (Reference 4). NSPM intends to use the information from the USACE evaluations as part of the above described analytical refinements.

3.0 Proposed Submittal Schedule

NSPM will submit the required flood HRR for PINGP, Units 1 and 2, within 10 months of receiving the USACE's final information. This timing supports incorporation of the USACE's information on dams and the site-specific analytical refinements into the HRR.

NSPM continues to validate and improve site readiness in regard to implementation of existing flood protection features and mitigating strategies. These efforts include improvement of flooding procedures, simulation of flood protection actions to validate effectiveness, and improvement of site flood response readiness through pre-staging of materials.

4.0 Basis for Acceptability of the Revised Schedule

NSPM's proposed submittal schedule extension is acceptable based on the discussion below:

The NRC's March 12, 2012, 50.54(f) cover letter states that the current regulatory approach and the resultant plant capabilities provide confidence that an accident with consequences similar to the Fukushima accident is unlikely to occur in the United States. The NRC letter concluded that continued plant operation and the continuation of licensing activities do not pose an imminent risk to public health and safety.

The events being analyzed in the PINGP HRR are beyond the plant’s design and licensing basis as noted in Reference 3. In accordance with Enclosure 2 of the March 12, 2012, 50.54(f) letter item 1.d, interim evaluations and actions will be taken or planned to address any reevaluated higher flooding hazards relative to the design basis. These interim evaluations and actions, if any, will be included in the complete PINGP HRR as part of the required response.

NSPM’s position is that, assessed qualitatively, the reevaluated flooding hazard is an unlikely event and is not likely to occur within the extension request timeframe. The table below compares the Historical Maximum Observed River Elevation, the 1000 year flood near the site, the current design bases probable maximum flood, and the flood protection elevation for the PINGP site, which demonstrates the margin between the predicted maximum flood and PINGP’s current flood protection.

Table – Licensing Basis Flood Elevations

Elevation Description	Elevation
Historical Maximum Peak Stage (Approximate) ¹	688 ft
USACE Estimated 1000-year Flood Elevation ²	691.8 ft
Plant Grade (Approximate)	695 ft
Design Bases Probable Maximum Flood	703.6 ft
Flood Protection Elevation (top of substructure and/or superstructure)	705.0 ft

Note 1: Maximum flood of record occurred in 1965 at Lock and Dam #3, approximately 1 mile downstream of the site.

Note 2: 1000 year peak stage at Lock and Dam #3, approximately 1 mile downstream of the site.

5.0 References:

1. NRC Letter, “Request for Information Pursuant to Title 10 of the *Code of Federal Regulations* 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident,” dated March 12, 2012 (ADAMS Accession No. ML12053A340).
2. NRC Letter, "Prioritization of Response Due Dates for Request for Information Pursuant to Title 10 of the *Code of Federal Regulations*

50.54(f) Regarding Flooding Hazard Reevaluations for Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated May 11, 2012 (ADAMS Accession No. ML12097A509).

3. NRC Letter, "Supplemental Information Related to Request for Information Pursuant to Title 10 of the *Code of Federal Regulations* 50.54(f) Regarding Flooding Hazard Reevaluations for Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated March 1, 2013 (ADAMS Accession No. ML13044A561).
4. NSPM Letter, "Request for NRC Assistance to Obtain Information on Dams from the U.S. Army Corps of Engineers (USACE)," dated March 4, 2014.