



Northern States Power Company

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July 31, 1991

Bulletin 89-01
Supplement 2

U S Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

PRAIRIE ISLAND NUCLEAR GENERATING PLANT
Docket Nos. 50-282 License Nos. DPR-42
50-306 DPR-60

Response to NRC Bulletin 89-01, Supplement 2
Failure of Westinghouse Steam Generator Tube Mechanical Plugs

Our response to NRC Bulletin No. 89-01, Supplement 2, "Failure of Westinghouse Steam Generator Tube Mechanical Plugs" dated June 28, 1991, is attached.

Please contact us if you have any questions related to our response to this NRC Bulletin.



Thomas M Parker
Manager

Nuclear Support Services

c: Regional Administrator - Region III, NRC
Senior Resident Inspector, NRC
NRR Project Manager, NRC
J E Silberg

Attachments

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UNITED STATES NUCLEAR REGULATORY COMMISSION

NORTHERN STATES POWER COMPANY

PRAIRIE ISLAND NUCLEAR GENERATING PLANT

DOCKET NO. 50-282
50-306

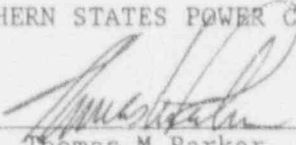
RESPONSE TO NRC BULLETIN 89-01, SUPPLEMENT 2

Northern States Power Company, a Minnesota corporation, with this letter is submitting information requested by NRC Bulletin 89-01, Supplement 2.

This letter contains no restricted or other defense information.

NORTHERN STATES POWER COMPANY

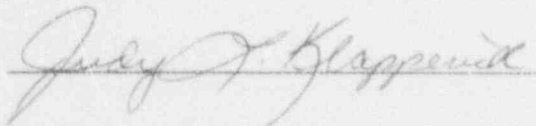
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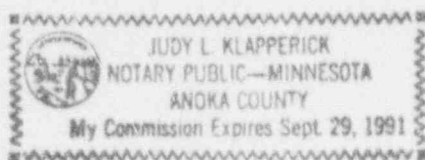

Thomas M Parker

Manager

Nuclear Support Services

On this 31 day of July, 1991, before me a notary public in and for said County, personally appeared Thomas M Parker, Manager, Nuclear Support Services, and being first duly sworn acknowledged that he is authorized to execute this document on behalf of Northern States Power Company, that he knows the contents thereof, and that to the best of his knowledge, information, and belief the statements made in it are true and that it is not interposed for delay.





RESPONSE TO NRC BULLETIN 89-01 SUPPLEMENT 2

Actions Requested and Responses

Action Requested #1

Addressees are requested to verify that information contained in Table 2 of Reference 4 for their plants is correct for plugs fabricated from group 2 heats. (Addressees have previously verified similar information for group 1 plugs in response to the original bulletin.) The specific information to be verified is the number of Westinghouse mechanical plugs installed in the hot-leg and cold-leg side of each steam generator, categorized by heat number and date of installation. The plug operating temperatures for each plant given in this Table should also be verified. If information from this Table is incorrect, addressees should provide correct information. Addressees are requested to so state if their plants have not installed Westinghouse mechanical plugs from group 2 heats.

Response

The information contained in Table 2 of Reference 4 to Bulletin 89-01, Supplement 2, has been reviewed. One error was found. Note 4 does not apply since all plugs in the hot legs of Unit 1 steam generators from heat 3513 have been removed.

Action Requested #2

Addressees are requested to take the following actions, to be implemented initially during any refueling outage or extended outage (greater than four weeks) which ends 60 days or more following receipt of this bulletin and during all future refueling outages. For the period of time between receipt of the bulletin and 60 days, the actions requested in the original version of this bulletin continue to be applicable for plugs fabricated from group 1 heats.

- a) Addressees should implement appropriate remedial actions (i.e., repair and/or replacement) for all plugs whose estimated lifetime in item 2b, below does not extend to the next refueling outage.
- b) Remaining lifetime estimates (in effective full power days (EFPD)) are given in Table 2 of Reference 4 in the column entitled (Remain EFPD to MIN." These remaining lifetime estimates are relative to reference dates given in the column entitled (Reference CALC Dates." These remaining lifetime estimates may be used directly. These estimates should be adjusted to reflect any corrections noted in Actions Requested, item 1.
- c) For refueling outages or extended outages ending prior to November 30, 1991, remedial actions for plugs fabricated from NX-5222 may be deferred until the next scheduled refueling outage.

- d) Installation of Westinghouse mechanical plugs fabricated from Inconel 600 should be discontinued.
- e) If for any refueling outage, the addressee does not plan to satisfy items 2a to 2d above, an alternative plan for insuring plug integrity, with appropriate technical justification, should be submitted to the NRC at least 30 days before the end of the refueling outage.
- f) Prior to any plug repairs or replacement, addressees are reminded that their responsibilities under ALARA require analysis of the various plug repair or replacement methods. In choosing a plug repair or replacement method, the licensee should consider the accessibility of the plugs and the dose reduction benefit of using robotic manipulators. Prior to plug repair or replacement, the licensee should consider steam generator decontamination and/or local shielding to reduce working area dose rates.

Response

The next refueling outages for Prairie Island Units 1 and 2 are scheduled for November 1992 and February 1992, respectively. No other extended outages (greater than four weeks) are planned for either unit.

- a) Hot leg plugs from heats 5222 and 6323 will be repaired or replaced at the next refueling outage or extended outage (greater than four weeks) for each unit.
- b) Estimated lifetime (based on actual operating history) for the Unit 1 plugs from heat 5222 is early 1991.

Estimated lifetime (based on actual operating history) for the Unit 2 plugs from heat 6323 is September 1992.
- c) No additional refueling or extended outages are planned prior to November 30, 1991.
- d) No further use of Westinghouse mechanical plugs fabricated from Alloy 600 is allowed at Prairie Island.
- e) Susceptible plugs will be removed during the Unit 2 refueling outage scheduled for February 1992, and during the Unit 1 refueling outage scheduled for November 1992.
- f) The Prairie Island Steam Generator Committee has considered the various plugging and replacement options. Plug removal operations have been conducted remotely twice at Prairie Island and will continue to be conducted in the future using remote manipulators in order to ensure as low as reasonably achievable radiation exposure.