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10 CFR Part 50
Section 50.90

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

Supplemental Information to Support the
License Amendment Request Dated October 4, 1991
Single-Failure-Proof Crane Upgrade

In our License Amendment Request dated October 4, 1991 we submitted proposed Technical Specification changes which eliminate cask handling restrictions and replace them with requirements for the use of a single-failure-proof handling system in the handling of heavy loads. The propose of this letter is to provide supplemental information in support of the October 4, 1991 License Amendment Request. This supplemental information includes plant design details for the auxiliary building crane upgrade and design information on the special lifting devices to be utilized in handling the TN-40 spent fuel storage casks.

As stated in the October 4, 1991 license Amendment Request, Northern States Power has contracted with Ederer Incorporated to modify the auxiliary building crane in accordance with the single-failure-proof criteria of NUREG-0612. This modification will consist of the replacement of the existing bridge trolley with an Ederer designed trolley and associated hoists which are comparable to that described in Revision 3, Amendment 3 of the Ederer Incorporated Generic Licensing Topical Report EDR-1(P)-A, "Ederer Nuclear Safety-Related Extra Safety and Monitoring (X-SAM) Cranes", dated October 8, 1982. The report describes the design and testing of the single-failure-proof features which are included in Ederer's X-SAM cranes intended for handling spent fuel casks and other safety related loads in a nuclear power plant. NRC Staff approval of the report was documented in a Safety Evaluation transmitted by NRC letter dated August 26, 1983.

The Appendix B and Appendix C Supplements to Topical Report EDR-1 are provided for NRC Staff review by Attachments 1 and 2 to this letter. The Appendix B supplement to Topical Report EDR-1 provides a summary of plant specific crane data supplied by Ederer Incorporated for the Prairie Island auxiliary building crane. The Appendix C supplement to Topical Report EDR-1 provides a summary of plant specific data supplied by Northern States Power for the Prairie Island auxiliary building crane modifications.

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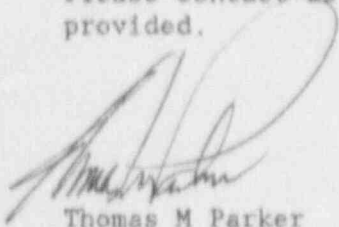
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The design criteria for the special lifting device to be utilized in handling the TN-40 spent fuel storage casks at Prairie Island is provided for NRC Staff review by Attachment 3 to this letter.

1. performing the seismic qualification of the modified Prairie Island auxiliary building crane, Northern States Power has followed the guidance of Section 2.5 of NUREG-0554. The evaluation of the modified auxiliary building crane took into account the increased weight of the new trolley, the actual bridge weight and the maximum critical load on the crane hook.

The resultant lateral seismic loads imparted on the auxiliary building runway girders has increased from the original design. Northern States Power has chosen to modify the existing runway girders by providing additional stiffness/strength in order to meet American Institute of Steel Construction (AISC) structural code requirements.

Please contact us if you have any questions related to the information provided.



Thomas M Parker
Manager
Nuclear Support Services

c: Regional Administrator - Region III, NRC
Senior Resident Inspector, NRC
NRR Project Manager, NRC
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Attachments:

1. Appendix B Supplement to Generic Licensing Topical Report EDR-1.
2. Appendix C Supplement to Generic Licensing Topical Report EDR-1.
3. Design Criteria for Lifting System for TN-40 Dry Storage Cask.

PRAIRIE ISLAND NUCLEAR GENERATING PLANT

ATTACHMENT 1

Appendix B Supplement to Generic Licensing Topical Report EDR-1