

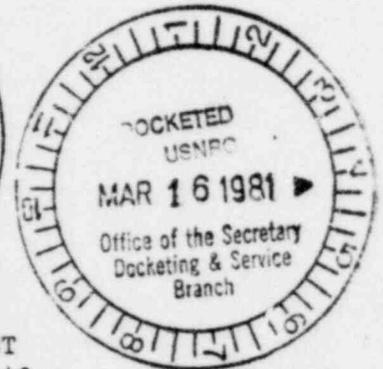
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NORTHERN STATES POWER COMPANY

MINNEAPOLIS, MINNESOTA 55401

March 13, 1981

Director of Nuclear Reactor Regulation
U S Nuclear Regulatory Commission
Washington, DC 20555



PRAIRIE ISLAND NUCLEAR GENERATING PLANT
Docket Nos. 50-282 License No. DPR-42
50-306 DPR-60

Request for Relief from the Requirements of 10 CFR Part 50,
Sections 50.48 (c)(2), (c)(3), and (c)(5), Schedule for
Completion of Appendix R Fire Protection Modifications

Appendix R to 10 CFR Part 50 became effective on February 17, 1981. Section 50.48(c) contains the schedule for compliance with the provisions of Appendix R and specifies the submittal of certain design and schedule information for NRC Staff review. Clarification of the requirements of Appendix R and additional guidance on the content of required information submittals was contained in a letter dated February 20, 1981, from Darrell G Eisenhut, Director, Division of Licensing (Generic Letter 81-12). The purpose of this letter is to request extension of certain of the schedule requirements specified in Section 50.48(c)(2), (c)(3), and (c)(5). In particular, Northern States Power Company requests:

- (1) that the date in paragraph (c)(5) for submitting plans and schedules for meeting the provisions of paragraphs (c)(2), (c)(3), and (c)(4) with respect to the requirements of Section III.G of Appendix R, and for submitting design descriptions of modifications needed to satisfy Section III.G.3 of Appendix R, be extended from March 19, 1981, to December 19, 1981;
- (2) that the implementation date in paragraph (c)(2) for installation of modifications required by Appendix R, Section III.G.2, that do not require prior NRC approval or plant shutdown, be extended from nine months after February 17, 1981, to nine months after November 17, 1981.
- (3) that the implementation date in paragraph (c)(3) for the installation of modifications required by Appendix R, Section III.G.2, that do not require prior NRC approval, but require plant shutdown, be extended from before startup after the first refueling or extended outage commencing 180 days or more after February 17, 1981, to before startup after the first refueling or extended outage commencing 180 days or more after November 17, 1981.

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The schedule extensions requested herein relate to those modifications which may be required to satisfy Section III.G, and which cannot be specifically identified by March 19, 1981. The plans and schedules now available for implementing other modifications required by Appendix R are being submitted in a separate letter dated March 19, 1981, to the Director of Nuclear Reactor Regulation.

Section 50.48 requires fire protection features required by Section III.G of Appendix R to be installed irrespective of previous ongoing discussions with the NRC Staff or NRC Staff approvals for alternative fire protection features tailored to the specific nuclear facility and appropriate for protection of the public health and safety. The ability to safely shut down the Prairie Island plant was carefully evaluated and a summary report outlining required plant modifications was submitted for NRC Staff review on October 22, 1979. The Staff reviewed this report and we responded to their questions in a letter dated July 8, 1980. It was our belief that major plant modifications had been identified and we were close to resolving the safe shutdown issue for the Prairie Island plant.

Generic Letter 81-12, dated February 20, 1981, from Darrell G Eisenhut stated that, in implementation of Section III.G, the licensee is required to reassess all relevant areas of the plant to determine whether the requirements of Section III.G.2 are satisfied. If the reassessment shows that Section III.G.2 is not satisfied, the licensee must either provide alternative shutdown capability in accordance with Section III.G.3, or request an exemption.

The reassessment effort for Prairie Island has far exceeded our expectations. It involves extensive analyses to determine what modifications are needed, and could not be accomplished prior to March 19, 1981. Until the reassessment is completed, we will be unable to provide the plans and schedules for those modifications. Completion of the reassessment is also needed to determine the need for requesting exemption from any of the specific requirements of Section III.G, and for determining whether, and the extent to which, alternative shutdown capability will be required under Section III.G.3.

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We estimate that this reassessment, and the preparation of plans and schedules for modifications, design descriptions, and technical justification for substantive exemption requests, will require approximately nine months at Prairie Island. A major factor contributing to the complexity and extended duration of the reassessment is the expansion of the concept of "associated circuits", which are to be considered in the safe shutdown analysis. It was not clear until the Staff's February 20, 1981 letter was received what precisely constituted "associated circuits." A review of the cable routing criteria used in the original plant design indicates that identification of these circuits will be a difficult and time consuming task. We are also severely hampered by the current workload placed on our technical staff by other Commission requirements such as TMI Action Plan modifications, environmental qualification of electrical equipment, and a host of investigations initiated by Bulletins issued by the Office of Inspection and Enforcement. This shortage is acute in the area of electrical engineers with the experience necessary to perform this assessment.

Appendix A and associated changes to Section 50.48 were published in their final form in the Federal Register on November 19, 1980. The Appendix is complicated and open to interpretation in many areas. Several weeks were required to gain a working understanding of the requirements of these regulations. Staff guidance in the form of a clarification letter was recently issued. The need to obtain this clarification caused some delay in starting our reassessment of the plant design.

The requested extension will not be detrimental to health and safety. There are no urgent considerations which would mandate the immediate implementation of the Appendix R requirements. In promulgating the rule, the Commission indicated no sense of urgency and provided no basis or explanation of any safety need for the implementation schedule in Section 50.48. Indeed, the Commission stated in the October 29, 1980 Federal Register that all operating nuclear plants may continue to operate safely pending compliance with the new requirements. In the case of the Prairie Island Nuclear Generating Plant the original plant design plus modifications and procedural changes specified in the Fire Protection Safety Evaluation provide a high degree of assurance that the plant can be safely shutdown in the event of any fire. A trained fire brigade of five individuals is available at all times for responding to a fire. The plant is provided with an extensive array of fire detectors, up-to-date fire fighting equipment, and automatic fire suppression systems in many plant areas.

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Were we to attempt to formulate and submit plans and schedules for modifications, or design descriptions for alternative shutdown capability, prior to completion of the plant reassessment, we would not be certain of having developed the most effective means of implementing the required modifications. More importantly, these changes should be carefully evaluated prior to being implemented. The schedule presented in Section 50.48(c)(2), (c)(3), and (c)(5) requires the rapid design and installation of sprinkler systems, fire detectors, cable and equipment protective barriers, rerouting of critical plant cables, and possible relocation of critical plant equipment. In many cases, the marginal improvement in safe shutdown capability may be outweighed by the potential for installation errors, adverse impact on other plants systems, and the diversion of personnel resources from activities having a more direct safety significance. The requested extension would permit a careful evaluation of the requirements of the rule change and provide for a safe, systematic, implementation of those plant changes found to be needed.

We anticipate that the reassessment will indicate the need to request exemptions from the requirements of Section III.G.2 for certain areas of the plant as suggested in Generic Letter 81-12. The new rule, by generically imposing certain requirements of Appendix R on all plants operating prior to January 1, 1979, ignores the unique and widely varying design features of individual facilities and the intensive efforts undertaken by the licensee and the Staff in developing fire protection features which may be better suited to those individual facilities than are the generic requirements of Appendix R. Compliance with the new regulation will not necessarily result in better protection of the public health and safety. In fact, unnecessarily increasing the complexity of power plant design features, particularly those involving circuitry and instrumentation, may be detrimental to safety.

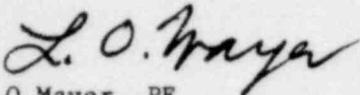
The new Section 50.48 will impose restrictive amendments of operating licenses, and will require backfitting of operating nuclear plants. Yet the licensee is afforded no opportunity for hearing on the imposed license modifications, as required by the Commission's regulations. The Commission is unilaterally imposing backfit requirements without regard to its own backfitting standards specified in 10 CFR 50.109. It is already apparent to us that many of the modifications required by Appendix R will not provide "substantial, additional protection..." particularly when viewed against alternative methods of fire protection which we had agreed to implement. We find little or no basis in the record for the specific requirements in Appendix R.

The new regulation also ignores the practical aspects of cost and feasibility or possibility of compliance. In many respects, the application of the new requirements to Prairie Island is technically and economically impracticable, without regard to whether it offers compensating benefit necessary for the protection of the public health and safety. The costs of designing and implementing alternative shutdown capability, or modifications for compliance with Section III.G.2, could be substantial, without necessarily having met the Section 50.109 standard for requiring backfitting. If additional outage time were needed to implement the modifications, replacement power costs could be enormous.

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Accordingly, we are at this time requesting the foregoing extensions of the schedule requirements specified in paragraphs 50.48(c)(2), (3), and (5). Please contact us if you have any questions related to this request or if we can furnish additional information related to this issue.



L O Mayer, PE
Manager of Nuclear Support Services

LOM/bd

cc: Secretary of the Commission (original and 2 copies)
J G Keppler
G Charnoff
NRC Resident Inspector

