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Docket Nos. 50-282  
and 50-306

Mr. D. M. Musolf  
Nuclear Support Services Department  
Northern States Power Company  
414 Nicollet Mall - 8th Floor  
Minneapolis, Minnesota 55401

Dear Mr. Musolf:

SUBJECT: EXEMPTION REQUEST OF MAY 20, 1982 - FIRE PROTECTION SCHEDULAR  
REQUIREMENTS OF 10 CFR 50.48(c) - PRAIRIE ISLAND NUCLEAR  
GENERATING PLANT, UNITS 1 AND 2

In your letters dated May 20 and August 23, 1982, you requested further  
schedular relief from 10 CFR 50.48(c) in regard to the installation of  
emergency lighting at the Prairie Island Nuclear Generating Plant,  
Unit Nos. 1 and 2 as required by Section III.J of Appendix R. Speci-  
fically, you requested that the deadline for implementation of this  
requirement for both Units be extended to January 1, 1983.

In your exemption request you asked for additional time to complete  
the engineering analysis, procurement and installation of the emergency  
lighting systems for both units and explained the circumstance and  
reasons that made the additional time necessary.

The Commission has granted your request as described in the enclosed  
Exemption. If the NRC should determine that this implementation date  
as granted by this Exemption is not met and no good cause can be  
shown for your failure to meet the date, you will be found in violation  
of 10 CFR 50.48(c).

A copy of the Exemption is being filed with the Office of the Federal  
Register for publication.

Sincerely,  
Original signed by  
Darrell G. Eisenhut

Darrell G. Eisenhut, Director  
Division of Licensing

*Handwritten initials*

Enclosure:  
Exemption

\*DL:ORB#5  
TWambach  
10/27/82

\*OELD  
11/27/82

D:NR  
HDenton  
12/6/82

\*See previous concurrence page

cc: See next page

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F PDR

DATE

*DL:ORB#3 PMKreutzer 10/21/82	*DL:ORB#3 RAClark 10/26/82	*DL:ORB#3 RAClark 10/26/82	*AD:OR:DL GCLainas 10/26/82	D:DL DGEisenhut 12/6/82
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Northern States Power Company  
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Minneapolis, Minnesota 55401

Dear Mr. Musolf:

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ELJordan  
JMTaylor  
TBarnhart-8  
ACRS-10

SUBJECT: EXEMPTION REQUEST OF MAY 20, 1982 - FIRE PROTECTION SCHEDULAR REQUIREMENTS OF 10 CFR 50.48(c) - PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2

In your letters dated May 20 and August 23, 1982, you requested further schedular relief from 10 CFR 50.48(c) in regard to the installation of emergency lighting at the Prairie Island Nuclear Generating Plant, Unit Nos. 1 and 2 as required by Section III.J of Appendix R. Specifically, you requested that the deadline for implementation of this requirement for both Units be extended to January 1, 1983.

In your exemption request you asked for additional time to complete the engineering analysis, procurement and installation of the emergency lighting systems for both units and explained the circumstance and reasons that made the additional time necessary.

The Commission has granted your request as described in the enclosed Exemption. If the NRC should determine that this implementation date as granted by this Exemption is not met and no good cause can be shown for your failure to meet the date, you will be found in violation of 10 CFR 50.48(c).

A copy of the Exemption is being filed with the Office of the Federal Register for publication.

Sincerely,

Darrell G. Eisenhut, Director  
Division of Licensing

Enclosure:  
Exemption

cc: See next page

ORB#5:DL  
TWambach  
10/27/82

OELD JMB  
10/27/82  
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OFFICE	ORB#3:DL	ORB#3:DL	ORB#3:DL	AD:OR:DL	D:DL	D:NRR
SURNAME	PMKreutzer	DCDiIanni/pn	RAClark	GCLainas	DGEisenhut	HDenton
DATE	10/21/82	10/26/82	10/26/82	10/27/82	10/ /82	10/ /82



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

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Docket No. 50-282 and  
50-306

Docketing and Service Section  
Office of the Secretary of the Commission

SUBJECT: NORTHERN STATES POWER COMPANY, Prairie Island Nuclear Generating  
Plant, Unit Nos. 1 and 2

Two signed originals of the Federal Register Notice identified below are enclosed for your transmittal to the Office of the Federal Register for publication. Additional conformed copies ( 12 ) of the Notice are enclosed for your use.

- Notice of Receipt of Application for Construction Permit(s) and Operating License(s).
- Notice of Receipt of Partial Application for Construction Permit(s) and Facility License(s): Time for Submission of Views on Antitrust Matters.
- Notice of Availability of Applicant's Environmental Report.
- Notice of Proposed Issuance of Amendment to Facility Operating License.
- Notice of Receipt of Application for Facility License(s); Notice of Availability of Applicant's Environmental Report; and Notice of Consideration of Issuance of Facility License(s) and Notice of Opportunity for Hearing.
- Notice of Availability of NRC Draft/Final Environmental Statement.
- Notice of Limited Work Authorization.
- Notice of Availability of Safety Evaluation Report.
- Notice of Issuance of Construction Permit(s).
- Notice of Issuance of Facility Operating License(s) or Amendment(s).
- Other: Exemption - Fire Protection.

Division of Licensing  
Office of Nuclear Reactor Regulation

Enclosure:  
As Stated

OFFICE →	ORB#3: <i>PM</i>				
SURNAME →	<i>PMKreutzer/pr</i>				
DATE →	12/10/82				



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

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Division of Licensing  
Office of Nuclear Reactor Regulation

Enclosure:  
As Stated

OFFICE →	ORB#3: <i>PMK</i>				
SURNAME →	PMKreutzer/pr				
DATE →	12/10/82				

Northern States Power Company

cc:

Gerald Charnoff, Esquire  
Shaw, Pittman, Potts and Trowbridge  
1800 M Street, N.W.  
Washington, D. C. 20036

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Executive Director  
Minnesota Pollution Control Agency  
1935 W. County Road B2  
Roseville, Minnesota 55113

The Environmental Conservation Library  
Minneapolis Public Library  
300 Nicollet Mall  
Minneapolis, Minnesota 55401

Mr. E. L. Watzl, Plant Manager  
Prairie Island Nuclear Generating Plant  
Northern States Power Company  
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Jocelyn F. Olson, Esquire  
Special Assistant Attorney General  
Minnesota Pollution Control Agency  
1935 W. County Road B2  
Roseville, Minnesota 55113

U.S. Nuclear Regulatory Commission  
Resident Inspectors Office  
Route #2, Box 500A  
Welch, Minnesota 55089

Regional Administrator  
Nuclear Regulatory Commission, Region III  
Office of Executive Director for Operations  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Mr. R. L. Tanner  
County Auditor  
Red Wing, Minnesota 55066

U. S. Environmental Protection Agency  
Federal Activities Branch  
Region V Office  
ATTN: Regional Radiation  
Representative  
230 South Dearborn Street  
Chicago, Illinois 60604

## NUCLEAR REGULATORY COMMISSION

In the Matter of )  
 )  
 NORTHERN STATES POWER ) Docket Nos. 50-282 and 50-306  
 COMPANY )  
 (Prairie Island Nuclear Generating )  
 Plant, Unit Nos. 1 and 2 )

EXEMPTION

## I.

The Northern States Power Company (the licensee) is the holder of Facility Operating License Nos. DPR-42 and DPR-60 which authorize operation of the Prairie Island Nuclear Generating Plant, Unit Nos. 1 and 2. These licenses provide, among other things, that they are subject to all rules, regulations and Orders of the Commission now or hereafter in effect.

The facility comprises two pressurized water reactors at the licensee's site located in Goodhue, Minnesota.

## II.

On November 19, 1980, the Commission published a revised Section 10 CFR 50.48 and a new Appendix R to 10 CFR 50 regarding fire protection features of nuclear power plants (45 F.R. 76602). The revised Section 50.48 and Appendix R became effective on February 17, 1981. Section 50.48(c) established the schedules for satisfying the provisions of Appendix R. Section III of Appendix R contains fifteen subsections, lettered A through O, each of which specifies requirements for a particular aspect of the fire protection features at a nuclear power plant. One of these fifteen subsections, III.J, is the subject of this exemption request.

Subsection III.J specifies that emergency lighting units with at least an 8-hour battery power supply shall be provided in all areas needed for operation of safe shutdown equipment and in access and egress routes thereto.

Section 50.48(c) requires completion of all modifications to meet the provisions of Appendix R within a specified time from the effective date of this fire protection rule, February 17, 1981, except for modifications to provide alternative safe shutdown capability.

By letters dated November 16 and December 1, 1981, Northern States Power Company requested exemptions from 10 CFR 50.48(c) with respect to the requirements of Subsection III.J of Appendix R as follows:

"Extend the implementation date in paragraph (c)(3) for modifications required by Appendix R Subsection III.J that do not require prior NRC approval but require plant shutdown, from the first refueling shutdown or extended outage commencing after 180 days from the effective date of Appendix R for each unit to the refueling outage scheduled for autumn of 1982 for Unit 1 and scheduled for spring of 1982 for Unit 2."

Section 50.48(c)(3) specifies the installation schedule of those fire protection features such as emergency lighting (III.J) that require a plant shutdown to complete the installation. The installation schedule in Section 50.48(c)(3) requires the completion of the installation of such fire protection features during the first refueling outage commencing after 180 days from the effective date of Appendix R (February 17, 1981). Hence, Section 50.48(c)(3) requires the licensee to complete the installation of the emergency lighting (III.J) during the first refueling outage commencing after August 17, 1981 for each unit.

On May 4, 1982, the Commission granted Northern States Power Company an extension from the schedular requirements of 10 CFR 50.48(c)(3)

for Unit 1 until the end of autumn 1982 outage based on facts that had been presented by that date. An exemption was not granted for Unit 2 since the licensee's commitment date by which installation would be completed complied with the schedule specified in 50.48(c)(3).

By letter dated May 20, 1982, the licensee requested further schedular relief from 10 CFR 50.48(c) in regard to the installation of emergency lighting. Specifically, the request would extend the deadline for completing the installation for both units to the end of December 1982.

The licensee by the same letter also stated that a plant shutdown is no longer considered necessary at either unit in order to implement the Subsection III.J requirements. Because of these changed circumstances, the exemption from the schedular requirements of 10 CFR 50.48(c)(3) granted on May 4, 1982 for Unit 1 is no longer valid. Under conditions described by the licensee's letter dated May 20, 1982 the schedular requirement for Subsection III.J is established in 10 CFR 50.48(c)(2). This subsection requires that the installation of emergency lighting be completed by November 17, 1981, nine months from the effective date of the rule.

The staff informed the licensee by letter dated July 29, 1982 that in order to consider the exemption request, the licensee would be required to submit a complete and detailed chronology of the efforts to implement Subsection III.J commencing with the publication of the fire protection rule on November 19, 1980 to the present and justify in detail the proposed schedule to complete the installation for both

units by January 1, 1983. The licensee by letter dated August 23, 1982 provided additional information supporting the exemption request including a detailed chronology of the efforts to implement Subsection III.J.

### III.

The licensee stated that for several months following the publication of Appendix R the licensee believed that the existing emergency lighting system, with minor modifications, would satisfy the requirements of Subsection III.J. The existing power source for emergency lighting is automatically transferred to the DC power system which provides power well in excess of the required eight-hour capability. In addition the existing emergency lighting system had been reviewed and found acceptable by the NRC staff based on established positions prior to the issuance of Appendix R. It was not until July 13, 1981 that additional information related to the staff's interpretation of the requirements of Subsection III.J was made known to the licensee. Specifically, using a central power source was found unacceptable unless it could be shown that a postulated fire in one area of the plant could not cause the loss of lighting in another area.<sup>1</sup> This interpretation of Subsection III.J requirements makes it impractical for any permanently wired emergency lighting system, such as that which now exists at the Prairie Island Nuclear Generating Plant, to meet the requirements of the regulation. Efforts to comply with Subsection III.J were redirected on July 13, 1981 to procure and install satisfactory local battery powered lighting units.

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<sup>1</sup>This finding was contained in our letter to the licensee in regard to an exemption request for the Monticello Plant dated July 13, 1982.

When the licensee prepared the exemption requested by letter dated November 16, 1981, the safe shutdown analysis had not progressed sufficiently to identify the exact locations for operation of safe shutdown equipment under Subsection III.G of Appendix R. It appeared at this point in the design that several areas requiring emergency lighting would be in parts of the plant where radiation levels made it imprudent to perform the modifications during plant operations. On this basis the licensee requested an exemption from the schedular requirements of 10 CFR 50.48(c)(3). It was not until May 1982 that the safe shutdown analysis of Subsection III.G was completed to a point where all areas of the plant needing emergency lighting could be identified. The plant staff determined that emergency lighting could be installed in all of these identified areas during plant operation without disrupting the operation of critical plant equipment or exposing plant personnel to excessive radiation levels. Once these circumstances were known, the licensee, by letter dated May 20, 1982, submitted a second request for a schedule exemption, asking for an extension in the time allowed for completing Subsection III.J modification to January 1, 1983 for both units. As noted above, the appropriate section for the exemption was now stated to be C-2 rather than C-3.

Delays developed when the licensee sought to purchase seismically qualified equipment - a design feature that exceeds the requirements of Subsection III.J. This delay occurred when the foreign battery supplier was no longer a reliable source which lead to further delays in the licensee's efforts to purchase suitable fighting units. The purchasing of the lighting units were also thwarted by a contract

dispute between the lighting unit vendor and the manufacturer of the batteries. In addition, the engineering analysis for emergency lighting resulted in unforeseen delays associated with properly identifying all of the areas where lighting units would be needed until the safe shutdown analysis under Subsection III was nearly completed, which affected the total number of lighting units needed to be purchased.

Based on our consideration of these circumstances, we conclude that the licensee made proper application of available resources in a best effort to provide seismically qualified lighting. However, the time allowed proved to be insufficient to permit full implementation. In addition, we have determined that as an interim compensatory measure the existing emergency lighting, although not fully in compliance with III.J, and in conjunction with the portable lighting units that are available for use by the operators and members of the fire brigade can provide emergency lighting as needed until the installation of the III.J units is achieved. On this basis the staff has judged that the request for exemption to allow additional time to complete the installation of the emergency lighting for both units until January 1, 1983 should be granted.

#### IV.

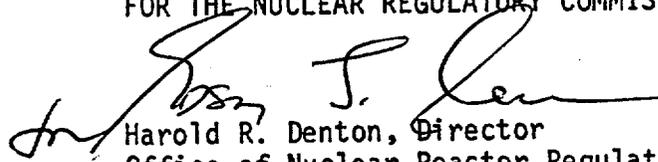
Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12, an exemption is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest and hereby grants the following exemptions

with respect to the requirements of Subsection III.J of Appendix R  
to 10 CFR 50:

Extend the implementation date in paragraph (c)(2) for installation of modifications required by Appendix R, Subsection III.J for both units, that do not require prior NRC approval or plant shutdown, from nine months after February 17, 1981 to January 1, 1983.

The NRC staff had determined that the granting of this Exemption will not result in any significant environmental impact and that pursuant to 10 CFR 51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with this action.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland  
this 8th day of December, 1982