

August 13, 2003

Mr. Joseph M. Solymossy  
Site Vice President  
Prairie Island Nuclear Generating Plant  
Nuclear Management Company, LLC  
1717 Wakonade Drive East  
Welch, MN 55089

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2 -  
EVALUATION OF RELIEF REQUEST NOS. 16 AND 17 FOR THE THIRD  
10-YEAR INTERVAL INSERVICE INSPECTION PROGRAM (TAC NOS. MB7976  
AND MB7977)

Dear Mr. Solymossy:

By letter dated March 7, 2003, the Nuclear Management Company, LLC (NMC), submitted Relief Request Nos. 16 and 17 (RR-16 and RR-17) for the Prairie Island Nuclear Generating Plant, Units 1 and 2, respectively. In RR-16 and RR-17, NMC proposed an alternative to use VT-1 visual examinations in lieu of VT-3 visual examinations as required by American Society of Mechanical Engineers *Boiler and Pressure Vessel Code*, Section XI, paragraph IWA-5250(a)(2), during the Prairie Island, Units 1 and 2, third 10-year inservice inspection (ISI) interval.

The enclosure provides the Nuclear Regulatory Commission (NRC) staff's safety evaluation (SE) for RR-16 and RR-17. As noted in the SE, the NRC staff concludes that NMC's proposed alternatives provide an acceptable level of quality and safety. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the NRC staff authorizes NMC's proposed alternatives described in RR-16 and RR-17 for the third 10-year ISI interval.

Sincerely,

*/RA/*

L. Raghavan, Chief, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-282 and 50-306

Enclosure: Safety Evaluation

cc w/encl: See next page

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L. Raghavan, Chief, Section 1  
Project Directorate III  
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Prairie Island Nuclear Generating Plant,  
Units 1 and 2

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August 2003

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

REGARDING THE THIRD 10-YEAR INTERVAL INSERVICE INSPECTION

RELIEF REQUEST NO. 16 (UNIT 1) AND RELIEF REQUEST NO. 17 (UNIT 2)

PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2

NUCLEAR MANAGEMENT COMPANY, LLC

DOCKET NOS. 50-282 AND 50-306

1.0 INTRODUCTION

By letter dated March 7, 2003, the Nuclear Management Company, LLC (the licensee), submitted Relief Request Nos. 16 and 17 (RR-16 and RR-17) for the Prairie Island Nuclear Generating Plant, Units 1 and 2. In RR-16 and RR-17, NMC requested relief from certain American Society of Mechanical Engineers (ASME), *Boiler and Pressure Vessel Code* (Code), Section XI, paragraph IWA-5250(a)(2) requirements pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.55a(a)(3)(i). The licensee requested RR-16 and RR-17 for the third 10-year inservice inspection (ISI) interval. Specifically, the licensee requested to perform VT-1 visual examination in lieu of the Code-required VT-3 visual examination. The third 10-year ISI interval program plan for Prairie Island, Units 1 and 2, meets the requirements of the ASME Code, Section XI, 1989 edition with no addenda.

The regulation at 10 CFR 50.55a(g) specifies that ISI of nuclear power plant components shall be performed in accordance with the requirements of the ASME Code, Section XI, except where specific written relief has been granted by the Nuclear Regulatory Commission (NRC) pursuant to 10 CFR 50.55a(g)(6)(i). The regulation at 10 CFR 50.55a(a)(3) states that alternatives to the requirements of paragraph (g) may be used, when authorized by the NRC, if (i) the proposed alternatives would provide an acceptable level of quality and safety or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Additionally, 10 CFR 50.55a(g)(5)(iii) states that if the licensee has determined that conformance with certain code requirements is impractical for its facility, the licensee shall notify the Commission and submit, as specified in 10 CFR 50.4, information to support the determinations.

2.0 REGULATORY EVALUATION

The licensee submitted RR-16 and RR-17 for the third 10-year ISI interval. The Code of record for the third 10-year ISI interval for Prairie Island, Units 1 and 2, is the ASME Code, Section XI, 1989 edition with no addenda. The NRC staff has evaluated the information provided by the licensee in support of RR-16 and RR-17 and the bases for the NRC staff's disposition are documented below.

## 2.1 System/Component(s) For Which Relief Request Will Be Used (as stated by the licensee)

Code Class:	Class 1, 2, and 3
Reference:	ASME, Section XI, 1989 Edition with no Addenda
Examination Category:	B-P
Item Number:	B15.10, B15.20, B15.30, B15.40, B15.50, B15.60, B15.70
Description:	Pressure Retaining Bolting at Bolted Connections
Component Numbers:	All

## 2.2 Code Requirements (as stated by the licensee)

ASME B&PV Code, Section XI, 1989 Edition Subparagraph, IWA-5250(a)(2), requires a VT-3 examination of bolting following detection of leakage.

## 2.3 Proposed Alternative (as stated by the licensee)

Pursuant to 10 CFR 50.55a(a)(3)(i), relief is requested to perform a VT-1, visual examination in lieu of the required VT-3, visual examination. As discussed below [in Section 2.4 of this safety evaluation], this will provide an acceptable level of quality and safety.

## 2.4 Basis for Relief Request (as stated by the licensee)

Prairie Island requests relief from the ASME B&PV Code, Section XI, 1989 Edition Subparagraph, IWA-5250(a)(2), regarding the actions to be taken when leakage occurs at a bolted connection on other than a gaseous system during the conduct of a system pressure test. Specifically, removal and examination of bolting would be by VT-1 visual examination in lieu of the Code-required VT-3 visual examination.

The ASME B&PV Code, Section XI, Table IWB-2500, Code Categories B-G-1 and B-G-2 require a VT-1 visual examination for Class 1 pressure retaining bolting, establishing its appropriateness. Guidance for performing VT-1 visual examinations of bolting are already incorporated within Prairie Island's examination procedures. The VT-1 examination criteria are more stringent than the simple corrosion evaluation described in IWA 5250. Thus, the use of a VT-1 visual examination in lieu of the Code-required VT-3 visual examination will provide a reasonable level of quality and safety. A similar request was approved for the H.B. Robinson Plant in 2002.

## 2.5 Implementation Schedule (as stated by the licensee)

The proposed alternative is requested for remainder of the 3<sup>rd</sup> 10 Year Interval of the Inservice Inspection Program for Prairie Island Unit 1 and Unit 2.

## 3.0 TECHNICAL EVALUATION

In RR-16 and RR-17, NMC requested relief from the requirements of ASME Code, Section XI, pursuant to 10 CFR 50.55a(a)(3)(i). RR-16 and RR-17 are to be applied during the third 10-year ISI interval. The licensee requested relief from the ASME B&PV Code, Section XI, 1989 edition with no addenda, paragraph IWA-5250(a)(2), regarding the actions to be taken when leakage occurs at a bolted connection on other than a gaseous system when conducting

a system pressure test. Specifically, removal and examination of bolting would be performed using a VT-1 visual examination in lieu of the Code-required VT-3 visual examination. The licensee also stated that guidance for performing VT-1 visual examinations of bolting is already incorporated within the Prairie Island examination procedures and that the VT-1 examination criteria are more stringent than the simple corrosion evaluation described in ASME Code, Section XI, paragraph IWA-5250. Thus, the use of a VT-1 visual examination in lieu of the Code-required VT-3 visual examination will provide a reasonable level of quality and safety. The NRC staff finds the licensee's requests acceptable because the VT-1 examination method is more conservative and stringent than the current VT-3 criteria provided in ASME Code, Section XI, 1989 edition with no addenda, paragraph IWA-5250(a)(2). Thus, the proposed alternative to use a VT-1 visual examination in lieu of the Code-required VT-3 visual examination will provide an acceptable level of quality and safety.

### 3.0 CONCLUSION

Based upon its review of the information provided by the licensee, the NRC staff has determined that the proposed alternative, as described in RR-16 and RR-17, provides an acceptable level of quality and safety and, therefore, is authorized pursuant to 10 CFR 50.55a(a)(3)(i) for the third 10-year ISI interval at Prairie Island, Units 1 and 2. All other ASME Code, Section XI, requirements for which relief was not specifically requested and approved herein remain applicable, including third party review by the Authorized Nuclear Inservice Inspector.

Principal Contributor: W. Held

Date: August 13, 2003