



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO THE THIRD 10-YEAR INTERVAL INSERVICE INSPECTION
EXAMINATION PLAN, REVISION 0
AND ASSOCIATED REQUESTS FOR RELIEF
NORTHERN STATES POWER COMPANY
PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT NO. 2
DOCKET NO. 50-306

1.0 INTRODUCTION

The Technical Specifications for the Prairie Island Nuclear Generating Plant, Unit No. 2, state that the inservice inspection (ISI) of the American Society of Mechanical Engineers (ASME) Code Class 1, 2, and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable addenda as required by 10 CFR 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i). Section 50.55a(a)(3) of 10 CFR 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 difficulties without a compensating increase in the level of quality and safety.

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) shall meet the requirements, except the design and access provisions and the preservice examination requirements, set forth in the ASME Code, Section XI, "Rules for Inservice Inspection Of Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry, and materials of construction of the components. The regulations require that inservice examination of components and system pressure tests conducted during the first 10-year interval and subsequent intervals comply with the requirements in the latest edition and addenda of Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(b) 12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein. The applicable edition of Section XI of the ASME Code for the Prairie Island Nuclear Generating Plant, Unit 2 third 10-year ISI interval is the 1989 Edition. The components (including supports) may meet the requirements set forth in subsequent editions and addenda of the ASME Code incorporated by reference in 10 CFR 50.55a(b) subject to the limitations and modifications listed therein and subject to Commission approval.

Pursuant to 10 CFR 50.55a(g)(5), if the licensee determines that conformance with an examination requirement of Section XI of the ASME Code is not practical for its facility, information shall be submitted to the Commission in support of that determination and a request made for relief from the ASME Code requirement. After

evaluation of the determination, pursuant to 10 CFR 50.55a(g)(6)(i), the Commission may grant relief and may impose alternative requirements that are determined to be authorized by law, will not endanger life, property, or the common defense and security, and are otherwise in the public interest, giving due consideration to the burden upon the licensee that could result if the requirements were imposed.

In letters dated November 15, 1994, Northern States Power (NSP) submitted to the NRC its Third 10-Year Interval Inservice Inspection Examination Plan, Revision 0, and associated requests for relief for Prairie Island Nuclear Generating Plant, Unit 2. Additional information was provided by NSP in letters dated April 19, July 13, and October 5, 1995.

2.0 EVALUATION AND CONCLUSIONS

The staff, with technical assistance from its contractor, the Idaho National Engineering Laboratory (INEL), has evaluated the information provided by the licensee in support of its third 10-year interval ISI examination plan, Revision 0, and associated requests for relief for Prairie Island Nuclear Generating Plant, Unit 2.

Based on the information provided, the staff adopts INEL's conclusions and recommendations in the attached Technical Evaluation Report (TER). The staff has concluded that no deviations from regulatory requirements or commitments were identified in the "Prairie Island Nuclear Generating Plant, Unit 2 Third 10-Year Interval Inservice Inspection Examination Plan," Revision 0.

Table 1 provides a summary of the relief requests submitted by the licensee for Unit 2. Specific information on each relief request can be found in the attached TER. The staff has concluded that for Requests for Relief Nos. RR-5, Rev. 2 (Part 2) and RR-6, the examinations required by the code are impractical and the licensee's proposed alternatives to code requirements provide reasonable assurance of operational readiness. Therefore, relief is granted for Requests for Relief Nos. RR-5 Rev. 2 (Part 2) and RR-6 pursuant to 10 CFR 50.55a(g)(6)(i) as requested.

The staff has also concluded that the alternative contained in Request for Relief No. RR-5, Rev. 2 (Part 1) provides an acceptable level of quality and is authorized pursuant to 10 CFR 50.55a(a)(3)(i) as requested. Furthermore, the staff concluded that for Request for Relief No. RR-7, compliance with the code requirements would result in a hardship without a compensating increase in safety, and that the proposed alternate testing provides reasonable assurance of operational readiness. Therefore, the alternative contained in Request for Relief No. RR-7 is authorized pursuant to 10 CFR 50.55a(a)(3)(ii) provided that when using the calibration blocks without the appropriate documentation, a comparison should be made between the acoustical properties of the calibration block and the material being examined. This comparison should be done once prior to the use of the calibration block, to ensure that the sensitivity is sufficient to find existing flaws in corresponding examination volumes.

The licensee withdrew Requests for Relief Nos. 1, 2, 3, and 4 by letters dated April 19, and July 13, 1995.

Principal Contributor: T. McLellan

Dated: February 22, 1996

Attachment: TER INEL-95/0592

PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 2
Third 10-Year ISI Interval

TABLE 1
SUMMARY OF RELIEF REQUESTS

Relief Request Number	System or Component	Exam Category	Item No.	Volume or Area to be Examined	Required Method	Licensee Proposed Alternative	Relief Request Status
1	Class 2 Piping	C-H		Pressure-retaining piping	Pressure testing		Withdrawn
2	Pressurizer	B-P	B15.50	Auxiliary Spray Line	Pressure testing		Withdrawn
3	Class 1 Pumps	B-L-1 B-L-2	B12.10 B12.20	Pump casings and casing welds	Volumetric and VT-3 visual examination		Withdrawn
4	Steam Generator	C-H		Pressure-retaining vessels	Pressure testing		Withdrawn
5 REV. 2 (PART 1)	Regenerative Heat Exchanger	B-B	B2.51	Circumferential Head Weld	Volumetric examination using acceptance standard IWB-3510.	Perform volumetric examination using acceptance standards IWB-3514.1, IWB-3514.3 and Table-3514-2	Authorized
5 REV. 2 (PART 2)	Regenerative Heat Exchanger	B-D	B3.160	Nozzle inner Radius Sections	Volumetric examination	Visual Examination	Granted
6	Cooling Water	D-C	D3.10	Pressure-retaining components	Hydrostatic pressure testing	System inservice testing	Granted
7	Calibration Blocks	Appendix I I-2100 I-2200		Piping weld calibration blocks		Perform comparison of acoustic properties under certain conditions	Authorized/ Conditionally