



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

Enclosure

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO THE THIRD TEN-YEAR INTERVAL INSERVICE INSPECTION

REQUEST FOR RELIEF PTP-3-04

WISCONSIN ELECTRIC COMPANY

POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-266 AND 50-301

1.0 INTRODUCTION

The Technical Specifications for the Point Beach Nuclear Plant, Units 1 and 2, state that the inservice inspection and testing 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). When authorized by the NRC, 10 CFR 50.55a(a)(3) states that alternatives to the requirements of paragraph (g) may be used, 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 ten-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) on the date twelve 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 Point Beach Nuclear Plant, Units 1 and 2, third 10-year inservice inspection (ISI) interval is the 1986 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 a letter dated March 29, 1994, the licensee, Wisconsin Electric Power Company submitted Request for Relief No. PTP-3-04 requesting relief from performing hydrostatic test requirements for modifications to the Class 2, EB-9 Main Feedwater Piping.

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 Request for Relief No. PTP-03-04. Based on the information submitted, the staff adopts the contractor's conclusions and recommendations presented in the Technical Evaluation Summary attached.

In order to perform the required Code hydrostatic tests the system would have to be redesigned. In addition, the licensee would be required to pressurize the steam generators, the feedwater pipe, and all of the associated components and piping to hydrostatic test pressures, solely to test a 2 inch bypass line. Therefore, Request for Relief No. PTP-03-04 is granted pursuant to 10 CFR 50.55a(g)(6)(i). Relief is granted given due consideration of the burden that would be placed on the licensee if the Code requirements were imposed, and the impracticality of performing the Code-required hydrostatic tests. The licensee's proposed alternative to perform surface examinations and VT-2 visual examination at operating pressure will provide reasonable assurance of the operational readiness of the main feedwater system.

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Date: April 28, 1994

Attachment:
Technical Evaluation Summary

TECHNICAL EVALUATION SUMMARY
OF THE THIRD 10-YEAR INTERVAL INSERVICE INSPECTION
REQUEST FOR RELIEF PTP-3-04
FOR
WISCONSIN ELECTRIC COMPANY
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2
DOCKET NUMBERS: 50-266 AND 50-301

1.0 INTRODUCTION

By letter dated March 29, 1994, the licensee, Wisconsin Electric Power Company, submitted request for relief number PTP-3-04 for the Point Beach Nuclear Plant, Units 1 and 2, third 10-year inservice inspection (ISI) interval. The Idaho National Engineering Laboratory (INEL) staff has evaluated the subject request for relief in the following section.

2.0 EVALUATION

The information provided by the licensee in support of the request for relief and the alternatives proposed therein are evaluated below. The applicable Code for the third 10-year inservice inspection interval for Point Beach Nuclear Plant, Units 1 and 2, is the 1986 Edition of ASME Section XI.

Request for Relief PTP-3-04, IWA-5214, Pressure Test Requirements
Following Modifications to ASME Class 2 Main Feedwater Piping

Code Requirement: IWA-5214 requires that component repairs or replacements (including modifications) be pressure tested prior to resumption of service in accordance with IWA-4400 and IWA-4600. The pressure test shall comply with "IWC-5222, System Hydrostatic Test".

Licensee's Code Relief Request: The licensee requested relief from the hydrostatic test requirements for modifications to the Class 2, EB-9 Main Feedwater Piping [Modifications 89-072 (Unit 1) and 89-073 (Unit 2)].

Licensee's Basis for Requesting Relief (as stated):

"Modification 89-072 (Unit 1) and 89-073 (Unit 2) install bypass assemblies around main feedwater series check valves CS-00466 AA&BB and CS-00476 AA&BB (4 valves per unit) to permit these components to be leak tested independently. Each check valve is provided with a 2 inch bypass assembly (see figure 2)¹, which consists of 2 socket-weld pipets providing attachment to the 16 inch ASME Class 2 EB-9 main feedwater piping and approximately nine other 2 inch components connected at socket welded joints.

"Main feedwater piping and components within the ASME Class 2 boundary are not isolable from their respective steam generators. A hydrostatic test performed in accordance with IWC-5222 following completion of the bypass assembly for any main feedwater check valve would also necessitate hydrostatically testing the associated steam generator, which is not

¹Included with licensee submittal only.

practical. Use of volumetric NDE methods to examine the welds associated with the bypass assembly is also not practical because of either the size or joint type. Consequently, the pressure test and surface examinations outlined in the Proposed Alternate Requirement section above [below] constitute the only practical alternative."

Licensee's Proposed Alternative Examination (as stated):

- "(a) A pressure test at nominal operating pressure shall be acceptable in lieu of the hydrostatic test of IWC-5222 following modifications to the specified main feedwater piping.
- "(b) Prior to performing VT-2 visual examination, the system shall be pressurized to nominal operating pressure for a minimum of 10 minutes. The system shall be maintained at nominal operating pressure during the performance of the VT-2 visual examination. The pressure retaining portions of the component which has undergone repair or replacement shall remain uninsulated until the VT-2 visual examination is completed.
- "(c) In addition to the pressure test specified in (a) above, a surface examination of the final weld pass shall be performed on all socket welds which are part of the modification. Surface examinations of the root weld pass and final weld pass shall be performed on all full penetration welds joining socket-weld pipets (see figure 1)¹ to the 16 inch ASME Class 2 EB-9 main feedwater piping."

Evaluation: The Code requires that, prior to resumption of service, the subject valve bypass line welds receive a hydrostatic test. The licensee stated that the modification is being performed on a portion of the Class 2, 16 inch main feedwater piping that cannot be isolated from the steam generators. As a result, the Code-required hydrostatic test would necessitate pressurization of the steam generators and other components and systems. Pressurization of the feedwater pipe, steam generator, and all of the associated components and piping to hydrostatic test pressures, solely to test the 2 inch bypass line, is considered impractical at this time.

In a March 28, 1994, telephone conversation between the licensee and the NRC, it was agreed that a meaningful volumetric examination of the full penetration welds could not be performed due to the size and joint type. Therefore, the licensee's proposed alternative to the Code-required hydrostatic test is to perform a surface examination of the root pass and final pass for the full penetration welds joining socket-weld pipets to the main run. In addition, the licensee is performing a surface examination of the final pass of all socket welds associated with the modifications. Prior to insulating the pipe and returning the system to service, a VT-2 visual examination will be performed at nominal operating pressure, following a minimum hold time of 10 minutes.

¹ Included with licensee submittal only.

The licensee's proposed alternative surface examinations and the VT-2 visual examination at operating pressure should provide reasonable assurance of the operational readiness of the main feedwater system. Therefore, pursuant to 10 CFR 50.55a(g)(6)(i), it is recommended that relief be granted for the subject modifications.

3.0 CONCLUSION

The INEL staff has reviewed the licensee's submittal and has concluded that the proposed alternatives for Request for Relief PTP-3-04 should provide reasonable assurance of operational readiness. Therefore, pursuant to 10 CFR 50.55a(g)(6)(i), it is recommended that the licensee's request for relief be granted for the subject valve bypass modifications.