



**Wisconsin  
Electric**  
POWER COMPANY

Point Beach Nuclear Plant  
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PBM 96-0117

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Document Control Desk  
U. S. NUCLEAR REGULATORY COMMISSION  
Mail Station P1-137  
Washington, DC 20555

Gentlemen:

DOCKET 50-301  
ASME SECTION XI RELIEF REQUEST RR-2-22  
POINT BEACH NUCLEAR PLANT, UNIT 2

In accordance with 10 CFR 50.55a(g)(5)(iv), Wisconsin Electric Power Company requests relief from Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, "Rules for Inservice Examination of Nuclear Power Plant Components," 1986 edition, no addenda. The requirements for which relief is requested apply to the third inservice inspection interval for Point Beach Nuclear Plant, Unit 2. The third interval began in December 1992 for Unit 2.

The attached relief request, RR-2-22, provides the information needed for the NRC to complete a review and approval as required.

Sincerely,

Greg Maxfield  
Plant Manager

caw

Attachment

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COMPONENT

Steam Generators A & B

EXAM AREA

Shell-to-Tubesheet weld  
Shell-to-Head weld  
FW Nozzle-to-Shell weld  
FW Nozzle Inner Radius Exam

ISOMETRIC

ISI-PRI-2201

ASME SECTION XI CATEGORY

C-A ( Shell-to-Tubesheet and Shell-to-Head welds)  
C-B (FW Nozzle-to-Shell and Inner Radius Exam)

ASME SECTION XI ITEM NUMBER

C1.20 - Shell-to-Head weld  
C1.30 - Shell-to-Tubesheet weld  
C2.21 - FW Nozzle-to-Shell weld  
C2.22 - FW Nozzle Inner Radius Exam

ASME SECTION XI REQUIREMENT

C1.20/C1.30 - Volumetric  
C2.21 - Surface and Volumetric  
C2.22 - Volumetric

IWC-2200 states that (b) "Shop and field examinations may serve in lieu of the on-site preservice examinations, provided: (1) in the case of vessels only, the hydrostatic test required by Section III has been completed"

ALTERNATE REQUIREMENT

The required volumetric and surface examinations will be completed. The proposed alternate examination is to utilize shop and field examinations in lieu of preservice examinations that will be performed prior to the hydrostatic test required by Section III. All other requirements of IWC-2200 will be met in their entirety.

REASON FOR PROPOSED ALTERNATE REQUIREMENT

PBNP Unit 2 will be replacing both the A and B Steam Generators during the U2R22 outage (Fall 1996). The replacement Steam Generators will arrive on site in two halves and a feedwater nozzle extension and require additional Section III construction prior to the Section III hydrostatic test. The additional construction required is the completion of a girth weld in the steam drum and a nozzle-to-nozzle extension weld. Upon completion of these welds, and the welds attaching the steam generators to existing plant

systems, the Section III hydrostatic test will be performed in place utilizing existing plant system to attain hydrostatic test pressure.

It is desired to perform the preservice examinations required by IWC-2200 in the shop prior to final installation (and Section III hydrostatic test). The reason for this is to reduce radiation exposure and potential personnel industrial safety concerns. Due to size concerns of the steam generators it is not practical to complete the ASME Section III construction of the two halves of the vessels, and the feedwater nozzle, outside of the containment building. The completed steam generators cannot physically fit through the existing equipment hatch. To maintain the integrity of the containment structure the steam generators will be moved through the equipment hatch in three components; the lower half, upper half (steam drum) and feedwater nozzle extension. The components will be put in place and the final Section III welds will be completed.

The radiation exposure associated with preservice examinations in the shop will be zero. If the preservice examinations are performed after the replacement steam generators are welded into place, radiation exposure from existing plant systems and components will cause exposure to the examining technicians. The radiation exposure associated with doing preservice examinations with a single steam generator in place is estimated as follows:

<u>Weld</u>	<u>Est. Rad. Field</u>	<u>Duration of exam</u>	<u>Exposure/person</u>
Shell-to-Tubesheet	50 mr/hr	6 hrs.	300 mrem
Shell-to-Head	5 mr/hr	6 hrs.	30 mrem
Nozzle-to-Shell	10 mr/hr	2 hrs.	20 mrem
Nozzle Inner Radius	10 mrem/hr	1 hr.	<u>10 mrem</u>
		Total	360 mrem

Based on 2 NDE technicians performing the work, the radiation exposure received is estimated to be 720 mrem per steam generator associated with the preservice examination. For completion of both steam generators, the radiation exposure is estimated to be around 1440 mrem. Any indications that require further characterization will result in additional exposure.

In addition, to perform the Shell-to-Head examination, a significant amount of scaffolding erection is required to provide access to this weld. While a substantial effort will be made to ensure personnel safety for the NDE technicians working from the scaffolding platform, a certain degree of industrial safety risk is assumed when performing this examination in the field. Performing the preservice examination of this weld in the shop will reduce the industrial safety to the examining personnel.

By implementing this relief request, all the required ASME Section XI preservice examinations would be performed in accordance with the ASME Code. The specific relief requested is to perform these examinations prior to the ASME Section III hydrostatic test rather than after the hydrostatic test. This approach is allowed for piping welds under current ASME Section XI rules. This relief request is an extension of this approach to the vessel welds for the replacement steam generators. By granting this relief and allowing preservice examinations to be performed in the shop, there will be a reduction in the radiation exposure and an increase in personnel safety associated with performing the preservice inspection of the welds in place.