



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

Enclosure

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

OF THE THIRD 10-YEAR INTERVAL INSERVICE INSPECTION

REQUEST TO REVISE RELIEF NO.13

FOR

CAROLINA POWER & LIGHT COMPANY

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

DOCKET NUMBER: 50-261

1.0 INTRODUCTION

The Technical Specifications for the H. B. Robinson Steam Electric Plant, Unit No. 2 (HBR) 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 (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). 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 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) on the date 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 HBR third 10-year ISI interval is the 1986 Edition with the exception of Class 1 piping. The extent of examination for Code Class 1 piping welds (Examination Category B-J) has been determined by the 1974 Edition through Summer 1975 Addenda as permitted by 10 CFR 50.55a(b). The third 10-year interval began February 19, 1992, and ends February 19, 2002. 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 to the NRC dated June 6, 1995, Carolina Power & Light Company (licensee) submitted a request to revise Relief No. 13 that is associated with the third 10-year ISI program plan for HBR.

## 2.0 EVALUATION AND CONCLUSIONS

The staff evaluation of the information provided by the licensee in support of its request to amend Relief No. 13 for HBR follows.

1. Request to Amend Relief No. 13, Examination Category B-L-1 and B-L-2, Items B12.10 and B12.20, Pump Casing Welds and Internal Surfaces
  - a) Code Requirement: Section XI, Table IWB-2500-1, Examination Category B-L-1, Item B12.10 requires a 100% volumetric examination of Class 1 pump casing welds as defined by Figure IWB-2500-16. Examination Category B-L-2, Item B12.20 requires a VT-3 visual examination of the Class 1 pump casing internal surfaces. This examination can be deferred until the end of the interval.
  - b) Licensee's Code Relief Request: On August 1, 1991, the licensee requested relief from performing 100% of the Code-required volumetric examination of the reactor coolant pump (RCP) casing welds and from the VT-3 visual examination of the pump casing internal surfaces unless the pump is disassembled for maintenance during the interval. The licensee identified the relief as Request for Relief No. 13 (RR13). The NRC staff, with the technical assistance of its contractor Idaho National Engineering Laboratory (INEL), reviewed RR13 and granted the relief pursuant to 10 CFR 50.55a(g)(6)(i) provided that the licensee perform the Code-required volumetric and VT-3 visual examination if a pump is disassembled for repair or maintenance. On June 4, 1995, while performing the reactor coolant system (RCS) leakage inspection required by the HBR ISI program and the Code, the licensee discovered a leak in the "C" RCP main flange. The licensee identified a section of the flange gasket, approximately 2 inches in length, as the cause of the leak and the leakage was determined to be less than 1/2 gpm. The licensee is planning to replace the "C" RCP main flange gasket. On June 6, 1995, the licensee requested that the NRC revise Relief No. 13 on a one-time basis to defer the volumetric and VT-3 visual examination that the licensee committed to perform in the request for Relief No. 13.

- c) Licensee's Basis for Requesting Relief: The licensee states:

The gasket replacement work to the "C" RCP is scheduled as part of an unplanned forced outage expected to last approximately 16 days. If NRC concurrence is not obtained for this requested one time change to the conditions imposed by Relief Request No. 13 to the Third 10-year ISI Program Plan and removal of the "C" RCP diffuser adapter and casing adapter is required solely in order to perform a visual examination of the internal casing surface and to perform volumetric examination of the internal surface welds, the outage would be extended by at most 15 days to accommodate further lowering of reactor water level, to perform additional RCP disassembly, and to perform the examinations.

In conclusion, we are requesting NRC concurrence with a one time change to the conditions imposed by Relief Request No. 13 to our Third 10-year ISI Program Plan because performance of the required visual and volumetric examinations, which would necessitate further disassembly of the "C" RCP to remove the diffuser and casing adapters, would result in an unnecessary extension of the unplanned forced outage and would involve significant additional occupational radiation exposure.

- d) Licensee's Proposed Alternative Examination: None

- e) Evaluation: The visual and volumetric examinations of the internal surfaces of the pump would require a complete disassembly of the pump, and the water level of the reactor vessel would have to be lowered to accomplish the required examinations. This would require major effort and planning on the part of licensee and would also require many hours from skilled maintenance and inspection personnel. In addition to the possibility of damage to the pump, maintenance personnel would receive excessive radiation exposure. The licensee has requested a one-time exception to the conditions imposed by the Safety Evaluation for Relief No. 13 which requires that the internal surfaces of the pumps be volumetrically and visually examined when a repair is made to the pump. The licensee has proposed to replace the "C" gasket of the RCP main flange in order to stop a minor leakage. This work can be accomplished without removal of the RCP diffuser adapter and casing adapter and will not involve maintenance activities that would degrade the condition of the pump casing. Therefore, to require the complete disassembly of the RCP solely to meet the conditions of Relief No. 13 would impose a burden on the licensee without a compensating increase in safety.

- f) Conclusion: It is concluded that the disassembly of the RCP for the sole purpose of performing inspections of the internal

surfaces of the pump would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Public health and safety will not be endangered by allowing a one-time exception from the conditions imposed by the Safety Evaluation associated with Relief No. 13. Therefore, a one-time exception from performing inspections of the pump internal surfaces is granted pursuant to 10 CFR 50.55a(a)(3)(ii).

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Dated: June 9, 1995