



Carolina Power & Light Company

Robinson Nuclear Plant
3581 West Entrance Road
Hartsville SC 29550

Serial: RNP-RA/00-0116

AUG 04 2000

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23

REQUEST FOR RELIEF FROM ASME BOILER AND PRESSURE VESSEL
CODE, SECTION XI, REGARDING VISUAL INSPECTION OF PUMP INTERNALS

Ladies and Gentlemen:

This letter requests relief in accordance with 10 CFR 50.55a(a)(3) from the requirements of American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," involving alternatives to inspection of the Reactor Coolant Pump (RCP) internals for the H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2.

Relief is requested to implement alternative requirements to those specified in ASME Section XI Code, 1986 Edition with no Addenda, Table IWB-2500-1, Category B-L-2, Item number B12.20, which requires a VT-3 examination of RCP internal pressure retaining surfaces once per inservice inspection interval. The proposed alternative is to perform a VT-3 visual examination of the accessible internal surfaces of the RCP whenever a pump is disassembled for maintenance, with the pump diffuser adapter removed.

Relief is also requested from submitting a report demonstrating the safety and serviceability of the pump casing to the NRC.

HBRSEP, Unit No. 2 is currently in its Third Ten Year Inservice Inspection Interval, which began on February 19, 1992.

The proposed alternative examinations will allow inspection of the casing surfaces when made accessible by maintenance without causing hardship and unusual difficulty associated with the high occupational doses expected from disassembly of the pump diffuser adapter.

A047

United States Nuclear Regulatory Commission

Serial: RNP-RA/00-0116

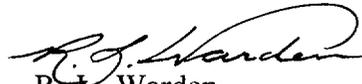
Page 2 of 2

This relief, if approved, will be implemented during the HBRSEP, Unit No. 2 Third Ten Year Inservice Inspection Interval. This relief is requested to be approved by January 20, 2001.

This relief is similar in nature to the relief granted to Nine Mile Point Station, Unit No. 2 (Docket No. 50-410) by NRC letter dated March 29, 2000, in which relief was granted from performing VT-3 visual examination of recirculation pump casing internal surfaces unless pumps are disassembled.

If you have any questions concerning this matter, please contact Mr. H. K. Chernoff.

Sincerely,



R. L. Warden

Manager - Regulatory Affairs

ALG/alg

Attachment

Relief Request No. 27, "Visual Inspection of Pump Internals"

c: Mr. L. A. Reyes, NRC, Region II
Mr. R. Subbaratnam, NRC, NRR
NRC Resident Inspector, HBRSEP

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

RELIEF REQUEST NO. 27
VISUAL INSPECTION OF PUMP INTERNALS

Code Requirements for Which Relief is Requested

American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," 1986 Edition with no addenda, Table IWB-2500-1, "Examination Categories," Examination Category B-L-2, Item number B12.20 requires a visual inspection of one Reactor Coolant Pump (RCP) casing internal surface during the ten year inservice inspection interval.

The required examination method for these examinations is a visual VT-3 examination.

Additionally, HBRSEP, Unit No. 2, has incorporated Code Case N-481, "Alternative Examination Requirements for Cast Austenitic Pump Casings," into its third Ten Year ISI Interval in accordance with Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability ASME Section XI Division 1," Revision 12. The Code Case requires that a report of the evaluation demonstrating the safety and serviceability of the pump casing be submitted to the NRC.

Specific Relief Requested

Relief is requested to implement alternative requirements to those specified in ASME Section XI Code, 1986 Edition with no Addenda, Table IWB-2500-1, Category B-L-2, Item number B12.20, to perform a VT-3 visual examination of the RCP internal pressure retaining surfaces once per inservice inspection interval.

Relief is also requested from submitting to the NRC in correspondence, the report of the evaluation demonstrating the safety and serviceability of the pump casing for HBRSEP, Unit No. 2, as required by Code Case N-481.

Alternative Examinations

Relief is requested from performing a VT-3 visual inspection of the RCP internal pressure retaining surfaces unless a RCP is disassembled for maintenance, with the pump diffuser adapter removed. If the pump diffuser adapter were removed for maintenance, examination of the internal pressure boundary would include the internal pressure retaining surfaces made accessible by the disassembly. If a VT-3 examination of a RCP internal pressure retaining surfaces is performed, with the pump diffuser adapter removed, during the interval, no additional VT-3 examinations of RCP internal pressure retaining surfaces would be required during the interval.

Basis for Requesting Relief

In accordance with 10 CFR 50.55a(a)(3)(ii), relief is requested for the H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2 on the basis that compliance with the specified requirements of the Code would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Disassembly of the RCP diffuser adapter for the purpose of performing the VT-3 visual examination of the RCP internal pressure retaining surfaces would involve significant occupational radiation dose.

Justification for Granting Relief

The HBRSEP, Unit No. 2 Inservice Inspection (ISI) Program references the 1986 Edition of the ASME B&PV Code, with no Addenda, which requires a VT-3 inspection of the RCP once per interval. HBRSEP, Unit No. 2, has incorporated Code Case N-481 into its third Ten Year ISI Interval. The Code Case eliminates the requirement for a volumetric examination of the pump casing unless the pump is disassembled for maintenance. The Code Case also requires a VT-3 visual examination of the internal surfaces whenever a pump is disassembled for maintenance. However, the Code Case does not address the VT-3 examination requirement in Item B12.20 that remains in the 1986 Edition of the Code.

As required by the Code Case, an evaluation demonstrating the safety and serviceability of the pump casing has been performed. This report is proprietary and is maintained as a plant record. Relief is requested from submitting the report to the NRC as required by the Code Case to avoid the additional expense and effort of developing a non-proprietary version of the report.

The proposed relief is consistent with the 1995 edition of the ASME B&PV Code, Table IWB-2500-1, which also requires a VT-3 visual examination of the RCP internal pressure retaining surfaces. This examination is required only when a pump is disassembled for maintenance, with the exception that, as in this relief request, a VT-3 examination is not performed unless the pump diffuser adapter is removed.

In the event that a RCP is disassembled for maintenance and the pump diffuser adapter is removed, examination of the internal pressure boundary would include the internal pressure retaining surfaces made accessible by the disassembly (Refer to the figure on page 4). The RCP diffuser adapter is the most significant impairment to accessibility for VT-3 examination. If maintenance of the pump does not involve disassembly and removal of the diffuser adapter, a limited examination of the RCP internal pressure retaining surfaces would neither fulfill ASME B&PV Code VT-3 requirements, nor cover sufficient internal surface area to be meaningful. Access through the diffuser's welded turning vanes, without removal of the diffuser adapter, would limit the VT-3 examination to an estimated coverage of less than 20% of the internal surface area of the pump casing.

When the diffuser adapter is removed, adequate access of the pump internal surfaces would be available in order to perform the VT-3 visual examination over most of the RCP internal surfaces in accordance with the 1986 Edition of the ASME B&PV Code. The diffuser itself is not removable, and a small part of the RCP internal surface at the top of the pump facing the diffuser is not accessible for the VT-3 examination.

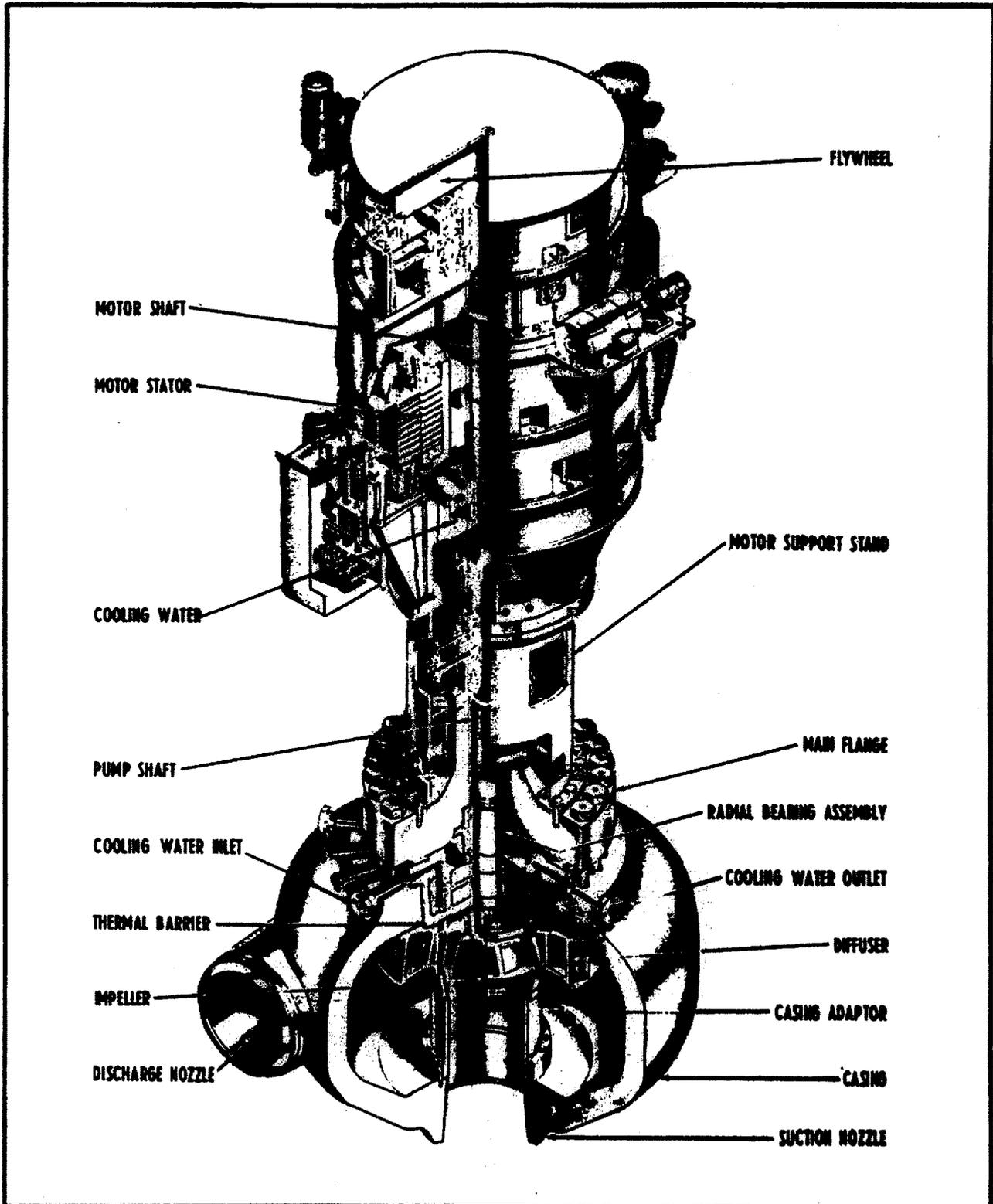
Disassembly of the RCP diffuser adapter for the purpose of performing the VT-3 visual examination of the RCP internal pressure retaining surfaces would involve significant occupational radiation dose. If the diffuser adapter were to be removed to permit the required examinations, an additional occupational radiation exposure dose of 10 person-rem is estimated. These estimates are based on the occupational exposure incurred when a volumetric examination was performed on the "B" RCP casing in 1982.

Therefore, removal of the RCP diffuser adapter solely to perform the ASME B&PV Code required internal surface examination of the pump casing would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. The proposed relief provides an acceptable level of quality and safety by performing the VT-3 visual examination of the RCP internal pressure retaining surfaces when a RCP is disassembled for maintenance.

Implementation Schedule

This relief will be implemented during the HBRSEP, Unit No. 2 Third Ten Year ISI Interval.

This relief is requested to be approved by January 20, 2001.



<p>H. B. ROBINSON UNIT 2 Carolina Power & Light Company UPDATED FINAL SAFETY ANALYSIS REPORT</p>	<p>REACTOR COOLANT CONTROLLED LEAKAGE PUMP</p>	
--	--	--