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AUTH.NAME AUTHOR AFFILIATION
RICHEY,R.B. Carolina Power & Light Co.
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SUBJECT: Forwards Relief Requests 15-18 for exemption from ASME boiler & pressure vessel code re inservice insp.

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Carolina Power & Light Company

JUN 23 1988

SERIAL: NLS-88-136
10CFR50.

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

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23
IN-SERVICE INSPECTION - RELIEF REQUESTS NO. 15, 16, 17, and 18

REFERENCE: Serial: NLS-86-123, dated April 22, 1986; Relief Request No. 14

Gentlemen:

Carolina Power & Light Company herein requests relief from certain examination requirements specified by the 1977 edition of the ASME Boiler and Pressure Vessel Code through the Summer 1978 Agenda.

The four enclosures to this submittal identify the specific reliefs requested, including the Code requirements, alternative examinations, and bases for the requests.

If you have any questions concerning this letter, please contact Mr. R. W. Prunty at 919-836-7318.

Yours very truly,

R. B. Richey
Manager - Licensing & Nuclear
Fuel Department

MDM/mss (5422MDM)

Enclosures

cc: Dr. J. Nelson Grace
Mr. R. Lo
Mr. L. Garner (NRC - HBR)

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411 Fayetteville Street • P. O. Box 1551 • Raleigh, N. C. 27602

RELIEF REQUEST #15

Request for Relief - Pump Casing Welds and
Pump Casings Examination Categories B-L-1
And B-L-2, Items No. B12.10 and B12.20

Code Requirement

Volumetric and surface examination of all welds in at least one pump in each group of pumps performing similar functions in the system; e.g., recirculating coolant pumps. Includes 100% of weld length and visual examination, VT-1, of the internal surface of the same pump selected for volumetric examination of welds.

Code Relief Request

Relief is requested from volumetric examination of the welds and visual examination of the internal surfaces of the reactor coolant pump casing.

Alternative Examination

Alternatively to the B-L-1 and B-L-2 examinations, CP&L proposes the following:

1. Visual examination of the exterior of the pump casing during the hydrostatic pressure tests required by IWB-5000.

2. Surface examination of the welds on the outside surface to the extent practicable and accessible.

3. If maintenance or operational problems are encountered which require disassembly of the pump, the pump interior surface will be visually examined. The need for performance of a volumetric examination will be re-evaluated at that time.

Licensee's Basis for Requesting Relief

1. Visual and volumetric examinations were performed on Loop "B" Reactor Coolant pump during the Spring 1982 Refueling Outage. These examinations were performed to satisfy the requirements for the first 10-year examination interval. The nondestructive examinations were performed using visual and radiographic techniques and revealed no reportable indications.

2. Radiation exposure for the 1982 Reactor Coolant Pump "B" work required 41 man-rem. This exposure far exceeds the normal expected exposure for an ISI outage program.

3. The reactor coolant pump casing at H. B. Robinson consist of four cast rings made from Type 316 stainless steel joined by three circumferential welds. The pump internals are removed and stored in the R. V. Cavity during radiographic and visual examination, then returned to the pump. These movements create the possibility for damage during disassembly or transport of the internals.

4. Carolina Power & Light Company believes the increased radiation exposure and excessive costs associated with performing these internal examinations far exceed the benefits that might be achieved by the examinations, particularly since the 1982 exams revealed no reportable indications, and the proposed alternatives would satisfy any safety concerns.

(5422MDM/mss)

RELIEF REQUEST #16

Request for Relief Reactor Coolant
Pump Bolts and Studs In-Place Examination
Category B-G-1, Item B6.180; Reactor Coolant Pump Bolts
and Studs, When Removed Examination Category B-G-1,
Item B6.190; Pressure Vessels Bolts and
Studs Examination Category C-D, Item C4.10

Code Requirement

Article 5, Section V, Volumetric Examination of Bolts and Studs.

Code Relief Request

Relief is requested from the Article 5 Section V Calibration requirements.

Alternative Examination

As an alternative to the Article 5, Section V Calibration requirements, calibration will be performed on each stud or bolt examined using back-surface response calibration techniques.

Licensee's Basis for Requesting Relief

By using back-surface response calibration techniques, the question of material differences would be eliminated as calibration is performed on the bolt/stud being examined. Where calibrations are performed on a test bar of the same nominal diameter and composition as required by Article 5 of Section V, material differences would be encountered over the range of studs/bolts in the assembly.

Historically, the most significant indications reported for bolts/studs have been by either surface or visual methods which are currently being performed on Class I system bolts/studs including those subject to this relief request.

RELIEF REQUEST #17

Request for Relief
Nozzles in Vessels Over 1/2-inch
in Nominal Thickness Examination
Category C-B, Item C2.20

Code Requirement

Surface and volumetric examination of all nozzles at terminal ends of piping runs that connect to vessels.

Code Relief Request

Relief is requested from volumetric examination of the steam generator nozzle inner radius sections of the 31-inch main steam and the 18-inch feedwater nozzles.

Alternative Examination

A visual examination of the inner radius section will be performed if access permits and only if the steam generators are open for other types of examinations or for maintenance.

Licensee's Basis for Requesting Relief

With regard to the steam generator, the 31-inch main steam nozzle and the 18-inch feedwater nozzle configurations of nozzle to vessel at the inner radius section prevents meaningful volumetric examination. Practical alternative techniques to volumetric examination of these areas are not presently available.

RELIEF REQUEST #18

Request for Relief - Circumferential Shell Welds
in Seal Water Filter Examination
Category C-A, Item C1.10

Code Requirement

Volumetric examination of circumferential shell welds at gross structural discontinuities during each inspection interval on 100% of the length of each weld.

Code Relief Request

Relief is requested from volumetric examinations of the seal water filter head-to-shell weld, shell-to-flange weld, and head-to-flange weld.

Alternative Examination

Liquid penetrant examination will be performed on the welds and on 1/2-inch of the base metal on each side of the welds for 100% of the weld lengths in lieu of volumetric examination.

Licensee's Basis for Requesting Relief

The thickness of the material utilized for the construction of this component (0.188 inch) is such that meaningful results could not be expected with ultrasonic examination as required by IWC-2500-1. The proposed alternative examination is as capable of detecting significant defects in 0.188 inch material as the code required volumetric examination.

(5422MDM/mss)