



Carolina Power & Light Company

OCT 25 1985

SERIAL: NLS-85-378

Director of Nuclear Reactor Regulation
Attention: Mr. D. B. Vassallo, Chief
Operating Reactors Branch No. 2
Division of Licensing
United States Nuclear Regulatory Commission
Washington, DC 20555

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-324/LICENSE NO. DPR-62
IN-SERVICE INSPECTION - ASME CODE RELIEF REQUEST

Dear Mr. Vassallo:

Carolina Power & Light Company (CP&L) hereby requests an exemption from the requirements of the ASME Boiler and Pressure Vessel Code, Section XI, Category B-M-2, which requires visual examination of the internal surfaces at the pressure boundary of the Class I valves exceeding four inches in diameter nominal pipe size. The provisions of 10 CFR 50.55a(3) allow for exemptions when compliance with the specified requirements would result in hardship of unusual difficulties without a compensating increase in the level of quality and safety. The disassembly of large valves to the degree necessary to inspect the internal pressure retaining surfaces is a major effort, involving large personnel exposures. Performance of this disassembly for the sole purpose of visual examination of the internal casing is impractical. Furthermore, disassembly of a valve which has been functioning within acceptable parameters for inspection is contrary to good maintenance practices, since the likelihood of failure may be increased. Therefore, the requested exemption is in accordance with 10 CFR 50.55a(3).

Enclosure 1 contains a complete list of the affected valve groupings along with justification for their exemption. A similar request was granted by your staff in a letter dated May 19, 1983.

Carolina Power & Light Company has reviewed this request in accordance with 10 CFR 170.12 and determined that an application fee is required. A check for \$150.00 is enclosure in payment of this fee. We request approval of this request by November 30, 1985 in order to support the upcoming Brunswick-2 outage.

Please refer any questions regarding this matter to Mr. Sherwood R. Zimmerman at (919) 836-6242.

Yours very truly,

A. B. Cutter - Vice President
Nuclear Engineering & Licensing

MAT/crs (2051MAT)
Enclosure

cc: Mr. W. H. Ruland (NRC-BNP)
Dr. J. Nelson Grace (NRC-RII)
Mr. M. Grotenhuis (NRC)

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Enclosure 1
to Serial: NLS-85-378

ASME Code Relief Request

APPLICABLE VALVE GROUPINGS

<u>Group</u>	<u>System</u>	<u>Valve</u>	<u>Function</u>	<u>Valves</u>
CS-1	Core Spray	Gate	Containment Isolation	E21-F004A,B E21-F005A,B
CS-2	Core Spray	Check	Overpressurization	E21-F006A,B
FW-2	Feedwater	Gate	Manual Isolation	B21-F011A,B
FW-3	Feedwater	Check	Containment Isolation	B21-F032A,B
MS-1	Main Steam	Relief	Overpressurization	B21-F013 A through L
MS-2	Main Steam	Globe	Containment Isolation	B21-F022A,B,C,D B21-F028A,B,C,D
RHR-2	Residual Heat Removal	Check	Overpressurization	E11-F050A,B
RHR-3	Residual Heat Removal	Angle	Containment Isolation	E11-F017A,B
RHR-4	Residual Heat Removal	Gate	Manual Isolation	E11-F060A E11-F060B
RR-1	Reactor Recirculation	Gate	Pump Isolation	B32-F023A,B B32-F031A,B
RR-2	Reactor Recirculation	Gate	Pressure Isolation	B32-F043A,B

BASIS FOR EXEMPTION

Valve Groups CS-1, MS-2, FW-3, and RHR-3

These four valve groupings contain primary containment isolation valves which fall within the 10 CFR 50 Appendix J testing program. Valve integrity is ensured by local leak rate testing (LLRT) which is performed at least once every two years on each valve within these groupings. Disassembly of one valve every ten years for a visual examination would not significantly improve the margin of safety.

Valve Group MS-1

Valves contained in this group are safety relief valves. In response to a vendor recommendation, these valves were sent to the manufacturer for inspection on June 24, 1984. At that time, a liquid penetrant examination of the internal surfaces was performed with no adverse indications. This provided a much more sensitive examination than obtainable by a visual examination.

Valve Groups CS-2 and RHR-2

Valve groups CS-2 and RHR-2 consist of pressure isolation valves designed to protect low pressure system piping from the high pressure side of the system. They are primary containment isolation valves, each of which is subject to an Appendix J LLRT at least once every two years. Disassembly of one valve every ten years for a visual examination would not improve the margin of safety enough to justify the estimated 20 to 30 man-rem incurred while doing the work.

Valve Group FW-2

Group FW-2 valves are manual isolation valves used to isolate the reactor pressure vessel from the feedwater system. Although these valves are not containment isolation valves, they are considered boundary valves. As such, they are subject to Appendix J local leak rate testing at least once every two years. The estimated exposure to perform a visual examination of one valve is 10 to 20 man-rem and is not justified by the minimal improvement in the margin of safety which would result.

Valve Groups RR-1 and RHR-4

Group RR-1 valves are 28-inch manual valves that provide isolation from the reactor pressure vessel to facilitate recirculation pump maintenance. Group RHR-4 valves are 24-inch manual valves that provide isolation from the reactor pressure vessel to facilitate maintenance on the residual heat removal system. Disassembly of these valves would require defueling the vessel and entail an estimated exposure of 20 to 30 man-rem. These lines are currently subjected to an external visual examination for leakage each cold shutdown in which the drywell is de-inerted in accordance with Generic Letter 84-11. In addition, during each refueling these lines are examined for leakage during the Section XI leakage/hydrostatic pressure test.

Valve Group RR-2

Group RR-2 valves are the 22-inch reactor recirculation system equalizer valves. These valves are under administrative control during plant operation to maintain one valve locked open and one valve locked closed. Since these valves are the first valves off the reactor pressure vessel, normal means of isolation to facilitate disassembly are not available. It is estimated that an exposure of 30 man-rem would be incurred in the inspection of one of these valve. These lines are currently subjected to an external visual examination for leakage during each cold shutdown in which the drywell is de-inerted in accordance with Generic Letter 84-11. In addition, during each refueling these lines are examined for leakage during the Section XI leakage/hydrostatic pressure test.