



Carolina Power & Light Company

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MAR 28 1988

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Licensing & Nuclear
Fuel Department

SERIAL: NLS-88-029
10CFR50.55a

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

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 & 50-324/LICENSE NOS. DPR-71 & DPR-62
SUPPLEMENT TO IN-SERVICE TESTING PROGRAM
SERVICE WATER LUBRICATING WATER SYSTEM
(NRC TAC NOS. 63523/63524)

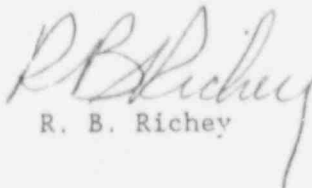
Gentlemen,

In a meeting held on July 21 - 22, 1987, Carolina Power & Light Company (CP&L) committed to identify its plans related to the service water lubricating water system at the Brunswick Steam Electric Plant (BSEP), Units 1 and 2 and to provide relief requests that were revised accordingly. The service water pumps will be modified to provide internal self-lubrication. After these service water pump modifications for each unit are completed, the lubricating water pumps will no longer be necessary. Currently, CP&L plans to perform the modifications by the end of 1990. Until the modifications are complete, each service water lubricating water pump will be tested for vibration amplitude quarterly, and the valves identified in Relief Requests VR-15, VR-16, and VR-17 will be put into a program which verifies valve operability through disassembly and manual manipulation of the check feature.

Enclosed are revised Relief Requests PR-05, VR-15, VR-16, and VR-17.

Please refer any questions regarding this submittal to Mr. Leonard I. Loflin at (919) 836-6242.

Yours very truly,


R. B. Richey

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Enclosure

cc: Dr. J. Nelson Grace
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ENCLOSURE 1

TO SERIAL NLS-88-029

SERVICE WATER LUBRICATING WATER SYSTEM

REVISED RELIEF REQUEST

RELIEF REQUEST NO. PR-05

COMPONENT: Service Water Lube Water Pumps: 1-SW-LW-P-1A, 1B
2-SW-LW-P-2A, 2B

FUNCTION: Provide lubricating water to the Service Water pump bearings and cooling water to the motor upper bearing oil sump.

CLASS: 3

TEST REQUIREMENT: Measure pump suction pressure, differential pressure, and flow rate quarterly.

BASIS FOR RELIEF: There is no installed instrumentation to measure pump suction pressure, differential pressure or flow rate. Each pump has capability of supplying all lubricating water requirements with one pump normally in service and the other pump being a backup. In addition, lubricating water can be supplied from either unit via a manually operated cross-tie valve. In accordance with paragraph 9.2.1.3 of the Updated FSAR, "Should all lubricating water pumps fail, the lube water can still be supplied as the nuclear and conventional supply is 50 psi. Loss of lubricating water to the Service Water Pumps will not result in shutdown. The Service Water Pumps are capable of pumping water (unfiltered) over the bearings, thus, providing adequate lubrication." The Service water pumps are also capable of providing cooling water to the Service Water pump motor upper (thrust) bearing without Lube Water pumps in operation. The Service Water Lube Water pumps will be removed when the self lubrication modifications to the Service Water pumps are complete. Current plans are to complete these modifications on all pumps by December 31, 1990.

ALTERNATE TESTING: Each Service Water Lube Water Pump will be tested for vibration amplitude quarterly until the plant modifications have been completed.

RELIEF REQUEST NO. VR-15

SYSTEM: Service Water (lubricating water)

COMPONENT: SW-V201, SW-V204, SW-V205

FUNCTION: Suction check valves for Service Water Lubricating Pumps.

CATEGORY: C

CLASS: 3

TEST REQUIREMENT: Full-stroke exercise valves to the open position quarterly.

BASIS FOR RELIEF: The Service Water Lube Water Pumps have four independent suction flow paths, each one containing check valves, three of which are listed above.

In Unit 1 there are no isolation valves in these flow paths to isolate three of the four paths to verify the nonisolated path is unobstructed, therefore, verifying the applicable check valve opens.

Neither unit's Service Water Lube Water System pumps have any flow instrumentation; therefore, the valves can only be verified to partially open.

ALTERNATE TESTING: In Unit 2 the valves will be partial-stroke exercised quarterly. For both units, the valves will be incorporated in a disassembly program and manually cycled upon disassembly (Ref: V-08) until the Service Water pump self lubrication modification is complete and the Lube Water pumps and Suction Check valves are removed.

Disassembly grouping characteristics:

Type: wafer check

Size: 4 inch

Operating Medium: saltwater

Manufacturer: Techno

RELIEF REQUEST NO. VR-16

SYSTEM: Service Water (lubricating water)

COMPONENT: SW-V200

FUNCTION: Isolate Service Water System nuclear header upon loss of Service Water System conventional header.

CATEGORY: C

CLASS: 3

TEST REQUIREMENT: Full-stroke exercise valve to the closed position quarterly.

BASIS FOR RELIEF: There is no means within the system to isolate this valve and perform a reverse flow (exercise valve to closed position) test. Adequate/proper testing requires terminating all pumps on the Service Water conventional header, pressurizing the Service Water nuclear header, and observing the pressure in the conventional header.

The probability of obtaining accurate test results is unlikely and actual check valve operability inclusive due in part to the following:

1. The SW-200 is a 4" wafer check valve. The conventional header could be out of service for an extended period of time waiting for a verifiable increase on the 30" header.
2. All conventional pumps operating on the nuclear header would be required to have their header cross-tie valves to be in the closed position. These 20" butterfly valves are not designed to be seal tight. Leakage past valves would contribute to erroneous test results.
3. Additional contingent conventional header inleakage points:
 - a. 30" conventional header cross-tie between units to T6CCW.
 - b. 10" conventional header cross-tie between units to chlorination system.
 - c. 3" conventional header cross-tie between units. These valves are also butterfly-type and are not designed to completely seal tight.

ALTERNATE TESTING:

The valve will be incorporated in a disassembly program and manually cycled upon disassembly (Ref: V-08) until completion of the Service Water Lube Water modifications (anticipated in 1990).

Disassembly grouping characteristics:

Type: wafer check

Size: 4 inch

Operating Medium: saltwater

Manufacturer: Techno

RELIEF REQUEST NO. VR-17

SYSTEM: Service Water (lubricating water)

COMPONENT: SW-V202, SW-V203

FUNCTION: Open to allow lubricating water flow and close upon loss of redundant pump.

CATEGORY: C

CLASS: 3

TEST REQUIREMENT: Full-stroke exercise valves to the open and closed position..

BASIS FOR RELIEF: There are no test connections and/or pressure instrumentation on the backside of these valves to verify valve closure. Neither is there pump flow instrumentation to verify one check valve full-stroke exercise the open position and the other to the closed position.

ALTERNATE TESTING: Partial stroke the valves to the open position quarterly, incorporate the valves in a disassembly program and manually cycle upon disassembly (Ref: V-08) until the Service Water pump self lubrication modification is complete and the lube water pumps and discharge check valves are removed.

Disassembly grouping characteristics:

Type: wafer check

Size: 4 inch

Operating Medium: saltwater

Manufacturer: Techno