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SUBJECT: Application for amend to License NPF-63, changing Tech Specs re reactor vessel head vent sys. Fee paid.

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TITLE: OR Submittal: TMI Action Plan Rgmt NUREG-0737 & NUREG-0660

NOTES: Application for permit renewal filed. 05000400

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

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
REACTOR VESSEL HEAD VENT SYSTEM

Gentlemen:

SUMMARY

In accordance with the Code of Federal Regulations, Title 10, Parts 50.90 and 2.101, Carolina Power & Light Company hereby requests a revision to the Technical Specifications for the Shearon Harris Nuclear Power Plant (SHNPP). The proposed change deletes Surveillance Requirement 4.4.11.1, which requires quarterly testing of the Reactor Coolant System (RCS) vent path block valves. This surveillance is redundant to Technical Specification 4.0.5 which requires testing of these valves via the In-service Testing Program. The RCS Head Vent System provides a means to vent noncondensible gases from the RCS which may inhibit core cooling during natural circulation. This function is required by NUREG-0737, Item II.B.1. The Company indicated its intention to submit this license amendment request in the relief request regarding the In-Service Pump and Valve Testing Program dated October 30, 1987.

DISCUSSION

Currently, Surveillance Requirement 4.4.11.1 requires that:

> "Each Reactor Coolant System vent path block valve not required to be closed by ACTION a. or b., above shall be demonstrated OPERABLE at least once per 92 days by operating the valve through one complete cycle of full travel from the control room."

The RCS High Point Vent System consists of 4 parallel vent valves, two each for the reactor vessel and the pressurizer, discharging to a common header, followed by two block valves, one each in lines to the containment atmospheric vent and the pressurizer relief tank. The RCS vent system is designed to remove noncondensible gases from the primary system that could inhibit core cooling during natural circulation. The system arrangement provides redundant and diverse venting paths. Double RCS pressure boundary isolation is provided by utilizing vent and block valves in series (see Enclosure 1). The system is designed such that any single active failure will not prevent the ability to vent the reactor vessel or pressurizer. To vent the RCS through either the pressurizer or reactor vessel head requires actuation of two separate and independent valves.

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The RCS High Point Vent System was designed and installed pursuant to the requirements of NUREG-0737, Item II.B.1. The NUREG also requires that "testing should be performed in accordance with Subsection IWV of Section XI of the ASME Code for Category B valves." The RCS High Point Vent System is currently tested three ways according to Technical Specifications. Technical Specification Surveillance 4.0.5 requires implementation of the In-service Testing Program (IST) for Pumps and Valves. This program implements periodic testing to ensure continued operability of both the RCS vent and block valves. In-service testing includes full stroke exercising, verification of valve full stroke times, and exercising the valve to the fail-safe closed position. The IST Program, required by 10CFR50.55a(g) and based on the ASME Code, Section XI is subject to review and approval by the NRC Staff. Technical Specification 3/4.4.11, "Reactor Coolant System Vents," requires in Surveillance 4.4.11.1 that the block valves be remotely cycled open and closed quarterly. Surveillance 4.4.11.2.b requires the vent system be demonstrated operable by cycling the system vent valves and verifying flow through the vent path every 18 months.

Testing of the block valves per 4.4.11.1 is redundant to the operability testing and surveillance performed already in accordance with Surveillance 4.0.5 (IST Program) and preempts the flexibility allowed by the ASME Code. Carolina Power & Light Company is therefore requesting that the duplicative and overly restrictive testing required by Technical Specification 4.4.11.1 be deleted and that Surveillance 4.4.11.2.b be revised to include both the vent valves and block valve in each vent path. The periodic testing performed by the IST program along with the revised RCS vent path surveillance provides adequate assurance of vent system operability.

These proposed changes are consistent with Technical Specifications for other similar facilities and NUREG-0452, "Westinghouse Standard Technical Specification," Draft Revision 5 which do not include the quarterly surveillance requirements for the vent system.

As previously discussed with the NRC staff, it is Carolina Power & Light Company's position that testing of the block valves on a quarterly basis (i.e., at power) is not prudent since it removes one of the two RCS pressure isolation boundaries. This leaves the RCS boundary susceptible to a single failure. Such a single failure would result in loss of RCS coolant to the containment atmosphere or the pressurizer relief tank. For additional discussion, see CP&L Letter NLS-87-234 dated October 30, 1987.

SIGNIFICANT HAZARDS ANALYSIS

The Commission has provided standards in 10CFR50.92(c) for determining whether a significant hazards consideration exists. A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. Carolina Power & Light Company has reviewed this request and determined that:

1. The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated because the remaining Technical Specification required surveillances provide adequate assurance of block valve operability. The RCS Head Vent System provides a means to vent noncondensible gases from the RCS which may inhibit core

cooling during natural circulation. The proposed amendment does not affect the method in which the RCS Head Vent System fulfills this function nor does it result in a reduction in the confidence level of the system operating properly if required.

2. The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated. As stated above, the requested change does not affect the method in which the RCS Head Vent System performs its intended safety function. In fact, there is no physical alteration to the facility whatsoever resulting from this amendment. As such, the proposed amendment cannot create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The proposed amendment does not involve a significant reduction in a margin of safety. The purpose of the requested amendment is to delete the testing required by Surveillance 4.4.11.1. Operability of the block valves will be adequately demonstrated by Surveillance Requirements 4.0.5 and the revised 4.4.11.2. In addition, by eliminating a test which degrades the RCS boundary during testing, the margin of safety is increased. Therefore, this change does not involve a significant reduction in a margin of safety.

Based on the above reasoning, Carolina Power & Light Company has determined that the proposed amendment does not involve a significant hazards consideration.

ADMINISTRATIVE INFORMATION

The revised SHNPP Technical Specification pages are provided in Enclosure 2. The Company has evaluated this request in accordance with the provisions of 10CFR170.12 and determined that a license amendment application fee is required. A check for $150 is enclosed in payment of this fee.

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

Yours very truly,

L. W. Eury

SDC/mss (5330SDC)

Enclosures

cc: Mr. Dayne H. Brown
Mr. B. C. Buckley
Dr. J. Nelson Grace
Mr. G. F. Maxwell

L. W. Eury, having been first duly sworn, did depose and say that the information contained herein is true and correct to the best of his information, knowledge and belief; and the sources of his information are officers, employees, contractors, and agents of Carolina Power & Light Company.

Ruby R. Morgan
Notary (Seal)

RUBY R. MORGAN NOTARY PUBLIC WAKE COUNTY, N. C.

My commission expires: 11/27/89