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SUBJECT: Application for amend to license NPF-63 to relocate cycle specific Overpower & Overtemperature Delta T trip setpoint parameters to COLR.

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AA

CP&L

Carolina Power & Light Company
PO Box 165
New Hill NC 27562
MAR 20 1995

William R. Robinson
Vice President
Harris Nuclear Plant

Letter Number: HO-950506

SERIAL: HNP-95-031
10 CFR 50.90

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 TRIP SYSTEM INSTRUMENTATION SETPOINT
RELOCATION TO THE COLR

Gentlemen:

In accordance with the Code of Federal Regulations, Title 10, Parts 50.90 and 2.101, Carolina Power & Light Company (CP&L) hereby requests a revision to the Technical Specifications (TS) for the Shearon Harris Nuclear Power Plant (SHNPP). This change proposes a revision to Technical Specification 2.2.1, Reactor Trip System Instrumentation Setpoints, to relocate cycle specific Overpower and Overtemperature Delta T trip setpoint parameters to the Core Operating Limits Report (COLR).

Enclosure 1 provides a detailed description of the proposed changes and the basis for the changes.

Enclosure 2 details, in accordance with 10 CFR 50.91(a), the basis for the Company's determination that the proposed changes do not involve a significant hazards consideration.

Enclosure 3 provides an environmental evaluation which demonstrates that the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental assessment needs to be prepared in connection with the issuance of the amendment.

Enclosure 4 provides page change instructions for incorporating the proposed revisions.

Enclosure 5 provides the proposed Technical Specification pages.

In accordance with 10 CFR 50.91(b), CP&L is providing the State of North Carolina with a copy of the proposed license amendment.

CP&L requests approval of the proposed amendment by September 1, 1995 to support preparations for Cycle No.7 operation. In order to allow time for procedure

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revision and orderly incorporation into copies of the Technical Specifications, CP&L requests that the proposed amendment, once approved by the NRC, be issued such that implementation will occur within 60 days of issuance of the amendment.

Please refer any questions regarding this submittal to Mr. D. C. McCarthy at (919) 362-2100.

Sincerely,

W. R. Robinson

SDC/sdc

Enclosures:
1. Basis for Change Request
2. 10 CFR 50.92 Evaluation
3. Environmental Considerations
4. Page Change Instructions
5. Technical Specification Pages

W. R. Robinson, 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.

Lewis S. Rowell
Notary (Seal)

My commission expires: 6/21/99

LEWIS S. ROWELL NOTARY PUBLIC WAKE COUNTY, N.C.

c: Mr. Dayne H. Brown
Mr. S. D. Ebneter
Mr. S. A. Elrod
Mr. N. B. Le

ENCLOSURE 1

SHEARON HARRIS NUCLEAR POWER PLANT
NRC DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
REACTOR TRIP SYSTEM INSTRUMENTATION SETPOINT
REVISION AND RELOCATION TO THE COLR

BASIS FOR CHANGE REQUEST

Background

The Shearon Harris Nuclear Power Plant (SHNPP) Technical Specifications (TS) provide standards and restrictions on minimum equipment operability and on operation of the facility. The TS ensure that the plant is operated within its design basis and safety analyses. A number of specifications address limits associated with reactor physics parameters that generally change with each reload core, requiring the processing of changes to TS to update these limits each fuel cycle. NRC Generic Letter 88-16, dated October 4, 1988, was issued to encourage licensees to prepare changes to TS related to cycle-specific parameters. These TS changes would relocate cycle-specific parameter limits from the TS to the Core Operating Limits Report (COLR). The Generic Letter states that if these limits are developed using an NRC-approved methodology, the license amendment process is an unnecessary burden on the licensee and the NRC. An alternative to including the values of these cycle-specific parameters in individual specifications was provided. This alternative consisted of three separate actions to modify the plant's TS: (1) the addition of the definition of a named formal report that includes the values of cycle-specific parameter limits that have been established using an NRC-approved methodology and consistent with all applicable limits of the safety analysis, (2) the addition of an administrative reporting requirement to submit the formal report on cycle-specific parameter limits to the Commission for information, and (3) the modification of individual TS to note that cycle-specific parameters shall be maintained within the limits provided in the defined formal report.

Amendment 15 to the SHNPP Operating License established a COLR, including the requisite reporting requirements, for many SHNPP cycle-specific TS limits. The purpose of this request is to allow the relocation of additional cycle-specific parameters to the SHNPP COLR.

Proposed Change

This change proposes a revision to Technical Specification 2.2.1, Reactor Trip System Instrumentation Setpoints, to relocate cycle specific Overpower and Overtemperature Delta T trip setpoint parameters to the Core Operating Limits Report.

Basis

Technical Specification 2.2.1, Reactor Trip System Instrumentation Setpoints, specifies trip setpoints for a number of functions related to the reactor core's design and operation. The trip setpoints have been selected to ensure that the

core and Reactor Coolant System are prevented from exceeding their Safety Limits during normal operation and during design basis anticipated operational occurrences.

This TS change deals with two trip functions containing cycle specific parameters, the Overtemperature Delta T (OTΔT) and the Overpower Delta T (OPΔT). These functions are defined by equations in Footnotes (1) and (3), respectively, of Specification 2.2.1. The Overtemperature Delta T trip provides core protection to prevent DNB for various combinations of pressure, power, coolant temperature, and axial power distribution. The trip function ensures that the core is always below the core Safety Limit specified in TS 2.1.1, Reactor Limits - Reactor Core. The Overpower Delta T trip provides assurance of fuel integrity (e.g., no fuel pellet melting and less than 1% cladding strain) in overpower conditions, limits the required range for Overtemperature Delta T trip, and provides a backup to the High Neutron Flux trip. It does so by ensuring that the allowable heat generation rate (kW/ft) is not exceeded.

As stated previously, this change proposes to relocate the specific values for cycle specific OTΔT and OPΔT parameters to the COLR. They include OTΔT gains K_1, K_2, K_3, OTΔT function $f_1(\Delta I)$, and OPΔT gains K_4 and K_6.

Before each operating cycle, the TS values of the reactor trip setpoint parameters are reviewed in conjunction with core design changes to ensure that they remain valid and bounding for the next operating cycle. This ensures that the protection provided against departure from nucleate boiling and centerline fuel melt is maintained. This parameter verification is performed in accordance with the NRC approved methodology "Statistical Setpoint/Transient Methodology for Westinghouse Type Reactors," Siemens Power Corporation (EMF-92-081A), as listed in TS 6.9.1.6.2.1. If a value(s) is not bounded, then a revised value is selected, verified in accordance with the approved methodology and then incorporated into the TS via the TS amendment process. Revisions to the TS to update one or more of the above values have occurred for operating cycles 2, 3 and 6.

As described in Generic Letter 88-16, relocation of the cycle-specific limits to the COLR eliminates the unnecessary administrative burden of processing change requests to the TS that would incorporate those limits that could be revised using NRC approved methodologies. With the OTΔT and OPΔT trip setpoint parameter values in the COLR, the TS remain in control of the implementation of the parameters and of the methodology used to verify the limits. The parameters would remain within the structure of the TS without requiring cycle-specific amendments to review and approve cycle-specific changes. Therefore, relocation of the Overpower and Overtemperature Delta T trip setpoint parameters to the COLR will have no adverse effects on the establishment or implementation of the Reactor Trip System Instrumentation Setpoints.

Conclusions

Relocation of cycle dependent parameters from the TS to the COLR has no impact upon plant operation or safety. No safety-related equipment, safety function, or plant operation will be altered as a result of this proposed change. Since the applicable FSAR limits, i.e., the accident analysis basis, will be

maintained, and since the Technical Specifications will continue to require both OTΔT and OPΔT trip functions, as well as the establishment of their limits by NRC-approved methodologies, this proposed change is administrative in nature.

ENCLOSURE 2

SHEARON HARRIS NUCLEAR POWER PLANT
NRC DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
REACTOR TRIP SYSTEM INSTRUMENTATION SETPOINT
RELOCATION TO THE COLR

10 CFR 50.92 EVALUATION

The Commission has provided standards in 10 CFR 50.92(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 proposed license amendment request and determined that its adoption would not involve a significant hazards determination. The bases for this determination are as follows:

Proposed Change

This change proposes a revision to Technical Specification 2.2.1, Reactor Trip System Instrumentation Setpoints, to relocate cycle specific Overpower and Overtemperature Delta T trip setpoint parameters to the Core Operating Limits Report (COLR).

Basis

This change does not involve a significant hazards consideration for the following reasons:

1. The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

   The proposed change of relocating Overtemperature Delta T (OTΔT) and the Overpower Delta T (OPΔT) trip setpoint parameters to the COLR has no influence or impact to the probability or consequences of an accident. The revised TS will continue to implement the Reactor Trip System Instrumentation OTΔT and OPΔT setpoint limits through reference to the parameters in the COLR. In addition, the COLR is subject to the existing controls of TS 6.9.1.6, including the establishment of the parameter values using an NRC approved methodology. Given that this change administratively relocates the selected trip setpoint parameter values to another TS-controlled document, there would be no increase in the probability or consequences of an accident previously evaluated.

2. The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

No safety-related equipment, safety function, or plant operation will be altered as a result of this proposed change. The limits are simply being relocated to another TS-controlled document. The TS will continue to require operation within the required limits as established per NRC approved methodologies. Therefore, the proposed changes do not 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 the margin of safety.

Relocation of the Reactor Trip System Instrumentation OTΔT and OPΔT setpoint limits to the TS-controlled COLR has no effect on the trip system setpoints currently in force in TS 2.2.1. Future revisions to the trip setpoint parameters are governed by TS 6.9.1.6. TS 6.9.1.6 lists each TS that references values in the COLR and the NRC approved methodologies utilized in developing those values. Since this change is only an administrative relocation of the selected trip setpoint parameter values to another TS controlled document, the proposed changes do not involve a significant reduction in a margin of safety.

ENCLOSURE 3

SHEARON HARRIS NUCLEAR POWER PLANT
NRC DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
REACTOR TRIP SYSTEM INSTRUMENTATION SETPOINT
RELOCATION TO THE COLR

ENVIRONMENTAL CONSIDERATIONS

10 CFR 51.22(c)(9) provides criterion for and identification of licensing and regulatory actions eligible for categorical exclusion from performing an environmental assessment. A proposed amendment to an operating license for a facility requires no environmental assessment if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant hazards consideration; (2) result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite; (3) result in a significant increase in individual or cumulative occupational radiation exposure. Carolina Power & Light Company has reviewed this request and determined that the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the issuance of the amendment. The basis for this determination follows:

Proposed Change

This change proposes a revision to Technical Specification 2.2.1, Reactor Trip System Instrumentation Setpoints, to relocate cycle specific Overpower and Overtemperature Delta T trip setpoint parameters to the Core Operating Limits Report (COLR).

Basis

The change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) for the following reasons:

1. As demonstrated in Enclosure 2, the proposed amendment does not involve a significant hazards consideration.

2. The proposed amendment does not result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

   The proposed change relocates numerical values for cycle-specific Reactor Trip System Instrumentation OTΔT and OPΔT setpoint limit parameters from the Technical Specifications to the existing COLR. The proposed amendment does not introduce any new equipment nor does it require any existing equipment or systems to perform a different type of function than they are currently designed to perform. Plant transient and accident response remains bounded by the FSAR accident analysis. As such, the change can not affect the types or amounts of any effluents that may be released offsite.

3. The proposed amendment does not result in a significant increase in individual or cumulative occupational radiation exposure.

The proposed change relocates numerical values for cycle-specific Reactor Trip System Instrumentation OTΔT and OPΔT setpoint limit parameters from the Technical Specifications to the existing COLR. No additional surveillances or testing results from the amendment. Therefore, the amendment has no affect on either individual or cumulative occupational radiation exposure.

ENCLOSURE 4
SHEARON HARRIS NUCLEAR POWER PLANT
NRC DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
REACTOR TRIP SYSTEM INSTRUMENTATION SETPOINT
RELOCATION TO THE COLR

PAGE CHANGE INSTRUCTIONS

Removed Page	Inserted Page
2-7	2-7
2-8	2-8
-	2-8a
2-9	2-9
2-10	2-10
6-24	6-24
6-24a	6-24a
6-24b	6-24b