CP&L
A Progress Energy Company

James Scarola
Vice President
Harris Nuclear Plant

AUG 2 8 2002

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

SERIAL: HNP-02-093
10CFR50.90

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
TECHNICAL SPECIFICATIONS 3/4.9.9

Dear Sir or Madam:

In accordance with the Code of Federal Regulations, Title 10, Part 50.90, Carolina Power & Light Company (CP&L) requests a revision to the Technical Specifications (TS) for the Harris Nuclear Plant (HNP). The proposed amendment revises Technical Specifications (TS) 3/4.9.9 "Containment Ventilation Isolation System" and associated Bases. Specifically, HNP proposes to include the use of administrative controls on the containment pre-entry purge and makeup penetrations when the Containment Ventilation Isolation System is inoperable during core alterations or movement of irradiated fuel in containment.

Enclosure 1 provides a 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 CP&L'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 is required for approval of this amendment request. 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 that the proposed amendment be issued by March 1, 2003. This amendment is needed to allow efficient prioritization of work activities during refueling outage 11 that is scheduled to start on April 26, 2003. CP&L requests that the proposed amendment be issued such that implementation will occur within 30 days of issuance to allow time for procedure revision and orderly incorporation into copies of the Technical Specifications.

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Please refer any questions regarding this submittal to Mr. J. R. Caves at (919) 362-3137.

Sincerely,

James Scarola

James Scarola

MSE/mse

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

James Scarola, 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 employees, contractors, and agents of Carolina Power & Light Company.

Darlene S. Yarborough

DARLENE S. YARBOROUGH NOTARY *** PUBLIC HARNETT COUNTY, NC

Notary (Seal)
My commission expires:
2-21-2005

cc: Mr. J. B. Brady, NRC Sr. Resident Inspector
Mr. Mel Fry, Director, N.C. DENR
Mr. R. Subbaratnum, NRC Project Manager
Mr. L. A. Reyes, NRC Regional Administrator

bc:

Ms. D. B. Alexander
Mr. C. Baucom
Mr. L.R. Beller
Mr. W. F. Conway
Mr. G. W. Davis
Mr. R. J. Duncan II
Ms. T. A. Hardy
Mr. K. N. Harris
Mr. C. S. Hinnant
Mr. James Holt
Mr. H. L. James
Mr. M. T. Janus
Mr. Abdy Khanpour
Mr. R. D. Martin
Mr. Brad Morrison
Mr. T. C. Morton
Mr. J. M. Taylor
Mr. B. C. Waldrep
Licensing File(s) (2 copies)
Nuclear Records

ENCLOSURE 1 TO SERIAL: HNP-02-093

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BASIS FOR CHANGE REQUEST

Background

On July 30, 2001, the Nuclear Regulatory Commission (NRC) issued License Amendment 104 to the Harris Nuclear Plant (HNP). That amendment revised Technical Specification (TS) 3/4.9.4, "Containment Building Penetrations", and its associated Bases, to allow the containment building penetrations to remain open during refueling operations provided specific administrative controls are met. The provisions of License Amendment 104 applied specifically to dampers, air locks, and the equipment hatch directly and did not apply to automatic signals that controls operation of dampers applicable to License Amendment 104. As a result, the requirements of the Containment Ventilation Isolation System (CVIS) are more restrictive than the dampers that CVIS controls. Specifically, current HNP TS require that if an actuation signal to the dampers is inoperable, the required action is more restrictive than if the damper itself is inoperable. HNP proposes to apply the same administrative controls for TS 3/4.9.9, previously reviewed and approved by the NRC in License Amendment 104, to TS 3/4.9.4 in order to provide consistency between the two specifications.

Proposed Change

HNP proposes to revise Technical Specification (TS) 3/4.9.9 Containment Ventilation Isolation System" and associated Bases to allow the use of administrative controls on open containment penetrations during core alterations.

Basis for the Proposed Change

TSTF-312 provided administrative controls for maintaining containment penetrations open. The proposed amendment provides a note that states that penetration flow path(s) providing direct access from the containment atmosphere to outside atmosphere may be unisolated under administrative controls. The proposed Bases state that the administrative controls ensure that 1) appropriate personnel are aware of the open status of the penetration flow path during core alterations or movement of irradiated fuel assemblies within containment, and 2) specified individuals are designated and readily available to isolate the flow path in the event of a fuel handling accident.

The proposed Bases also state that the allowance to have penetration flow paths with direct access from the containment atmosphere to the outside atmosphere to be unisolated during fuel movement and core alterations is based on (1) confirmatory dose calculations of a fuel handling accident as approved by the NRC staff which indicates acceptable radiological consequences and (2) commitments from the licensee to implement

acceptable administrative procedures that ensure, in the event of a fuel handling accident (even though the containment fission product control function is not required to meet acceptable dose consequences), that the open penetration can and will be promptly closed. The applicable procedures have been previously revised as part of the implementation of License Amendment 104.

HNP has performed alternate source term analyses for fuel handling accidents in containment and the fuel handling building. The analyses assume that activity produced by the accident escapes to the outside atmosphere. The NRC reviewed and approved the HNP fuel handling accident analysis as a part of License Amendment 104.

HNP proposes to apply the administrative controls that were approved by the NRC as part of License Amendment 104 and apply the provisions to TS 3.9.9. The NRC, in License Amendment 104, approved maintaining containment penetrations (that includes containment purge and makeup penetrations) open under administrative controls. The radiological consequences of a fuel handling accident are not affected by this change and the previous approved fuel handling accident analysis remains bounding.

Conclusion

HNP is requesting this change to incorporate similar administrative controls for TS 3.9.9 as was previously reviewed and approved for TS 3.9.4 for the same penetrations. HNP has previously demonstrated through analyses that doses to the public and to control room operators remain well below required limits. These administrative controls provide defense-in-depth to limit the consequences of fuel handling accidents in containment.

ENCLOSURE 2 TO SERIAL: HNP-02-093

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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

HNP proposes to revise Technical Specification (TS) 3/4.9.9 Containment Ventilation Isolation System" and associated Bases to allow the use of administrative controls on open containment penetrations during core alterations.

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 changes modify TS requirements similar to that previously reviewed and approved by the NRC in Harris Nuclear Plant License Amendment 104. The administrative controls proposed by this change are currently being used for the same applicable penetrations as part of TS 3.9.4. This change would permit opening up the applicable penetrations under administrative controls if the containment ventilation isolation system were inoperable. HNP has demonstrated (in License Amendment 104) that the radiological consequences were acceptable for a fuel handling accident occuring simultaneously with an open penetration. For the purpose of the applicable analysis, no credit was given for isolating the penetration and dose consequences remained below applicable regulatory limits. The proposed change does not modify the design or operation of equipment used to move spent fuel or to perform core alterations

   Therefore, the proposed amendment does not involve a significant 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.

Containment penetrations are designed to form part of the containment pressure boundary. The proposed change provides for administrative controls and operating restrictions for containment penetrations consistent with guidance approved by the NRC staff. Containment penetrations are not an accident initiating system as described in the Final Safety Analysis Report. The proposed change does not affect other Structures, Systems, or Components. The operation and design of containment penetrations in operational modes 1-4 will not be affected by this proposed change.

Therefore, the proposed change does 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.

The proposed changes modify similar required Actions previously reviewed and approved by the NRC in HNP License Amendment 104. The proposed change to containment penetrations does not significantly affect any of the parameters that relate to the margin of safety as described in the Bases of the TS or the FSAR. Accordingly, NRC Acceptance Limits are not significantly affected by this change.

Therefore, the proposed change does not involve a significant reduction in the margin of safety.

ENCLOSURE 3 TO SERIAL: HNP-02-093

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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

HNP proposes to revise Technical Specification (TS) 3/4.9.9 Containment Ventilation Isolation System" and associated Bases to allow the use of administrative controls on open containment penetrations during core alterations.

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 increase in the amounts of any effluents that may be released offsite.

   The change does not introduce any new effluents or significantly increase the quantities of existing effluents. As such, the change cannot significantly 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 does not result in any physical plant changes or new surveillances that would require additional personnel entry into radiation controlled areas. Therefore, the amendment has no significant affect on either individual or cumulative occupational radiation exposure.

ENCLOSURE 4 TO SERIAL: HNP-02-093

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PAGE CHANGE INSTRUCTIONS

Removed Page	Inserted Page
3/4 9-11	3/4 9-11
B3/4 9-3	B3/4 9-3
B3/4 9-4	B3/4 9-4

ENCLOSURE 5 TO SERIAL: HNP-02-093

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TECHNICAL SPECIFICATION PAGES

3/4.9.9 CONTAINMENT VENTILATION ISOLATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.9 The Containment Ventilation Isolation System shall be OPERABLE.

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

a. With the Containment Ventilation Isolation System inoperable, close each of the containment purge makeup and exhaust penetrations providing direct access from the containment atmosphere to the outside atmosphere.* Add

b. The provisions of Specification 3.0.3 are not applicable. Delete (1)

SURVEILLANCE REQUIREMENTS

4.9.9 The Containment Ventilation Isolation System shall be demonstrated OPERABLE within 100 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS by verifying that containment ventilation isolation occurs on a two-out-of-four High Radiation test signal from the containment area radiation monitors (Table 3.3-6, item 1.a) and by verifying that isolation occurs for each valve using its control switch in the main control room.

Add

* Penetration flow path(s) providing direct access from the containment atmosphere to the outside atmosphere may be opened under administrative controls.

Delete

~~BASES~~

Insert A

3/4.9.10 AND 3/4.9.11 WATER LEVEL - REACTOR VESSEL AND NEW AND SPENT FUEL POOLS

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the assumed iodine gap activity released from the rupture of an irradiated fuel assembly. The minimum water depth is consistent with the assumptions of the safety analysis.

According to Regulatory Guide 1.25, Revision 0, there is 23 feet of water between the top of the damaged fuel bundle and the fuel pool surface during a fuel handling accident. With 23 feet of water, the assumptions of Regulatory Guide 1.25, Revision 0, can be used directly. In practice, this LCO preserves this assumption for the bulk of the fuel in the storage racks. In the case of a single bundle dropped and lying horizontal on top of the spent fuel racks; however, there may be <23 feet of water above the top of the fuel bundle and the surface, indicated by the width of the bundle. To offset this small nonconservatism, the analysis assumes that all fuel rods fail.

3/4.9.12 FUEL HANDLING BUILDING EMERGENCY EXHAUST SYSTEM

The limitations on the Fuel Handling Building Emergency Exhaust System ensure that all radioactive material released from an irradiated fuel assembly will be filtered through the HEPA filters and charcoal adsorber prior to discharge to the atmosphere. Operation of the system with the heaters operating for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. The OPERABILITY of this system and the resulting iodine removal capacity are consistent with the assumptions of the safety analyses. ANSI N510-1980 will be used as a procedural guide for surveillance testing. Criteria for laboratory testing of charcoal and for in-place testing of HEPA filters and charcoal adsorbers is based upon removal efficiencies of 95% for organic and elemental forms of radioiodine and 99% for particulate forms. The filter pressure drop was chosen to be half-way between the estimated clean and dirty pressure drops for these components. This assures the full functionality of the filters for a prolonged period, even at the Technical Specification limit.

The LCO is modified by a note allowing the Fuel Handling Building Emergency Exhaust System (FHBEES) ventilation boundary to be opened intermittently under adminstrative controls. For entry and exit through doors, the administrative control of opening is performed by the person(s) entering or exiting the area. For other openings, these controls consist of stationing a dedicated individual at the opening who is in continuous communication with the control room. This individual will have a method to rapidly close the opening when a need for FHBEES isolation is indicated.

Insert A

Penetrations applicable to Technical Specification 3.9.9 may be opened provided the following administrative controls are in effect:

1. An individual or individuals shall be designated and available at all times, capable of isolating the breached penetration.
2. The breached penetration shall not be obstructed unless capability for rapid removal of obstructions is provided (such as quick disconnects for hoses).

The LCO is modified by a Note allowing penetration flow paths providing direct access from the containment atmosphere to the outside atmosphere to be open under administrative controls. Administrative controls ensure that 1) appropriate personnel are aware of the open status of the penetration flow path during CORE ALTERATIONS or movement of irradiated fuel assemblies within containment, and 2) specified individuals are designated and readily available to isolate the flow path in the event of a fuel handling accident.

The allowance to have containment penetration (including the airlock doors and equipment hatch) flow paths with direct access from the containment atmosphere to the outside atmosphere to be unisolated during fuel movement and CORE ALTERATIONS is based on (1) confirmatory dose calculations as approved by the NRC staff which indicate acceptable radiological consequences and (2) commitments from the licensee to implement acceptable administrative procedures that ensure in the event of a refueling accident that the airlock or equipment hatch can and will be promptly closed following containment evacuation (even though the containment fission product control function is not required to meet acceptable dose consequences) and that the open penetration(s) can and will be promptly closed. The time to close such penetrations or combination of penetrations shall be included in the confirmatory dose calculations.

3/4.9.9 CONTAINMENT VENTILATION ISOLATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.9 The Containment Ventilation Isolation System shall be OPERABLE.

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

a. With the Containment Ventilation Isolation System inoperable, close each of the containment purge makeup and exhaust penetrations providing direct access from the containment atmosphere to the outside atmosphere.*

b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.9 The Containment Ventilation Isolation System shall be demonstrated OPERABLE within 100 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS by verifying that containment ventilation isolation occurs on a two-out-of-four High Radiation test signal from the containment area radiation monitors (Table 3.3-6, item 1.a) and by verifying that isolation occurs for each valve using its control switch in the main control room.

*Penetration flow path(s) providing direct access from the containment atmosphere to the outside atmosphere may be opened under administrative controls.

CONTAINMENT VENTILATION ISOLATION SYSTEM (Continued)

Penetrations applicable to Technical Specification 3.9.9 may be opened provided the following administrative controls are in effect:

1. An individual or individuals shall be designated and available at all times, capable of isolating the breached penetration.

2. The breached penetration shall not be obstructed unless capability for rapid removal of obstructions is provided (such as quick disconnects for hoses).

The LCO is modified by a Note allowing penetration flow paths providing direct access from the containment atmosphere to the outside atmosphere to be open under administrative controls. Administrative controls ensure that 1) appropriate personnel are aware of the open status of the penetration flow path during CORE ALTERATIONS or movement of irradiated fuel assemblies within containment, and 2) specified individuals are designated and readily available to isolate the flow path in the event of a fuel handling accident.

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3/4.9.10 AND 3/4.9.11 WATER LEVEL - REACTOR VESSEL AND NEW AND SPENT FUEL POOLS

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the assumed iodine gap activity released from the rupture of an irradiated fuel assembly. The minimum water depth is consistent with the assumptions of the safety analysis.

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The LCO is modified by a note allowing the Fuel Handling Building Emergency Exhaust System (FHBEES) ventilation boundary to be opened intermittently under administrative controls. For entry and exit through doors, the administrative control of opening is performed by the person(s) entering or exiting the area. For other openings, these controls consist of stationing a dedicated individual at the opening who is in continuous communication with the control room. This individual will have a method to rapidly close the opening when a need for FHBEES isolation is indicated.