



James Scarola
Vice President
Harris Nuclear Plant

JUL - 8 2002

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

SERIAL: HNP-02-088
10CFR50.90

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
TECHNICAL SPECIFICATIONS 3/4.8.1.1 and 3/4.8.1.2

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 3/4.8.1.1 "Electrical Power Systems – A. C. Sources" Operating and Technical Specifications 3/4.8.1.2 "Electrical Power Systems – A. C. Sources" Shutdown.

Enclosure 1 provides a description of the proposed changes, 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 such that implementation will occur within 60 days of issuance to allow time for procedure revision and orderly incorporation into copies of the Technical Specifications.

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

Sincerely,

RTG/rtg

P.O. Box 165
New Hill, NC 27562

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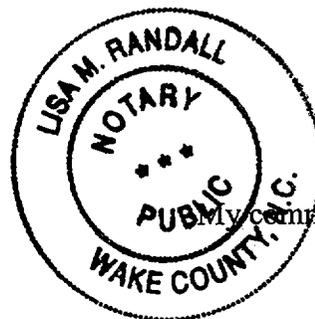
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Enclosures:

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.

Lisa M. Randall



Notary (Seal)

My commission expires:

6-7-03

c:

- Mr. J. B. Brady, NRC Sr. Resident Inspector
- Mr. M. Fry, Director, N.C. DEHNR
- Mr. J. M. Goshen, NRC Project Manager
- Mr. L. A. Reyes, NRC Regional Administrator

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BASIS FOR CHANGE REQUEST

Background

Design

The Harris Nuclear Plant (HNP) is equipped with two separate independent Emergency Diesel Generators that make up the "Standby AC power supply." The Onsite Power Distribution System can receive power from either the Preferred (offsite) Power System or from the Standby Power Supply, which consists of the two diesel generators, one for each division. Each diesel generator is rated at 6500 kW, 6.9 kV and is complete with its accessories and fuel storage (day tank) system.

The diesel generator ratings are sufficient to supply reliable power to all safety related loads in its respective division, as well as to those non-safety related loads which it is desirable to have manually loaded on the diesel generator. Each diesel generator is designed for fast starting and load acceptance, with a high degree of availability and reliability.

The Diesel Generator Fuel Oil Storage and Transfer System (DGFOSTS) is a safety related system required to support diesel generator operation following loss of offsite power under all postulated conditions. Each redundant fuel oil storage tank provides the design basis onsite storage capacity for its associated diesel. This storage capacity provides ample time for obtaining additional fuel oil, since additional fuel oil is readily available within eight hours.

The diesel fuel oil transfer pump is a horizontal, centrifugal pump located below grade in a separate compartment adjacent to the fuel oil storage tank. The fuel oil transfer pump powered by its associated diesel generator is sized to provide a flow of 40 gpm for approximately six times the maximum engine consumption rate and is automatically controlled through the use of a level switch activated by day tank fuel level. Upon demand, the diesel fuel oil is pumped from the fuel oil storage tank and through one simplex strainer into the diesel fuel oil day tank.

In each fuel oil supply subsystem, the fuel oil transfer pump maintains the fuel oil level in its associated diesel generator day tank. The day tanks are vertical steel tanks located in separate, isolated, fire resistant compartments, and situated so as to assure sufficient positive pressure at

the engine fuel pumps. The full volume of each day tank provides approximately six hours of storage assuming maximum engine fuel consumption.

Upon receipt of a signal initiating diesel start, the diesel engine shaft driven fuel pump takes suction from its associated day tank and pumps fuel oil to the diesel as required and recirculates that portion not consumed by the diesel back to the day tank.

Proposed Change

Revise HNP Technical Specification (TS) 3/4.8.1.1.b.1 “Electrical Power Systems – A. C. Sources” Limiting Condition for Operations while operating and TS 3/4.8.1.2.b.1 “Electrical Power Systems – A. C. Sources” Limiting Condition for Operations (LCO) while shutdown to eliminate the minimum indicated level required to assure a minimum fuel volume in the Emergency Diesel Generator Day Tank of 1457 gallons. The TS currently states that the percent indicated level equivalent to 1457 gallons is 40%. The 40% indicated level however, equates to a specific gravity dependent volume that may be less than the 1457 gallons required. Changes in specific gravity of the fuel oil can be accounted for, and the desired minimum volume assured, by comparing the indicated level to the day tank curve to find the volume adjacent to the measured specific gravity of the fuel. Therefore the requested change is to eliminate the level value in TS 3/4.8.1.1.b.1 and TS 3/4.8.1.2.b.1 in order to prevent confusion since it is not a set value but a variable based on specific volume. This change also makes the HNP TS more consistent with the Improved Technical Specifications (ITS) as described in NUREG-1431, which only lists a day tank minimum volume in gallons.

Basis for the Proposed Change

The bases for submitting this change request is to correct a value in the HNP TS that is not accurate for all values of fuel oil specific gravity. Since the fuel oil specific gravity varies, the TS required minimum volume in the day tank is not satisfied by having one indicated level value. The day tank level could indicate 40% as required in both of the affected TS but the required number of gallons would be less than the 1457 gallons required if the fuel specific gravity was less than .83. This TS change will improve the accuracy of the HNP TS and is consistent with the ITS in that the ITS only requires day tank minimum volume in gallons.

Current HNP TS were modeled after NUREG-0452, which was the previous Westinghouse TS standard prior to generation of NUREG-1431 (ITS). The current HNP TS provides much the same TS Limiting Condition for Operation (LCO) as the ITS with the difference being that ITS references the day tank level in the surveillance requirements instead of the LCO portion of the TS. The HNP TS requirement for the day tank to contain a minimum volume of 1457 gallons of fuel provides approximately 3 times the minimum required fuel described in Regulatory Guide 1.137 and ANSI N195-1976 based on a nominal fuel consumption rate of 7.4 gallons per minute at full load.

The proposed changes are acceptable because they present no significant reduction in the margin of safety and no significant increase in risk. The proposed changes improve the accuracy of the HNP TS. There is no change to the original minimum day tank fuel oil volume requirement in the TS.

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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

Revise Harris Nuclear Plant (HNP) Technical Specification (TS) 3/4.8.1.1.b.1 "Electrical Power Systems – A. C. Sources" Limiting Condition for Operations while operating and TS 3/4.8.1.2.b.1 "Electrical Power Systems – A. C. Sources" Limiting Condition for Operations (LCO) while shutdown to eliminate the minimum indicated level required to assure a minimum fuel volume in the Emergency Diesel Generator Day Tank of 1457 gallons. The TS currently states that the percent indicated level equivalent to 1457 gallons is 40%. The 40% indicated level however, equates to a specific gravity dependent volume that may be less than the 1457 gallons required. Changes in specific gravity of the fuel oil can be accounted for, and the desired minimum volume assured, by comparing the indicated level to the day tank curve to find the volume adjacent to the measured specific gravity of the fuel. Therefore the requested change is to eliminate the level value in TS 3/4.8.1.1.b.1 and TS 3/4.8.1.2.b.1 in order to prevent confusion since it is not a set value but a variable based on specific volume. This change also makes the HNP TS more consistent with the Improved Technical Specifications (ITS) as described in NUREG-1431, which only lists a day tank minimum volume in gallons.

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 Harris Nuclear Plant (HNP) Technical Specification (TS) Bases for Electrical Power Systems – A. C. Systems states that; “A separate day tank containing a minimum of 1457 gallons of fuel, which is equivalent to a minimum indicated level of 40%***” and, the asterisked note states; “***Minimum indicated level with a fuel oil specific gravity of 0.83 and the level instrumentation calibrated to a reference specific gravity of 0.876.” These changes do not modify the design or operation of Structures, Systems, and Components (SSCs) that could initiate an accident. The minimum volume of fuel in the day tank is unchanged by this amendment and consequently would not impact the probability or consequences of any accident scenario.

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

The proposed changes do not involve new plant components or procedures, but only revise existing Technical Specification Limiting Condition for Operation Requirements. No significant impact on any postulated accident is made due to this change since the required fuel oil volume is not changed and the level indication for the operations personnel is not changed. These changes do not modify the design or operation of Structures, Systems, and Components (SSCs) that could initiate an accident.

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 do not affect the design or operation of safety related components relied upon to automatically mitigate the consequences of a design basis event. The day tank level specified in TS is not accurate for all fuel oil specific gravities so these changes provide better monitoring capability by reducing the possibility of confusion. Indicated day tank level is used to determine volume by comparing the indicated level to the day tank curve using the actual specific gravity of the fuel. The Diesel Generator day tank minimum volume is not altered by these changes and therefore there is no significant impact on any safety system and these changes do not reduce the margin of safety.

Based on these considerations, the proposed change does not involve a significant reduction in the margin of safety.

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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

Revise Harris Nuclear Plant (HNP) Technical Specification (TS) 3/4.8.1.1.b.1 "Electrical Power Systems – A. C. Sources" Limiting Condition for Operations while operating and TS 3/4.8.1.2.b.1 "Electrical Power Systems – A. C. Sources" Limiting Condition for Operations (LCO) while shutdown to eliminate the minimum indicated level required to assure a minimum fuel volume in the Emergency Diesel Generator Day Tank of 1457 gallons. The TS currently states that the percent indicated level equivalent to 1457 gallons is 40%. The 40% indicated level however, equates to a specific gravity dependent volume that may be less than the 1457 gallons required. Changes in specific gravity of the fuel oil can be accounted for, and the desired minimum volume assured, by comparing the indicated level to the day tank curve to find the volume adjacent to the measured specific gravity of the fuel. Therefore the requested change is to eliminate the level value in TS 3/4.8.1.1.b.1 and TS 3/4.8.1.2.b.1 in order to prevent confusion since it is not a set value but a variable based on specific volume. This change also makes the HNP TS more consistent with the Improved Technical Specifications (ITS) as described in NUREG-1431, which only lists a day tank minimum volume in gallons.

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-02-088

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PAGE CHANGE INSTRUCTIONS

<u>Removed Page</u>	<u>Inserted Page</u>
3/4 8-1	3/4 8-1
3/4 8-11	3/4 8-11

ENCLOSURE 5 TO SERIAL: HNP-02-088

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TECHNICAL SPECIFICATION PAGES

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and
- b. Two separate and independent diesel generators, each with:
 - 1. A separate day tank containing a minimum of 1457 gallons of fuel, which is equivalent to a minimum indicated level of 40%**, Delete
 - 2. A separate main fuel oil storage tank containing a minimum of 100,000 gallons of fuel, and
 - 3. A separate fuel oil transfer pump.
- c. Automatic Load Sequencers for Train A and Train B.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With one offsite circuit of 3.8.1.1.a inoperable:
 - 1. Perform Surveillance Requirement 4.8.1.1.1.a within 1 hour and once per 8 hours thereafter; and
 - 2. Restore the offsite circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; and
 - 3. Verify required feature(s) powered from the OPERABLE offsite A.C. source are OPERABLE. If required feature(s) powered from the OPERABLE offsite circuit are discovered to be inoperable at any time while in this condition, restore the required feature(s) to OPERABLE status within 24 hours from discovery of inoperable required feature(s) or declare the redundant required feature(s) powered from the inoperable A.C. source as inoperable.

Delete 1

**Minimum indicated level with a fuel oil specific gravity of 0.83 and the level instrumentation calibrated to a reference specific gravity of 0.876.

Delete 1

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and
- b. Two separate and independent diesel generators, each with:
 1. A separate day tank containing a minimum of 1457 gallons of fuel,
 2. A separate main fuel oil storage tank containing a minimum of 100,000 gallons of fuel, and
 3. A separate fuel oil transfer pump.
- c. Automatic Load Sequencers for Train A and Train B.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With one offsite circuit of 3.8.1.1.a inoperable:
 1. Perform Surveillance Requirement 4.8.1.1.1.a within 1 hour and once per 8 hours thereafter; and
 2. Restore the offsite circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; and
 3. Verify required feature(s) powered from the OPERABLE offsite A.C. source are OPERABLE. If required feature(s) powered from the OPERABLE offsite circuit are discovered to be inoperable at any time while in this condition, restore the required feature(s) to OPERABLE status within 24 hours from discovery of inoperable required feature(s) or declare the redundant required feature(s) powered from the inoperable A.C. source as inoperable.

ELECTRICAL POWER SYSTEMS

A.C. SOURCES

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. One circuit between the offsite transmission network and the onsite Class 1E distribution system, and
- b. One diesel generator with:
 1. Day tank containing a minimum volume of 1457 gallons of fuel, which is equivalent to a minimum indicated level of 40% .
 2. A separate main fuel oil storage tank containing a minimum volume of 100,000 gallons of fuel, and
 3. A fuel oil transfer pump.

Delete

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above minimum required A.C. electrical power sources OPERABLE, immediately suspend all operations involving CORE ALTERATIONS, positive reactivity changes, movement of irradiated fuel, or crane operation with loads over irradiated fuel and within 8 hours, depressurize and vent the Reactor Coolant System through a vent of greater than or equal to 2.9 square inches. In addition, when in MODE 5 with the reactor coolant loops not filled, or in MODE 6 with the water level less than 23 feet above the reactor vessel flange, immediately initiate corrective action to restore the required sources to OPERABLE status as soon as possible.

SURVEILLANCE REQUIREMENTS

4.8.1.2 The above required A.C. electrical power sources shall be demonstrated OPERABLE by the performance of each of the requirements of Specifications 4.8.1.1.1 and 4.8.1.1.2.

Delete

**Minimum indicated level with a fuel oil specific gravity of 0.83 and the level instrumentation calibrated to a reference specific gravity of 0.876.

ELECTRICAL POWER SYSTEMS

A.C. SOURCES

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. One circuit between the offsite transmission network and the onsite Class 1E distribution system, and
- b. One diesel generator with:
 1. Day tank containing a minimum volume of 1457 gallons of fuel,
 2. A separate main fuel oil storage tank containing a minimum volume of 100,000 gallons of fuel, and
 3. A fuel oil transfer pump.

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above minimum required A.C. electrical power sources OPERABLE, immediately suspend all operations involving CORE ALTERATIONS, positive reactivity changes, movement of irradiated fuel, or crane operation with loads over irradiated fuel and within 8 hours, depressurize and vent the Reactor Coolant System through a vent of greater than or equal to 2.9 square inches. In addition, when in MODE 5 with the reactor coolant loops not filled, or in MODE 6 with the water level less than 23 feet above the reactor vessel flange, immediately initiate corrective action to restore the required sources to OPERABLE status as soon as possible.

SURVEILLANCE REQUIREMENTS

4.8.1.2 The above required A.C. electrical power sources shall be demonstrated OPERABLE by the performance of each of the requirements of Specifications 4.8.1.1.1 and 4.8.1.1.2.