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SUBJECT: Application for amend to license NPF-63,revising TS 3/4.3.2, "ESFAS Instrumentation," to allow two hour surveillance interval to facilitate testing of 6.9 kV emergency bus undervoltage relays.

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CP&L

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

William R. Robinson
Vice President
Harris Nuclear Plant

SERIAL: HNP-98-061
10CFR50.90

APR 24 1998

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 EXIGENT LICENSE AMENDMENT
TECHNICAL SPECIFICATIONS 3/4.3.2

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 TS 3/4.3.2, "Engineered Safety Features Actuation System Instrumentation" to allow a 2 hour surveillance interval to facilitate testing of the 6.9 kV Emergency Bus Undervoltage relays. The proposed change is necessary to prevent a potential shutdown per the requirements of TS 3.0.3.

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 the 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.

10 CFR 50.91(a)(6)(vi) requires that a licensee explain the nature of the exigency and why the exigency could not have not have been avoided. To adequately perform a TS required surveillance test, the Harris Nuclear Plant must enter TS 3.0.3 which could lead to an unnecessary plant shutdown. The surveillance interval for this test is at least once per 31 days. There is insufficient time between test performance to process a license amendment through normal means. Therefore, CP&L requests the NRC review and approve the proposed change as an exigent submittal.

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Please refer any questions regarding this submittal to Mr. J. H. Eads at (919) 362-2646.

Sincerely,

W. R. Robinson

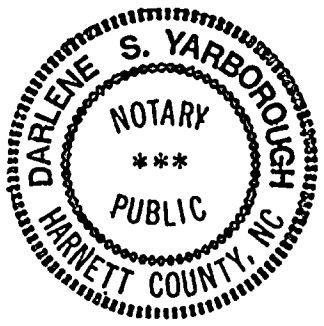
MSE/mse

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

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

Darlene S. Yarborough

Notary (Seal)
My commission expires:
2-6-2000



c: Mr. J. B. Brady, NRC Sr. Resident Inspector
Mr. Mel Fry, Acting Director, N.C. DEHNR
Mr. S. C. Flanders, NRC Project Manager
Mr. L. A. Reyes, NRC Regional Administrator

ENCLOSURE 1 TO SERIAL: HNP-98-061

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR EXIGENT LICENSE AMENDMENT
TECHNICAL SPECIFICATIONS 3/4.3.2

BASIS FOR CHANGE REQUEST

Background

The Harris Nuclear Plant (HNP) 6.9kV electrical emergency buses, 1A-SA and 1B-SB, are equipped with three primary and three secondary undervoltage relays to monitor the voltage condition of these buses. Loss of voltage on either bus, sensed by these undervoltage relays, causes shedding of all loads on the applicable bus, automatic starting of the associated emergency diesel generator (EDG), and automatic starting of the Turbine-Driven Auxiliary Feedwater Pump (TDAFWP). When the EDG has attained rated speed and voltage, the EDG circuit breaker to the 6.9 kV emergency bus is closed and the safety-related loads are connected to the bus automatically by the emergency load sequencer.

Undervoltage of a safety bus could be indicative of a loss-of-offsite power. A loss-of-offsite power will be accompanied by a loss of reactor coolant pumping power and the subsequent need for some method of decay heat removal. Loss of power to either emergency bus will start the TDAFWP to ensure that at least one SG contains enough water to serve as the heat sink for reactor decay heat and sensible heat removal following the reactor trip.

HNP Technical Specifications (TS) require primary and secondary undervoltage relays to be operable per Table 3.3-3 Item 6.e. (Loss-of-Offsite Power Start Motor-Driven Pumps and Turbine-Driven Pump) and Item 9.a. and 9.b (Loss-of-Offsite Power, Undervoltage-Primary and Undervoltage-Secondary). Table 3.3-3 Item 6.e. references Item 9 for initiating functions and requirements. Additionally, Table 4.3-2 Item 6.e. references Table 4.3-2 Item 9. for surveillance requirements associated with Loss-of-Offsite Power (LOSP) requirements. The surveillance requirement for LOSP Trip Actuating Device Operational Test (TADOT) is in TS Table 4.3-2 Item 9.a. and 9.b. The current HNP TS surveillance interval for LOSP TADOT is once per 31 days (M).

On January 10, 1996, the NRC issued Generic Letter (GL) 96-01. The NRC requested licensees to review Engineering Safety Features circuitry, Reactor Protection circuitry, and EDG actuation and load shedding circuitry to verify all portions of the circuitry were being tested. In response to GL 96-01, HNP identified in LER 96-002 that surveillance testing had not been performed to verify proper operation of the 6.9 kV emergency bus degraded grid voltage relays (secondary undervoltage relays) during monthly TADOT testing. HNP revised the surveillance test procedure to adequately test the secondary undervoltage relays. However, to properly test the secondary undervoltage relays, the primary undervoltage relays are rendered inoperable.

HNP wrote a TS Interpretation that determined the intent of the TS could be met by declaring the associated emergency bus inoperable if the corresponding primary and secondary undervoltage relays were inoperable. This is similar to NUREG 1431, Revision 1 TS 3.3.5 which requires declaring the associated EDG inoperable if the Action and associated Completion times are not met for LOSP EDG start instrumentation. Upon futher review, HNP has determined that this interpretation is not in literal compliance with TS.

There is no TS Action for 3 channels of primary undervoltage relays being inoperable. Therefore, a TS 3.0.3 entry is required in order to perform the TS surveillance requirement. GL 87-09 and NUREG-1431, Revision 1 state in TS LCO Bases for TS 3.0.3 that "It is not intended to be used as an operational convenience that permits (routine) voluntary removal of redundant systems or components from service in lieu of other alternatives that would not result in redundant systems or components being inoperable". The proposed change will permit performance of the associated surveillance requirement without entry into TS 3.0.3.

Proposed Change

Harris Nuclear Plant (HNP) proposes revising TS 3/4.3.2, "Engineered Safety Features Actuation System Instrumentation" to allow a 2 hour surveillance interval to facilitate testing of the 6.9 kV Emergency Bus Undervoltage relays. Specifically, HNP proposes modifying Technical Specification Table 3.3.3 Items 9.a. and 9.b. to change the Action from 15 to 15a. In addition, TS Table 3.3-3 is revised to add Action 15a to allow removal of 6.9 kV Emergency Bus Undervoltage relays for 2 hours for surveillance testing provided the redundant train Emergency 6.9kV Bus and associated undervoltage primary and secondary relays are operable.

Basis

In order to perform required surveillance testing without entering into Technical Specification (TS) 3.0.3, HNP proposes revising TS 3/4.3.2, "Engineered Safety Features Actuation System Instrumentation" to allow a 2 hour surveillance interval to facilitate testing of the 6.9 kV Emergency Bus Undervoltage relays. During the 2 hours that surveillance testing is being performed on the Emergency Bus Undervoltage relays, the redundant train emergency bus will be available to perform necessary safety functions. Additionally, the redundant emergency bus undervoltage relays will be operable to detect a loss-of-offsite power and automatically start the redundant Emergency Diesel Generator (EDG), redundant Motor-Driven Auxiliary Feedwater Pump (MDAFWP), and the Turbine-Driven Auxiliary Feedwater Pump (TDAFWP) if required. As an additional compensatory feature, the secondary or degraded voltage relays will be available to provide automatic loss-of-offsite power protection on the associated bus during testing. Manual initiation of the associated Emergency Diesel Generator (EDG), Motor-Driven Auxiliary Feedwater Pump (MDAFWP), and the Turbine-Driven Auxiliary Feedwater Pump (TDAFWP) will also be available to the operators in the Main Control Room.

The TDAFWP can be started on an undervoltage signal from either emergency bus. Although the automatic start from an undervoltage condition will be degraded while testing one of the emergency buses, the redundant bus that is not being tested will be able to sense a loss-of-offsite power condition and consequently automatically start the TDAFWP. The emergency bus that is being tested can also automatically start the TDAFWP. This is due to a testing feature that will automatically enable the secondary undervoltage relays should a loss-of-offsite condition occur. The secondary relays are redundant to the primary relays in that they perform the same functions. However, the secondary relays are not instantaneous. The secondary relays actuate when bus voltage is degraded for designated period of time that depends on whether or not Safety Injection has been actuated.

The design for the HNP loss-of-offsite power circuitry is different compared to the Standard Westinghouse Technical Specifications. The relays that start the EDGs on loss-of-offsite power are the same relays that start the TDAFWP on loss-of-offsite power. NUREG 1431, Revision 1 (Standard Westinghouse Technical Specifications) has a separate Limiting Condition for Operation (LCO) requirement for the EDG start on loss-of-offsite power that is different from the LCO requirement for TDAFWP loss-of-offsite power start. Therefore, HNP is unable to adopt the

Standard Westinghouse Technical Specification for this circuitry. Additionally, the HNP undervoltage relay testing design is unique to the nuclear industry in that the primary and secondary relays cannot be tested separately. Therefore, HNP requires a plant unique provision in the applicable LCO that allows removal of loss-of-offsite power undervoltage relays for testing to ensure each set of undervoltage relays have been adequately tested. The HNP Primary and Secondary Loss-of-Offsite Power undervoltage relays have demonstrated high reliability based on successful completion of previous TADOT testing.

Conclusion:

HNP concludes the proposed change is acceptable based on the following:

1. Sufficient redundancy will be provided during TADOT testing on Primary and Secondary Loss-of-Offsite Power undervoltage relays. During TADOT testing of Primary and Secondary Loss-of-Offsite Power undervoltage relays, the redundant emergency bus, that is unaffected by testing, and the associated redundant Primary and Secondary Loss-of-Offsite Power undervoltage relays will be operable. Should a Loss-of-Offsite Power condition occur, the redundant emergency bus will automatically sense the undervoltage condition and start the redundant EDG and start the TDAFWP. Additionally, the Secondary or Degraded undervoltage relays will be available to provide loss-of-offsite power protection on the affected emergency bus. The EDG and the TDAFWP have manual start capability in the Main Control Room as a backup to the available automatic features.

2. HNP Primary and Secondary Loss-of-Offsite Power undervoltage relays have demonstrated high reliability based on successful completion of previous TADOT testing.

3. HNP Primary and Secondary Loss-of-Offsite Power undervoltage relays share the EDG start and the TDAFWP start functions. This design is unique compared to other Westinghouse plants. Additionally, HNP does not have the design capability to separately perform TADOT testing of Primary and Secondary Loss-of-Offsite Power undervoltage relays.

4. The interval that Primary and Secondary Loss-of-Offsite Power undervoltage relays are unavailable due to testing is limited to 2 hours.

HNP TS require performance of TADOT testing on primary and secondary undervoltage circuitry for 6.9kV emergency buses. Currently there is no provision with the HNP design to adequately perform this testing without entry into TS 3.0.3. Therefore, it is concluded that a 2 hour surveillance interval for Primary and Secondary Loss-of-Offsite Power undervoltage relays is necessary and acceptable.

ENCLOSURE 2 TO SERIAL: HNP-98-061

SHEARON HARRIS NUCLEAR POWER PLANT
NRC DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR EXIGENT LICENSE AMENDMENT
TECHNICAL SPECIFICATION TS 3/4.3.2

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

Harris Nuclear Plant (HNP) proposes revising TS 3/4.3.2, "Engineered Safety Features Actuation System Instrumentation" to allow a 2 hour surveillance interval to facilitate testing of the 6.9 kV Emergency Bus Undervoltage relays. Specifically, HNP proposes modifying Technical Specification Table 3.3.3 Items 9.a. and 9.b. to change the Action from 15 to 15a. In addition, TS Table 3.3-3 is revised to add Action 15a to allow removal of 6.9 kV Emergency Bus Undervoltage relays for 2 hours for surveillance testing provided the redundant train Emergency 6.9kV Bus and associated undervoltage primary and secondary relays are operable.

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.

   Loss-of-Offsite Power Emergency Bus undervoltage relays are not accident initiating components as described in the Final Safety Analysis Report. The proposed change allows a surveillance test interval to facilitate required testing per the Harris Nuclear Plant Technical Specifications (TS). Redundancy of emergency buses, availability of alternate automatic loss-of-offsite power protection, and the capability of manual initiation of affected components combined with the short duration allowed for testing, compensate for the new allowed surveillance interval.

   Therefore, the proposed change 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.

Loss-of-Offsite Power Emergency Bus undervoltage relays are not accident initiating components as described in the Final Safety Analysis Report (FSAR). The proposed change only affects testing of the Loss- of- Offsite Power Emergency Bus undervoltage relays while not affecting other structures, systems, or components.

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 change to testing of Loss-of-Offsite Power Emergency Bus undervoltage relays does not 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 affected by this change.

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

ENCLOSURE 3 TO SERIAL: HNP-98-061

SHEARON HARRIS NUCLEAR POWER PLANT
NRC DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR EXIGENT LICENSE AMENDMENT
TECHNICAL SPECIFICATION TS 3/4.3.2

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

Harris Nuclear Plant (HNP) proposes revising TS 3/4.3.2, "Engineered Safety Features Actuation System Instrumentation" to allow a 2 hour surveillance interval to facilitate testing of the 6.9 kV Emergency Bus Undervoltage relays. Specifically, HNP proposes modifying Technical Specification Table 3.3.3 Items 9.a. and 9.b. to change the Action from 15 to 15a. In addition, TS Table 3.3-3 is revised to add Action 15a to allow removal of 6.9 kV Emergency Bus Undervoltage relays for 2 hours for surveillance testing provided the redundant train Emergency 6.9kV Bus and associated undervoltage primary and secondary relays are operable.

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 increase the quantities of existing effluents. As such, the change cannot 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 surveillance which would require additional personnel entry into radiation controlled areas. Therefore, the amendment has no affect on either individual or cumulative occupational radiation exposure.

ENCLOSURE 4 TO SERIAL: HNP-98-061

SHEARON HARRIS NUCLEAR POWER PLANT
NRC DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR EXIGENT LICENSE AMENDMENT
TECHNICAL SPECIFICATION TS 3/4.3.2

PAGE CHANGE INSTRUCTIONS

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