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U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Document Control Desk

Subject: Duke Energy Carolinas, LLC
Oconee Nuclear Station
Docket Numbers 50-269, 270, and 287
Technical Specification Bases (TSB) Change

On July 1, 2009 Station Management approved revisions to TSB 3.3.17, Emergency Power Switching Logic Automatic Transfer Function to add/revise Emergency Core Coding Systems timing requirements for valve stroke times and pump rated speed times.

Attachment 1 contains the new TSB pages, Attachment 2 contains the marked up version of the TSB pages.

If any additional information is needed, please contact Reene Gambrell at 864-873-3364.

Sincerely,

Dave Baxter
Oconee Nuclear Site

A001
NRR

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Attachment 1

B 3.3 INSTRUMENTATION

B 3.3.17 Emergency Power Switching Logic (EPSL) Automatic Transfer Function

BASES

BACKGROUND

The transfer circuits of the EPSL are designed with sufficient redundancy to assure that power is supplied to the unit Main Feeder Buses (MFBs) and, hence, to the unit's essential loads, under accident conditions. The logic system monitors the normal and emergency power sources and, upon loss of the normal power source (the unit auxiliary transformer), the logic seeks an available alternate source of power.

The Load Shed and Transfer to Standby Circuits are designed to energize the MFBs from the Standby Buses powered from either Keowee or Lee when voltage is lost or is insufficient from the Normal and Startup sources. The Load Shed signal is generated to separate nonessential loads from the MFBs to ensure the CT-4 or CT-5 transformers supplying the Standby Buses are not overloaded. The Load Shed timers and Transfer to Standby timers are set such that, if no power is available from the startup source for approximately 11 seconds, the startup source breakers are prohibited from closing and the standby bus to MFB breakers receive a permissive to close.

The Retransfer to Startup logic provides the emergency power switching logic the capability to retransfer essential loads from the Standby Bus to the startup source, if available, should power to both standby buses be lost for more than 5 seconds.

The EPSL automatic transfer function is designed to perform their function assuming a single failure. There are two automatic transfer channels, with one channel consisting of Channel A of the Load Shed and Transfer to Standby function and Channel A of the Retransfer to Startup function and the other consisting of Channel B of both of these functions.

APPLICABLE SAFETY ANALYSES

The EPSL Automatic Transfer function is required for the engineered safeguards (ES) equipment to function in any accident with a loss of offsite power.

The limiting accident for the EPSL transfer functions is a LOCA with a simultaneous loss of offsite power (Ref. 1).The loss of offsite power is considered to occur coincident with ES actuation. In this scenario, the

BASES

APPLICABLE SAFETY ANALYSES (continued)

Load Shed and Transfer to Standby function reenergizes the affected unit's MFBs from the standby buses which are powered from Keowee or Lee.

The analyses assume that the maximum time the MFBs will be deenergized is 33 seconds. This time is derived from the following:

1. The 74 second time requirement for full LPI injection minus the 36 second ECCS valve stroke time requirement and 5 seconds for the pump to get to rated speed.
2. The 48 second time requirement for full HPI injection minus the 15 second valve stroke time requirement for the pump to get to rated speed.

EPSL automatic transfer functions are part of the primary success path and function to mitigate an accident or transient that presents a challenge to the integrity of a fission product barrier. The EPSL automatic transfer function satisfies Criterion 3 of 10 CFR 50.36 (Ref. 2).

LCO

Two channels of the Automatic Transfer Function, with one channel consisting of Channel A of the Load Shed and Transfer to Standby function and Channel A of the Retransfer to Startup function and the other consisting of Channel B of both of these functions, are required to be OPERABLE. Failure of one channel reduces the reliability of the affected Functions.

The requirement for two channels to be OPERABLE ensures that one channel of the function will remain OPERABLE if a single failure has occurred. The remaining channel can perform the safety function.

APPLICABILITY

The automatic transfer function of EPSL is required to be OPERABLE in MODES 1, 2, 3, and 4 to ensure that power is provided from AC Sources to the AC Distribution system within the time assumed in the accident analyses.

The EPSL automatic transfer function is not required to be OPERABLE in MODES 5 and 6 since more time is available for the operator to respond to a loss of power event.

ACTIONS

A.1

If one channel is inoperable, it must be restored to OPERABLE status within 24 hours. With one channel inoperable, the remaining channel is

BASES

ACTIONS

A.1 (continued)

capable of providing necessary transfer functions to ensure power is provided to the MFBs. The 24 hour Completion Time is considered appropriate based on engineering judgement, taking into consideration the time required to complete the required action.

Required Action A.1 is modified by a Note which indicates that the Completion Time is reduced when in Condition L of LCO 3.8.1. Condition L limits the Completion Time for restoring an inoperable channel to 4 hours when emergency power source(s) or offsite power source(s) are inoperable for extended time periods or for specific reasons.

B.1 and B.2

With the Required Action and associated Completion Time not met, the unit must be brought to a MODE in which the LCO does not apply. To achieve this status, the unit must be brought to at least MODE 3 in 12 hours and to MODE 5 within 84 hours. The allowed Completion Times are reasonable, based on operating experience, to allow for a controlled shutdown.

SURVEILLANCE REQUIREMENTS

SR 3.3.17.1

This SR requires the performance of a CHANNEL FUNCTIONAL TEST of the EPSL automatic transfer function. The ES inputs to the Load Shed and Transfer to Standby function and the Retransfer to Startup function are verified to operate properly during an automatic transfer of the Main Feeder Buses to the Startup Transformer, Standby Buses, and retransfer to the Startup Transformers. The Frequency of 18 months is based on engineering judgment and operating experience that determined testing on an 18 month interval provides reasonable assurance that the circuitry is available to perform its safety function.

REFERENCES

1. UFSAR, Chapters 6 and 15.
2. 10 CFR 50.36.

Attachment 2

Attachment #2

Markup of current TSB

BASES

APPLICABLE SAFETY ANALYSES (continued)

Load Shed and Transfer to Standby function reenergizes the affected unit's MFBs from the standby buses which are powered from Keowee or Lee.

The analyses assume that the maximum time the MFBs will be deenergized is 33 seconds. This time is derived from the 53 second time requirement for full LPI injection minus the 15 second ECCS valve stroke time requirement and 5 seconds for the pump to get to rated speed.

2. The 48 second time requirement for full HPI injection minus the 15 second valve stroke time requirement for the pumps to get to rated speed.

EPSL automatic transfer functions are part of the primary success path and function to mitigate an accident or transient that presents a challenge to the integrity of a fission product barrier. The EPSL automatic transfer function satisfies Criterion 3 of 10 CFR 50.36 (Ref. 2).

LCO

Two channels of the Automatic Transfer Function, with one channel consisting of Channel A of the Load Shed and Transfer to Standby function and Channel A of the Retransfer to Startup function and the other consisting of Channel B of both of these functions, are required to be OPERABLE. Failure of one channel reduces the reliability of the affected Functions.

The requirement for two channels to be OPERABLE ensures that one channel of the function will remain OPERABLE if a single failure has occurred. The remaining channel can perform the safety function.

APPLICABILITY

The automatic transfer function of EPSL is required to be OPERABLE in MODES 1, 2, 3, and 4 to ensure that power is provided from AC Sources to the AC Distribution system within the time assumed in the accident analyses.

The EPSL automatic transfer function is not required to be OPERABLE in MODES 5 and 6 since more time is available for the operator to respond to a loss of power event.

ACTIONS

A.1

If one channel is inoperable, it must be restored to OPERABLE status within 24 hours. With one channel inoperable, the remaining channel is capable of providing necessary transfer functions to ensure power is provided to the MFBs. The 24 hour Completion Time is considered appropriate based on engineering judgement, taking into consideration the time required to complete the required action.