ENCLOSURE 3

Proposed Change Technical Specification Pages

TABLE 3.5-3 (Continued)

INSTRUMENTATION OPERATING CONDITIONS FOR ENGINEERED SAFETY FEATURES

NO.	FUNCTIONAL UNIT	1 MINIMUM CHANNELS OPERABLE	2 MINIMUM DEGREE OF REDUNDANCY	3 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 2 CANNOT BE MET
2.	CONTAINMENT SPRAY			
	a. Manual*	2	0**	Cold Shutdown
	b. High Containment Pressure* (Hi-Hi Level)	2/set	1/set	Cold Shutdown
3.	LOSS OF POWER			
	a. 480V Emerg. Bus Undervoltage (Loss of Voltage)	2/bus(a)	1/bus(b)	Main Hot Shutdown(d)
	b. 480V Emerg. Bus Undervoltage (Degraded Voltage)	2/bus	1/bus	Maintain Hot Shutdown(c)

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* Also initiates a Phase B containment isolation.
** Must actuate two switches simultaneously.
*** When primary pressure is less than 2000 psig, channels may be blocked.
**** When primary temperature is less than 547°F, channels may be blocked.
***** In this case the 2/3 high steam flow is already in the trip mode.
(a) During testing and maintenance of one channel, may be reduced to 1/bus.
(b) During testing and maintenance of one channel, may be reduced to 0/bus.
(c) The reactor may remain critical below the power operating conditions with this feature inhibited for the purpose of starting reactor coolant pumps.
(d) A one-time-only exception is granted that allows power operation to continue with the actuation circuitry of this Specification inoperable due solely to the inability of the surveillance procedure for TS Table 4.1-1, Item 32a and TS 4.6.1.2 to adequately assess operability of the affected circuits. The duration of this exception is limited to the first outage of sufficient length which allows performance of a surveillance test which adequately tests the affected circuits but not later than Refueling Outage 14.

ENCLOSURE 4

Basis for Waiver of Compliance Request

(1) A discussion of the requirements for which a waiver is requested.

The waiver of compliance is requested for Technical Specification Table 3.5-3, item 3a which requires a minimum of 2 channels operable for the 480V Emergency Bus Undervoltage (Loss of Voltage) instrumentation.

(2) A discussion of circumstances surrounding the situation including the need for prompt action, and a description of why the situation could not have been avoided.

The basis for the need for the waiver is identical to the need for the emergency Technical Specification as discussed in the cover letter.

(3) A discussion of compensatory actions (if any).

During the time that the waiver is in effect, the following compensatory action is being taken. A Manager-Operations Directive has been written to shift supervisors in the control room which provides a summary of this issue and guidance for each operating crew including requiring them to review existing procedures that would be used in the event of failure of this circuitry. The Directive also identifies caution tags that have been placed on the RTGB, 480V Buses E-1 and E-2 and the EDG Control Panel alerting operators to this issue.

(4) A preliminary evaluation of the safety significance and potential consequences of the proposed request.

A discussion of the safety significance of the waiver is identical to that contained in the Enclosure 1, Supporting Analysis/Safety Analysis for the amendment request.

(5) A discussion which justifies the duration of the request.

The waiver is requested for a duration to allow the NRC to process an emergency amendment.

(6) The basis for the licensee's conclusion that the request does not involve a significant hazards consideration.

See Enclosure 2.

(7) The basis for the licensee's conclusion that the request does not involve irreversible environmental consequences.

Carolina Power & Light Company has reviewed this request and concluded that it does not involve irreversible environmental consequences. This request meets the criteria of 10CFR51.22 (c)(9) for a categorical exclusion from the requirement for an environmental assessment. As discussed above, this request involves no significant hazards consideration. There is no significant change in the types or significant increase in the amounts of any effluent that may be released offsite, and there is no significant increase in individual or cumulative occupational radiation exposure.

Response to NRC request for additional information during September 17, 1991, telephone conversation.

Item 1.: Provide a detailed description of the problem on a channel basis.

The problem is twofold. The first problem results in the inability of the current test method to differentiate between which channel(s) actually initiates the stripping function. Each Emergency Bus has two channels which are redundant for the stripping function. The output contacts for each channel are combined in a parallel configuration in the breaker trip logic. Since the test acceptance criteria was to observe the opening of a breaker, there was no way to determine which particular channel initiated the shed. This could result in a failed slave relay in one channel going undetected. Analysis of our test results limit this to two pairs of redundant relays. We do know that at least one of the relays in each pair was energized. These relays initiate tripping for the following breakers:

Bus E1		Bus E2	
(Relays 271X2/E1 & 272X2/E1)		(Relays 271X2/E2 & 272X2/E2)	
SST-2A to 480V Bus #1	*	SST-2C to 480V Bus #3	*
480V Bus #1 Main	*	480V Bus #3 Main	*
Bus E1 Normal Supply Breaker		Charging Pump "C"	
CV Spray Pump "A"		SI Pump "C"	
HVH-1		SW Pump "C"	*
HVH-2	*	HVH 4	*
(Relays 272X3/E1 & 272X3/E1)		(Relays 272X3/E2 & 272X3/E2)	
AFW Pump "A"		AFW Pump "B"	
SW Pump "A"	*	HVH-3	*
SW Pump "B"		SW Pump "D"	
Charging Pump "B"		CV Spray Pump "B"	
SI Pump "A"		RHR Pump "B"	
RHR Pump "A"			

(* These breakers are verified to shed. In addition; HVH-1, SW Pump "B", and SW Pump "D" were verified to shed in earlier refuelings.)

Each channel also contains three sets of redundant contacts used in the Safeguards Sequencer Logic to sense voltage on the Emergency Bus. The first set senses voltage on the Emergency Bus to provide a permissive for Safety Injection load sequencing. The second set senses a loss of voltage on the Emergency Bus to provide a permissive for the Blackout load sequencing. The third set senses a loss of voltage on the Emergency Bus to provide an inhibit of the Emergency Diesel Generator Output Breaker closing to allow time for load shedding. These functions were verified.

Only one channel contains a start contact for the Diesel Generator associated with its bus. This function was successfully tested.

The second problem results from not all loads being powered from the Emergency Busses when the stripping function was initiated. Since the testing method for verifying the stripping function was to observe the breaker change state, those breakers which were open at the beginning of the test were not validated to shed. The following breakers were not verified to shed:

Bus E1		Bus E2	
Bus E1 Normal Supply		Charging Pump "C"	
CV Spray Pump "A"		SI Pump "C"	
HVH-1	*	AFW Pump "B"	
AFW Pump "A"		SW Pump "D"	*
SW Pump "B"	*	CV Spray Pump "B"	
Charging Pump "B"		RHR Pump "B"	
SI Pump "A"		CCW Pump "C"	
RHR Pump "A"		Bus E2 Normal Supply	
Bus E1 to SI Pump "B"		Bus E2 to SI Pump "B"	
CCW Pump "B"		SI Pump "B"	

(* These loads have been verified to shed during earlier refuelings)

Item 2.: Provide a description of each function which is not redundant within the channels.

Two functions are not redundant between channels. The first is the "Loss of Voltage" start for the Emergency Diesel Generators. This function was verified. The second function is the blocking of the normal automatic closing features for both the AFW Pump and the CCW Pump breakers should an undervoltage condition exist on the Emergency Bus. This second function also blocks the normal automatic starting of the Charging Pump if a "Safety Injection" signal and a "Loss of Voltage" signal are present. The undervoltage slave relay which initiates this function was verified to have actuated.

Item 3.: Why was the load shedding function not completely tested?

The surveillance Technical Specification for load shedding is not clearly written. The phrase, "particular vital equipment," has been interpreted to mean equipment which was in service at the time of the test. Thus the load shed function was assumed to have been verified even though every individual load had not been verified. Each Undervoltage Relay is calibrated by removing the relays and bench calibrating. This was assumed to fulfill the calibration requirement even though the remainder of the channel logic was not verified. The discovery of this fact is the initiator of this problem.

Item 4.: What is the planned resolution?

We will prepare tests which validate the full functionality of the "Loss of Voltage" channels. This will include testing of the shedding features.

During the time the waiver is in effect, the actions to be taken are described in Enclosure 4, Item 3.

Item 5.: Describe the "Start Circuitry" for the Diesel Generators.

Each Diesel Generator starts upon a manual start, or a Safety Injection Signal, or a "Loss of Voltage" signal from its respective Emergency Bus. As noted above under Item 2, the "Loss of Voltage" start signal is derived from only one channel of the "Loss of Voltage" logic. All the functions associated with the automatic starting of the Emergency Diesel Generators were successfully tested. The following functions associated with the Emergency Diesel Generator were verified:

1) Safety Injection initiated start,
2) Undervoltage on the Emergency Bus start, and
3) Combination of Safety Injection and Undervoltage start.