



Carolina Power & Light Company

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Vice President
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SERIAL: NLS-90-026

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

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 & 50-324/LICENSE NOS. DPR-71 & DPR-62
TECHNICAL SPECIFICATION INTERPRETATION EVALUATION

Gentlemen:

On January 23, 1990, a conference call was held between members of the NRC and Carolina Power & Light Company. During this call, the NRC requested that CP&L submit a letter which (1) identifies those Technical Specification Interpretations (TSIs) which result from the inability to perform a Technical Specification requirement due to the physical configuration of the plant, (2) provides an analysis of the safety significance of each TSI identified, (3) establishes a schedule for submitting the associated license amendment requests or additional information and (4) requests a waiver of compliance for these TSIs until the license amendment process can be completed. The safety analyses are included in Enclosure 1.

Carolina Power & Light Company has reviewed the TSIs currently in effect at the Brunswick Plant and determined that five TSIs result from the inability to perform a Technical Specification requirement due to the physical configuration of the plant. Enclosure 1 contains analyses for each of these five TSIs which demonstrate that operation in accordance with the TSIs does not create a safety concern. These analyses also include schedules for CP&L submittals necessary to resolve the TSIs.

Carolina Power & Light Company requests a waiver of compliance for the Technical Specifications associated with the TSIs discussed in Enclosure 1. This waiver will be in effect until such time as license amendments for the TSIs can be issued.

Please refer any questions regarding this submittal to Mr. M. R. Oates at (919) 546-6063.

Yours very truly,

A. B. Cutter

ABC/MAT

Enclosure

cc: Mr. S. D. Ebner
Mr. W. H. Ruland
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ENCLOSURE 1 to NLS-90-026

TECHNCIAL SPECIFICATION INTERPRETATION EVALUATIONS

TECHNICAL SPECIFICATION INTERPRETATION 84-19 (UNIT 2 ONLY)

Affected Technical Specification: Table 3.3.1-1, Item 10

Analysis of Safety Significance

Technical Specification 3.3.1, Table 3.3.1-1, Item 10, requires four (4) OPERABLE channels per trip system, however, the design at Brunswick has only two (2) channels per trip system. This Technical Specification Interpretation allows the plant to operate within its design (2 channels per trip system) until the Technical Specifications can be amended.

This interpretation has been reviewed and it has been determined that operation in accordance with the TSI does not involve a significant safety concern. This change is purely an administrative change to the technical specifications to correct a previously inserted error. When Brunswick Unit 2 was initially licensed to operate with Custom Technical Specifications, the requirement for the minimum number of channels for the Turbine Control Valve Fast Closure were two channels per trip system (Custom Technical Specification Table 3.1-1, Item 12). When Brunswick Unit 1 was licensed to Standard Technical Specifications and Unit 2 switched to Standard Technical Specifications, the requirement for both units for this function was again, two channels per trip system.

In the early 1980's, Brunswick began an upgrade of selected instrumentation to new Rosemount analog equipment. To support this upgrade, a request for a Technical Specification change was submitted to the Nuclear Regulatory Commission on January 26, 1983, to reflect the change in instrument tag numbers found in the Technical Specifications. In the development of the affected page for submittal, a "4" was incorrectly inserted instead of a "2" for this function. The change request affecting that page was for other instrumentation and was not intended to affect the Turbine Control Valve Fast Closure, as this equipment was not upgraded to the analog system. Neither the safety analysis nor the actual page (this item was not "barred" to indicate a change) identified the change as requested.

The submitted change request was issued by the NRC under amendment 97 for Unit 2. Again, neither the safety evaluation nor the actual page (again, not "barred") identified this as a requested change. Based on the actual design of Brunswick (two channels per trip system) and identified cause of the incorrect requirement reflected in the current Technical Specifications, this is considered administrative in nature and does not reflect a significant safety concern.

Schedule for CP&L Action

CP&L intends to submit a license amendment request correcting Technical Specification Table 3.3.1-1, Item 10 by March 30, 1990.

TECHNICAL SPECIFICATION INTERPRETATION 84-20

Affected Technical Specification: 4.1.4.2.b

Analysis of Safety Significance

Technical Specification 4.1.4.2.b requires demonstrating RSCS OPERABLE by attempting to select and move an out-of-sequence control rod in each of the other three rod groups as soon as RSCS is automatically initiated when reducing THERMAL POWER. RSCS is automatically initiated at approximately 22% power (required prior to 20% power); however, between 22% power and 50% rod density, RSCS has only two out-of-sequence rod groups by design. The third out-of-sequence rod group is initiated at 50% rod density. This interpretation provides the guidance that the surveillance requirements are met if the rod block function for the initial two of the out-of-sequence rod groups are verified when RSCS is initiated and the third out-of-sequence rod group rod block is verified as soon as 50% rod density is reached.

This interpretation has been reviewed and it has been determined that operation in accordance with the TSI does not involve a significant safety concern. This change is purely an administrative change to the technical specifications to correct an error introduced by the Brunswick Standard Technical Specifications which never accurately reflected the design of RSCS. Even though RSCS is automatically initiated prior to 20% power, the interpretation views the requirement to verify the group rod blocks to be applicable when the rod groups are automatically initiated. For two groups, this is when RSCS is initiated and for the remaining group, it is at 50% rod density. This interpretation does not in any way prevent RSCS from performing its intended function as designed.

In addition, the Brunswick Units 1 and 2 have converted from Group Notch Mode of startup control rod movement to the Banked Position Withdrawal Sequence mode for limiting the reactivity insertion associated with the postulated control rod drop accident so that this accident will not result in excessive fuel damage. This change allows the elimination of RSCS based on the NRC's Safety Evaluation Report of Amendment 17 to General Electric Topical Report NEDE 24011-P-A, "General Electric Standard Application for Reactor Fuel."

Schedule for CP&L Action

CP&L intends to submit a license amendment request to delete the RSCS by March 15, 1990.

TECHNICAL SPECIFICATION INTERPRETATION 85-10

Affected Technical Specification: Table 3.3.5.7-1, Item 5

Analysis of Safety Significance

Technical Specification 3.3.5.7, Table 3.3.5.7-1, Item 5, states that Zone 4 of the AOG Building must have as a minimum, one flame detector, six heat detectors, and six smoke detectors. This interpretation provides guidance to reflect the installed design of two flame detectors, five heat detectors, and zero smoke detectors.

This interpretation has been reviewed and it has been determined that operation in accordance with the TSJ does not involve a significant safety concern. This change reflects a design change made to the facility which is in compliance with applicable codes and standards for fire protection and detection. The safety evaluation for this design change clearly identified that the change did not constitute an unreviewed safety question and the Facility Safety Analysis Report was revised to reflect this design change.

When the design change was being initiated, it was recognized that a change to the technical specifications would be required. That change request was submitted to the NRC on September 7, 1982. While this change request was being reviewed by the NRC, subsequent change requests were submitted on December 13, 1982 and October 17, 1983, which affected other zones on Table 3.3.5.7-1. These later submittals incorrectly reflected the "old" numbers for Zone 4 of the AOG Building; therefore, when the amendments were issued to update this table [Amendments 66 (Unit 1) and 92 (Unit 2)], the pre-design change number of detectors was reflected for Zone 4.

Schedule for CP&L Action

CP&L intends to submit a license amendment request correcting Technical Specification Table 3.3.5.7-1, Item 5 by March 30, 1990.

TECHNICAL SPECIFICATION INTERPRETATION 85-12

Affected Technical Specification: Table 3.3.2-3, Item 3.a

Analysis of Safety Significance

Technical Specification 3.3.2, Table 3.3.2-3, Item 3.a provides a response time of less than or equal to 13 seconds for isolation of the Reactor Water Cleanup (RWCU) System; however, this specified response time does not take into consideration the 45 second time delay designed into this system. The interpretation states that the logic response time is in series with the 45 second time delay.

This interpretation has been reviewed and it has been determined that operation in accordance with the TSI does not involve a significant safety concern. This change is purely an administrative change to the technical specifications to correct an error introduced by the Brunswick Standard Technical Specifications which never accurately reflected the design of the RWCU isolation system.

The 45 second time delay has been a part of the system design since prior to the incorporation of the Standard Technical Specifications at Brunswick. The 45 second time delay prevents spurious isolation during system evolutions. When the values were being established for instrumentation isolation response times for the Standard Technical Specifications (response times were not part of the Custom Technical Specifications), the thought process established the initiation of the logic (time = zero) as the output from the time delay relay, i.e. input to the isolation logic. Thus, the need to include the 45 second time delay in the specification was not recognized.

The affect of the 45 second time delay in the RWCU isolation logic on the environment inside the reactor buildings is being reviewed against the high energy line break (HELB) analysis and preliminary indications are that it is bounded by the high pressure coolant injection (HPCI) line break. In addition, should there be a line break within the RWCU pump and heat exchanger rooms, the high temperature isolation function would initiate the system. Therefore, the inclusion of this time delay does not represent a significant safety concern.

Schedule for CP&L Action

This change has been reflected in a license amendment request concerning the Primary Containment Isolation System which is currently under review by the NRC. Additional information concerning the affect of the 45 second time delay on the environment inside the reactor building was requested by the NRC Project Manager. CP&L intends to submit the requested information, upon finalizing of the required analysis. This submittal will be made by February 16, 1990.

TECHNICAL SPECIFICATION INTERPRETATION 87-01

Affected Technical Specification: 3.8.1.1.a

Analysis of Safety Significance

Technical Specification 3.8.1.1.a requires two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system when either unit is in operation. This technical specification interpretation specifies that the requirement for two independent offsite power sources is met by the Unit Auxiliary Transformer and the Startup Auxiliary Transformer and their respective feeds to the Class 1E buses. One aspect of the offsite power source operability requirements not specifically discussed in TSI 87-01 is the implication in Technical Specification 3.8.1.1 that a shutdown unit must maintain two operable offsite power sources if the other unit is running. CP&L's interpretation is that the operability requirement for two offsite power sources is only applicable when the unit is operating in OPERATIONAL CONDITION 1, 2, or 3. A shutdown unit requires only one operable offsite power source independent of the OPERATIONAL CONDITION of the other unit.

This interpretation has been reviewed and it has been determined that operation in accordance with the TSI does not involve a significant safety concern. This change is purely an administrative change to the technical specifications to correct an error introduced during the shift to Standard Technical Specifications. The Standard Technical Specifications do not accurately reflect the design of the Brunswick electrical system.

Technical Specification 3.8.1.1 is the first specification under the section heading, 3/4.8 ELECTRICAL POWER SYSTEMS, subsection, 3/4.8.1 - A.C. SOURCES. The next subheading for this specification states the following: "OPERATION OF ONE OR BOTH UNITS." Specification 3.8.1.1 provides the LIMITING CONDITION FOR OPERATION for both the emergency diesel generators and the offsite power system. Due to Brunswick's unique design of shared emergency diesel generators between the two units, with either unit operating, all four emergency diesel generators are required to be OPERABLE to support operation. Thus the subheading "OPERATION OF ONE OR BOTH UNITS" is interpreted as only being applicable to the emergency diesel generators.

The subheading "OPERATION OF ONE OR BOTH UNITS" is not appropriate when dealing with the offsite power system. The design of the offsite power system is unit specific and therefore, is not relied on for operation of the other unit. As the two offsite power supplies for each unit are totally independent of the other unit, maintaining two independent offsite feeds to a shutdown unit while the other unit is operating is not appropriate. Licensing documentation and the FSAR both clearly state that the offsite power systems are not shared by the units. Based on this, the applicability of offsite power supplies operability requirements are interpreted to be as follows:

- a. If a unit is operating, two physically independent circuits between the offsite transmission network and the onsite Class 1E

distribution system must be OPERABLE for that unit. The ACTION statements for Technical Specification 3.8.1.1 must be taken as applicable if less than two are OPERABLE.

- b. If the unit is not operating, one circuit between the offsite transmission network and the onsite Class 1E distribution system must be OPERABLE for that unit. The ACTION statements for Technical Specification 3.8.1.2 must be taken as applicable. The specification is for ELECTRICAL POWER SYSTEMS/SHUTDOWN OF BOTH UNITS.

Schedule for CP&L Action

CP&L intends to submit a license amendment request clarifying Technical Specification 3.8.1.1 by April 27, 1990.