



Carolina Power & Light Company

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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  
CORE ALTERATIONS AND SHUTDOWN MARGIN

Gentlemen:

Following the reload of the Brunswick Steam Electric Plant, Unit 1 (BSEP-1) reactor vessel during its current refueling outage, post-refueling testing of the control rod drive (CRD) units in OPERATIONAL CONDITION 5 with the reactor vessel head removed was initiated to verify OPERABILITY of the CRDs. Concerns were raised by the NRC Resident Inspector Office as to whether the BSEP Technical Specifications allowed the testing which was in progress. The Brunswick Plant has been operating under the philosophy that the testing being performed did not constitute a CORE ALTERATION as defined by the BSEP Technical Specifications (TS); however, this philosophy was questioned by the Resident Inspector Office. This letter is provide you with the Company's position.

A plant position was developed in 1983 and approved by the Plant Nuclear Safety Committee which reflected this philosophy. A request to amend the TSs to more clearly reflect this interpretation was not developed at the time as it was concluded that a revision to the TSs was not needed (i.e., the definition appeared clear with the developed position). This position was based on the original BSEP TSs and the TSs issued to other operating units as follows:

The original BSEP-2 TSs contained a definition for "Alteration of the Reactor Core" which was the forerunner of the current Standard TSs. Contained within that definition is the following clarification: "Normal control rod movement with the control rod drive hydraulic system is not defined as a core alteration. Normal movement of incore instrumentation is not defined as a core alteration."

In 1977, both Unit 1 and Unit 2 began operation under the Standard TSs (Unit 2 converted to the Standards TS format during its first refueling outage). The definition of CORE ALTERATION as provided in the Standard TSs was worded differently from that in the previously used custom format TSs.

411 Fayetteville Street • P. O. Box 1551 • Raleigh, N. C. 27602

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However, as there was no indication that the intent was different, operation at the Brunswick Plant continued with the understanding that control rod movement was not considered a CORE ALTERATION.

Support that the intent was not changed is reflected in NRC approved NUREG-1141 (Fermi) and NUREG-1161 (Perry), and other NUREGs for various BWRs (plant specific Standard TSs). These Standard TSs either provide wording in the Definition section for CORE ALTERATION which mirror the wording contained within the original BSEP TSs or they provide allowed exceptions within the Refueling section of the TSs.

The Brunswick Plant conducted a survey of other utilities to determine their understanding of rod movement using the normal hydraulic system as a CORE ALTERATION. The initial input indicates that the Brunswick Plant interpretation is consistent with the industry practice (seven utilities have responded thus far).

No basis for the term CORE ALTERATION is provided in Standard TSs; however, bases are provided for the individual refueling specifications. The basis for Control Rod Position states ". . . all control rods be inserted during CORE ALTERATIONS (which implies that the two are not synonymous) ensures that fuel will not be loaded into a cell without a control rod and prevents two positive reactivity changes from occurring simultaneously." In addition, normal movement of control rods and SRMs/IRM to be considered a CORE ALTERATION, surveillances required by Standard TSs for one-rod-out interlock and SRM operability could not be performed due to the requirement to move these components.

Another concern expressed by the Resident Inspector Office was the methodology used at BSEP for shutdown margin verification as required in TSs 3.9.10.1 and 3.9.10.2. These specifications require that, "the SHUTDOWN MARGIN requirements of 3.1.1 are satisfied." The Resident Office has indicated that: (1) in order to meet this specification, the requirements of Specification 3.1.1 must be demonstrated and (2) an analysis method of determining SHUTDOWN MARGIN is not allowed by the BSEP TSs.

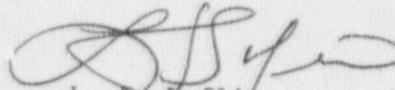
The Company's position is that throughout the BSEP TSs, where it has been determined that OPERABILITY of a component or system must be demonstrated, the specification clearly states that demonstration is required. Otherwise, verification, such as using up-to-date completed surveillances, etc., is acceptable to determine OPERABILITY. Prior to and during fuel loading or CORE ALTERATIONS at the Brunswick Plant, the requirements of Specification 3.1.1 are met by performing an analytical evaluation. Actual demonstration is performed using the in sequence critical method during the initial startup following the reload as required by Specification 4.1.1. As Specification 3.1.1 does not require demonstration of SHUTDOWN MARGIN, the Company's position is that the analytical method satisfies the requirement of Specifications 3.9.10.1 and 3.9.10.2.

Therefore, based on the available history and current NRR approved methodology with TSs for CORE ALTERATION and SHUTDOWN MARGIN, CP&L believes these positions define a consistent and safe operating methodology for the Brunswick Plant.

Carolina Power & Light Company intends to submit a TS change to provide clarity for the issues discussed and for other changes where improved wording has been approved for plants of similar design.

Please refer any questions regarding this submittal to Mr. Stephen D. Floyd at (919) 546-6904.

Yours very truly,



L. I. Loflin  
Manager

Nuclear Licensing Section

DBB/crs (325CRS)

cc: Mr. S. D. Ebnetter  
Mr. W. H. Ruland  
Mr. E. G. Tourigny