



Carolina Power & Light Company
P.O. Box 10429
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January 24, 1997

SERIAL: BSEP 97-0024
10 CFR 50.90
TSC 87TSB16

U. S. Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 AND 50-324/LICENSE NOS. DPR-71 AND DPR-62
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
REQUEST FOR LICENSE AMENDMENTS
APPLICABILITY AND SURVEILLANCE REQUIREMENTS

Gentlemen:

By letter dated April 4, 1996 (Serial: BSEP 96-0126), Carolina Power & Light Company requested a revision to the Technical Specifications for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2. This request would revise Technical Specifications 3.0 and 4.0, and the associated bases for these sections, using the guidance contained in Generic Letter 87-09 and NUREG-1433, "Standard Technical Specifications, General Electric Plants, BWR/4," Revision 1, April 1995.

Generic Letter 87-09 provides increased flexibility with regard to Specification 3.0.4 by removing unnecessary restrictions on operational mode changes in those cases where conformance with an Action Requirement already provides an acceptable level of safety for continued operation in any mode for an unlimited period of time. Through telephone discussions, the NRC staff has requested that CP&L provide additional information regarding the level of protection being maintained for those Specification 3.0.4-related changes included in the April 4, 1996 license amendment application.

A review of the Brunswick Plant Technical Specifications has been performed to identify those specifications affected by the proposed change to Specification 3.0.4. Enclosure 1 identifies the Technical Specifications affected by the proposed change to Specification 3.0.4, describes the remedial measures prescribed by the Action requirements for each affected Specification involving the proposed Specification 3.0.4 revision, and discusses how a sufficient level of protection to permit operational mode changes and safe long term operation is provided by the associated remedial measures.

Carolina Power & Light Company is providing Mr. Mel Fry of the State of North Carolina with a copy of the additional information supporting these proposed license amendments.

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Please refer any questions regarding this submittal to Mr. Mark Turkal at (910) 457-3066.

Sincerely,



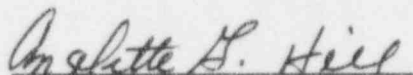
John S. Keenan
Director — Site Operations
Brunswick Nuclear Plant

WRM/wrm

Enclosures:

1. Response To Request For Additional Information
2. List of Regulatory Commitments

John S. Keenan, 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 officers, employees, and agents of Carolina Power & Light Company.


Notary (Seal)

My commission expires: 11/25/01

pc: U. S. Nuclear Regulatory Commission
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The Honorable R. Hunt
Chairman (Acting) - North Carolina Utilities Commission
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Mr. Mel Fry
Director (Acting) - Division of Radiation Protection
North Carolina Department of Environment, Health, and Natural Resources
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ENCLOSURE 1

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
NRC DOCKET NOS. 50-325 AND 50-324
OPERATING LICENSE NOS. DPR-71 AND DPR-62
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
REQUEST FOR LICENSE AMENDMENTS
APPLICABILITY AND SURVEILLANCE REQUIREMENTS

BACKGROUND:

The proposed revision to Specification 3.0.4 would allow entry into an Operational Condition or other specified condition of Applicability in accordance with Action requirements when conformance with the Action requirements provides for continued operation of the unit for an unlimited period of time. A review of the Brunswick Plant Technical Specifications was performed to identify those affected by the proposed change to Specification 3.0.4. Technical Specifications affected by the proposed change to Specification 3.0.4 are those identified by a "Yes" in the "Flexibility gained as a result of proposed change to Specification 3.0.4" column of Table 1 (attached). The following describes the remedial measures prescribed by the Action requirements for each affected Specification involving the proposed Specification 3.0.4 revision and how a sufficient level of protection to permit operational mode changes and safe long term operation is provided by the associated remedial measures.

REVIEW:

Specification 3.1.4.3. Rod Block Monitor (RBM)

If one RBM channel is inoperable and not restored within the required time period or if two RBM channels are inoperable, the actions require at least one RBM channel to be tripped. Tripping one RBM channel initiates a control rod withdrawal block, thereby ensuring that the RBM function is met.

Specification 3.3.1. Reactor Protection System (RPS) Instrumentation

If one or more channels of RPS Instrumentation are inoperable, the actions (permitting continued operation) require maintaining sufficient channels Operable or in trip such that trip capability of each RPS function is maintained. Placing the affected channels or trip system in trip compensates for the inoperability and restores the capability to accommodate a single failure.

Specification 3.3.2. Isolation Actuation Instrumentation

If one or more channels of Isolation Actuation Instrumentation are inoperable, the actions (permitting continued operation) require maintaining sufficient channels Operable or in trip such that automatic isolation capability of each Isolation Actuation function is maintained. Placing the affected channels in trip compensates for the inoperability and restores the capability to accommodate a single failure.

Specification 3.3.3. Emergency Core Cooling System (ECCS) Actuation Instrumentation

In Specification 3.3.3, only Actions 30, 32, 33, and 34 (Operational Condition 4 or 5 only) permit continued operation in the Applicability.

For Action 30, if one or more channels of the associated ECCS Actuation Instrumentation are inoperable, the action (permitting continued operation) requires maintaining sufficient channels Operable or in trip such that automatic actuation capability of each associated ECCS Actuation function is maintained. Placing the affected channels in trip compensates for the inoperability and restores the capability to accommodate a single failure.

For Action 32, if one or more channels of the associated ECCS Actuation Instrumentation are inoperable, the action (permitting continued operation) requires bus power availability to be verified at least once per 12 hours. The ECCS Actuation Instrumentation functions, for which Action 32 applies, are ECCS actuation logic bus power monitors. These bus power monitors provide a monitoring/alarm function only. Therefore, verifying bus power availability once per 12 hours adequately compensates for the inoperability.

For Action 33, if one or more channels of the associated ECCS Actuation Instrumentation are inoperable, the action (permitting continued operation) requires at least one of the inoperable channels to be placed in the tripped condition. Tripping one channel (for the ECCS Actuation functions associated with Action 33) actuates the associated function, thereby ensuring that the associated ECCS Actuation function is met.

For Action 34, if one or more channels of the associated ECCS Actuation Instrumentation are inoperable in Operational Condition 4 or 5, the action (permitting continued operation) requires declaring the associated diesel generator inoperable and taking the actions required by Specification 3.8.1.2, AC Sources Shutdown. The ECCS Actuation Instrumentation, for which Action 34 applies, functions to initiate the diesel generators. In Operational Condition 4 or 5, diesel generators are required to ensure adequate AC electrical power is provided to mitigate events postulated during shutdown. In Operational Condition 4 or 5, the actions of Specification 3.8.1.2 require suspension of operations involving irradiated fuel handling, Core Alterations, positive reactivity changes, and operations with the potential for draining the reactor vessel. Suspension of these activities minimizes the probability of occurrence of postulated events in Operational Conditions 4 and 5 and adequately compensates for the inoperability.

Specification 3.3.4. Control Rod Withdrawal Block Instrumentation

If the required Control Rod Withdrawal Block Instrumentation function channels are inoperable in one trip system and not restored within the required time period or if required Control Rod Withdrawal Block Instrumentation function channels are inoperable in two trip systems, the actions require at least one associated Control Rod Withdrawal Block Instrumentation trip system to be placed in the tripped condition. Tripping one associated Control Rod Withdrawal Block Instrumentation trip system initiates a control rod withdrawal block, thereby ensuring that the associated function is met.

Specification 3.3.5.4. Source Range Monitors

If the required Source Range Monitors (SRMs) are inoperable in Operational Condition 3 or 4, the actions require that all control rods to be verified to be fully inserted in the core and the reactor mode switch to be locked in the Shutdown position. In Operational Condition 3 or 4, the SRMs provide monitoring of reactivity changes during control rod movement and give the control room operator early indication of unexpected subcritical multiplication that could be indicative of an

approach to criticality. The action requirement to verify all control rods are fully inserted ensures that the reactor will be at its minimum reactivity level and the action requirement to lock the reactor mode switch in the Shutdown position prevents subsequent control rod withdrawal by maintaining a control rod block. Therefore, these actions adequately compensates for the inoperability.

Specification 3.3.6.1. ATWS Recirculation Pump Trip (RPT) System Instrumentation

If one or more channels of ATWS RPT System Instrumentation are inoperable, the actions (permitting continued operation) require maintaining sufficient channels Operable or in trip such that trip capability of each ATWS RPT System Instrumentation function is maintained. Placing the affected channels in trip compensates for the inoperability and restores the capability to accommodate a single failure.

Specification 3.3.7. Reactor Core Isolation Cooling (RCIC) System Actuation Instrumentation

In Specification 3.3.7, only Actions 50 and 52 permit continued operation in the Applicability.

For Action 50, if one or more channels of the associated RCIC System Actuation Instrumentation are inoperable, the actions (permitting continued operation) require maintaining sufficient channels Operable or in trip such that trip capability of each associated RCIC System Actuation Instrumentation function is maintained. Placing the affected channels or trip system in trip compensates for the inoperability and restores the capability to accommodate a single failure.

For Action 52, if one or more channels of the associated RCIC System Actuation Instrumentation are inoperable, the action (permitting continued operation) requires at least one of the inoperable channels to be placed in the tripped condition. Tripping one channel, for the RCIC System Actuation functions associated with Action 52 actuates the associated function, thereby ensuring that the associated RCIC System Actuation function is met.

Specification 3.5.4. Suppression Pool

In Operational Condition 4 or 5, the requirements for suppression pool level support the Operability of low pressure ECCS which is required to mitigate postulated events. If suppression pool level does not meet the limits of the LCO in Operational Condition 4 or 5, the actions require suspension of all operations in the vessel, all positive reactivity changes, and all operations with the potential for draining the reactor vessel. Suspension of these activities minimizes the probability of occurrence of postulated events in Operational Conditions 4 and 5 and adequately compensates for the inoperability resulting from suppression pool level requirements not being met.

Specification 3.6.5.1. Secondary Containment Integrity

In Operational Condition 5, secondary containment is the only barrier to release of fission products to the environment. If Secondary Containment Integrity is not maintained in Operational Condition 5, the actions require suspension of irradiated fuel handling in the secondary containment, Core Alterations, and activities which could reduce Shutdown Margin. Suspension of these activities minimizes the probability of occurrence of postulated events in Operational Condition 5 and adequately compensates for the loss of Secondary Containment Integrity.

Specification 3.6.6.1. Standby Gas Treatment System

The Standby Gas Treatment System supports maintaining Secondary Containment Integrity. In Operational Condition 5, secondary containment is the only barrier to release of fission products to the environment. If one or both standby gas treatment subsystems are inoperable in Operational Condition 5, the actions (permitting continued operations) require suspension of irradiated fuel handling in the secondary containment, Core Alterations, and activities which could reduce Shutdown Margin. Suspension of these activities minimizes the probability of occurrence of postulated events in Operational Condition 5 and adequately compensates for the inoperability.

Specification 3.7.1.2. Service Water Systems

The Service Water System supports the Operability of diesel generators, the Residual Heat Removal (RHR) System, and ECCS equipment; the site nuclear service water pumps and the nuclear header support diesel generator Operability and the conventional service water pumps (or a nuclear service pump if it is capable of supplying the vital header and RHR Service Water header) support the RHR System and the ECCS equipment.

If one or more required service water pumps (conventional or nuclear) are inoperable in Operational Condition 4 or 5, the actions (permitting continued operation) require suspension of all operations with the potential for draining the reactor vessel. In Operational Condition 4 or 5, the requirements for service water pumps support the Operability of low pressure ECCS which is required to mitigate postulated reactor vessel drain down events. Suspension of operations with the potential for draining the reactor vessel minimizes the probability of occurrence of postulated reactor vessel drain down events in Operational Conditions 4 and 5 and adequately compensates for the inoperability. In addition, if the Service Water System nuclear header or one or more required nuclear service pumps are inoperable in Operational Condition 4 or 5, the actions (permitting continued operation) require taking the applicable actions required by Specification 3.8.1.2, AC Sources Shutdown. In Operational Condition 4 or 5, diesel generators are required to be Operable to ensure adequate AC electrical power is provided to mitigate events postulated during shutdown. In Operational Condition 4 or 5, the actions of Specification 3.8.1.2 require suspension of operations involving irradiated fuel handling, Core Alterations, positive reactivity changes, and operations with the potential for draining the reactor vessel. Suspension of these activities minimizes the probability of occurrence of postulated events in Operational Conditions 4 and 5 and adequately compensates for the inoperability.

Specification 3.7.2. Control Room Emergency Ventilation (CREV) System

In Operational Condition 4 or 5 or during movement of irradiated fuel assemblies in secondary containment, the CREV System is required to be Operable to control operator exposure during and following events postulated during shutdown. In Operational Condition 4 or 5 or during movement of irradiated fuel assemblies in secondary containment, if one control room emergency filtration unit is inoperable, the action (permitting continued operation) requires initiating and maintaining operation of the remaining Operable control building emergency filtration unit in the radiation/smoke protection mode. This action adequately compensates for the inoperability by ensuring that the remaining filtration unit is Operable, that no failures that would prevent automatic actuation will occur, and that any active failure is readily detected. In Operational Condition 4 or 5, if both control room emergency filtration units are inoperable, the action (permitting continued operation) requires suspension of all operations involving Core Alterations, handling of irradiated fuel assemblies in secondary containment, and operations with the potential for draining the reactor vessel. Suspension of these activities minimizes the

probability of occurrence of postulated events in Operational Conditions 4 and 5 and adequately compensates for the inoperability.

Specification 3.8.1.2, AC Sources Shutdown

In Operational Condition 4 or 5, AC Sources are required to ensure adequate AC electrical power is provided to mitigate events postulated during shutdown. In Operational Condition 4 or 5, if one or more required AC Sources are inoperable, the actions (permitting continued operation) require suspension of operations involving irradiated fuel handling, Core Alterations, positive reactivity changes, and operations with the potential for draining the reactor vessel. Suspension of these activities minimizes the probability of occurrence of postulated events in Operational Conditions 4 and 5 and adequately compensates for the inoperability.

Specification 3.8.2.2, AC Distribution - Shutdown of Both Units

In Operational Condition 4 or 5, the AC Distribution System is required to ensure adequate AC electrical power is provided to mitigate events postulated during shutdown. In Operational Condition 4 or 5, if one or more required AC buses are inoperable, the actions (permitting continued operation) require suspension of operations involving irradiated fuel handling, Core Alterations, positive reactivity changes, and operations with the potential for draining the reactor vessel. Suspension of these activities minimizes the probability of occurrence of postulated events in Operational Conditions 4 and 5 and adequately compensates for the inoperability.

Specification 3.8.2.4.2, DC Distribution - Shutdown

In Operational Condition 4 or 5, the DC Distribution System is required to ensure adequate AC electrical power is provided to mitigate events postulated during shutdown. In Operational Condition 4 or 5, if one or both divisions of the DC Distribution System are inoperable, the actions (permitting continued operation) require suspension of operations involving irradiated fuel handling in secondary containment, Core Alterations, decreases in Shutdown Margin, and operations with the potential for draining the reactor vessel. Suspension of these activities minimizes the probability of occurrence of postulated events in Operational Conditions 4 and 5 and adequately compensates for the inoperability.

Specification 3.9.9, Water Level - Spent Fuel Storage Pool

The spent fuel storage pool water level requirement ensures that sufficient water is available to retain iodine fission product activity in the water in the event of a fuel handling accident. If the spent fuel pool water level is not within the required limit, the actions (permitting continued operation) require suspension of all movement of fuel assemblies and crane operations with loads in the spent fuel pool area. Suspension of these activities minimizes the probability of occurrence of the postulated event and adequately compensates for the spent fuel storage pool water level requirements not being met.

CONCLUSION:

Based on the previous description, CP&L has concluded that the remedial measures provided by the Technical Specification Actions for each change involving the proposed Specification 3.0.4 provide a sufficient level of protection to permit operational mode changes and safe long term operation and are consistent with the Updated Final Safety Analysis Report and the supporting safety analyses. In addition, the provisions of the proposed Specification 3.0.4 should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or

components to Operable status before entering the associated Operational Condition or other specified condition in the Applicability. Consistent with this philosophy, appropriate administrative controls will be established in procedures at the Brunswick Plant to govern the use of the proposed Specification 3.0.4 reliefs. These administrative controls will be put in place prior to implementation of the amendments associated with this Technical Specification Change Request.

TABLE 1		
Current Technical Specifications (CTS) with Actions permitting continued operation in the Applicability	CTS Actions state the provisions of Specification 3.0.4 are not applicable	Flexibility gained as a result of proposed change to Specification 3.0.4
3.1.3.1, Control Rod Operability	Yes	No
3.1.3.2, Control Rod Maximum Insertion Time	Yes	No
3.1.3.4, Four Control Rod Group Scram Insertion Times	Yes	No
3.1.3.5, Control Rod Scram Accum. (Op. Cond. 1 or 2)	Yes	No
3.1.3.6, Control Rod Drive Coupling (Op. Cond. 1 or 2)	Yes	No
3.1.3.7, Control Rod Pos. Ind. (Op. Cond. 1 or 2)	Yes	No
3.1.4.1, Rod Worth Minimizer	Yes	No
3.1.4.3, Rod Block Monitor	No	Yes
3.3.1, RPS Instr.	No	Yes
3.3.2, Isol. Act. Instr.	No	Yes
3.3.3, ECCS Act. Instr.	No	Yes
3.3.4, Control Rod Withdrawal Block Instr.	No	Yes
3.3.5.1, Seismic Monitoring Instr.	Yes	No
3.3.5.3, Accident Monitoring Instr.	Yes	No
3.3.5.4, Source Range Monitors (Op. Cond. 3 or 4)	No	Yes
3.3.5.5, CREV System Instr.	Yes	No
3.3.5.6, Chloride Intrusion Instr.	Yes	No
3.3.5.8, Rad. Liquid Effluent Monitoring Instr.	Yes	No

TABLE 1		
Current Technical Specifications (CTS) with Actions permitting continued operation in the Applicability	CTS Actions state the provisions of Specification 3.0.4 are not applicable	Flexibility gained as a result of proposed change to Specification 3.0.4
3.3.5.9, Rad. Gaseous Effluent Monitoring Instr.	Yes	No
3.3.6.1, ATWS RPT System Instr.	No	Yes
3.3.6.2, EOC RPT System Instr. (Unit 2 only)	Yes	No
3.3.7, RCIC Act. Instr.	No	Yes
3.4.7, MSIVs	Yes	No
3.5.4, Suppression Pool (Op. Cond. 4 or 5)	No	Yes
3.6.1.3, Primary Ctmt Air Lock	Yes	No
3.6.3, Primary Ctmt Isolation Valves	Yes	No
3.6.4.1, Drywell-Suppression Chamber Vacuum Breakers	Yes	No
3.6.5.1, Secondary Ctmt Integrity (Op. Cond. 5)	No	Yes
3.6.5.2, Secondary Ctmt Isolation Dampers	Yes	No
3.6.6.1, Standby Gas Treatment System (Op. Cond. 5)	No	Yes
3.7.1.2, Service Water System (Op. Cond. 4 or 5)	No	Yes
3.7.2, CREV System (Op. Cond. 4 or 5)	No	Yes
3.7.6, Sealed Source Contamination	Yes	No
3.8.1.2, AC Sources Shutdown	No	Yes
3.8.2.2, AC Distr. Shutdown	No	Yes

TABLE 1		
Current Technical Specifications (CTS) with Actions permitting continued operation in the Applicability	CTS Actions state the provisions of Specification 3.0.4 are not applicable	Flexibility gained as a result of proposed change to Specification 3.0.4
3.8.2.4.2 DC Distr. Shutdown (Op. Cond. 4 or 5)	No	Yes
3.9.9, Water Level-Spent Fuel Storage Pool	No	Yes
3.11.1.2, Dose-Liquid Effluents	Yes	No
3.11.1.3, Liquid Radwaste Treatment System	Yes	No
3.11.1.4, Liquid Holdup Tanks	Yes	No
3.11.2.2, Dose-Noble Gases	Yes	No
3.11.2.3, Dose-I-131, I-133, Tritium, and Radionuclides in Particulate Form	Yes	No
3.11.2.4, Gaseous Radwaste Treatment System	Yes	No
3.11.2.5, Vent. Exhaust Treatment System	Yes	No
3.11.2.8, Drywell Venting or Purging	Yes	No
3.11.3, Solid Radioactive Waste	Yes	No
3.11.4, Total Dose (40 CFR Part 190)	Yes	No
3.12.1, Rad. Env. Monitoring Program	Yes	No
3.12.2, Land Use Census	Yes	No
3.12.3, Interlaboratory Comparison Program	Yes	No

ENCLOSURE 2

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
NRC DOCKET NOS. 50-325 AND 50-324
OPERATING LICENSE NOS. DPR-71 AND DPR-62
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
REQUEST FOR LICENSE AMENDMENTS
APPLICABILITY AND SURVEILLANCE REQUIREMENTS

LIST OF REGULATORY COMMITMENTS

The following table identifies those actions committed to by Carolina Power & Light Company in this document. Any other actions discussed in the submittal represent intended or planned actions by Carolina Power & Light Company. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Manager-Regulatory Affairs at the Brunswick Nuclear Plant of any questions regarding this document or any associated regulatory commitments.

Commitment	Committed date or outage
1. Appropriate administrative controls will be established in procedures at the Brunswick Plant to govern the use of the proposed Specification 3.0.4 reliefs.	Prior to license amendment implementation