

UNITED STATES

WASHINGTON, D.C. 20555-0001

August 11, 1995

Mr. R. A. Anderson Vice President Brunswick Steam Electric Plant Carolina Power & Light Company Post Office Box 10429 Southport, North Carolina 28461

SUBJECT: ISSUANCE OF AMENDMENT NO. 178 TO FACILITY OPERATING LICENSE NO. DPR-71 AND AMENDMENT NO. 209 TO FACILITY OPERATING LICENSE NO. DPR-62 REGARDING TRANSITION BETWEEN OPERATING CONDITIONS WITH INOPERABLE CONTROL RODS - BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2 (TAC NOS. M85736 AND M85737)

Dear Mr. Anderson:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 178 to Facility Operating License No. DPR-71 and Amendment No. 209 to Facility Operating License No. DPR-62 for Brunswick Steam Electric Plant, Units 1 and 2. The amendments change the Technical Specifications (TS) in response to a Carolina Power & Light Company (CP&L) submittal dated January 25, 1993, as supplemented on December 28, 1993, September 13, 1994, January 13, 1995, and May 25, 1995.

The amendments allow unit entry into Operational Condition 1 (Power Operation) from Operational Condition 2 (Startup) with up to eight inoperable control rods, provided those control rods are not inoperable due to being immovable or untrippable. Corresponding TS Bases changes accompany these amendments.

In the May 25, 1995, supplement, CP&L withdrew the part of the January 25, 1993, amendment request that would have revised the TS to allow power operation with more than one inoperable control rod scram accumulator. Consequently that part of the CP&L request is not addressed in these amendments and the associated Safety Evaluation.

NRC FILE GEI

9508170118 950811 PDR ADOCK 05000324 P PDR A copy of the Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's bi-weekly <u>Federal Register</u> Notice.

Sincerely,

David C Trimelle

David C. Trimble, Project Manager Project Directorate II-1 Division of Reactor Projects - I/II Office of Nuclear Reactor Regulation

Docket Nos. 50-325 and 50-324

Enclosures:

.

- 1. Amendment No. 178 to
- License No. DPR-71
- 2. Amendment No. 209 to License No. DPR-62
- 3. Safety Evaluation
- cc w/enclosures: See next page

A copy of the Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's bi-weekly <u>Federal</u> <u>Register</u> Notice.

Sincerely,

Original signed by:

David C. Trimble, Project Manager Project Directorate II-1 Division of Reactor Projects - I/II Office of Nuclear Reactor Regulation

Docket Nos. 50-325 and 50-324

Enclosures:

- 1. Amendment No. 178 to License No. DPR-71
- 2. Amendment No. 209 to
- License No. DPR-62 3. Safety Evaluation

cc w/enclosures: See next page

| DOCUMENT NAME: | 6:\ | RKONZMIC/ | BK82/30. | AMU |
|----------------|-----|-----------|----------|-----|
|----------------|-----|-----------|----------|-----|

| OFFICE | LA:PDII-1 | PM:PDII-1 | D:PDJJ-1 | OGC 46 |
|--------|-------------|-------------|----------------|---------|
| NAME | EDunnington | DTrimbleDer | - BMatthews | Howen |
| DATE | 07/25/95 | 07/27/95 | 07/11/95 | 07/3/95 |
| СОРҮ | YesyNo | (Yes) No | Yes/No | Yes |

OFFICIAL RECORD COPY

AMENDMENT NO. 178 TO FACILITY OPERATING LICENSE NO. DPR-71 - BRUNSWICK, UNIT 1 AMENDMENT NO. 209 TO FACILITY OPERATING LICENSE NO. DPR-62 - BRUNSWICK, UNIT 2 DISTRIBUTION: Docket File PUBLIC PD II-1 Reading File S. Varga J. Zwolinski OGC G. Hill (4) C. Grimes, DOPS/OTSB J. Donoghue R. Jones ACRS (4) OPA OC/LFDCB

territoria dalla dalla construcción de la construcc

- E. Merschoff, R-II
- cc: Brunswick Service List

~~

Mr. R. A. Anderson Carolina Power & Light Company

cc:

Mr. R. E. Jones General Counsel Carolina Power & Light Company Post Office Box 1551 Raleigh, North Carolina 27602

Mr. Jerry W. Jones, Chairman Brunswick County Board of Commissioners Post Office Box 249 Bolivia, North Carolina 28422

Resident Inspector U.S. Nuclear Regulatory Commission Star Route 1, Post Office Box 208 Southport, North Carolina 28461

Regional Administrator, Region II U.S. Nuclear Regulatory Commission 101 Marietta St., N.W., Ste. 2900 Atlanta, Georgia 30323

Mr. Dayne H. Brown, Director Division of Radiation Protection N.C. Department of Environmental, Commerce and Natural Resources Post Office Box 27687 Raleigh, North Carolina 27611-7687

Mr. William Levis Plant Manager Carolina Power & Light Company Brunswick Steam Electric Plant Post Office Box 10429 Southport, North Carolina 28461

Public Service Commission State of South Carolina Post Office Drawer 11649 Columbia, South Carolina 29211 Brunswick Steam Electric Plant Units 1 and 2

Karen E. Long Assistant Attorney General State of North Carolina Post Office Box 629 Raleigh, North Carolina 27602

Mr. Robert P. Gruber Executive Director Public Staff - NCUC Post Office Box 29520 Raleigh, North Carolina 27626-0520

Mr. H. W. Habermeyer, Jr. Vice President Nuclear Services Department Carolina Power & Light Company Post Office Box 1551 - Mail OHS7 Raleigh, North Carolina 27602

Mr. Norman R. Holden, Mayor City of Southport 201 East Moore Street Southport, North Carolina 28461

Mr. Dan E. Summers Emergency Management Coordinator New Hanover County Department of Emergency Management Post Office Box 1525 Wilmington, North Carolina 28402



UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

CAROLINA POWER & LIGHT COMPANY, et al.

DOCKET NO. 50-325

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 178 License No. DPR-71

- 1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by Carolina Power & Light Company (the licensee), dated January 25, 1993, as supplemented December 28, 1993, September 13, 1994, January 13, 1995, and May 25, 1995, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I:
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
- 2. Accordingly, the license is amended by changes to the Technical Specifications, as indicated in the attachment to this license amendment; and paragraph 2.C.(2) of Facility Operating License No. DPR-71 is hereby amended to read as follows:

(2) <u>Technical Specifications</u>

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 178, are hereby incorporated in the license. Carolina Power & Light Company shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Rta HAVAN An

David B. Matthews, Director
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: August 11, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 178

FACILITY OPERATING LICENSE NO. DPR-71

DOCKET NO. 50-325

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised areas are indicated by marginal lines.

| <u>Remove Pages</u> | <u>Insert Pages</u> |
|----------------------|------------------------------------|
| 3/4 1-4 B 3/4 1-2 | 3/4 1-4 B 3/4 1-2 B 3/4 1-2a |

REACTIVITY CONTROL SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

- 2. If the inoperable control rod(s) is inserted:
 - a) Within one hour disarm the associated directional control valves either:
 - 1) Electrically, or
 - 2) Hydraulically by closing the drive water and exhaust water isolation valves.
 - b) Otherwise, be in at least HOT SHUTDOWN within the next 12 hours.
- 3. The provisions of Specification 3.0.4 are not applicable.
- c. With more than 8 control rods inoperable, be in at least HOT SHUTDOWN within 12 hours.

SURVEILLANCE REQUIREMENTS

4.1.3.1.1 The scram discharge volume drain and vent valves shall be demonstrated OPERABLE at least once per 31 days by:*

- a. Verifying each valve to be open.
- b. Cycling each valve at least one complete cycle of full travel.

4.1.3.1.2 All withdrawn control rods not required to have their directional control valves disarmed electrically or hydraulically shall be demonstrated OPERABLE by moving each control rod at least one notch:

- a. At least once per 7 days when above the preset power level of the RWM and
- b. At least once per 24 hours when above the preset power level of the RWM and any control rod is immovable as a result of excessive friction or mechanical interference.

4.1.3.1.3 All withdrawn control rods shall be determined OPERABLE by demonstrating the scram discharge volume drain and vent valves OPERABLE, when the reactor protection system logic is tested per Specification 4.3.1.2. by verifying that the drain and vent valves:

- a. Close within 30 seconds after receipt of a signal for control rods to scram, and
- b. Open when the scram signal is reset or the scram discharge volume trip is bypassed.

^{*} These valves may be closed intermittently for testing under administrative control.

REACTIVITY CONTROL SYSTEMS

BASES

CONTROL RODS (Continued)

potential effects of the rod ejection accident are limited. The ACTION statements permit variations from the basic requirements but at the same time impose more restrictive criteria for continued operation. A limitation on inoperable rods is set such that the resultant effect on total rod worth and scram shape will be kept to a minimum. The requirements for the various scram time measurements ensure that any indication of systematic problems with rod drives will be investigated on a timely basis.

Damage within the control rod drive mechanism could be a generic problem: therefore, with a control rod immovable because of excessive friction or mechanical interference, operation of the reactor is limited to a time period which is reasonable to determine the cause of the inoperability and at the same time prevent operation with a large number of inoperable control rods.

Control rods that are inoperable for other reasons are permitted to be taken out of service provided that those in the non-fully-inserted position are consistent with the SHUTDOWN MARGIN requirements.

With one or more withdrawn control rods inoperable for reasons other than being stuck, operation may continue provided within one hour, either a) the inoperable withdrawn control rod(s) are fully inserted and disarmed (electrically or hydraulically), or b) the inoperable control rod(s) are separated from other inoperable control rods by at least two control cells in all directions, and the insertion capability of each inoperable control rod is demonstrated by inserting the control rod at least one notch by drive water pressure within the normal operating range. Inserting a control rod ensures the shutdown and scram capabilities are not adversely affected. Adequate separation of inoperable withdrawn control rods (inoperable for reasons other than being immoveable or untrippable) is required to ensure consistency with the scram reactivity function assumed in the reload licensing analysis. Inserted inoperable control rods are disarmed to prevent inadvertent withdrawal during subsequent operations. The control rods can be hydraulically disarmed by closing the drive and exhaust water isolation valves, or electrically disarmed by disconnecting power from all four directional control valve solenoids.

Technical Specification 3.1.3.1, ACTION b is generic to the other control rod Technical Specifications 3.1.3.2, 3.1.3.4, 3.1.3.5, 3.1.3.6, and 3.1.3.7, which identify individual types of control rod inoperability. Each of the individual control rod Technical Specifications identifies that the provisions of Technical Specification 3.0.4 are not applicable provided the specification ACTIONS are satisfied, the affected control rod is declared inoperable, and the requirements of Technical Specification 3.1.3.1 are satisfied. Inclusion of an exemption from the requirements of Technical Specification 3.0.4 in Specification 3.1.3.1, ACTION b allows changing from OPERATIONAL CONDITION 2 to OPERATIONAL CONDITION 1 with inoperable control rods and is consistent with the individual control rod operability specifications listed above (Reference 8).

BRUNSWICK - UNIT 1

Amendment No. 178

I

REACTIVITY CONTROL STSTEMS

BASES

CONTROL RODS (Continued)

The number of control rods permitted to be inoperable could be more than the eight allowed by the specification, but the occurrence of eight inoperable rods could be indicative of a generic problem and the reactor must be shut down for investigation and resolution of the problem.

The control rod system is analyzed to bring the reactor subcritical at a rate fast enough to prevent the MPCR from becoming less than the Safety Limit MCPR of Specification 2.1.2 during the limiting power transient analyzed in Section 14.3 of the FSAR. This analysis shows that the negative reactivity rates resulting from the scram with the average response of all the drives as given in the specifications, provide the required protection and MCPR remains greater than the Safety Limit MCPR of Specification 2.1.2 The occurrence of scram times longer than those specified should be viewed as an indication of a systemic problem with the rod drives and, therefore, the surveillance interval is reduced in order to prevent operation of the reactor for long periods of time with a potentially serious problem.

Control rods with inoperable accumulators are declared inoperable and Specification 3.1.3.1 then applies. This prevents a pattern of inoperable accumulators that would result in less reactivity insertion

L



UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

CAROLINA POWER & LIGHT COMPANY, et al.

DOCKET NO. 50-324

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 209 License No. DPR-62

- 1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by Carolina Power & Light Company (the licensee), dated January 25, 1993, as supplemented December 28, 1993, September 13, 1994, January 13, 1995, and May 25, 1995, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I:
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
- 2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment; and paragraph 2.C.(2) of Facility Operating License No. DPR-62 is hereby amended to read as follows:

(2) <u>Technical Specifications</u>

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 209 , are hereby incorporated in the license. Carolina Power & Light Company shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

LRIGHTHUM

David B. Matthews, Director Project Directorate II-1 Division of Reactor Projects - I/II Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: August 11, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 209

FACILITY OPERATING LICENSE NO. DPR-62

DOCKET NO. 50-324

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised areas are indicated by marginal lines.

Remove Pages

Insert Pages

3/4 1-4 B 3/4 1-2 B 3/4 1-2a

3/4 1-4 B 3/4 1-2

REACTIVITY CONTROL SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

- 2. If the inoperable control rod(s) is inserted:
 - a) Within one hour disarm the associated directional control valves either:
 - 1) Electrically. or
 - 2) Hydraulically by closing the drive water and exhaust water isolation valves.
 - b) Otherwise, be in at least HOT SHUTDOWN within the next 12 hours.
- 3. The provisions of Specification 3.0.4 are not applicable.
- c. With more than 8 control rods inoperable, be in at least HOT SHUTDOWN within 12 hours.

SURVEILLANCE REQUIREMENTS

4.1.3.1.1 The scram discharge volume drain and vent valves shall be demonstrated OPERABLE at least once per 31 days by:*

- a. Verifying each valve to be open.
- b. Cycling each valve at least one complete cycle of full travel.

4.1.3.1.2 All withdrawn control rods not required to have their directional control valves disarmed electrically or hydraulically shall be demonstrated OPERABLE by moving each control rod at least one notch:

- a. At least once per 7 days when above the preset power level of the $\operatorname{\mathsf{RWM}}$ and
- b. At least once per 24 hours when above the preset power level of the RWM and any control rod is immovable as a result of excessive friction or mechanical interference.

4.1.3.1.3 All withdrawn control rods shall be determined OPERABLE by demonstrating the scram discharge volume drain and vent valves OPERABLE. when the reactor protection system logic is tested per Specification 4.3.1.2. by verifying that the drain and vent valves:

- a. Close within 30 seconds after receipt of a signal for control rods to scram, and
- b. Open when the scram signal is reset or the scram discharge volume trip is bypassed.

1

^{*} These valves may be closed intermittently for testing under administrative control.

REACTIVITY CONTROL SYSTEMS

BASES

CONTROL RODS (Continued)

potential effects of the rod ejection accident are limited. The ACTION statements permit variations from the basic requirements but at the same time impose more restrictive criteria for continued operation. A limitation on inoperable rods is set such that the resultant effect on total rod worth and scram shape will be kept to a minimum. The requirements for the various scram time measurements ensure that any indication of systematic problems with rod drives will be investigated on a timely basis.

Damage within the control rod_drive mechanism could be a generic problem: therefore, with a control rod immovable because of excessive friction or mechanical interference, operation of the reactor is limited to a time period which is reasonable to determine the cause of the inoperability and at the same time prevent operation with a large number of inoperable control rods.

Control rods that are inoperable for other reasons are permitted to be taken out of service provided that those in the non-fully-inserted position are consistent with the SHUTDOWN MARGIN requirements.

With one or more withdrawn control rods inoperable for reasons other than being stuck, operation may continue provided within one hour, either a) the inoperable withdrawn control rod(s) are fully inserted and disarmed (electrically or hydraulically), or b) the inoperable control rod(s) are separated from other inoperable control rods by at least two control cells in all directions, and the insertion capability of each inoperable control rod is demonstrated by inserting the control rod at least one notch by drive water pressure within the normal operating range. Inserting a control rod ensures the shutdown and scram capabilities are not adversely affected. Adequate separation of inoperable withdrawn control rods (inoperable for reasons other than being immoveable or untrippable) is required to ensure consistency with the scram reactivity function assumed in the reload licensing analysis. Inserted inoperable control rods are disarmed to prevent inadvertent withdrawal during subsequent operations. The control rods can be hydraulically disarmed by closing the drive and exhaust water isolation valves, or electrically disarmed by disconnecting power from all four directional control valve solenoids.

Technical Specification 3.1.3.1. ACTION b is generic to the other control rod Technical Specifications 3.1.3.2. 3.1.3.4. 3.1.3.5. 3.1.3.6. and 3.1.3.7. which identify individual types of control rod inoperability. Each of the individual control rod Technical Specifications identifies that the provisions of Technical Specification 3.0.4 are not applicable provided the specification ACTIONS are satisfied. the affected control rod is declared inoperable, and the requirements of Technical Specification 3.1.3.1 are satisfied. Inclusion of an exemption from the requirements of Technical Specification 3.0.4 in Specification 3.1.3.1. ACTION b allows changing from OPERATIONAL CONDITION 2 to OPERATIONAL CONDITION 1 with inoperable control rods and is consistent with the individual control rod operability specifications listed above (Reference 8).

BRUNSWICK - UNIT 2

Amendment No. 209

ł

REACTIVITY CONTROL STSTEMS

BASES

CONTROL RODS (Continued)

The number of control rods permitted to be inoperable could be more than the eight allowed by the specification, but the occurrence of eight inoperable rods could be indicative of a generic problem and the reactor must be shut down for investigation and resolution of the problem.

The control rod system is analyzed to bring the reactor subcritical at a rate fast enough to prevent the MPCR from becoming less than the Safety Limit MCPR of Specification 2.1.2 during the limiting power transient analyzed in Section 14.3 of the FSAR. This analysis shows that the negative reactivity rates resulting from the scram with the average response of all the drives as given in the specifications, provide the required protection and MCPR remains greater than the Safety Limit MCPR of Specification 2.1.2 The occurrence of scram times longer than those specified should be viewed as an indication of a systemic problem with the rod drives and, therefore, the surveillance interval is reduced in order to prevent operation of the reactor for long periods of time with a potentially serious problem.

Control rods with inoperable accumulators are declared inoperable and Specification 3.1.3.1 then applies. This prevents a pattern of inoperable accumulators that would result in less reactivity insertion



UNITED STATES

WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 178 TO FACILITY OPERATING LICENSE NO. DPR-71

AND AMENDMENT NO. 209 TO FACILTY OPERATING LICENSE NO. DPR-62

CAROLINA POWER & LIGHT COMPANY

BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2

DOCKET NOS. 50-325 AND 50-324

1.0 INTRODUCTION

By letter dated January 25, 1993 (Reference 1), and supplemented December 28, 1993 (Reference 2), September 13, 1994 (Reference 3), and January 13, 1995 (Reference 4), Carolina Power and Light Company (the licensee) requested changes to the Technical Specifications (TS) for Brunswick Steam and Electric Plant (BSEP), Units 1 and 2. The proposed changes would exempt TS 3.1.3.1 Action b., the specification concerning one or more inoperable control rods, from the requirements of TS 3.0.4, allowing transition from Operating Condition 2 to Operating Condition 1 with up to eight inoperable control rods. Also requested was a change to TS 3.1.3.5, to address operation with more than one inoperable scram accumulator in order to avoid entry into TS 3.0.3, which requires plant shutdown in the event multiple scram accumulators are declared inoperable. Associated TS Bases changes were also submitted. The proposed change to TS 3.1.3.5 was withdrawn by the licensee by letter dated May 25, 1995 (Reference 5).

References 2, 3, 4, and 5 did not expand the scope of the original <u>Federal</u> <u>Register</u> notice or change the no significant hazards determination.

2.0 EVALUATION

2.1 <u>Background</u>

The control rod drive (CRD) system regulates reactor reactivity by positioning control rods in response to manual control signals during operation, and by shutting down the reactor in emergency situations by quickly inserting rods in response to a manual or automatic signal. Each control rod is positioned by a separate hydraulic control rod drive, which is furnished pressurized water by the CRD hydraulic system. Each rod is associated with a particular hydraulic control unit which has the components needed for the normal positioning or scram of the control rod. Each rod also has an associated scram accumulator. The accumulator serves as an independent source of energy to insert a control rod during a scram. The reactivity control technical specifications ensure that; (1) the minimum shutdown margin is maintained, (2) the control rod insertion times are consistent with those used in the plant-specific accident analysis, and (3) the potential effects of a rod ejection accident are limited. A limitation on the number of inoperable rods is set so that the resultant effect on total rod worth and scram reactivity is minimized. The various requirements for scram times ensure that scram reactivity is within limits assumed for safety analyses and that any indication of systemic problems with rod drives is investigated on a timely basis.

2.2 TS 3.0.4 Exemption

The Reactivity Control Systems section of the Technical Specifications consists of several Limiting Conditions for Operation (LCO) addressing specific grounds for declaring control rod inoperability. The first, LCO 3.1.3.1, specifies the requirements once a control rod is declared inoperable. LCO 3.1.3.1 is composed of three Actions, the first (Action a.) dealing with inoperable rods due to immobility or inability to trip, the second (Action b.) addressing inoperability for all other reasons, and the final Action (Action c.) specifying the 12-hour hot shutdown requirement if more than eight rods are inoperable.

The remaining LCOs deal with specific factors affecting control rod operability:

3.1.3.2 Control Rod Maximum Scram Insertion Times 3.1.3.3 Control Rod Average Scram Insertion Times 3.1.3.4 Four Control Rod Group Scram Insertion Times 3.1.3.5 Control Rod Scram Accumulators 3.1.3.6 Control Rod Drive Coupling 3.1.3.7 Control Rod Position Indication

Except for LCO 3.1.3.3, each of these remaining LCOs stipulates that the provisions of TS 3.0.4 are not applicable if the action statement of the LCO is satisfied and other requirements are met, including the standard separation and insertability requirement for rod inoperability in TS 3.1.3.1 (Action b.). TS 3.0.4 is the prohibition against establishing new operational conditions if TS LCOs are not met without reliance on provisions contained in the Action statements unless otherwise excepted. For the remaining LCOs, the 3.0.4 exemption is always accompanied by a requirement to satisfy conditions in TS 3.1.3.1 for inoperable control rods.

The types of rod inoperability addressed in the remaining LCOs above do not include all forms of inoperability, however. One surveillance requirement of LCO 3.1.3.1 includes operability tests of the scram discharge volume vent and drain valves to ensure control rod operability. In this case, inoperability of a scram discharge volume would affect the scram capability of a large number of control rods, thus precluding the possibility of continued operation (TS 3.1.3.1 Action c.). Such a condition is distinct from inoperability not affecting scram capability, as addressed in TS 3.1.3.1 (b), and is not included in this proposed change. This proposed change does not involve provisions concerned with untrippable control rods as addressed in TS 3.1.3.1 Action a.

In its justification for including the 3.0.4 exemption in TS 3.1.3.1 Action b., the licensee presented its assessment of the safety impact of allowing entry into Operational Condition 1 from Operational Condition 2 for the types of control rod inoperability addressed in TS 3.1.3.2, 3.1.3.4, 3.1.3.5, 3.1.3.6, 3.1.3.7 listed above.

Approval of this change is justified based upon the fact that, once the applicable Actions of TS 3.1.3.1 are satisfied, these TS specifically grant an exemption from the provisions of TS 3.0.4 for the types of control rod inoperability they govern. Given this, the proposed addition of a corresponding TS 3.0.4 exemption to TS 3.1.3.1 Action b., which is the Action of TS 3.1.3.1 addressing these types of control rod inoperability, does not have an adverse impact on safety. The proposed change eliminates ambiguity in the TS in this area.

2.3 Acceptability of Proposed Technical Specifications

To effect the proposed changes for control rod operability, the licensee submitted the following TS and TS Bases changes for BSEP Units 1 and 2:

- a. A statement exempting the provisions of TS 3.0.4 is added to the limiting condition for operation (LCO) for TS 3.1.3.1 Action b. This change is acceptable as discussed in the Evaluation section.
- b. TS Bases Section 3/4.1.3, Control Rods, is updated to support the control rod operability requirements associated with the change in (a) above, and is acceptable.

Other changes proposed in Reference 1 were withdrawn by the licensee in Reference 5.

The proposed change to exempt TS 3.1.3.1 Action b. from the requirements of TS 3.0.4, allowing transition from Operating Condition 2 to Operating Condition 1 with up to eight inoperable control rods is acceptable. Approval of this change is acceptable based upon the fact that, once the applicable Actions of TS 3.1.3.1 are satisfied, TS 3.1.3.2, 3.1.3.4, 3.1.3.5, 3.1.3.6, and 3.1.3.7 specifically grant an exemption from the provisions of TS 3.0.4 for the types of control rod inoperability those TS govern. Given this, the proposed addition of a corresponding TS 3.0.4 exemption to TS 3.1.3.1 Action b., merely makes clear that TS 3.0.4 does not apply when all the requirements of TS 3.1.3.2, 3.1.3.4, 3.1.3.7, have been met. Further, the total number of inoperable control rods is limited by TS 3.1.3.1 Action c., and other LCOs ensure that the resulting control rod scram worth and scram capability comply with assumptions for operating limits for both Conditions 1 and 2.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the State of North Carolina official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (58 FR 36428). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

6.0 <u>REFERENCES</u>

- 1. Letter from R. B. Starkey, Jr. (CP&L) to NRC, January 25, 1993, Brunswick Steam and Electric Plant, Unit Nos. 1 and 2, Request for License Amendment, CRD and CRD Scram Accumulators.
- 2. Letter from R. A. Anderson (CP&L) to NRC, December 28, 1993, Brunswick Steam and Electric Plant, Unit Nos. 1 and 2, Response to Request for Additional Information Regarding Control Rod Operability Technical Specification Amendment Request.
- 3. Letter from R. A. Anderson (CP&L) to NRC, September 13, 1994, Brunswick Nuclear Plant, Unit Nos. 1 and 2, Response to NRC Staff Request for Information - Control Rod Drive Scram Accumulator License Amendment Request.
- 4. Letter from R. A. Anderson, (CP&L) to NRC, January 13, 1995, Brunswick Nuclear Plant, Unit Nos. 1 and 2, Request for License Amendments, Control Rod Drive and Control Rod Drive Scram Accumulators.

5. Letter from R. A. Anderson, (CP&L) to NRC, May 25, 1995, Brunswick Nuclear Plant, Unit Nos. 1 and 2, Partial Withdrawal of Request for License Amendments, Control Rod Drive and Control Rod Drive Scram Accumulators.

Principal Contributor: J. Donoghue Date: August 11, 1995

•