

December 13, 1995

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

SUBJECT: ISSUANCE OF AMENDMENT NO. 180 TO FACILITY OPERATING LICENSE NO. DPR-71 AND AMENDMENT NO. 211 TO FACILITY OPERATING LICENSE NO. DPR-62 REGARDING - BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2 (BSEP 95-0383) (TAC NOS. M93921 AND M93922)

Dear Mr. Campbell:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 180 to Facility Operating License No. DPR-71 and Amendment No. 211 to Facility Operating License No. DPR-62 for Brunswick Steam Electric Plant, Units 1 and 2. The amendments change the Technical Specifications in response to your submittal dated October 23, 1995.

The amendments change the Technical Specifications to delete the applicability of the primary coolant water chemistry limits when the primary system is being chemically decontaminated and the reactor vessel is defueled.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's bi-weekly Federal Register 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. 180 to License No. DPR-71
2. Amendment No. 211 to License No. DPR-62
3. Safety Evaluation

cc w/enclosures: See next page

FILENAME - G:\BRUNSWICK\BR93921.AMD

LA:PDII-1 <i>ED</i>	DRPE <i>dk</i>	PM:PDII-1 <i>net</i>	EMCB <i>Strosnider</i>	OGC <i>EB</i>	D:PDII-1
EDunnington	RClark	DTrimble	JStrosnider	<i>EBOLLEN</i>	DMatthews
10/27/95	10/30/95	10/7/95	10/1/95	10/8/95	10/12/95
Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

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AMENDMENT NO. 180 TO FACILITY OPERATING LICENSE NO. DPR-71 - BRUNSWICK, UNIT 1  
AMENDMENT NO. 211 TO FACILITY OPERATING LICENSE NO. DPR-62 - BRUNSWICK, UNIT 2

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S. Varga

J. Zwolinski

OGC

G. Hill (4)

C. Grimes, DOPS/OTSB

ACRS (4)

OPA

OC/LFDCB

cc: Brunswick Service List

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DF01

Mr. W. R. Campbell  
Carolina Power & Light Company

Brunswick Steam Electric Plant  
Units 1 and 2

cc:

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

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

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

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

Resident Inspector  
U.S. Nuclear Regulatory Commission  
8470 River Road  
Southport, North Carolina 28461

Mr. W. Levis  
Director  
Site Operations  
Brunswick Steam Electric Plant  
Post Office Box 10429  
Southport, North Carolina 28461

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

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

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

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

Mr. J. Cowan  
Manager  
Nuclear Services and Environmental  
Support Department  
Carolina Power & Light Company  
Post Office Box 1551 - Mail OHS7  
Raleigh, North Carolina 27602

Public Service Commission  
State of South Carolina  
Post Office Drawer 11649  
Columbia, South Carolina 29211

Mr. Milton Shymlock  
U. S. Nuclear Regulatory Commission  
101 Marietta Street, N.W. Suite 2900  
Atlanta, Georgia 30323-0199



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. 180  
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 October 23, 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:

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(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 180, 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

*Bart C. Buckley for*

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: December 13, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 180

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.

Remove Pages

3/4 4-7

3/4 4-9

B 3/4 4-3

B 3/4 4-4

Insert Pages

3/4 4-7

3/4 4-9

B 3/4 4-3

B 3/4 4-4

REACTOR COOLANT SYSTEM

3/4.4.4 CHEMISTRY

LIMITING CONDITION FOR OPERATION

3.4.4 The chemistry of the reactor coolant system shall be maintained within the limits specified in Table 3.4.4-1.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4, and 5\*.

ACTION:

- a. In OPERATIONAL CONDITIONS 1, 2, and 3:
  - 1. With the conductivity or chloride concentration exceeding the limits specified in Table 3.4.4-1, but less than 10  $\mu\text{mho/cm}$  at 25°C and less than 0.5 ppm, respectively, operation may continue for up to 24 hours and this condition need not be reported to the Commission provided that operation under these conditions shall not exceed 336 hours per year. The provisions of Specification 3.0.4 are not applicable.
  - 2. With the conductivity or chloride concentration exceeding the limits specified in Table 3.4.4-1 for more than 24 hours during one continuous time interval or with the conductivity exceeding 10  $\mu\text{mho/cm}$  at 25°C or chloride exceeding 0.5 ppm, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. In OPERATION CONDITIONS 4 and 5\* with the conductivity and/or chloride concentration of the reactor coolant in excess of the limit specified in Table 3.4.4-1, restore the conductivity and/or chloride concentration to within the limit within 48 hours.

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\*Except during planned chemical decontamination activities (with the reactor vessel defueled).

TABLE 3.4.4-1

REACTOR COOLANT SYSTEM CHEMISTRY LIMITS

<u>OPERATIONAL CONDITION</u>	<u>CHLORIDES</u>	<u>CONDUCTIVITY (<math>\mu</math>mhos/cm @ 25°C)</u>
1	< 0.5 ppm	< 2.0
2	< 0.2 ppm	< 2.0
3, 4, and 5*	< 0.2 ppm	<10.0

---

\*Except during planned chemical decontamination activities (with the reactor vessel defueled).

## REACTOR COOLANT SYSTEM

### BASES

The surveillance requirements provide adequate assurance that concentrations in excess of the limits will be detected in sufficient time to take corrective action.

In order to reduce personnel radiation exposure, chemical decontamination of portions of the reactor coolant system may be performed during shutdown. During the chemical decontamination process, the injection of chemical solvents may cause the reactor coolant system conductivity and chloride measurements to increase above the limits. The solvents that are selected for use in performing the chemical decontamination process are selected and evaluated to ensure their chemical reactivity will not adversely impact components or the structural integrity of the reactor coolant system. Because decontamination activities are performed at temperatures significantly less than normal operating temperatures, the chemical reactivity of these solvents will not increase the likelihood of stress corrosion occurring nor affect those stress corrosion cracks that may already be present.

### 3/4.4.5 SPECIFIC ACTIVITY

The limitations on the specific activity of the primary coolant ensure that the 2-hour thyroid and whole body doses resulting from a main steam line failure outside the containment during steady state operation will not exceed small fractions of the dose guidelines in 10CFR 100. Permitting operation to continue for limited time periods with higher specific activity levels accommodates short-term iodine spikes which may be associated with power level changes, and is based on the fact that a steam line failure during these short time periods is considerably less likely. Operation at the higher activity levels, therefore, is restricted to a small fraction of the unit's total operating time. The upper limit of coolant iodine concentration during short-term iodine spikes ensures that the thyroid dose from a steam line failure will not exceed 10 CFR Part 100 dose guidelines.

Information obtained on iodine spiking will be used to assess the parameters associated with spiking phenomena. A reduction in frequency of isotopic analysis following power changes may be permissible, if justified by the data obtained.

Closing the main steam line isolation valves prevents the release of activity to the environs should the steam line rupture occur. The surveillance requirements provide adequate assurance that excessive specific activity levels in the reactor coolant will be detected in sufficient time to take corrective action.

### 3/4.4.6 PRESSURE/TEMPERATURE LIMITS

All components in the Reactor Coolant System are designed to withstand the effects of cyclic loads due to system temperature and pressure changes. These cyclic loads are introduced by normal load transients, reactor trips, and start-up and shutdown operations. The various categories of load cycles used for design purposes are provided in Section 4.2 of the FSAR. During

## REACTOR COOLANT SYSTEM

### BASES

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#### PRESSURE/TEMPERATURE LIMITS (Continued)

start-up and shutdown, the rates of temperature and pressure changes are limited so that the maximum specified heatup and cooldown rates are consistent with the design assumptions and satisfy the stress limits for cyclic operation.

During heatup, the thermal gradients in the reactor vessel wall produce thermal stresses which vary from compressive at the inner wall to tensile at the outer wall. Thermal-induced compressive stresses tend to alleviate the tensile stresses induced by the internal pressure. During cooldown, thermal gradients to be accounted for are tensile at the inner wall and compressive at the outer wall.

The reactor vessel materials have been tested to determine their initial  $RT_{NDT}$ . The results of these tests are shown in GE NEDO 24161. Reactor operation and resultant fast neutron,  $E > 1$  Mev, fluence will cause an increase in the  $RT_{NDT}$ . Therefore, an adjusted reference temperature, based upon the fluence, can be predicted using the proper revision of Regulatory Guide 1.99. The pressure-temperature limit curve Figures 3.4.6.1-1, 3.4.6.1-2, and 3.4.6.1-3a through 3.4.6.1-3c include predicted adjustments for this shift in  $RT_{NDT}$  at the end of indicated EFPY, as well as adjustments to account for the location of the pressure-sensing instruments.

The actual shift in  $RT_{NDT}$  of the vessel material will be checked periodically during operation by removing and evaluating, in accordance with ASTM E185-82, reactor vessel material irradiation surveillance specimens installed near the inside wall of the reactor vessel in the core area. Since the neutron spectra at the irradiation samples and vessel inside radius vary little, the measured transition shift for a sample can be adjusted with confidence to the adjacent section of the reactor vessel.

The pressure-temperature limit lines shown in Figures 3.4.6.1-1, 3.4.6.1-2 and 3.4.6.1-3a through 3.4.6.1-3c have been provided to assure compliance with the minimum temperature requirements of the 1983 revision to Appendix G of 10CFR50. The conservative method of the Standard Review Plan has been used for heatup and cooldown.

The number of reactor vessel irradiation surveillance specimens and the frequencies for removing and testing these specimens are provided in Table 4.4.6.1.3-1 to assure compliance with the requirements of ASTM E185-82.



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. 211  
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 October 23, 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) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 211, 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



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: December 13, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 211

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

3/4 4-7

3/4 4-9

B 3/4 4-3

B 3/4 4-4

Insert Pages

3/4 4-7

3/4 4-9

B 3/4 4-3

B 3/4 4-4

REACTOR COOLANT SYSTEM

3/4.4.4 CHEMISTRY

LIMITING CONDITION FOR OPERATION

3.4.4 The chemistry of the reactor coolant system shall be maintained within the limits specified in Table 3.4.4-1.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4, and 5\*. |

ACTION:

- a. In OPERATIONAL CONDITIONS 1, 2, and 3: |
  - 1. With the conductivity or chloride concentration exceeding the limits specified in Table 3.4.4-1, but less than 10  $\mu$ mho/cm at 25°C and less than 0.5 ppm, respectively, operation may continue for up to 24 hours and this condition need not be reported to the Commission provided that operation under these conditions shall not exceed 336 hours per year. The provisions of Specification 3.0.4 are not applicable.
  - 2. With the conductivity or chloride concentration exceeding the limits specified in Table 3.4.4-1 for more than 24 hours during one continuous time interval or with the conductivity exceeding 10  $\mu$ mho/cm at 25°C or chloride exceeding 0.5 ppm, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. In OPERATIONAL CONDITIONS 4 and 5\* with the conductivity and/or chloride concentration of the reactor coolant in excess of the limit specified in Table 3.4.4-1, restore the conductivity and/or chloride concentration to within the limit within 48 hours. |

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\*Except during planned chemical decontamination activities (with the reactor vessel defueled). |

TABLE 3.4.4-1

REACTOR COOLANT SYSTEM CHEMISTRY LIMITS

<u>OPERATIONAL CONDITION</u>	<u>CHLORIDES</u>	<u>CONDUCTIVITY (<math>\mu</math>mhos/cm @ 25°C)</u>	
1	< 0.5 ppm	< 2.0	
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3, 4, and 5*	< 0.2 ppm	<10.0	

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\*Except during planned chemical decontamination activities (with the reactor vessel defueled). |

## REACTOR COOLANT SYSTEM

### BASES

The surveillance requirements provide adequate assurance that concentrations in excess of the limits will be detected in sufficient time to take corrective action.

In order to reduce personnel radiation exposure, chemical decontamination of portions of the reactor coolant system may be performed during shutdown. During the chemical decontamination process, the injection of chemical solvents may cause the reactor coolant system conductivity and chloride measurements to increase above the limits. The solvents that are selected for use in performing the chemical decontamination process are selected and evaluated to ensure their chemical reactivity will not adversely impact components or the structural integrity of the reactor coolant system. Because decontamination activities are performed at temperatures significantly less than normal operating temperatures, the chemical reactivity of these solvents will not increase the likelihood of stress corrosion occurring nor affect those stress corrosion cracks that may already be present.

#### 3/4.4.5 SPECIFIC ACTIVITY

The limitations on the specific activity of the primary coolant ensure that the 2-hour thyroid and whole body doses resulting from a main steam line failure outside the containment during steady state operation will not exceed small fractions of the dose guidelines in 10CFR 100. Permitting operation to continue for limited time periods with higher specific activity levels accommodates short-term iodine spikes which may be associated with power level changes, and is based on the fact that a steam line failure during these short time periods is considerably less likely. Operation at the higher activity levels, therefore, is restricted to a small fraction of the unit's total operating time. The upper limit of coolant iodine concentration during short-term iodine spikes ensures that the thyroid dose from a steam line failure will not exceed 10 CFR Part 100 dose guidelines.

Information obtained on iodine spiking will be used to assess the parameters associated with spiking phenomena. A reduction in frequency of isotopic analysis following power changes may be permissible, if justified by the data obtained.

Closing the main steam line isolation valves prevents the release of activity to the environs should the steam line rupture occur. The surveillance requirements provide adequate assurance that excessive specific activity levels in the reactor coolant will be detected in sufficient time to take corrective action.

#### 3/4.4.6 PRESSURE/TEMPERATURE LIMITS

All components in the Reactor Coolant System are designed to withstand the effects of cyclic loads due to system temperature and pressure changes. These cyclic loads are introduced by normal load transients, reactor trips, and start-up and shutdown operations. The various categories of load cycles used for design purposes are provided in Section 4.2 of the FSAR. During

## REACTOR COOLANT SYSTEM

### BASES

#### PRESSURE/TEMPERATURE LIMITS (Continued)

start-up and shutdown, the rates of temperature and pressure changes are limited so that the maximum specified heatup and cooldown rates are consistent with the design assumptions and satisfy the stress limits for cyclic operation.

During heatup, the thermal gradients in the reactor vessel wall produce thermal stresses which vary from compressive at the inner wall to tensile at the outer wall. Thermally induced compressive stresses tend to alleviate the tensile stresses induced by the internal pressure. During cooldown, thermal gradients to be accounted for are tensile at the inner wall and compressive at the outer wall.

The reactor vessel materials have been tested to determine their initial  $RT_{NDT}$ . The results of these tests are shown in GE NEDO 24161. Reactor operation and resultant fast neutron,  $E > 1$  Mev, fluence will cause an increase in the  $RT_{NDT}$ . Therefore, an adjusted reference temperature, based upon the fluence, can be predicted using the proper revision of Regulatory Guide 1.99. The pressure/temperature limit curves Figures 3.4.6.1-1, 3.4.6.1-2, and 3.4.6.1-3a through 3.4.6.1-3c include predicted adjustments for this shift in  $RT_{NDT}$  at the end of indicated EFPY, as well as adjustments to account for the location of the pressure-sensing instruments.

The actual shift in  $RT_{NDT}$  of the vessel material will be checked periodically during operation by removing and evaluating, in accordance with ASTM E185-82, reactor vessel material irradiation surveillance specimens installed near the inside wall of the reactor vessel in the core area. Since the neutron spectra at the irradiation samples and vessel inside radius vary little, the measured transition shift for a sample can be adjusted with confidence to the adjacent section of the reactor vessel.

The pressure/temperature limit lines shown in Figures 3.4.6.1-1, 3.4.6.1-2, and 3.4.6.1-3a through 3.4.6.1-3c have been provided to assure compliance with the minimum temperature requirements of the 1983 revision to Appendix G of 10CFR50. The conservative method of the Standard Review Plan has been used for heatup and cooldown.

The number of reactor vessel irradiation surveillance specimens and the frequencies for removing and testing these specimens are provided in Table 4.4.6.1.3-1 to assure compliance with the requirements of ASTM E185-82.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 180 TO FACILITY OPERATING LICENSE NO. DPR-71  
AND AMENDMENT NO. 211 TO FACILITY 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 October 23, 1995, the Carolina Power & Light Company (the licensee) submitted a request for changes to the Brunswick Steam Electric Plant, Units 1 and 2, Technical Specifications (TS). The requested changes would revise Section 3.4.4.b of the TSs to delete the applicability of the primary coolant water chemistry limits when the primary system is being chemically decontaminated and the reactor vessel is defueled.

2.0 EVALUATION

During reactor operation, an oxide film or layer builds up on the surfaces of all material exposed to the primary coolant. The oxide film entraps corrosion products, some of which are strong gamma emitters (e.g., cobalt-60) which result in high radiation levels in the vicinity of the piping, valves, pumps and other components. The only way the material can be removed is by mechanical means (e.g., scraping), with high pressure sprays (e.g., hydrolyzing) or chemically. Except for small sections of piping or small components where the surfaces are accessible, chemical decontamination is the only feasible means of removing some or most of the oxide film to reduce radiation levels. The chemical solutions or solvents used vary depending on the materials of construction, the results of corrosion test programs, disposal options for the waste solutions, the time available, the level of decontamination expected to be achieved, and other factors, but generally involve strong oxidizing agents, (e.g., alkaline permanganate), weak acids, (e.g., citric acid), chelating agents, (e.g., EDTA), inhibitors and various proprietary solutions.

Section 3.4.4 requires that the chemistry of the reactor coolant system shall be maintained within the limits specified in Table 3.4.4-1 "at all times." The licensee proposes to change "at all times" to "operational conditions 1, 2, 3, 4, and 5," which covers all modes of operation from power operation (operational condition 1) to refueling (operational condition 5). Thus, there is no change in the applicability. The asterisk with operational condition 5 will refer to a proposed footnote that will read "except during planned chemical decontamination activities (with the reactor vessel defueled)."

Section 3.4.4.a of the current TS specifies the water chemistry conditions that must be maintained during "operational condition 1, 2, and 3." There are no proposed changes to this section. Section 3.4.4.b specifies the water chemistry conditions that must be maintained "at all other times." The licensee proposes to change the latter to "in operational conditions 4 and 5." Since modes 4 and 5 (shutdown and refueling) are the only two operational modes not covered by 3.4.4.a, there is no change in applicability. This is only a more precise definition of what constitutes "at all other times." The asterisk with operational condition 5 will refer to the footnote described above.

Table 3.4.4-1 lists the reactor coolant system chemistry limits that must be maintained during operational condition 1, 2 and "at all other times." The licensee proposes to define the latter as operational condition "3, 4, and 5." This is simply a redefinition of what constitutes "at all other times." There are no changes in any of the chloride or conductivity limits. The asterisk with operational condition 5 will refer to a footnote which will read "Except during planned chemical decontamination activities (with the reactor vessel defueled)."

The licensee also proposes to add a paragraph to BASES Section 3/4.4.4 on Chemistry to discuss water chemistry conditions during decontamination of the primary system. Because of the addition of this paragraph on page B 3/4 4-3, some of the material in Section 3/4 4.6 now on page B 3/4 4-3 is being relocated, without changes, to page B 3/4 4-4.

As noted previously, the decontamination solvents generally involve acidic and/or alkaline solutions. Compared to the essentially "pure" water of primary coolant, these solvents have high conductivity (low resistivity) and pHs well above or below the relatively neutral pH of demineralized water. The water chemistry limits in Section 3.4.4 of the TS are based on the primary coolant being demineralized water. The limits are not appropriate during decontamination of the primary system. The licensee's proposed changes to Section 3.4.4 are to reflect this fact. The proposed changes specify that the water chemistry limits are only suspended when the reactor vessel is defueled and chemical decontamination is in process. The licensee will have to thoroughly flush the primary system with demineralized water (particularly pockets where suspended corrosion products and other material may settle) and restore the water chemistry quality specified in Table 3.4.4-1 before existing Mode 5. The proposed changes are acceptable.

This safety evaluation does not assess any particular decontamination process or processes that the licensee might use to remove the corrosion product oxide film from the base metal. In accordance with 10 CFR 50.59, the licensee has to conduct adequate corrosion test loop studies (or rely on tests conducted by others) to assess both general corrosion of the base metals as well as the potential for specific corrosion attack (e.g., pitting corrosion, crevice corrosion, etc.), optimal temperatures and circulation rates, potential hideout during flushing and all the other considerations in selecting the solutions to be used.

### 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 (60 FR 56364). 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.

Principal Contributor: R. Clark

Date: December 13, 1995