

February 19, 1997

DISTRIBUTION

Mr. J. W. Hampton
Vice President, Oconee Site
Duke Power Company
P. O. Box 1439
Seneca, SC 29679

Docket File
PUBLIC
PDII-2 RF
S.Varga
L.Wert, RII
J.Zwolinski
E.Merschhoff, RII
OGC 0-15 B18

G.Hill(4) T-5 C3
C.Grimes 0-11 F23
ACRS T-2 E26

SUBJECT: ISSUANCE OF AMENDMENTS - OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3 (TAC NOS. M94898, M94899 and M94900)

Dear Mr. Hampton:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 221, to Facility Operating License DPR-38, Amendment No.221 to Facility Operating License No. DPR-47, and Amendment No.218 to Facility Operating License No. DPR-55, for the Oconee Nuclear Station, Units 1, 2, and 3, respectively. The amendments are in response to your application dated February 20, 1996, as supplemented October 16, 1996.

The amendments revise Technical Specifications (TS) 3.1.5, TS 3.1.10 and TS 4.1 to (1) reduce the surveillance frequency for the boron concentration in the concentrated boric acid storage tank, (2) delete the surveillance requirements for Sr⁸⁹ and Sr⁹⁰, gross beta activity, gross alpha activity and dissolved gas concentration in the reactor coolant, and gross beta activity in the steam generator feedwater, and (3) relocate the surveillance requirements for tritium, chloride, fluoride, and oxygen in the reactor coolant to the Selected Licensee Commitments (SLC) manual. In addition, TS 3.1.10 related to temperature and pressure requirements to avoid gas bubble formation on depressurization is deleted.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,
Original signed by:

NRC FILE CENTER COPY

David E. LaBarge, Senior Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-269, 50-270, and 50-287

- Enclosures: 1. Amendment No. 221 to DPR-38
- 2. Amendment No. 221 to DPR-47
- 3. Amendment No. 218 to DPR-55
- 250026 4. Safety Evaluation

cc w/encl: See next page

DOCUMENT NAME: G:\OCONEE\OC094898.AME

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	PM:PD22:DRPE	LA:PD22:DRPE	EMCB	OGC	D:PD22:DRPE
NAME	DLaBarge:cn	LBerry	JStroschider K. Wichman	changes	HBerkow
DATE	1/13/97	1/18/97	1/14/97	2/15/96	2/19/97

OFFICIAL RECORD COPY

9702250272 970219
PDR ADOCK 05000269
PDR

*incorporated
2/14/97
DF01*



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

February 19, 1997

Mr. J. W. Hampton
Vice President, Oconee Site
Duke Power Company
P. O. Box 1439
Seneca, SC 29679

SUBJECT: ISSUANCE OF AMENDMENTS - OCONEE NUCLEAR STATION, UNITS 1, 2,
AND 3 (TAC NOS. M94898, M94899 and M94900)

Dear Mr. Hampton:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 221, to Facility Operating License DPR-38, Amendment No. 221 to Facility Operating License No. DPR-47, and Amendment No. 218 to Facility Operating License No. DPR-55, for the Oconee Nuclear Station, Units 1, 2, and 3, respectively. The amendments are in response to your application dated February 20, 1996, as supplemented October 16, 1996.

The amendments revise Technical Specifications (TS) 3.1.5, TS 3.1.10 and TS 4.1 to (1) reduce the surveillance frequency for the boron concentration in the concentrated boric acid storage tank, (2) delete the surveillance requirements for Sr⁸⁹ and Sr⁹⁰, gross beta activity, gross alpha activity and dissolved gas concentration in the reactor coolant, and gross beta activity in the steam generator feedwater, and (3) relocate the surveillance requirements for tritium, chloride, fluoride, and oxygen in the reactor coolant to the Selected Licensee Commitments (SLC) manual. In addition, TS 3.1.10 related to temperature and pressure requirements to avoid gas bubble formation on depressurization is deleted.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

A handwritten signature in black ink, appearing to read "De LaBarge".

David E. LaBarge, Senior Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-269, 50-270, and 50-287

Enclosures: 1. Amendment No. 221 to DPR-38
2. Amendment No. 221 to DPR-47
3. Amendment No. 218 to DPR-55
4. Safety Evaluation

cc w/encl: See next page

Mr. J. W. Hampton
Duke Power Company

Oconee Nuclear Station

cc:

Mr. Paul R. Newton
Legal Department (PB05E)
Duke Power Company
422 South Church Street
Charlotte, North Carolina 28242-0001

Mr. Ed Burchfield
Compliance
Duke Power Company
Oconee Nuclear Site
P. O. Box 1439
Seneca, South Carolina 29679

J. Michael McGarry, III, Esquire
Winston and Strawn
1400 L Street, NW.
Washington, DC 20005

Ms. Karen E. Long
Assistant Attorney General
North Carolina Department of
Justice
P. O. Box 629
Raleigh, North Carolina 27602

Mr. Robert B. Borsum
Framatome Technologies
Suite 525
1700 Rockville Pike
Rockville, Maryland 20852-1631

Mr. G. A. Copp
Licensing - EC050
Duke Power Company
526 South Church Street
Charlotte, North Carolina 28242-0001

Manager, LIS
NUS Corporation
2650 McCormick Drive, 3rd Floor
Clearwater, Florida 34619-1035

Mr. Dayne H. Brown, Director
Division of Radiation Protection
North Carolina Department of
Environment, Health and
Natural Resources
P. O. Box 27687
Raleigh, North Carolina 27611-7687

Senior Resident Inspector
U. S. Nuclear Regulatory Commission
Route 2, Box 610
Seneca, South Carolina 29678

Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
101 Marietta Street, NW. Suite 2900
Atlanta, Georgia 30323

Max Batavia, Chief
Bureau of Radiological Health
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

County Supervisor of Oconee County
Walhalla, South Carolina 29621



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

DUKE POWER COMPANY

DOCKET NO. 50-269

OCONEE NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 221
License No. DPR-38

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Oconee Nuclear Station, Unit 1 (the facility) Facility Operating License No. DPR-38 filed by the Duke Power Company (the licensee) dated February 20, 1996, as supplemented by letter dated October 16, 1996, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as 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 set forth in 10 CFR Chapter I;
 - 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 hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 3.B of Facility Operating License No. DPR-38 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 221, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance. Implementation shall include concurrent revision of the Selected Licensee Commitment Manual in accordance with the application for this amendment.

FOR THE NUCLEAR REGULATORY COMMISSION



Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: February 19, 1997



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

DUKE POWER COMPANY

DOCKET NO. 50-270

OCONEE NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 221
License No. DPR-47

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Oconee Nuclear Station, Unit 2 (the facility) Facility Operating License No. DPR-47 filed by the Duke Power Company (the licensee) dated February 20, 1996, as supplemented by letter dated October 16, 1996, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as 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 set forth in 10 CFR Chapter I;
 - 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.

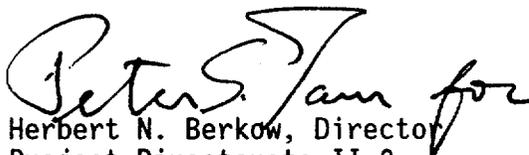
2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 3.B of Facility Operating License No. DPR-47 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 221, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance. Implementation shall include concurrent revision of the Selected Licensee Commitment Manual in accordance with the application for this amendment.

FOR THE NUCLEAR REGULATORY COMMISSION



Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: February 19, 1997



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

DUKE POWER COMPANY

DOCKET NO. 50-287

OCONEE NUCLEAR STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 218
License No. DPR-55

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Oconee Nuclear Station, Unit 3 (the facility) Facility Operating License No. DPR-55 filed by the Duke Power Company (the licensee) dated February 20, 1996, as supplemented by letter dated October 16, 1996, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as 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 set forth in 10 CFR Chapter I;
 - 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 hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 3.B of Facility Operating License No. DPR-55 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No.218 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance. Implementation shall include concurrent revision of the Selected Licensee Commitment Manual in accordance with the application for this amendment.

FOR THE NUCLEAR REGULATORY COMMISSION



Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: February 19, 1997

ATTACHMENT TO LICENSE AMENDMENT NO. 221

FACILITY OPERATING LICENSE NO. DPR-38

DOCKET NO. 50-269

AND

TO LICENSE AMENDMENT NO. 221

FACILITY OPERATING LICENSE NO. DPR-47

DOCKET NO. 50-270

AND

TO LICENSE AMENDMENT NO. 218

FACILITY OPERATING LICENSE NO. DPR-55

DOCKET NO. 50-287

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change.

Remove Pages

4.1-10
4.1-12
3.1-12
3.1-13
3.1-21
3.1-22

Insert Pages

4.1-10
4.1-12
3.1-12
3.1-13
3.1-21
3.1-22

Table 4.1-3

Minimum Sampling Frequency And Analysis Program

<u>Item</u>	<u>Check</u>	<u>Frequency</u>
1. Reactor Coolant	a. Gamma Isotopic Analysis b. Boron Concentration c. \bar{E} Determination (2)	a. 3 times/week* b. 2 times/week** c. Semi-annually
2. Borated Water Storage Tank Water Sample	Boron Concentration	Weekly* and after each makeup
3. Core Flooding Tank	Boron Concentration	Monthly* and after each makeup
4. Spent Fuel Pool Water Sample	Boron Concentration	Monthly and after each makeup
5. OTSG or Final Feedwater	Gamma Isotopic Analysis	Weekly*
6. Concentrated Boric Acid Tank	Boron Concentration	Weekly*

* Not applicable if reactor is in a cold shutdown condition for a period exceeding the sampling frequency.

** Applicable only when fuel is in the reactor.

TABLE 4.1-3 NOTES

- (1) (Not Used)
- (2) \bar{E} determination will be started when gross gamma activity analysis indicates greater than 10 μ Ci/ml and will be determined for each 10 μ Ci/ml increase in gross gamma activity analysis thereafter. A radiochemical analysis for this purpose shall consist of a quantitative measurement of 95 percent of the radionuclides in the reactor coolant with half lives greater than 30 minutes.
- (3) (Not Used)
- (4) (Not Used)
- (5) (Not Used)
- (6) (Not Used)
- (7) (Not Used)
- (8) (Not Used)
- (9) (Not Used)
- (10) (Not Used)
- (11) (Not Used)

INTENTIONALLY BLANK

OCONEE - UNITS 1, 2, & 3

3.1-12

Amendment No. 221 (Unit 1)
Amendment No. 221 (Unit 2)
Amendment No. 218 (Unit 3)

INTENTIONALLY BLANK

OCONEE - UNITS 1, 2, & 3

3.1-13

Amendment No. 221 (Unit 1)
Amendment No. 221 (Unit 2)
Amendment No. 218 (Unit 3)

INTENTIONALLY BLANK

OCONEE - UNITS 1, 2, & 3

3.1-21

Amendment No. 221 (Unit 1)
Amendment No. 221 (Unit 2)
Amendment No. 218 (Unit 3)

INTENTIONALLY BLANK

OCONEE - UNITS 1, 2, & 3

3.1-22

Amendment No. 221 (Unit 1)
Amendment No. 221 (Unit 2)
Amendment No. 218 (Unit 3)



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 221 TO FACILITY OPERATING LICENSE DPR-38,
AMENDMENT NO. 221 TO FACILITY OPERATING LICENSE DPR-47,
AND AMENDMENT NO. 218 TO FACILITY OPERATING LICENSE DPR-55
DUKE POWER COMPANY
OCONEE NUCLEAR STATION, UNITS 1, 2 AND 3
DOCKET NOS. 50-269, 50-270 AND 50-287

1.0 INTRODUCTION

By letter dated February 20, 1996, as supplemented October 16, 1996, Duke Power Company (the licensee), submitted a request for changes to the Oconee Nuclear Station (ONS), Units 1, 2, and 3, Technical Specifications (TS). The requested changes would revise TS Table 4.1-3 and TS 3.1.5, 3.1.10, and 4.1. The TS changes would: (1) reduce the frequency of the concentrated boric acid storage tank boron concentration surveillance for boron concentration from twice weekly to weekly; (2) delete the chemical and radiochemical surveillance requirements for the reactor coolant for Sr⁸⁹ and Sr⁹⁰, gross beta activity, gross alpha activity, dissolved gas concentration in the reactor coolant, and gross beta activity in the steam generator feedwater; (3) relocate the surveillance requirements for tritium, chloride, fluoride and oxygen to the Selected Licensee Commitments (SLC) Manual; and (4) delete TS 3.1.10 and TS Figure 3.1.10-1 related to temperature and pressure requirements for control rod operation.

Guidance for the evaluation of the proposed amendments is provided by Regulatory Guide (RG) 1.97, by the Commission's Final Policy Statement dated July 16, 1993, on the scope and purpose of the TS, and by the Improved Standard Technical Specifications for Babcock and Wilcox nuclear plants, revised April 7, 1995.

The supplementary information supplied by letter dated October 16, 1996, did not affect the proposed no significant hazards consideration determination and the initial scope of the February 20, 1996, application.

2.0 EVALUATION

2.1 Concentrated Boric Acid Storage Tank (CBAST) Surveillance

The concentrated boric acid solution in the CBAST is used to adjust the boron concentration in the reactor coolant system. Item 6 of TS Table 4.1-3 requires that the CBAST boric acid concentration be determined twice weekly.

However, the only parameters that could affect the boric acid concentration in the CBAST are the temperature of the CBAST and associated piping (which is automatically maintained at preset elevated values to prevent precipitation of boric acid), and the level of the CBAST (which is monitored on instruments located in the control room). Also, the operator aided computer (OAC) provides alarms for the operator if the temperatures of the CBAST and associated piping vary from the preset values. Plant operational procedures require evaluation of the CBAST boron concentration within 4 hours after completing any volume transfers.

These operational procedure requirements, the OAC alarms and the remote level monitoring instrumentation provide assurance that any sudden changes in the boron concentration in the CBAST from the TS value will be detected, the effect on the concentration addressed, and the cause determined. Therefore, reduction of the surveillance frequency to determine the CBAST boric acid concentration from twice weekly to weekly is acceptable (Item 6 in TS Table 4.1-3, Minimum Sampling Frequency and Analysis Program).

2.2 Radiochemical Analysis for Sr⁸⁹ and Sr⁹⁰

Item 1 of TS Table 4.1-3 requires that the radiochemical analysis for Sr⁸⁹ and Sr⁹⁰ in the reactor coolant be determined monthly when fuel is in the core. It was originally included since these fission products could be biological hazards and are relatively long-lived. These activities are included in the calculation of Ebar, which is the average beta and gamma energy per disintegration in MeV, weighted in proportion to the measured activity of the radionuclides in reactor coolant samples. This quantity, in turn, is used in TS 3.1.4, which requires that the total activity of the reactor coolant due to nuclides with half-lives longer than 30 minutes shall not exceed 224/Ebar microcuries per milliliter whenever the reactor is critical. The Bases of TS 3.1.4 state that the specification is based on limiting the consequences of a postulated accident involving the double-ended steam generator tube rupture (SGTR).

The licensee has determined, however, that in two decades of strontium data trending, the strontium activity remained within a range of 1.0E-5 to 1.0E-7 microcuries per milliliter during normal operation. This amounts to less than 2.0E-3 percent of the total reactor coolant activity and, therefore, would not impact the calculation of Ebar. Correspondingly, the low strontium activities during normal operation would not contribute significantly to the consequences of an SGTR accident.

Further, any abnormal increases in reactor coolant activities, including the strontium activities, will be detected in the required twice weekly gamma spectrometer analyses. Also, the current technology for evaluating the SGTR doses provides a more conservative SGTR accident dose estimate, which is tied to a TS requirement that puts a specific limit on the radioactive iodine concentration in the reactor coolant. It should be noted that Note 2 to TS Table 4.1-3 will be retained, requiring an Ebar determination whenever the gross gamma concentration exceeds 10 microcuries per milliliter, and the redetermination of Ebar for each additional 10 microcurie per milliliter increase in gross gamma concentration.

In light of the low strontium activities historically observed in the reactor coolant, the ability of the daily gamma spectral analyses to measure increases in strontium, iodine and the other activities, the conservative approach in evaluating the SGTR accident doses, and the additional requirement to perform an Ebar determination when the gross gamma activity exceeds the acceptable limits, the licensee's proposal to eliminate the radiochemical analyses for strontium activities is acceptable.

2.3 Gross Beta and Gamma Analyses

The objective of the gross beta and gamma radiochemical analyses required by Items 1d, 1g, and 5a of TS Table 4.1-3 was to monitor the fuel cladding integrity and the concentration of fission products in the reactor coolant and steam generator. Since the time when these requirements were instituted in the early 1970's, there have been significant advances in multichannel gamma isotopic analyzer technology as applied in the radiochemistry program at the ONS. The improved analysis permits the precise identification of individual isotopes, including beta and alpha emitting fission products from their coincident gamma emissions.

The results of the gamma spectral analyses for selected isotopes are scrutinized for deviations from normal behavior. Long-term plots of the data are reviewed by ONS staff monthly, with additional reviews 3 times per year. Any adverse trends are investigated to determine the cause.

In view of the capability of the improved multichannel gamma isotopic analyzer to determine the concentrations of the important fission products in the reactor coolant system, and the provisions for reviewing the short-term and long-term behavior of these isotopes, the licensee's proposal to delete the requirements for radiochemical gross beta and gross gamma analyses (Items 1d, 1g, and 5a) from TS Table 4.1-3 is acceptable.

2.4 Tritium Analysis

In reactors, tritium is produced by ternary fission and by the reaction of fast neutrons with the Li^6 content of the reactor coolant. The rate of production can be calculated from the known ternary fission yield and the known cross section of Li^6 for reactor neutron reactions. To minimize the

contribution of the latter reaction, 99.9 percent pure Li^7 is used in the LiOH added to the reactor coolant to control pH level. The requirement for the surveillance of tritium concentration in reactor coolant was included as Item 1c of TS Table 4.1-3 because tritium is a known biological hazard, as a beta emitter with a half-life of 12.4 years.

The proposed amendments would delete Item 1c from TS Table 4.1-3, and relocate the tritium surveillance requirements to the Selected Licensee Commitment (SLC) manual, with a quarterly surveillance frequency in place of the monthly frequency specified in TS Table 4.1-3. In addition to this measurement of tritium in the reactor coolant, ONS has programs in place to monitor all effluents leaving the site for tritium content, including the chemical treatment pond discharge and the site groundwater. Containment air is monitored for tritium whenever the reactor building is entered.

The change in surveillance frequency for tritium in the reactor coolant from monthly to quarterly is justified because the known tritium production rate during reactor operation results in slow and predictable changes in the tritium content of the reactor coolant. The relocation of this surveillance requirement to the SLC manual is acceptable, because it is consistent with the Improved Standard Babcock & Wilcox Owners' Group (BWOOG) TS and the requirement does not meet any of the four criteria listed in 10 CFR 50.36 for inclusion in the TS. Because the SLC manual is a part of the Updated Final Safety Analysis Report (UFSAR), any changes to the surveillance requirement could only be made in accordance with the 10 CFR 50.59 process. The staff considers this process adequate to ensure that the surveillance program for the tritium content of the reactor coolant will be adequately controlled. In addition, since implementation of the change to the SLC manual will coincide with the change to the TS, the surveillance requirements will remain in effect and adequately controlled during the change process.

In view of the provisions for continued surveillance of the coolant, the effluent monitoring programs and the use of Li^7 to reduce the rate of generation of tritium, the proposed amendments regarding tritium surveillance are acceptable.

2.5 Oxygen, Chloride, and Fluoride Analyses

The rate of stress corrosion cracking of reactor components is strongly influenced by the levels of dissolved oxygen, chloride and fluoride in the reactor coolant. Therefore, in TS 3.1.4, the concentrations of these species are required to be very low. Item 1e of TS Table 4.1-3 specifies a frequency of 5 times per week for measuring the concentrations of these species. However, during normal operation, changes in the concentrations of oxygen and halide ions in the reactor coolant are slow. Therefore, the licensee has proposed to reduce the frequency of these analyses to 3 times per week. Further, the licensee has proposed to relocate the chemistry specifications to the SLC manual.

Because of the slow rate at which oxygen and halide concentrations change in the reactor coolant, the reduced analysis frequency of 3 times per week is acceptable. Also, the relocation of the chemistry specifications to the SLC manual is acceptable because they do not meet any of the four criteria listed in 10 CFR Part 50.36. Also, the chemistry specifications are not included in the BWOOG Improved Standard TS. Because the SLC manual is a part of the UFSAR, any changes to the specifications could only be made in accordance with the 10 CFR 50.59 process. The staff considers this process adequate to control the surveillance program for the oxygen, chloride, and fluoride concentrations in the reactor coolant. In addition, since implementation of the change to the SLC manual will coincide with the change to the TS, the specifications will remain in effect and adequately controlled during the change process. The related shutdown requirements will be in accordance with the EPRI guidelines.

Based on the previous discussion, the licensee's proposed amendments of TS 4.1.5 and TS Table 4.1-3 related to the chemical specifications are acceptable.

2.6 Dissolved Gas Concentration Analysis

The requirement to measure the concentration of dissolved gas in reactor coolant, TS 3.1.10, was placed in the Oconee TS following an incident during the initial testing of ONS Unit 1 in 1971. A nitrogen overpressure of 400 psig had been established for the pressurizer for operation of the reactor coolant pump, which results in a dissolved nitrogen concentration of 300 standard cubic centimeters of nitrogen per liter of water in the pressurizer.

The failure of a pressurizer valve caused a sudden depressurization to 60 psig, which resulted in the formation of nitrogen gas pockets in the reactor vessel and some of the control rod drive mechanisms. During a subsequent control rod drop test, several of the control rods were damaged because of the absence of water above the snubbing springs for proper dampening action.

The requirement in TS 3.1.10.2 that dissolved gas concentration remains below 100 standard cubic centimeters per liter was designed to preclude the formation of gas bubbles in significant amounts following depressurization. The restrictions of TS 3.1.10.2 and Figure 3.1.10-1 also limit the dissolved gas concentration. However, during the operational history of ONS the dissolved gas concentration has not exceeded the TS limit, and is normally less than 50 standard cubic centimeters per liter.

During startup, power operation, and cooldown, the gas content of the coolant is controlled through operation practices such as venting. At ONS, instrumentation and procedures are in place to ensure that the appropriate actions are taken to preclude conditions that would result in a "gas-out" problem. Therefore, the licensee proposes to delete TS 3.1.10 and Figure 3.1.10-1 from the Oconee TS.

In view of the low dissolved gas concentrations observed during the operational history of ONS, the unlikelihood that the 1971 gas bubble incident would be repeated, and the instrumentation and procedures in place at ONS to avoid conditions leading to a "gas-out" problem, the staff finds that the amendments to delete TS 3.1.10 and Figure 3.1.10-1 are acceptable.

2.7 Spent Fuel Pool Sampling Footnote Deletion

The third footnote to TS Table 4.1-3 (current page 4.1-10), "Applicable only when fuel is in the wet storage in the spent fuel pool," was originally inserted to prevent excessive monitoring prior to storing fuel in the pool. The proposed amendments would delete this footnote.

The staff finds the deletion acceptable because fuel will always be present in the spent fuel pool for wet storage. The footnote, therefore, is outdated and unnecessary.

3.0 STATE CONSULTATION

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

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change surveillance requirements. 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 (61 FR 13523 dated March 27, 1996). 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: S. S. Kirslis

Date: February 19, 1997