

March 20, 1997

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Mr. J. W. Hampton
Vice President, Oconee Site
Duke Power Company
P. O. Box 1439
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OGC 0-15 B18

G.Hill(6) T-5 C3
C.Grimes 0-11 F23
ACRS T-2 E26
R.Crlenjak, RII

SUBJECT: ISSUANCE OF AMENDMENTS - OCONEE NUCLEAR STATION, UNITS 1, 2,
AND 3 (TAC NOS. M94926, M94927 and M94928)

Dear Mr. Hampton:

The Nuclear Regulatory Commission has issued the enclosed Amendment No.222 ,
to Facility Operating License DPR-38, Amendment No.222 to Facility Operating
License No. DPR-47, and Amendment No.219 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 15, 1996, and
supplemented February 18, 1997.

The amendments add operability and surveillance requirements regarding
operation and testing of the Keowee Hydro Station to the Oconee Technical
Specifications. In addition, the Keowee commercial power operating
restrictions curves are being added to your Selected Licensee Commitment
manual. As a result, any changes to the curves will be made in accordance
with the provisions of 10 CFR 50.59. Thus, should an unreviewed safety
question result from changes to the Keowee commercial power operating
restrictions, a license amendment application for staff review would be
required.

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:

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. 222 to DPR-38
- 2. Amendment No. 222 to DPR-47
- 3. Amendment No. 219 to DPR-55
- 4. Safety Evaluation

DF01/1

cc w/encl: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

March 20, 1997

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

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AND 3 (TAC NOS. M94926, M94927 and M94928)

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The amendments add operability and surveillance requirements regarding operation and testing of the Keowee Hydro Station to the Oconee Technical Specifications. In addition, the Keowee commercial power operating restrictions curves are being added to your Selected Licensee Commitment manual. As a result, any changes to the curves will be made in accordance with the provisions of 10 CFR 50.59. Thus, should an unreviewed safety question result from changes to the Keowee commercial power operating restrictions, a license amendment application for staff review would be required.

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 "D. 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. 222 to DPR-38
2. Amendment No. 222 to DPR-47
3. Amendment No. 219 to DPR-55
4. Safety Evaluation

cc w/encl: See next page

Duke Power Company

cc:

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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. 222
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 15, 1996, as supplemented by letter dated February 18, 1997, 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.

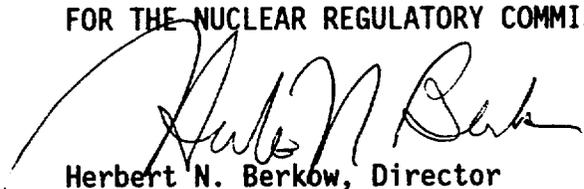
2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 3.B of Facility Operating License No. DPR-38 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 222, 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 revision of the Selected Licensee Commitment manual to incorporate the Keowee Hydro units' commercial power operating restrictions curves 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: March 20, 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. 222
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 15, 1996, as supplemented by letter dated February 18, 1997, 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. 222, 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 revision of the Selected Licensee Commitment manual to incorporate the Keowee Hydro units' commercial power operating restrictions curves 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: March 20, 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. 219
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 15, 1996, as supplemented by letter dated February 18, 1997, 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. 219, 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 revision of the Selected Licensee Commitment manual to incorporate the Keowee Hydro units' commercial power operating restrictions curves 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: March 20, 1997

ATTACHMENT TO LICENSE AMENDMENT NO. 222

FACILITY OPERATING LICENSE NO. DPR-38

DOCKET NO. 50-269

AND

TO LICENSE AMENDMENT NO. 222

FACILITY OPERATING LICENSE NO. DPR-47

DOCKET NO. 50-270

AND

TO LICENSE AMENDMENT NO. 219

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

3.7-3
3.7-14
4.6-3
4.6-4

Insert Pages

3.7-3
3.7-14
4.6-3
4.6-4
4.6-5

- (j) The Keowee station auxiliary transformers (1X and 2X) and the Keowee station backup auxiliary transformer (CX) shall be operable.
- (k) During periods of commercial power generation, the operability of the Keowee Hydro units shall be based on lake levels and the power level of the Keowee Hydro units. The Keowee Hydro operating restrictions for commercial power generation shall be contained in the ONS Selected Licensee Commitment manual.

3.7.2 With the reactor heated above 200°F, provisions of 3.7.1 may be modified to allow the following conditions to exist:

- (a)
 - (1) One of the two independent on-site emergency power paths, as defined in 3.7.1(b), may be inoperable for periods not exceeding 72 hours for test or maintenance, provided the alternate power path is verified operable within one hour of the loss and every eight hours thereafter.
 - (2) Both Keowee station auxiliary transformers (1X and 2X) may be inoperable for periods not exceeding 72 hours for test or maintenance, provided that the backup auxiliary transformer (CX) and its associated underground power path from Oconee switchgear 1TC is operable;
 - (3) Keowee backup auxiliary transformer (CX) and its associated underground power path from Oconee switchgear 1TC may be inoperable for periods not exceeding 72 hours for test or maintenance, provided that the Keowee main step-up transformer and both auxiliary transformers (1X and 2X) are operable;
 - (4) Keowee auxiliary transformer (1X) may be inoperable for test or maintenance provided that Keowee Unit 2 is aligned to the overhead path;
 - (5) Keowee auxiliary transformer (2X) may be inoperable for test or maintenance provided that Keowee Unit 1 is aligned to the overhead path.
- (b) Except for the allowable conditions defined in Specifications 3.7.2(a), 3.7.2(c), 3.7.2(i), 3.7.4, 3.7.6 and 3.7.7 the circuits or channels of any single functional unit of the EPSL may be inoperable for test or maintenance for periods not exceeding 24 hours, provided that:
 - 1. The conditions of Table 3.7-1 for degraded operation are satisfied for that specific functional unit; and
 - 2. The conditions of Table 3.7-1 for normal operation are satisfied for all other functional units.

Beyond the conditions allowed by 3.7.2(b)1 and 2, the circuits or channels of more than one functional unit of the EPSL may be inoperable only if:

- 1. The inoperability results from a loss of power due to the inoperability of a 125 VDC instrumentation and control panelboard (see 3.7.2(e) below); and

Transformer CX is capable of backing up one or both unit's auxiliary transformers.

Each Keowee unit has a generation capacity of 87.5 MVA and the main step up transformer is rated for 230 MVA. This power capacity exceeds the Oconee emergency power requirements. In addition to supplying emergency power for Oconee, the Keowee Hydro units provide peaking power to the Duke Power generation system. During periods of commercial power generation, the Keowee Hydro units are operated within the acceptable region of the Keowee Hydro operating restrictions. This will ensure that the Keowee Hydro units will be able to perform their emergency power functions from an initial condition of commercial power generation. The Keowee Hydro operating restrictions for commercial power generation are contained in the Selected Licensee Commitment manual. Changes to these operating restrictions would be performed in accordance with 10 CFR 50.59, which would include an evaluation to determine if any unreviewed safety questions exist.

Emergency Power Switching Logic Circuits

The Emergency Power Switching Logic (EPSL) in conjunction with its associated circuits, is designed with sufficient redundancy to assure that power is supplied to the unit Main Feeder Buses and, hence, to the unit's essential loads, under accident conditions. The logic system monitors the normal and emergency power sources and, upon loss of the normal power source (the unit auxiliary transformer), the logic will seek an alternate source of power.

Operation of the unit with certain circuits or channels of the EPSL inoperable for test or maintenance is permitted for periods of up to 24 hours, provided that the inoperable circuits/channels are in only one portion, or functional unit, of the EPSL and provided that a sufficient number of circuits/channels in the affected functional unit remain operable such that the functional unit does not lose its ability to perform its designed safety function. These provisions ensure that only one portion of the EPSL is degraded at a time for test or maintenance on the EPSL and that the affected portion remains operable although degraded.

Emergency power system components (transformers, buses, Keowee Hydro Units, etc.) which become inoperable for testing or maintenance cause their associated circuitry (functional units) of the EPSL to become ineffective. Therefore, the operability of these associated functional units is irrelevant and not required. In these cases the controlling Technical Specification for the LCO will be the one associated with the inoperability of the emergency power system component(s). However, all other functional units unaffected by the inoperability of the emergency power system component(s) must meet the requirements of Table 3.7-1 to ensure the operability of the remaining emergency power system.

In the event a 125 VDC instrumentation and control power panelboard becomes inoperable (for planned or unplanned reasons) as allowed by Technical Specification 3.7.2(e) (4), circuits or channels of more than one functional unit of EPSL may become inoperable. In this case, continued operation is allowed under the LCO of T.S. 3.7.2(e) (4), provided that no functional units' circuits, etc., addressed by Table 3.7.1 are out of service, which would not have been out of service due to inoperability of the panelboard. This assures that no functional unit of Table 3.7.1 is degraded beyond the requirements for degraded operation, and that the EPSL is capable of performing its intended function.

≥2.12 VDC.

- (3) The electrolyte level of each connected cell is between the minimum and maximum level indication marks.

c. Annually verify that:

- (1) The cells, end-cell plates and battery racks show no visual indication of structural damage or degradation.
- (2) The cell to cell and terminal connections are clean, tight and coated with anti-corrosion grease.

4.6.10 Annually, a one hour discharge service test at the required maximum load shall be made on the instrument and control batteries, the Keowee batteries, and the switching station batteries.

4.6.11 Monthly, the operability of the individual diode monitors in the Instrument and Control Power System shall be verified by imposing a simulated diode failure signal on the monitor.

4.6.12 Semiannually, the peak inverse voltage capability of each auctioneering diode in the 125 VDC Instrument and Control Power System shall be measured and recorded.

4.6.13 At least once every 18 months, the ability of the Keowee Hydro units to supply emergency power from an initial condition of commercial power generation shall be verified.

4.6.14 At least once every 18 months, the Keowee Hydro units load rejection response will be verified to be bounded by the design criteria used to develop the Keowee operating restrictions.

Bases

The Keowee Hydro units, in addition to serving as the emergency power sources for the Oconee Nuclear Station, are power generating sources for the Duke system requirements. As power generating units, they are operated frequently, normally on a daily basis at loads equal to or greater than required by Table 8.1-1 of the FSAR for ESF bus loads. Normal as well as emergency startup and operation of these units will be from the Oconee Unit

1 and 2 Control Room. The frequent starting and loading of these units to meet Duke system power requirements assures the continuous availability for emergency power for the Oconee auxiliaries and engineered safety features equipment. It will be verified that these units will carry the equipment of the maximum safeguards load within 25 seconds, including instrumentation lag, after a simulated requirement for engineered safety features. To further assure the reliability of these units as emergency power sources, they will be, as specified, tested for automatic start on a monthly basis from the Oconee control room. These tests will include verification that each unit can be synchronized to the 230 kV bus and that each unit can energize the 13.8 kV underground feeder. Also, the verification of the ability of the Keowee Unit ACBs to automatically close to the underground power path will be performed by the annual tests.

In order to ensure that the Keowee Hydro units are operable during periods of commercial power generation, the protection circuitry will be tested at least once every 18 months. This surveillance will ensure that the adverse effects of overspeed following a load rejection will be precluded and the appropriate emergency power paths will be aligned. In addition, the speed sensing governor failure logic will be verified during this surveillance. Failure to meet the acceptance criteria will be evaluated in the corrective action program to determine the impact on the operability of the emergency power paths. The Keowee Watt/Var meter, frequency relays, and governor magnetic speed switch will be calibrated prior to the performance of this surveillance.

A maximum power dual unit load rejection will be performed at least once every 18 months. This surveillance will verify that the Keowee Hydro units response to a load rejection is bounded by the design criteria used to develop the Keowee operating restrictions. The design criteria are defined in the calculation that determines the Keowee operating restrictions. A power level for the dual unit load rejection will be defined based on the operating conditions for the day of the test. In addition, a revision of the operating restrictions for simultaneous operation of both Keowee units will require that a maximum power dual unit load rejection test be performed prior to implementing the revision. A revision of the operating restrictions for a single Keowee unit will require only a maximum power single unit load rejection as defined by the conditions for the day of the test. However, if a load rejection test is performed to support a revision to the operating restrictions, then no additional load rejection test will be required until the next surveillance. The Keowee Watt/Var meter and frequency relays will be calibrated prior to the performance of this surveillance.

The interval specified for testing of transfer to emergency power sources is based on maintaining maximum availability of redundant power sources.

Starting a Lee Station gas turbine, separation of the 100 kV line from the remainder of the system, and charging of the 4160 volt main feeder buses are specified to assure the continuity and operability of this equipment. The one hour time limit is considered the absolute maximum time limit that would be required to accomplish this.

REFERENCE

FSAR, Section 8



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 222 TO FACILITY OPERATING LICENSE DPR-38.

AMENDMENT NO. 222 TO FACILITY OPERATING LICENSE DPR-47,
AND AMENDMENT NO. 219 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 15, 1996, which was supplemented by letter dated February 18, 1997, the Duke Power Company (licensee), submitted a request for changes to the Oconee Nuclear Station (ONS), Units 1, 2, and 3, Technical Specifications (TS). The requested changes would add operability requirements to TS 3.7 for the Keowee Hydro units during periods of commercial power operation. These requirements are based on lake levels and the power level of the Keowee Hydro units. In addition, two surveillances would be added to TS 4.6. The first surveillance addresses periodic testing of the circuitry that was added by the modification approved in the staff's safety evaluation dated August 15, 1995. The second surveillance would add a load rejection surveillance to ensure that the response of the Keowee Hydro units is bounded by the design criteria used to develop the Keowee commercial power operating restrictions.

The supplemental information supplied by letter dated February 18, 1997, did not affect the proposed no significant hazards consideration determination or the scope of the initial February 15, 1996, application.

2.0 BACKGROUND

During design basis reviews performed by the licensee for the emergency power system, a potential problem of overspeed during commercial operation by the Keowee units was identified following a load rejection. This potential overspeed problem could prevent the emergency power system from performing its safety function. In order to prevent this problem from occurring, simultaneous generation to the grid by both Keowee Hydro units was prohibited. In addition, load restrictions were placed on the Keowee unit generating to the grid.

Another part of the corrective action included development of a design modification to add overfrequency protection to the emergency power system. This modification prevents a Keowee unit from supplying emergency power following a load rejection until the Keowee unit reaches an acceptable speed. This modification also enhances the runaway governor protection by detecting a governor failure during an emergency start of Keowee.

The staff reviewed the electrical schematics and supporting information for the new circuitry design modification that prohibits overfrequency effects during overspeed conditions and detects governor failure. This review found that the new circuitry, intended as part of the corrective action for overfrequency and overspeed concerns, does indeed eliminate those concerns and is acceptable. Further, the staff discussed with the licensee the planned testing, periodic surveillance, and technical specification changes needed to support the overfrequency hardware modification and administrative control on commercial operation of the Keowee units. The licensee addressed these topics in an action plan attached to a letter dated April 19, 1995. The staff reviewed this action plan and supporting calculation for the Keowee commercial operating limits and found that the action plan implementation and installation of hardware modification will ensure that the Keowee units are capable of performing their intended safety function within the time required to meet the plant's accident analysis following a load rejection scenario. This review and evaluation is documented in an NRC safety evaluation attached to License Amendment Nos. 210, 210, and 207, issued August 15, 1995. As part of the action plan, the licensee committed to amend the Oconee TS to address operability restrictions for Keowee commercial generation and attendant surveillance requirements for the hardware modification.

3.0 STAFF EVALUATION

The proposed TS amendment would add the following as TS Section 3.7.1(k):

During periods of commercial power generation, the operability of the Keowee Hydro units shall be based on lake levels and the power level of the Keowee Hydro units. The Keowee Hydro operating restrictions for commercial power generation shall be contained in the ONS Selected Licensee Commitment manual.

The above limiting condition for operation would be added to ensure that the Keowee units are capable of performing their emergency power functions from an initial condition of commercial power generation. During periods of commercial power generation, the Keowee units are operated within the acceptable region of the Keowee operating restrictions. The Keowee operating restrictions and the associated control logic prohibit overfrequency effects of a load rejected Keowee unit from being applied to Oconee. These Keowee operating restrictions for commercial power generation are determined by curves contained in the Selected Licensee Commitment (SLC) manual. These curves provide acceptable operating regions for the Keowee lake levels and identify Keowee dual- and single-unit power levels that are applicable for these regions.

During our evaluation of the proposed amendments, the staff expressed concern about the adequacy of the evaluation process that would be used to make changes to the commercial operating restriction curves in the SLC manual. Specifically, the concern was expressed that the probability of occurrence of a malfunction of the Keowee units may be increased due to changes that result in less conservative restrictions and, as such, involve an unreviewed safety question. By letter dated February 18, 1997, the licensee provided a response to this concern and explained that changes to the Keowee commercial operating restrictions would be performed in accordance with 10 CFR 50.59, which would include an evaluation to determine if any unreviewed safety questions existed. Thus, should an unreviewed safety question result from this evaluation by the licensee, a license amendment for staff review would be required. This resolved the concern.

In addition to the above limiting condition for operation, the proposed TS amendment would add the following TS surveillances as TS Sections 4.6.13 and 4.6.14, respectively:

At least once every 18 months, the ability of the Keowee Hydro units to supply emergency power from an initial condition of commercial power generation shall be verified.

and

At least once every 18 months, the Keowee Hydro units load rejection response will be verified to be bounded by the design criteria used to develop the Keowee operating restrictions.

The proposed surveillance addition in TS 4.6.13 is designed to ensure that the Keowee Hydro units are operable during periods of commercial power generation. For this surveillance, the associated protection circuitry is tested at least once every 18 months. This surveillance ensures that the adverse effects of overspeed following a load rejection will be precluded and the appropriate emergency power paths will be aligned. In addition, the speed-sensing governor failure logic is verified during this surveillance. Failure to meet the acceptance criteria will be evaluated in the licensee's corrective action program to determine the impact on the operability of the emergency power paths. Further, the Keowee Watt/Var meter, frequency relays, and governor magnetic speed switch will be calibrated prior to the performance of this surveillance. These actions are consistent with the staff-reviewed action plan.

The proposed surveillance TS 4.6.14 would verify that the Keowee Hydro units response to a load rejection is bounded by the design criteria used to develop the Keowee operating restrictions. For this surveillance, a maximum-power, dual-unit load rejection test will be performed at least once every 18 months. A power level for the dual-unit load rejection will be established based on the operating conditions for the day of the test. In addition, a revision of the operating restrictions for simultaneous operation of both Keowee units will require that a maximum-power, dual-unit load rejection test be performed

before implementing the revision. A revision of the operating restrictions for a single Keowee unit will require only a maximum-power, single-unit load rejection, as defined by the conditions for the day of the test. However, if a load rejection test is performed to support a revision to the operating restrictions, then no additional load rejection test will be required until the next surveillance. The Keowee Watt/Var meter and frequency relays will be calibrated before the performance of this surveillance. These actions are also consistent with the staff-reviewed action plan.

Based on our review, the staff concludes that the proposed TS amendments are consistent with the staff-reviewed action plan, supporting calculation, and licensing basis, and resolve any outstanding concerns associated with overfrequency and overspeed following load rejection of the Keowee units. Therefore, the TS amendments are acceptable.

4.0 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.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and 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.

6.0 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.

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Date: March 20, 1997