

July 17, 1985

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

<u>Distribution</u>	WJones
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Mr. Hal B. Tucker  
Vice President - Nuclear Production  
Duke Power Company  
P. O. Box 33189  
422 South Church Street  
Charlotte, North Carolina 28242

Dear Mr. Tucker:

The Commission has issued the enclosed Amendments Nos. 141, 141, and 138 to Facility Operating Licenses Nos. DPR-38, DPR-47 and DPR-55 for the Oconee Nuclear Station, Units Nos. 1, 2 and 3. These amendments consist of changes to the Station's common Technical Specifications (TSs) in response to your request dated March 19, 1985, as supplemented on May 1, 1985.

These amendments revise the TSs to allow a one-time extension of the allowable period of inoperability from 24 hours to 10 days per battery for the installation of new Keowee batteries and battery racks.

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

Sincerely,

*Original signed by*

Helen Nicolaras, Project Manager  
Operating Reactors Branch #4  
Division of Licensing

Enclosures:

1. Amendment No. 141 to DPR-38
2. Amendment No. 141 to DPR-47
3. Amendment No. 138 to DPR-55
4. Safety Evaluation

cc w/enclosures:  
See next page

ORB#4:DL  
RIngram  
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HNicolaras;cr  
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ORB#4:DL  
JStolz  
7/13/85

OELD  
B.E. Johnson  
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AD:DR:DL  
GLajnas  
7/16/85

*chop made 7/16/85*

*w/changes noted*

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Mr. H. B. Tucker  
Duke Power Company

Oconee Nuclear Station  
Units Nos. 1, 2 and 3

cc:  
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Honorable James M. Phinney  
County Supervisor of Oconee County  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

DUKE POWER COMPANY

DOCKET NO. 50-269

OCONEE NUCLEAR STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 141  
License No. DPR-38

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Duke Power Company (the licensee) dated March 19, 1985, as supplemented on May 1, 1985, 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 3.8 of Facility Operating License No. DPR-38 is hereby amended to read as follows:

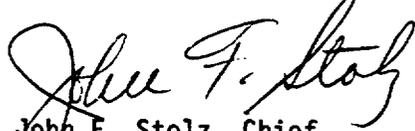
3.8 Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 141 are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "John F. Stolz". The signature is written in a cursive style with a large, looping initial "J".

John F. Stolz, Chief  
Operating Reactors Branch #4  
Division of Licensing

Attachment:  
Changes to the Technical .  
Specifications

Date of Issuance: July 17, 1985



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

DUKE POWER COMPANY

DOCKET NO. 50-270

OCONEE NUCLEAR STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 141  
License No. DPR-47

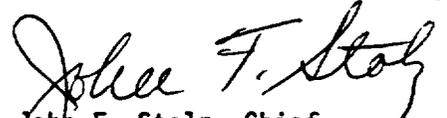
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Duke Power Company (the licensee) dated March 19, 1985, as supplemented on May 1, 1985, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and 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 3.B of Facility Operating License No. DPR-47 is hereby amended to read as follows:

3.B Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 141 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 the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
John F. Stolz, Chief  
Operating Reactors Branch #4  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: July 17, 1985



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

DUKE POWER COMPANY

DOCKET NO. 50-287

OCONEE NUCLEAR STATION, UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 138  
License No. DPR-55

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Duke Power Company (the licensee) dated March 19, 1985, as supplemented on May 1, 1985, 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 3.B of Facility Operating License No. DPR-55 is hereby amended to read as follows:

3.B Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 138 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 the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
John F. Stolz, Chief  
Operating Reactors Branch #4  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: July 17, 1985

ATTACHMENTS TO LICENSE AMENDMENTS

AMENDMENT NO. 141 TO DPR-38

AMENDMENT NO. 141 TO DPR-47

AMENDMENT NO. 138 TO DPR-55

DOCKETS NOS. 50-269, 50-270 AND 50-287

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by amendment numbers and contain vertical lines indicating the area of change.

Remove Pages

3.7-3  
3.7-4

Insert Pages

3.7-3  
3.7-4

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
2. The conditions of Table 3.7-1 for degraded operation are satisfied for the affected functional units.

If any event, if the reactor is subcritical, the inoperable circuit(s) or channel(s) shall be restored to operability and the conditions of Table 3.7-1 for normal operation shall be satisfied for all functional units before the reactor is returned to criticality.

- (c) One 4160 volt main feeder bus may be inoperable for 24 hours.
- (d) One complete single string (i.e., 4160 volt switchgear (TC, TD, or TE), 600 volt load center, (X8, X9, or X10), 600-208 volt MCC (XS1, XS2, or XS3), and their loads) of each unit's 4160 volt Engineered Safety Features Power System may be inoperable for 24 hours.
- (e) One or more of the following DC distribution components may be inoperable for periods not exceeding 24 hours (except as noted in 3.7.2(f) below):
  1. One complete single string or single component (i.e., 125VDC battery, charger, distribution center, and panelboards) of the 125VDC 230KV Switching Station Power System.
  - \*2. One complete single string or single component (i.e., 125VDC battery, charger, and distribution center) of the Keowee 125VDC Power System may be inoperable provided the remaining string of Keowee is operable and electrically connected to an operable Keowee hydro unit.
  3. One complete single string or single component (i.e., 125VDC battery, charger, distribution center, and associated isolating and transfer diodes) of any unit's 125VDC Instrumentation and Control Power System. Only one battery more than the number allowed to be inoperable per 3.7.1 (f) for the Station may be removed from service under this paragraph.
  4. One 125 VDC instrumentation and control panelboard and its associated loads, per unit, provided that no additional AC buses are made inoperable beyond the provisions of 3.7.2(a), (c), and (d), and provided that the conditions of Table 3.7-1 for normal operation are satisfied for all functional units of the EPSL before the 125 VDC instrumentation and control panelboard becomes inoperable. Additionally, the provisions of 3.7.2.(h) must be observed for the 120 VAC vital instrumentation power panelboard which is powered by the affected 125 VDC panelboard.
- (f) For periods not to exceed 24 hours each unit's 125 VDC system may be separated from its backup unit via the isolating and transfer diodes.

\*A one-time extension of inoperability for a period of 10 days per battery is granted to allow for installation of new Keowee batteries and battery racks.

(g) One battery each, from one or more of the following 125VDC systems may be simultaneously inoperable for 72 hours in order to perform an equalizer charge after the surveillance requirements of Specification 4.6.10.

1. 230 KV Switching Station 125VDC Power System
2. Keowee Hydro Station 125VDC Power System
3. Each unit's 125VDC Instrumentation and Control Power System, provided that the unit's remaining battery is operable. However, for operation of 1 or 2 units, no more batteries than those allowed to be inoperable per 3.7.1 (f) may be removed from service. For operation of 3 units, at least 4 or the 6 station I&C batteries shall be operable.

(h) One 120 VAC vital instrumentation power panelboard per unit and/or its associated static inverter may be inoperable for periods as specified below:

<u>Panelboard</u>	<u>Maximum Allowed Period of Inoperability</u>
KVIA	4 hours
KVIB	4 hours
KVIC	24 hours
KVID	24 hours

A single vital bus static inverter per unit may continue to be inoperable beyond the specified period, but no longer than 7 days total, provided that its associated 120 VAC vital instrumentation power panelboard is connected to the 240/120 VAC Regulated Power System and verified to be operable once every 24 hours.

- (i) 1. A startup transformer may be inoperable for periods not exceeding 72 hours for test or maintenance, provided the underground feeder path, through transformer CT4; and to one 4160V standby bus is verified operable within one hour of loss and every eight hours thereafter. The remaining operable startup transformers can be shared between units within the same 72 hours of the above startup transformer being determined inoperable. Prior to exceeding 72 hours, they shall be aligned and connected such that each one is providing a path for power to one and only one unit.
2. In the event that a startup transformer becomes inoperable for unplanned reasons, then one unit shall be in cold shutdown within 72 hours with its loads powered from the standby buses. The remaining operable startup transformers can be shared between units within the same 72 hours of the above startup transformer being determined inoperable. Prior to exceeding 72 hours, they shall be aligned and connected such that each one is providing a path for power to one and only one unit.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 141 TO FACILITY OPERATING LICENSE NO. DPR-38

AMENDMENT NO. 141 TO FACILITY OPERATING LICENSE NO. DPR-47

AMENDMENT NO. 138 TO FACILITY OPERATING LICENSE NO. DPR-55

DUKE POWER COMPANY

OCONEE NUCLEAR STATION, UNITS NOS. 1, 2, AND 3

DOCKETS NOS. 50-269, 50-270 AND 50-287

1.0 Introduction

By letter dated March 19, 1985, as supplemented on May 1, 1985, Duke Power Company (the licensee) proposed changes to the Technical Specifications (TSs) of Facility Operating Licenses Nos. DPR-38, DPR-47 and DPR-55 for the Oconee Nuclear Station, Units Nos. 1, 2 and 3. These amendments would consist of changes to the Station's common TSs.

The proposed amendments would revise TS 3.7.2(e)2 to allow a one-time extension of the allowable period of inoperability from 24 hours to 10 days per battery for the installation of new Keowee batteries and battery racks. The reason for the replacement is that the licensee has determined that there is insufficient documentation on the seismic capabilities of the existing Keowee 125 VDC batteries and racks. The licensee has estimated that this new changeout cannot be accomplished during the 24 hours time period currently allowed by TS 3.7.2.(e).2, but has requested a maximum of 10 days for each of the two batteries.

2.0 Discussion

DC System

Although diesel generators are used as the most common source of onsite electric power, Oconee Nuclear Station uses the Keowee Hydro Station as the source of two independent on-site emergency power paths. The Keowee Hydro Station is part of the Auxiliary Electrical System that assures safe reactor operation and provides for continuing availability of engineered safety features systems. The subject batteries in the Keowee Hydro Station provide only control and motive power to start the Keowee Hydros. Aside from the Keowee Hydro Station batteries, each Oconee Nuclear Station Unit maintains separate and redundant 125 VDC system (Class 1E) for the vital instrumentation and control power system which is normally required for reactor operation and orderly shutdown.

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The Keowee Hydro Station is in the process of ordering replacement cells for both of the Keowee 125 VDC power system batteries. Each Keowee Hydro Unit has a separate 125 VDC power system consisting of a 125 VDC battery charger, a 125 VDC battery and a metal clad distribution center. The two 125 VDC power systems, in Keowee, can be connected through an interlocked bus tie arrangement (two breakers in series) which permits one 125 VDC battery to be removed for testing/servicing while maintaining the capability to supply the required DC loads of both Keowee Units with the remaining battery.

### 3.0 Evaluation

Our review of the Oconee Nuclear Station offsite power system shows that the following sources are available:

1. The 230 kV and 525 kV transmission system;
2. The 100 kV transmission system;
3. Two Keowee Hydro Units (one 13.8 kV underground path);
4. The two other nuclear units (onsite).

The 230 kV (normal offsite power source) and 525 kV switchyards are separated and connected by a transformer. Each of the switching stations (buses, disconnect switches and circuit breakers) are arranged into a reliable breaker-and-a-half scheme. Also, the number of offsite power lines to onsite distribution exceeds the minimum requirement of two. Moreover, our review of the EPRI publication (EPRI NP-2301), "Loss of Offsite Power at Nuclear Power Plants: Data and Analysis" lists only one partial loss of offsite power event for Oconee which occurred on April 19, 1973. Although the event isolated and deenergized the 230 kV switchyard for one hour, the rest of the offsite power sources listed above were available throughout the event.

In view of the reliability inherent in the Oconee offsite power system design and the low incidence of this event at Oconee, we have determined that the potential for a loss of offsite power within the time period of the 10 days requested for installation of each of the new batteries is acceptably low.

In addition, with one of the Keowee batteries out of service, the remaining battery unit can be used to start both of the Keowee Hydro electric emergency power units.

Each of the existing Keowee batteries has an in rush (one minute) rating of 1670 amp hours and 906 amp hours for one hour while the required DC load for both Hydros is 1480 amp hours (in rush) and 308 amp hours for one hour. This indicates that one battery has more than sufficient capacity to start both Hydros. Furthermore, to ensure the capability of the battery to start two Hydro units, the licensee in a letter dated May 1, 1985 stated that they will perform a compensatory test which will demonstrate the battery capability prior to installing the new battery. The second battery replacement outage will not begin until the newly installed battery is verified operable. Thus, given a very unlikely total loss of offsite power during these short outage periods power will be available to start the emergency power units.

Based on the above, we find acceptable the proposed amendment, which allows a one-time extension of inoperability for a period of 10 days for each battery on a staggered basis to install new Keowee seismically qualified batteries and battery racks.

#### 4.0 Environmental Consideration

These amendments involve a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. We have 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 these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, these 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 these amendments.

#### 5.0 Conclusion

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: July 17, 1985

Principal Contributor: P. Kang