

AUGUST 17, 1992

Docket Nos. 50-413  
and 50-414

Distribution  
See next page

Mr. M. S. Tuckman  
Vice President, Catawba Site  
Duke Power Company  
4800 Concord Road  
York, South Carolina 29745

Dear Mr. Tuckman:

SUBJECT: ISSUANCE OF AMENDMENTS - CATAWBA NUCLEAR STATION, UNITS 1 AND 2  
(TAC NOS. M83356 AND M83357)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 100 to Facility Operating License NPF-35 and Amendment No. 94 to Facility Operating License NPF-52 for the Catawba Nuclear Station, Units 1 and 2. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated May 14, 1992, as supplemented August 5, 1992.

The amendments revise TS Surveillance Requirement 4.8.2.1.1.d which will permit the service test of battery 2EBD to be conducted during power operation on a one-time basis prior to the expiration of the current surveillance interval grace period on August 24, 1992.

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:

Robert E. Martin, Project Manager  
Project Directorate II-3  
Division of Reactor Projects I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 100 to NPF-35
2. Amendment No. 94 to NPF-52
3. Safety Evaluation

cc w/enclosures:  
See next page

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FILE NAME: A:CAT83356.AMD

OFC	: PDII-3/LA	: PDII-3/PM	: OGC	: PDII-3/MD	:	:
NAME	: LBERRY	: RMartin	:	: DMATTHEWS	:	:
DATE	: 8/13/92	: 8/13/92	: 8/13/92	: 8/17/92	:	:

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U.S. NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20545



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555

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Sincerely,

A handwritten signature in cursive script that reads "Robert E. Martin".

Robert E. Martin, Project Manager  
Project Directorate II-3  
Division of Reactor Projects I/II  
Office of Nuclear Reactor Regulation

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3. Safety Evaluation

cc w/enclosures:  
See next page

Mr. M. S. Tuckman  
Duke Power Company

Catawba Nuclear Station

cc:

Mr. R. C. Futrell  
Regulatory Compliance Manager  
Duke Power Company  
4800 Concord Road  
York, South Carolina 29745

Mr. Alan R. Herdt, Chief  
Project Branch #3  
U. S. Nuclear Regulatory Commission  
101 Marietta Street, NW. Suite 2900  
Atlanta, Georgia 30323

Mr. A. V. Carr, Esquire  
Duke Power Company  
422 South Church Street  
Charlotte, North Carolina 28242-0001

North Carolina Electric Membership  
Corporation  
P. O. Box 27306  
Raleigh, North Carolina 27611

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

Senior Resident Inspector  
Route 2, Box 179 N  
York, South Carolina 29745

North Carolina MPA-1  
Suite 600  
P. O. Box 29513  
Raleigh, North Carolina 27626-0513

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

Mr. Frank Modrak  
Project Manager, Mid-South Area  
ESSD Projects  
Westinghouse Electric Corporation  
MNC West Tower - Bay 241  
P. O. Box 355  
Pittsburgh, Pennsylvania 15230

Mr. Heyward G. Shealy, Chief  
Bureau of Radiological Health  
South Carolina Department of  
Health and Environmental Control  
2600 Bull Street  
Columbia, South Carolina 27602

County Manager of York County  
York County Courthouse  
York, South Carolina 29745

Mr. R. L. Gill, Jr.  
Licensing  
Duke Power Company  
P. O. Box 1007  
Charlotte, North Carolina 28201-1007

Richard P. Wilson, Esquire  
Assistant Attorney General  
South Carolina Attorney General's  
Office  
P. O. Box 11549  
Columbia, South Carolina 29211

Saluda River Electric  
P. O. Box 929  
Laurens, South Carolina 29360

Piedmont Municipal Power Agency  
121 Village Drive  
Greer, South Carolina 29651

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

DATED: August 17, 1992

AMENDMENT NO. 100 TO FACILITY OPERATING LICENSE NPF-35 - Catawba Nuclear Station, Unit 1

AMENDMENT NO. 94 TO FACILITY OPERATING LICENSE NPF-52 - Catawba Nuclear Station, Unit 2

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

DUKE POWER COMPANY

NORTH CAROLINA ELECTRIC MEMBERSHIP CORPORATION

SALUDA RIVER ELECTRIC COOPERATIVE, INC.

DOCKET NO. 50-413

CATAWBA NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 100  
License No. NPF-35

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment to the Catawba Nuclear Station, Unit 1 (the facility) Facility Operating License No. NPF-35 filed by the Duke Power Company, acting for itself, North Carolina Electric Membership Corporation and Saluda River Electric Cooperative, Inc. (licensees) dated May 14, 1992, as supplemented August 5, 1992, 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.

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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 2.C.(2) of Facility Operating License No. NPF-35 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 100, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. Duke Power Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION



David B. Matthews, Director  
Project Directorate II-3  
Division of Reactor Projects-I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Technical Specification  
Changes

Date of Issuance: August 17, 1992



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

DUKE POWER COMPANY

NORTH CAROLINA MUNICIPAL POWER AGENCY NO. 1

PIEDMONT MUNICIPAL POWER AGENCY

DOCKET NO. 50-414

CATAWBA NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.94  
License No. NPF-52

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment to the Catawba Nuclear Station, Unit 2 (the facility) Facility Operating License No. NPF-52 filed by the Duke Power Company, acting for itself, North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency (licensees) dated May 14, 1992, as supplemented August 5, 1992, 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 2.C.(2) of Facility Operating License No. NPF-52 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 94 , and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. Duke Power Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION



David B. Matthews, Director  
Project Directorate II-3  
Division of Reactor Projects-I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Technical Specification  
Changes

Date of Issuance: August 17, 1992



ATTACHMENT TO LICENSE AMENDMENT NO. 100

FACILITY OPERATING LICENSE NO. NPF-35

DOCKET NO. 50-413

AND

TO LICENSE AMENDMENT NO. 94

FACILITY OPERATING LICENSE NO. NPF-52

DOCKET NO. 50-414

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

Remove Page

3/4 8-14

Insert Page

3/4 8-14

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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- 4) The battery charger will supply at least 200 amperes at a minimum of 125 volts for at least 8 hours.
  - d. At least once per 18 months during shutdown,\* by verifying that the battery capacity is adequate to either:
    - 1) Supply and maintain in OPERABLE status all of the actual emergency loads for 1 hour when the battery is subjected to a battery service test; or
    - 2) Supply a dummy load from Batteries EBA and EBD and from Batteries EBB and EBC of greater than or equal to 373 amperes for the first minute of the first hour, greater than or equal to 213 amperes for the next 59 minutes of the first hour and a dummy load only from Batteries EBA and EBD of greater than or equal to 210 amperes for the second hour while maintaining the battery terminal voltage greater than or equal to 105 volts
  - e. At least once per 60 months, during shutdown, by verifying that the battery capacity is at least 80% of the manufacturer's rating when subjected to a performance discharge test. Once per 60 month interval this performance discharge test may be performed in lieu of the battery service test required by Specification 4.8.2.1.1d.; and
  - f. At least once per 18 months, during shutdown, by giving performance discharge tests of battery capacity to any battery that shows signs of degradation or has reached 85% of the service life expected for the application. Degradation is indicated when the battery capacity drops more than 10% of rated capacity from its average on previous performance tests, or is below 90% of the manufacturer's rating.
- 4.8.2.1.2 Each D.C. channel shall be determined OPERABLE and energized with tie breakers open between redundant busses at least once per 7 days by verifying correct breaker alignment, indicated power availability from the charger and battery, and voltage on the bus of greater than or equal to 125 volts.

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\*For battery 2EBD only, Surveillance Requirement 4.8.2.1.1.d may be performed during power operation on a one-time basis, provided it is performed prior to the expiration of the current grace period on August 24, 1992.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 100 TO FACILITY OPERATING LICENSE NPF-35  
AND AMENDMENT NO. 94 TO FACILITY OPERATING LICENSE NPF-52  
DUKE POWER COMPANY, ET AL.  
CATAWBA NUCLEAR STATION, UNITS 1 AND 2  
DOCKET NOS. 50-413 AND 50-414

1.0 INTRODUCTION

By letter dated May 14, 1992, as supplemented August 5, 1992, the Duke Power Company (the licensee) submitted a request for changes to the Catawba Nuclear Station, Units 1 and 2, Technical Specifications (TS). The requested changes would revise TS Surveillance Requirement 4.8.2.1.1.d which will permit the service test of battery 2EBD to be conducted during power operation on a one-time basis prior to the expiration of the current surveillance interval grace period on August 24, 1992. The initial application requested a complete deletion of the testing-during-shutdown requirement of TS 4.8.1.1.d for all four divisions of batteries on each plant. The scope of the initial application was reduced substantially in the August 5, 1992, submittal to address deletion of the testing-during-shutdown requirement for only one battery division in Unit 2 on a one-time basis. The August 5, 1992, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

During the electrical distribution system functional inspection (EDSFI), the team from the Special Inspection Branch of DRIS, NRR, issued a violation because Catawba had been conducting the 18-month battery service test while the unit was operating instead of while the unit was shutdown, as required by Technical Specification Surveillance Requirement 4.8.2.1.1.d. The team also raised a related issue that the smaller 825 ampere-hour vital battery at Catawba may not be capable of supplying the loads of two emergency dc buses simultaneously while the larger (1200 ampere-hour) battery is out for testing during power operation.

2.0 EVALUATION

On each unit, the batteries on Channels A and D are rated for 1200 ampere-hours and those on Channels B and C are rated for 825 ampere-hours. The licensee states that the 1200 ampere-hour batteries have adequate capacity to supply the loads of one load group and the loads of another load group for two hours and that the 825 ampere-hour batteries have adequate capacity to supply the loads of one load group and the loads of another load group for a minimum of one hour. During normal operation, the batteries are floated on the dc

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distribution centers and are available to assume the loads without interruption upon loss of a battery charger or ac power source. Each battery charger is capable of supplying the steady-state loads of its load group while charging its associated battery. A spare battery charger is also provided to serve as a backup for any of the normal battery chargers. When a service test is being performed on a particular battery, the battery and associated battery charger are removed from service, the dc distribution centers are cross-tied, and the standby charger is connected to the affected distribution center. Therefore, both a battery and two battery chargers remain available to supply the cross-tied channels during the test.

Following the EDSFI, the licensee has reassessed the calculation for sizing the dc batteries. The preliminary assessments have identified specific conservatism used in sizing the dc batteries. The conservatism used were as follows:

1. Only two periods were established for the one-hour duty cycle (first minute = 1st period; last 59 minutes = 2nd period).
2. Both non-continuous and momentary loads were assumed to be continuous for each respective period of the duty cycle; and
3. Loads were conservatively estimated.

We have reviewed the list of the specific load revisions, the respective bases for load revision, and the revised load requirements for each period of the 825 ampere-hour battery duty cycle. We have also reviewed the total loads for two channels being fed from a single 825 ampere-hour battery. The licensee's submittal stated that the adjusted battery discharge current is approximately 316 amperes for the first minute, 200 amperes for the 1-10 minute period, 198.5 amperes for the 10-20 minute period, and 188 amperes for the 20-60 minute period. The corresponding battery terminal end voltages are 112.7 Vdc, 115.1 Vdc, 114.5 Vdc and 113.3 Vdc, respectively. Based on this assessment, the licensee concluded that the 825 ampere-hour battery was adequate to handle the loads of both channels with a 40% margin.

We have reviewed the licensee's submittal and have found that the preliminary assessment of the dc system indicates that the 825 ampere-hour battery has adequate capacity to carry the loads with the two channels cross-tied.

Based on the above evaluation, we believe that Duke Power Company has provided adequate basis for the Surveillance Requirement 4.8.2.1.1.d to be performed for battery 2EBD during power operation on a one-time basis, and, accordingly, this Technical Specification change is approved.

### 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 (57 FR 22262 dated May 27, 1992). 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: N. K. Trehan, ESB

Date: August 17, 1992