Jul 1, 1997

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Mr. G. R. Peterson
Site Vice President
Catawba Nuclear Station
Duke Power Company
4800 Concord Road
York, South Carolina 29745-9635

Distribution XXXXXXXXXI
Docket File ACRS T-2 E26
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SUBJECT: ISSUANCE OF AMENDMENTS - CATAWBA NUCLEAR STATION, UNITS 1 AND 2 (TAC NOS. M98861 AND M98862)

Dear Mr. Peterson:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 160 to Facility Operating License NPF-35 and Amendment No. 152 to Facility Operating License NPF-52 for the Catawba Nuclear Station, Units 1 and 2. The amendments are in response to your application dated May 27, 1997.

The amendments delete Section 4.7.13.3.a.2 of each unit's Technical Specifications, regarding the minimum volume and boron concentration of borated water available to the Standby Makeup Pump of the Standby Shutdown System.

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:

Peter S. Tam, Senior Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-413 and 50-414

Enclosures:
1. Amendment No. 160 to NPF-35
2. Amendment No. 152 to NPF-52
3. Safety Evaluation

cc w/encl: See next page

DOCUMENT NAME: G:\CATAWBA\CAT98861.AMD

OFFICE	PDII-2/PM	PDII-2/LA	OGC NLO	SPLB/SC	PDII-2/D
NAME	P.TAM:cn	L.BERRY	S.Horn	G.Hubbard	H.BERKOW
DATE	6/30/97	6/30/97	7/3/97	6/30/97	7/4/97
COPY	YES NO	YES NO	YES NO	YES NO	YES NO

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

July 21, 1997

Mr. G. R. Peterson
Site Vice President
Catawba Nuclear Station
Duke Power Company
4800 Concord Road
York, South Carolina 29745-9635

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Peter S. Tam, Senior Project Manager
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cc w/encl: See next page

Catawba Nuclear Station
Units 1 and 2

cc:
Mr. M. S. Kitlan
Regulatory Compliance Manager
Duke Power Company
4800 Concord Road
York, South Carolina 29745

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

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

North Carolina Municipal Power
Agency Number 1
1427 Meadowwood Boulevard
P. O. Box 29513
Raleigh, North Carolina 27626-0513

Mr. Peter R. Harden, IV
Account Sales Manager
Westinghouse Electric Corporation
Power Systems Field Sales
P. O. Box 7288
Charlotte, North Carolina 28241

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

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

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

Mr. T. Richard Puryear
Owners Group (NCEMC)
Duke Power Company
4800 Concord Road
York, South Carolina 29745

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

Senior Resident Inspector
4830 Concord Road
York, South Carolina 29745

Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
Atlanta Federal Center
61 Forsyth Street, S.W., Suite 23T85
Atlanta, Georgia 30303

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

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

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

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

Elaine Wathen, Lead REP Planner
Division of Emergency Management
116 West Jones Street
Raleigh, North Carolina 27603-1335

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

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

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.160
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 27, 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 2.C.(2) of Facility Operating License No. NPF-35 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 160 , which are attached hereto, are hereby incorporated into this license. Duke Power Company 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 of issuance.

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: July 21, 1997

ATTACHMENT TO LICENSE AMENDMENT NO. 160

FACILITY OPERATING LICENSE NO. NPF-35

DOCKET NO. 50-413

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

Remove	Insert
3/4 7-33	3/4 7-33

SURVEILLANCE REQUIREMENTS (Continued)

4.7.13.2 The Standby Shutdown System diesel starting 24-volt battery bank and charger shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying that:

1) The electrolyte level of each battery is at or above the low mark and at or below the high mark; and

2) The overall battery voltage is greater than or equal to 24 volts on float charge.

b. At least once per 92 days by verifying that the individual cell voltage is greater than or equal to 1.36 volts on float charge, and

c. At least once per 18 months by verifying that:

1) The batteries, cell plates, and battery racks show no visual indication of physical damage or abnormal deterioration, and

2) The battery-to-battery and terminal connections are clean, tight, and free of corrosion.

4.7.13.3 The Standby Makeup Pump water supply shall be demonstrated OPERABLE by:

a. Verifying at least once per 7 days that the requirements of Specification 3.9.10 are met and the boron concentration in the storage pool is greater than or equal to the minimum specified in the Core Operating Limits Report.

b. Verifying at least once per 92 days that the Standby Makeup Pump develops a flow of greater than or equal to 26 gpm at a pressure greater than or equal to 2488 psig.

4.7.13.4 The Standby Shutdown System 250/125-Volt Battery Bank and its associated charger shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying:

1) That the electrolyte level of each battery is above the plates, and

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

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. 152
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 27, 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.

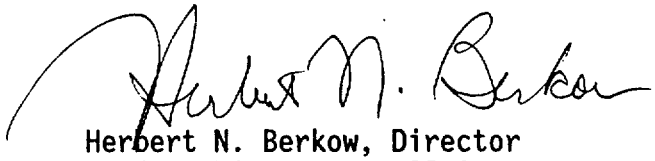
2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. NPF-52 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 152, which are attached hereto, are hereby incorporated into this license. Duke Power Company 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 of issuance.

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 Specifications Changes

Date of Issuance: July 21, 1997

ATTACHMENT TO LICENSE AMENDMENT NO. 152

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 contains vertical lines indicating the areas of change.

Remove	Insert
3/4 7-34	3/4 7-34

SURVEILLANCE REQUIREMENTS (Continued)

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c. At least once per 18 months by verifying that:

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a. At least once per 31 days by verifying:

1) That the electrolyte level of each battery is above the plates, and

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WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 160 TO FACILITY OPERATING LICENSE NPF-35

AND AMENDMENT NO. 152 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 27, 1997, Duke Power Company, et al. (DPC, the licensee), submitted a request for changes to the Catawba Nuclear Station, Units 1 and 2, Technical Specifications (TS). The proposed changes would delete Section 4.7.13.3.a.2 regarding minimum borated water volume and boron concentration for the standby makeup pump (SMP) of the standby shutdown system (SSS).

2.0 DISCUSSION AND EVALUATION

The Catawba SSS is a non-safety-related system that is shared between Units 1 and 2. Details of the staff's review of the SSS functions and design objectives are delineated in Section 9.5.1.5, Supplement 4 of the Safety Evaluation Report (SSER 4) for Catawba, NUREG-0954, dated December 1984. SSER 4 provides the following description of the SSS:

> The standby shutdown system (SSS) is designed to mitigate the consequences of a postulated fire incident to either Catawba Unit 1 or Unit 2 and consists of normal plant safety-related equipment (i.e., each unit's turbine-driven auxiliary feedwater pump) and dedicated equipment (i.e., the standby diesel generator and each unit's standby makeup pump). The SSS is designed to remove decay heat through the steam generator and provide normal reactor coolant system makeup to maintain hot standby. The SSS supplements the current shutdown capability described in Section 7.4 of the Final Safety Analysis Report (FSAR). It would be operated only in the event that installed normal and emergency systems were inoperable. Manual operator action is required to actuate the system. There is one SSS for both units of the station, but each unit has separate SSS controls.

SSER 4 describes the SMP as follows:

> The standby makeup pump, which supplies reactor coolant makeup during SSS operation, is located in the containment annulus of each unit. The pump provides makeup for normal reactor coolant system leakage and reactor coolant pump seal leakage. The pump draws water from the spent fuel pool transfer canal through a pipe connected to the fuel

> transfer tube in the annulus...[and] will provide at least 26 gallons per minutes (gpm) of borated water to the reactor coolant system. Approximately 14 gpm will be available for seal leakage, and the remaining 12 gpm is for reactor coolant system makeup and boration.

The SMP flow rate of 26 gpm is specified by TS Section 4.7.13.3.b, which is not a subject of the current amendment request. The licensee's data obtained from in-plant testing has shown that the actual flow rate of the SMP is in the range of 26 - 32 gpm. For the low end (as specified by the TS) of the flow rate, the total volume of borated water needed would be 112,320 gallons, as currently specified by TS Section 4.7.13.3.a.2; for the high end, the total volume would be 138,240 gallons.

Section E4.1 of NRC Inspection Report 50-413, 414/96-13 raised questions concerning such apparent nonconservative design assumptions. As a result, during additional review of this issue, the licensee determined that the source of borated water, the spent fuel pool, has much more water available to the SMP (415,000 gallons) than would be required by the SMP for a 3-day operation at maximum flow rate. While SMP suction from the spent fuel pool would deprive it of some inventory, borated makeup water can be supplied from the refueling water storage tank, demineralized water can be supplied by the reactor makeup water pumps, and emergency makeup water can be supplied from the nuclear service water system (see Section 9.1.3.1.4 of the Update Final Safety Analysis Report, and Section 9.1.3 of the Catawba Safety Evaluation Report, NUREG-0954). Thus, there is no shortage of water for the SMP from the spent fuel pool for the required 3-day operation capability.[1] The minimum volume requirement of TS Section 4.7.13.3.a.2 can be deleted with no impact on SMP performance.

The spent fuel pool water is required to be borated to "within the limit specified in the core operating limits report" (Section 3.9.12 of the TS). This requirement is identical to that currently specified for the SMP borated water source in TS Section 4.7.13.3.a.1. The minimum boration requirement of TS Section 4.7.13.3.a.2 can thus be deleted with no impact on SMP performance.

Other than the proposed deletion of TS Section 4.7.13.3.a.2, which has been shown above as redundant and unnecessary, the licensee proposed no change to SMP design or operation. There is no relaxation of any limiting conditions for operation, and no decrease in surveillance requirements. The staff,

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[1]The volume of water available in the spent fuel pool to the SMP is 415,000 gallons. The minimum depth of water in the pool is at least 37.6 feet, corresponding to 23 feet over the top of irradiated fuel assemblies specified by Section 3.9.10 of the TS. In practice, the licensee keeps the water above the alarm level of 39 feet, nominally at 39.9 feet. Since 1 foot corresponds to about 17,000 gallons, the SMP could take suction from the spent fuel pool for about 8.8 hours before the alarm limit is reached, and about 20 hours before the TS limit is reached. There is thus ample time to activate any of the several makeup sources to prevent reaching the alarm or TS minimum level.

therefore, finds the licensee's proposed deletion of TS Section 4.7.13.3.a.2 acceptable.

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 (62 FR 33121 dated June 18, 1997). 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 staff 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: Peter S. Tam

Date: July 21, 1997