

June 28, 2001

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

SUBJECT: CATAWBA NUCLEAR STATION, UNITS 1 AND 2 RE: ISSUANCE OF
AMENDMENTS (TAC NOS. MB0357 AND MB0359)

Dear Mr. Peterson:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 191 to Facility Operating License NPF-35 and Amendment No. 183 to Facility Operating License NPF-52 for the Catawba Nuclear Station, Units 1 and 2. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated October 20, 2000, as supplemented by letter dated March 12, 2001. Associated Bases are being changed accordingly.

The amendments eliminate the requirement for the safety related chlorine monitor and the capability for automatic isolation of the control room area ventilation system when prompted by a signal from the detectors. Specifically, the changes delete a note in Required Action D.1 in TS 3.7.10, "Control Room Area Ventilation," that references high chlorine protection function. Revisions to the Bases to TS 3.7.10 are reflected.

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,

/RA/

Chandu P. Patel, Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-413 and 50-414

Enclosures:

1. Amendment No. 191 to NPF-35
2. Amendment No. 183 to NPF-52
3. Safety Evaluation

cc w/encls: See next page

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*No major changes to SE

**See previous concurrence

Accession Number: ML011710575

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DUKE ENERGY CORPORATION
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. 191
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 Energy Corporation, acting for itself, North Carolina Electric Membership Corporation and Saluda River Electric Cooperative, Inc. (licensees), dated October 20, 2000, as supplemented by letter dated March 12, 2001, 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. 191 , which are attached hereto, are hereby incorporated into this license. Duke Energy Corporation 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

/RA by Robert Martin for/

Richard L. Emch, Jr., Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: June 28, 2001

DUKE ENERGY CORPORATION
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. 183
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 Energy Corporation, acting for itself, North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency (licensees), dated October 20, 2000, as supplemented by letter dated March 12, 2001, 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. 183 , which are attached hereto, are hereby incorporated into this license. Duke Energy Corporation 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

/RA by Robert Martin for/

Richard L. Emch, Jr., Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: June 28, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 191

FACILITY OPERATING LICENSE NO. NPF-35

DOCKET NO. 50-413

AND LICENSE AMENDMENT NO. 183

FACILITY OPERATING LICENSE NO. NPF-52

DOCKET NO. 50-414

Replace the following pages of the Appendix A Technical Specifications and associated Bases with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

3.7.10-2
B 3.7.10-1
B 3.7.10-2
B 3.7.10-3
B 3.7.10-5
B 3.7.10-6
B 3.7.10-7

Insert

3.7.10-2
B 3.7.10-1
B 3.7.10-2
B 3.7.10-3
B 3.7.10-5
B 3.7.10-6
B 3.7.10-7

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 191 TO FACILITY OPERATING LICENSE NPF-35
AND AMENDMENT NO. 183 TO FACILITY OPERATING LICENSE NPF-52
DUKE ENERGY CORPORATION, ET AL.
CATAWBA NUCLEAR STATION, UNITS 1 AND 2
DOCKET NOS. 50-413 AND 50-414

1.0 INTRODUCTION

By letter dated October 20, 2000, as supplemented by letter dated March 12, 2001, Duke Energy Corporation, et al. (DEC, the licensee), submitted a request for changes to the Catawba Nuclear Station, Units 1 and 2, Technical Specifications (TS). The requested changes would eliminate the requirement for the safety related chlorine monitor and the capability for automatic isolation of the control room area ventilation system (CRAVS) when prompted by a signal from the detectors. Specifically, the changes will delete a note in Required Action D.1 in TS 3.7.10, "Control Room Area Ventilation," that references high chlorine protection function. The use of chlorine at Catawba station has changed since the original design. Based on the new method for using the chlorine, the licensee has concluded that there is no need for having a high chlorine protection function in the CRAVS. Therefore, the licensee has proposed to replace it with a non-safety related chlorine monitoring system and to have a manual CRAVS isolation. Associated Bases changes were also submitted.

The March 12, 2001, letter provided additional clarification that did not change the proposed no significant hazard consideration determination, or expand the application beyond the scope of the *Federal Register* notice.

2.0 DISCUSSION AND EVALUATION

The original water chlorination at Catawba Station relied on hypochlorite. This chemical was stored on the plant-site close to the sulfuric acid tanks and there was a possibility of accidental mixing of these two chemicals with resultant generation of chlorine. Therefore, both units were required to protect the control room by having a chlorine protection function for the CRAVS. The protection consisted of safety-related chlorine detectors located outside the air inlets to the CRAVS and an automatic isolation of the CRAVS on a signal from these detectors. During the subsequent modifications of the plant, the hypochlorite chlorination process was replaced by chlorination using liquified chlorine from cylinders containing 50 lbs of chlorine each. The licensee has proposed to administratively control that each cylinder will contain a maximum of 50 lbs of chlorine and, these cylinders will be stored in a facility specially constructed for that purpose. The facility will be located approximately 2200 feet from the nearest control room outside air intake. The licensee plans to construct this facility and move all the stored chlorine cylinders prior to implementation of these amendments. All the cylinders containing chlorine meet the applicable Department of Transportation requirements of Title 49 of the *Code of*

Federal Regulations, Chapter 1, including the seven-foot drop test. Also, at the storage location, protective valve caps will be installed on all the stored cylinders.

Water is chlorinated in the filtered water and exterior fire protection systems. The chlorination points at the filtered water system and at the exterior fire protection system are located 520 feet and 825 feet from the nearest control room outside air intake, respectively. During the chlorination no more than two cylinders are connected to the system. Therefore, no more than 100 lbs of chlorine is present at any time at the chlorination points. The licensee also estimated that, because of the existing structures between the chlorination points and the fresh air inlets, any accidentally released chlorine will have to follow a very tortuous path before reaching the control room air inlets. Therefore, most probably the cloud of released chlorine will disperse and chlorine concentration will be greatly reduced.

The presence of chlorine sources outside of the plant was previously evaluated by the licensee, and as documented in Section 2.2 of the Updated Final Safety Analysis Report, there is no significant source of chlorine either used or stored within a five mile radius of the plant. Therefore, in accordance with the NRC regulatory position in Regulatory Guide 1.78, there is no need for the licensee to consider external sources of the chlorine in the present analysis. However, the staff recommends that the licensee periodically verify that there is no new chlorine source within a five mile radius of the plant.

The NRC regulatory positions in Regulatory Guides 1.78 and 1.95 indicate that evaluation of the chlorine sources present inside the plant should be performed whenever the total amount of chlorine exceeds 100 lbs. Also, no more than 20 lbs of chlorine can be stored at a distance less than 100 meters from the air inlets, and a manual isolation of control room is allowable only when a single source contains less than 150 lbs of chlorine. The licensee's analysis has indicated that after construction of the storage facility all these requirements will be met. The chlorination points inside the plant are located more than 100 meters from the control room air inlets, and only a maximum of 100 lbs of chlorine could be released during an accident at an individual chlorination point. Although the storage area contains several chlorine cylinders, because of their construction, only one cylinder could fail and discharge chlorine during a credible accident. In addition, the storage area is located approximately 2200 feet from the nearest control room fresh air inlet, and the released chlorine cloud will disperse before reaching the control room air inlets. Taking into consideration all these characteristics of the chlorination system, the licensee concluded that eliminating the requirements for the CRAVS high chlorine protection function and replacing it with non-safety related chlorine detectors and manual isolation is adequate for protecting the control room operators during a chlorine release accident.

The staff reviewed the licensee's justifications for the proposed changes and performed its own independent evaluation using the NRC's HABIT computer code. Based on the results of this evaluation the staff concludes that the changes proposed by the licensee are acceptable because they do not diminish the level of protection offered to the control room operators from the current level approved by the NRC. The proposed changes in associated Bases are also 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. 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 (66 FR 2013). 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.

Principal Contributor: K. Parczewski

Date: June 28, 2001

Catawba Nuclear Station

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