

July 31, 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. MB1383 AND MB1384)

Dear Mr. Peterson:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 192 to Facility Operating License NPF-35 and Amendment No. 184 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 March 1, 2001.

The amendments permit implementation of 10 CFR Part 50, Appendix J, Option B and reference Regulatory Guide 1.163, "Performance-Based Containment Leak Test Program," dated September 1995, which specifies a method acceptable to the NRC for complying with Option B. These changes relate only to Type B and Type C (local) leakage rate testing. In addition, the amendments revise Surveillance Requirement 3.6.3.8 by deleting the requirement for soap bubble testing of welded penetrations that are not individually testable and clarify the Bases for TS 3.6.2 pertaining to the containment air lock door.

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. 192 to NPF-35
2. Amendment No. 184 to NPF-52
3. Safety Evaluation

cc w/encls: See next page

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Enclosures:

1. Amendment No. 192 to NPF-35 PDII-1 R/F GHill (4)
2. Amendment No. 184 to NPF-52 COgle,Rll
3. Safety Evaluation WBeckner, TSB

cc w/encls: See next page

ADAMS ACCESSION NUMBER: ML012290327

OFFICE	PDII-1/PM	PDII-1/LA	PDII-1/SC	OGC(NLO)
NAME	CPatel	CHawes	REmch	NSt.Amour
DATE	07/24/01	07/24/01	07/31/01	07/16/01

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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.192
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 March 1, 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. 192, 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/

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: July 31, 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.184
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 March 1, 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. 184, 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/

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: July 31, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 192

FACILITY OPERATING LICENSE NO. NPF-35

DOCKET NO. 50-413

AND LICENSE AMENDMENT NO. 184

FACILITY OPERATING LICENSE NO. NPF-52

DOCKET NO. 50-414

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

<u>Remove</u>	<u>Insert</u>
3.6.1-2	3.6.1-2
3.6.2-5	3.6.2-5
3.6.3-7	3.6.3-7
5.5-1	5.5-1
5.5-2	5.5-2
B 3.0-10	B 3.0-10
B 3.6.1-1	B 3.6.1-1
B 3.6.1-2	B 3.6.1-2
B 3.6.1-3	B 3.6.1-3
B 3.6.1-4	B 3.6.1-4
B 3.6.1-5	B 3.6.1-5
B 3.6.2-2	B 3.6.2-2
B 3.6.2-3	B 3.6.2-3
B 3.6.2-4	B 3.6.2-4
B 3.6.2-5	B 3.6.2-5
B 3.6.2-6	B 3.6.2-6
B 3.6.2-7	B 3.6.2-7
B 3.6.2-8	B 3.6.2-8
B 3.6.3-13	B 3.6.3-13
B 3.6.3-14	B 3.6.3-14
B 3.6.3-15	--

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 192 TO FACILITY OPERATING LICENSE NPF-35
AND AMENDMENT NO. 184 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

On September 12, 1995, the U.S. Nuclear Regulatory Commission (NRC) approved issuance of a revision to 10 CFR Part 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors", which was subsequently published in the Federal Register on September 26, 1995, and became effective on October 26, 1995. The NRC added Option B, "Performance-Based Requirements," to allow licensees to voluntarily replace the prescriptive testing requirements of 10 CFR Part 50, Appendix J with testing requirements based on both overall performance and the performance of individual components.

By letter dated March 1, 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 permit implementation of 10 CFR Part 50, Appendix J, Option B, and reference Regulatory Guide (RG) 1.163, "Performance-Based Containment Leak Test Program," dated September 1995, which specifies a method acceptable to the NRC for complying with Option B. These changes relate only to Type B and C (local) leakage rate testing. The use of Option B for Type A (integrated) leakage rate testing was approved on May 13, 1996, by License Amendment Nos. 144 and 138. In addition, the licensee requested to revise Surveillance Requirement (SR) 3.6.3.8 by deleting the requirement for soap bubble testing of welded penetrations that are not individually testable and to clarify the Bases for TS 3.6.2 pertaining to the containment air lock door.

2.0 BACKGROUND

Compliance with 10 CFR Part 50, Appendix J provides assurance that the primary containment, including those systems and components which penetrate the primary containment, do not exceed the allowable leakage rate specified in the TS and Bases. The allowable leakage rate is determined so that the leakage rate assumed in the safety analyses is not exceeded.

On February 4, 1992, the NRC published a notice in the Federal Register (57 FR 4166) discussing a planned initiative to begin eliminating requirements marginal to safety which impose a significant regulatory burden. 10 CFR Part 50, Appendix J, "Primary Containment Leakage Testing for Water-Cooled Power Reactors," was considered for this initiative, and the staff undertook a study of possible changes to this regulation. The study examined the previous performance history of domestic containments and examined the effect on risk of a

revision to the requirements of Appendix J. The results of this study are reported in NUREG-1493, "Performance-Based Leak-Test Program".

Based on the results of this study, the staff developed a performance-based approach to containment leakage rate testing. On September 12, 1995, the NRC approved issuance of this revision to 10 CFR Part 50, Appendix J, which was subsequently published in the Federal Register on September 26, 1995, and became effective on October 26, 1995. The revision added Option B "Performance-Based Requirements," to Appendix J to allow licensees to voluntarily replace the prescriptive testing requirements of Appendix J with testing requirements based on both overall and individual component leakage rate performance.

RG 1.163, "Performance-Based Containment Leak Test Program," dated September 1995, was developed as a method acceptable to the NRC staff for implementing Option B. This RG states that the Nuclear Energy Institute (NEI) guidance document NEI 94-01, Rev. 0, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," provides methods acceptable to the NRC staff for complying with Option B with four exceptions, which are described therein.

Option B requires that RG 1.163 or another implementation document used by a licensee to develop a performance-based leakage testing program must be included, by general reference, in the plant TS. The licensee has referenced RG 1.163 in the proposed Catawba TS.

RG 1.163 specifies an extension in Type A test frequency to at least one test in 10 years based upon two consecutive successful tests. Type B tests may be extended up to a maximum interval of 10 years based upon completion of two consecutive successful tests and Type C tests may be extended up to 5 years based on two consecutive successful tests.

By letter dated October 20, 1995, NEI proposed TS to implement Option B. After some discussion, the staff and NEI agreed on final TS which were transmitted to NEI in a letter dated November 2, 1995. These TS served as a model for licensees to develop plant-specific TS in preparing amendment requests to implement Option B. However, the Standard Technical Specifications have subsequently been revised in accordance with the Technical Specification Task Force (TSTF) generic change traveler TSTF-52, Revision 3, and this is now used as the standard for TS related to Option B.

In order for a licensee to determine the performance of each component, factors that are indicative of or affect performance, such as an administrative leakage limit, must be established. The administrative limit is selected to be indicative of the potential onset of component degradation. Although these limits are subject to NRC inspection to assure that they are selected in a reasonable manner, they are not TS requirements. Failure to meet an administrative limit requires the licensee to return to the minimum value of the test interval.

Option B requires that the licensee maintain records to show that the criteria for Type A, B, and C tests have been met. In addition, the licensee must maintain comparisons of the performance of the overall containment system and the individual components to show that the test intervals are adequate. These records are subject to NRC inspection.

3.0 EVALUATION

In Amendment Nos. 144 and 138, dated May 13, 1996, the Catawba Units 1 and 2 TS were revised to incorporate the requirements of 10 CFR Part 50, Appendix J, Option B for the Type A test. The Type B and C tests continued to be performed under the requirements of Option A. In Amendment Nos. 173 and 165 for Units 1 and 2, dated September 30, 1998, the Catawba TS were revised to a set of improved TS based on TSTF-52, "Westinghouse Improved Standard TS and Bases," Revision 3. The improved TS reflected the current requirements for containment leakage rate testing, i.e., Type A tests performed per Option B and Type B and C tests performed per Option A.

In a letter dated March 1, 2001, the licensee proposed to perform the Type B and Type C tests adopting the requirements of Option B of Appendix J and proposed appropriate revisions to the Catawba TS to reflect these test changes. The proposed changes combine all requirements for Types A, B, and C testing, except for testing of air locks and valves with resilient seals, into SR 3.6.1.1, which references the Containment Leakage Rate Testing Program. To reflect that all containment leakage rate testing is to be done in accordance with Appendix J, Option B, the details of the testing are relocated to the Containment Leakage Rate Testing Program.

The requirement to perform air lock leakage testing resides in SR 3.6.2.1 and also now refers to the Containment Leakage Rate Testing Program for acceptance criteria. A surveillance requirement for valves with resilient seals (containment purge system, Hydrogen Purge System, and containment air release and addition systems) resides in SR 3.6.3.6 and requires leakage rate testing beyond the test requirements of 10 CFR Part 50, Appendix J, Option B. Therefore, this surveillance requirement therefore does not reference the Containment Leakage Rate Testing Program.

The TS changes proposed by the licensee are in compliance with the requirements of Option B and consistent with the guidance of RG 1.163. Further, the proposed TS are consistent with TSTF-52, Revision 3, and are acceptable to the staff.

3.1 Soap Bubble Testing

One of the changes Catawba has proposed that is unrelated to the adoption of 10 CFR Part 50, Appendix J, Option B affects SR 3.6.3.8. This change deletes the surveillance note requiring soap bubble testing for penetrations that are not testable individually. The requirement for soap bubble testing at Catawba applies to penetrations surrounded by guard piping or penetrations that are welded to the containment liner. For penetrations surrounded by guard piping, the outboard end of the guard pipe is seal welded to the process pipe. Most of the penetrations in the above two categories are of this configuration. For several configurations, the process pipe is welded to the containment liner. There are 25 penetrations of these types for each Catawba unit.

The rationale for performing soap bubble testing of penetration welds was presented previously in NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants, LWR Edition," and Branch Technical Position CSB 6-3, "Determination of Bypass Leakage Paths in Dual Containment Plants," Revision 2. The position taken by the stated rationale in these documents is no longer held by the staff. This issue was discussed with Catawba personnel in a conference call on November 14, 2000. On November 21, 2000, the

licensee docketed its position for Catawba and McGuire Nuclear Station. At present the staff believes that requiring soap bubble testing of welded penetrations is tantamount to requiring soap bubble testing on all welded seams of a steel containment or a containment liner, that this form of leakage is detected by the Type A test, and that requiring soap bubble testing at welded penetrations places an unnecessary burden on the licensee.

Based on this current rationale, the staff concludes that the elimination of the requirement for soap bubble testing of penetration welds at Catawba is acceptable.

3.2 Air Lock Door Bulkheads

Another change to TS proposed by licensee concerns the bulkhead associated with air lock doors. Within the context of the BASES that explain the justification for ACTIONS A.1, A.2, and A.3 of limiting condition of operation 3.6.1, "Containment," concerning operability of the air lock doors, the licensee is proposing the insertion of the following paragraph on page B 3.6.2-3:

Note that for the purpose of Required Action A.1, A.2, and A.3, the bulkhead associated with an air lock door is considered to be part of the door. For example, an air lock door may be declared inoperable if the equalizing valve becomes inoperable or if it is replaced. It is appropriate to treat the associated bulkhead as part of the door because a leak path through the bulkhead is no different than a leak path past the door seals. The remaining OPERABLE door/bulkhead provides the necessary barrier between the containment atmosphere and the environs.

Since the equalizing valve described above is installed across the bulkhead, a leak through this valve would in fact be pneumatically similar to a leak past the door seals and may be treated as such. Therefore, an inoperable equalizing valve may provide justification to declare the associated air lock door inoperable for the purpose of providing access through the inoperable door to repair the valve. Based on this rationale the staff finds the addition of the above paragraph, establishing the bulkhead associated with an air lock door to be considered as part of the door, to be 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 (66 FR 22028). 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: J. Golla

Date: July 31, 2001

Catawba Nuclear Station

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