

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

August 9, 2010

Mr. J. R. Morris Site Vice President Catawba Nuclear Station Duke Energy Carolinas, LLC 4800 Concord Road York, SC 29745

SUBJECT: CATAWBA NUCLEAR STATION, UNITS 1 AND 2, ISSUANCE OF AMENDMENTS REGARDING CHANGES TO TECHNICAL SPECIFICATION (TS) 3.7.10, "CONTROL ROOM AREA VENTILATION SYSTEM (CRAVS)," (TAC NOS. ME2280 AND ME2281)

Dear Mr. Morris:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 260 to Renewed Facility Operating License NPF-35 and Amendment No. 255 to Renewed Facility Operating License NPF-52 for the Catawba Nuclear Station, Units 1 and 2, respectively. The amendments consist of changes to the TSs in response to your application dated September 3, 2009.

The amendments revise TS Section 3.7.10, "Control Room Area Ventilation System (CRAVS)," to allow movement of irradiated fuel with only one CRAVS train OPERABLE.

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.

If you have any questions, please call me at 301-415-1119.

Sincerely,

Jon Thompson, Project Manager Plant Licensing Branch II-1 Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

Docket Nos. 50-413 and 50-414

Enclosures:

- 1. Amendment No. 260 to NPF-35
- 2. Amendment No. <sup>255</sup> to NPF-52
- 3. Safety Evaluation

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

# DUKE ENERGY CAROLINAS, LLC

# NORTH CAROLINA ELECTRIC MEMBERSHIP CORPORATION

# DOCKET NO. 50-413

# CATAWBA NUCLEAR STATION, UNIT 1

# AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 260 Renewed 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) Renewed Facility Operating License No. NPF-35 filed by the Duke Energy Carolinas, LLC, acting for itself, and North Carolina Electric Membership Corporation (licensees), dated September 3, 2009, 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.

- 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 Renewed Facility Operating License No. NPF-35 is hereby amended to read as follows:
  - (2) <u>Technical Specifications</u>

The Technical Specifications contained in Appendix A, as revised through Amendment No.  $^{260}\,$ , which are attached hereto, are hereby incorporated into this renewed operating license. Duke Energy Carolinas, LLC, 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

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Gioria Kulesa, Chief Plant Licensing Branch II-1 Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

Attachment: Changes to License No. NPF-35 and the Technical Specifications

Date of Issuance: August 9, 2010



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

# DUKE ENERGY CAROLINAS, LLC

# NORTH CAROLINA MUNICIPAL POWER AGENCY NO. 1

# PIEDMONT MUNICIPAL POWER AGENCY

# DOCKET NO. 50-414

# CATAWBA NUCLEAR STATION, UNIT 2

# AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 255 Renewed 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) Renewed Facility Operating License No. NPF-52 filed by the Duke Energy Carolinas, LLC, acting for itself, North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency (licensees), dated September 3, 2009, 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.

- 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 Renewed Facility Operating License No. NPF-52 is hereby amended to read as follows:
  - (2) <u>Technical Specifications</u>

The Technical Specifications contained in Appendix A, as revised through Amendment No.  $^{255}$ , which are attached hereto, are hereby incorporated into this renewed operating license. Duke Energy Carolinas, LLC, 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

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Gloría Kulesa, Chief Plant Licensing Branch II-1 Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

Attachment: Changes to License No. NPF-52 and the Technical Specifications

Date of Issuance: August 9, 2010

# ATTACHMENT TO

### LICENSE AMENDMENT NO. 260

### RENEWED FACILITY OPERATING LICENSE NO. NPF-35

### DOCKET NO. 50-413

#### AND LICENSE AMENDMENT NO. 255

### RENEWED FACILITY OPERATING LICENSE NO. NPF-52

#### DOCKET NO. 50-414

Replace the following pages of the Renewed Facility Operating Licenses and the Appendix A Technical Specifications (TSs) with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove	<u>Insert</u>
<u>Licenses</u>	<u>Licenses</u>
NPF-35, page 4	NPF-35, page 4
NPF-52, page 4	NPF-52, page 4

<u>TSs</u> 3.7.10-2 <u>TSs</u> 3.7.10-2 (2) <u>Technical Specifications</u>

The Technical Specifications contained in Appendix A, as revised through Amendment No 260 which are attached hereto, are hereby incorporated into this renewed operating license. Duke Energy Carolinas, LLC shall operate the facility in accordance with the Technical Specifications.

#### (3) Updated Final Safety Analysis Report

The Updated Final Safety Analysis Report supplement submitted pursuant to 10 CFR 54.21(d), as revised on December 16, 2002, describes certain future activities to be completed before the period of extended operation. Duke shall complete these activities no later than December 6, 2024, and shall notify the NRC in writing when implementation of these activities is complete and can be verified by NRC inspection.

The Updated Final Safety Analysis Report supplement as revised on December 16, 2002, described above, shall be included in the next scheduled update to the Updated Final Safety Analysis Report required by 10 CFR 50.71(e)(4), following issuance of this renewed operating license. Until that update is complete, Duke may make changes to the programs described in such supplement without prior Commission approval, provided that Duke evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

(4) Antitrust Conditions

Duke Energy Carolinas, LLC shall comply with the antitrust conditions delineated in Appendix C to this renewed operating license.

(5) <u>Fire Protection Program</u> (Section 9.5.1, SER, SSER #2, SSER #3, SSER #4, SSER #5)\*

Duke Energy Carolinas, LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report, as amended, for the facility and as approved in the SER through Supplement 5, subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

<sup>\*</sup>The parenthetical notation following the title of this renewed operating license condition denotes the section of the Safety Evaluation Report and/or its supplement wherein this renewed license condition is discussed.

(2) <u>Technical Specifications</u>

The Technical Specifications contained in Appendix A, as revised through Amendment No 255 which are attached hereto, are hereby incorporated into this renewed operating license. Duke Energy Carolinas, LLC shall operate the facility in accordance with the Technical Specifications.

#### (3) Updated Final Safety Analysis Report

The Updated Final Safety Analysis Report supplement submitted pursuant to 10 CFR 54.21(d), as revised on December 16, 2002, describes certain future activities to be completed before the period of extended operation. Duke shall complete these activities no later than February 24, 2026, and shall notify the NRC in writing when implementation of these activities is complete and can be verified by NRC inspection.

The Updated Final Safety Analysis Report supplement as revised on December 16, 2002, described above, shall be included in the next scheduled update to the Updated Final Safety Analysis Report required by 10 CFR 50.71(e)(4), following issuance of this renewed operating license. Until that update is complete, Duke may make changes to the programs described in such supplement without prior Commission approval, provided that Duke evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

#### (4) Antitrust Conditions

Duke Energy Carolinas, LLC shall comply with the antitrust conditions delineated in Appendix C to this renewed operating license.

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Duke Energy Carolinas, LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report, as amended, for the facility and as approved in the SER through Supplement 5, subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

<sup>\*</sup>The parenthetical notation following the title of this renewed operating license condition denotes the section of the Safety Evaluation Report and/or its supplements wherein this renewed license condition is discussed.

# REQUIRED ACTIONS (continued)

	CONDITION		REQUIRED ACTION	COMPLETION TIME	
a	C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, 3, or 4.	C.1 Be in MODE 3.		6 hours	
		C.2	Be in MODE 5.	36 hours	
associ	Required Action and associated Completion Time of Condition A not	D.1	Place OPERABLE CRAVS train in operation.	Immediately	
	met in MODE 5 or 6 or during movement of				
	irradiated fuel assemblies.	D.2	Suspend movement of irradiated fuel assemblies.	Immediately	
E.	Two CRAVS trains inoperable in MODE 5 or 6, or during movement of irradiated fuel assemblies.	E.1	Suspend movement of irradiated fuel assemblies.	Immediately	
<u>OR</u>					
	One or more CRAVS trains inoperable due to an inoperable CRE boundary in MODE 5 or 6, or during movement of irradiated fuel assemblies.				
F.	Two CRAVS trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B.	F.1	Enter LCO 3.0.3.	Immediately (continued)	

(continued)



# SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

# RELATED TO

# AMENDMENT NO. 260 TO RENEWED FACILITY OPERATING LICENSE NPF-35

<u>AND</u>

# AMENDMENT NO. 255 TO RENEWED FACILITY OPERATING LICENSE NPF-52

# DUKE ENERGY CAROLINAS, LLC

# CATAWBA NUCLEAR STATION, UNITS 1 AND 2

# DOCKET NOS. 50-413 AND 50-414

# 1.0 INTRODUCTION

By application dated September 3, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML092530240), Duke Energy Carolinas, LLC (Duke, the licensee), requested changes to the Technical Specifications (TSs) for the Catawba Nuclear Station, Units 1 and 2 (Catawba 1 and 2).

The proposed changes would revise TSs Section 3.7.10, "Control Room Area Ventilation System (CRAVS)," to allow movement of irradiated fuel with only one CRAVS train OPERABLE. The proposed changes would also result in consistency between Catawba 1 and 2 TS 3.7.10 and the corresponding provisions of NUREG-1431, "Standard Technical Specifications [STSs] Westinghouse Plants," Vol. 1, Rev. 3 (ADAMS Accession No. ML041830612).

### 2.0 REGULATORY EVALUATION

Section 182a of the Atomic Energy Act requires applicants for nuclear power plant operating licenses to include TSs as part of the license. These TSs are derived from the analyses and evaluations in the plant safety analysis reports.

The regulation at Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 50.36 contains the requirements for the content of TSs. Pursuant to 10 CFR 50.36, TSs are required to include items in the following five categories: (1) Safety limits (SLs), limiting safety system settings (LSSSs), and limiting control settings; (2) Limiting conditions for operation (LCOs); (3) Surveillance requirements (SRs); (4) Design features; and (5) Administrative controls.

The regulation at 10 CFR 50.36(c)(2)(ii) lists the criteria used to determine whether or not LCOs must be established in the TSs to ensure that the lowest functional capability or performance level of equipment required for safe operation of the facility will be met:

Criterion 1. Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.

Criterion 2. A process variable, design feature, or operating restriction that is an initial condition of a design-basis accident [DBA] or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

Criterion 3. A structure, system, or component [SSC] that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

Criterion 4. A structure, system, or component which operating experience or probabilistic risk assessment [PRA] has shown to be significant to public health and safety.

Further, 10 CFR Part 50, Appendix A, "General Design Criteria for Nuclear Power Plants," provides several criteria affecting the Control Room Area protected by the CRAVS, including: Criterion 16 - Containment design, Criterion 19 - Control room, Criterion 22 - Protection system independence, and Criterion 41 - Containment atmosphere cleanup.

#### 3.0 TECHNICAL EVALUATION

When originally converted to improved STSs, the TSs for Catawba 1 and 2 included TS 3.7.10 as described in the STSs. This effectively required only one train of CRAVS to be OPERABLE during movement of irradiated fuel assemblies. As part of their license amendment for partial scope implementation of Alternate Source Term sent by letter dated March 26, 2002 (ADAMS Accession No. ML020930658), the licensee requested a revision to TS 3.7.10 that required two CRAVS trains to be OPERABLE during movement of irradiated fuel assemblies. The NRC staff issued amendments approving this change by letter dated April 23, 2002 (ADAMS Accession No. ML021140431). This was a conservative change when compared to the STS and was based on existing plant procedures that were more conservative than their TS.

Catawba 1 and 2 recently conducted a further review of plant operation and system design in preparation for implementing a dry cask storage program. Based on this, they concluded that the requirement for both CRAVS trains to be OPERABLE during movement of irradiated fuel assemblies is not necessary, and adds unnecessary conservatism and more restrictive operational practices with respect to movement of irradiated fuel. They confirm that there are no fuel types, operational practices, or unique design features that should require Catawba 1 and 2 to have more restrictive TSs for the CRAVS than the STSs. This amendment requests that during movement of irradiated fuel assemblies, only one train of CRAVS be required OPERABLE and in operation.

The licensee confirms that allowing movement of irradiated fuel assemblies with one train of CRAVS OPERABLE does not invalidate nor change the current analysis of radiological consequences for the fuel-handling accident. The licensee-proposed changes to TS 3.7.10 stay within the relevant GDC requirements and maintain the accident analysis and consequences that NRC has reviewed and approved for this equipment. Thus, the Catawba 1 and 2 TSs will continue to be derived from the analyses and evaluations in the Updated Final Safety Analysis Report as required by 10 CFR 50.36. This change also brings their TSs back into conformance with the STSs.

# 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 a requirement with respect to the installation or use of facility components 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 (75 FR 30444). 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 <u>CONCLUSION</u>

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: V. Cusumano

Date: August 9, 2010

Mr. J. R. Morris Site Vice President Catawba Nuclear Station Duke Energy Carolinas, LLC 4800 Concord Road York, SC 29745

SUBJECT: CATAWBA NUCLEAR STATION, UNITS 1 AND 2, ISSUANCE OF AMENDMENTS REGARDING CHANGES TO TECHNICAL SPECIFICATION (TS) 3.7.10, "CONTROL ROOM AREA VENTILATION SYSTEM (CRAVS)," (TAC NOS. ME2280 AND ME2281)

Dear Mr. Morris:

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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.

If you have any questions, please call me at 301-415-1119.

Sincerely,

# /**RA**/

Jon Thompson, Project Manager Plant Licensing Branch II-1 Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

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Enclosures:

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#### ADAMS Accession No. ML102070181

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NAME	JThompson	MO'Brien	RElliott		GKulesa (JStang for)	JThompson
DATE	07/26/10	07/26/10	07/29/10	08/04/10	08/05/10	08/05/10

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