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March 14, 2007

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555-0001

RE: Duke Power Company LLC d/b/a Duke Energy Carolinas, LLC

Oconee Nuclear Station, Units 1, 2 and 3  
Renewed Facility Operating License Nos. DPR-38, DPR-47, DPR-55  
Docket Nos. 50-269, 50-270, 50-287  
McGuire Nuclear Station, Units 1 and 2  
Renewed Facility Operating License Nos. NPF-9, NPF-17  
Docket Nos. 50-369, 50-370  
Catawba Nuclear Station, Units 1 and 2  
Renewed Facility Operating License Nos. NPF-35, NPF-52  
Docket Nos. 50-413, 50-414  
Oconee Nuclear Station  
Independent Spent Fuel Storage Installation  
NRC License No. SNM-2503  
Docket No. 72-004

#### License Amendment Request for Change of Licensee Name

On September 29, 2006, Duke Power Company LLC filed Articles of Amendment with the North Carolina Department of the Secretary of State that changed its name to Duke Energy Carolinas, LLC. The name change became effective October 1, 2006.

Pursuant to 10 CFR 50.90, this letter transmits license amendment requests for the Oconee, McGuire, and Catawba Nuclear Station Renewed Facility Operating Licenses. Also, pursuant to 10 CFR 72.56, this letter transmits a license amendment request for the Oconee Independent Spent Fuel Storage Installation (ISFSI) License. It is requested that amendments be made to these licenses to reflect the change in the name of the licensee from Duke Power Company LLC to Duke Energy Carolinas, LLC.

The proposed amendments are a name change only. There is no change in the state of incorporation, registered agent, registered office, rights or liabilities of the company. Nor is there a change in the function of the licensee or the way in which it does business.

The licensee's financial responsibility for its plants and its sources of funds to support the plants will remain the same. Duke Energy Carolinas, LLC will continue to be a utility

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regulated by the Federal Energy Regulatory Commission, the North Carolina Utilities Commission and the Public Service Commission of South Carolina.

We respectfully request the NRC Staff complete its review and approval of this administrative change at its earliest convenience.

There are no regulatory commitments contained in this correspondence.

If you have any questions or require additional information, please contact K. B. Nolan at (704) 382-8869.

Sincerely,



Dhiaa M. Jamil

Enclosures:

1. Articles of Amendment filed with the North Carolina Department of the Secretary of State
2. Licensee Evaluation
  - Attachment 1 – License Markups
    - Attachment 1a. Oconee Nuclear Station, Marked Changes to Current FOLs DPR-38, DPR-47, and DPR-55
    - Attachment 1b. McGuire Nuclear Station, Marked Changes to Current FOLs NPF-9 and NPF-17
    - Attachment 1c. Catawba Nuclear Station, Marked Changes to Current FOLs NPF-35 and NPF-52
    - Attachment 1d. Oconee Independent Spent Fuel Storage Installation, Marked Changes to Current NRC License No. SNM-2503
  - Attachment 2 – Retyped License Pages
    - Attachment 2a. Oconee Nuclear Station, Proposed Amended – Retyped FOLs DPR-38, DPR-47, and DPR-55
    - Attachment 2b. McGuire Nuclear Station, Proposed Amended – Retyped FOLs NPF-9 and NPF-17
    - Attachment 2c. Catawba Nuclear Station, Proposed Amended – Retyped FOLs NPF-35 and NPF-52
    - Attachment 2d. Oconee Independent Spent Fuel Storage Installation, Proposed Amended – Retyped NRC License No. SNM-2503

xc:

W. D. Travers, Region II Administrator  
U.S. Nuclear Regulatory Commission  
Sam Nunn Atlanta Federal Center, 23 T85  
61 Forsyth St., SW  
Atlanta, GA 30303-8931

L. N. Olshan, Senior Project Manager (ONS)  
U.S. Nuclear Regulatory Commission  
11555 Rockville Pike  
Mail Stop 0-8 G9A  
Rockville, MD 20852-2738

J. F. Stang, Jr., Senior Project Manager (CNS & MNS)  
U. S. Nuclear Regulatory Commission  
11555 Rockville Pike  
Mail Stop 0-8 H 4A  
Rockville, MD 20852-2738

D. W. Rich  
NRC Senior Resident Inspector  
Oconee Nuclear Station

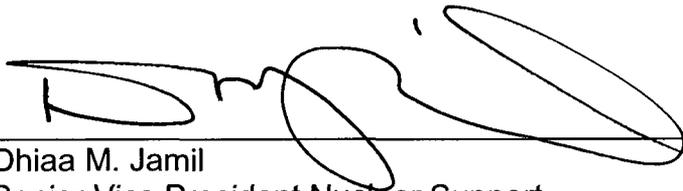
J. B. Brady  
NRC Senior Resident Inspector  
McGuire Nuclear Station

A. T. Sabisch  
NRC Senior Resident Inspector  
Catawba Nuclear Station

H. J. Porter, Assistant Director  
Division of Radioactive Waste Management  
Bureau of Land and Waste Management  
South Carolina Department of Health and Environmental Control  
2600 Bull St.  
Columbia, SC 29201

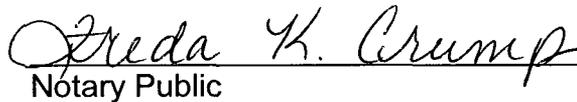
B. O. Hall, Section Chief  
Division of Environmental Health, Radiation Protection Section  
North Carolina Department of Environment and Natural Resources  
1645 Mail Service Center  
Raleigh, NC 27699

Dhiaa M. Jamil, Senior Vice President Nuclear Support of Duke Energy Carolinas, LLC, affirms that he is the person who subscribed his name to the foregoing statement, and that all the matters and facts set forth herein are true and correct to the best of his knowledge.



Dhiaa M. Jamil  
Senior Vice President Nuclear Support  
Duke Energy Carolinas, LLC

Subscribed and sworn to me: March 14, 2007  
Date



Notary Public

My Commission Expires: August 17, 2011  
Date

SEAL

U.S. Nuclear Regulatory Commission  
March 14, 2007  
Enclosure 1

**ARTICLES OF AMENDMENT FILED WITH THE  
NORTH CAROLINA DEPARTMENT OF THE SECRETARY OF STATE**



# NORTH CAROLINA

## Department of The Secretary of State

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To all whom these presents shall come, Greetings:

I, **ELAINE F. MARSHALL**, Secretary of State of the State of North Carolina, do hereby certify the following and hereto attached to be a true copy of

### ARTICLES OF AMENDMENT

OF

**DUKE POWER COMPANY LLC  
WHICH CHANGED ITS NAME TO  
DUKE ENERGY CAROLINAS, LLC**

the original of which was filed in this office on the 29th day of September, 2006.



IN WITNESS WHEREOF, I have hereunto  
set my hand and affixed my official seal at the  
City of Raleigh, this 29th day of September, 2006

*Elaine F. Marshall*  
Secretary of State

SEP-28-2006 10:27

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SOSID: 0043506  
Date Filed: 9/29/2006 2:14:00 PM  
Effective: 10/1/2006  
Elaine F. Marshall  
North Carolina Secretary of State  
C200627200004

State of North Carolina  
Department of the Secretary of State

Limited Liability Company  
AMENDMENT OF ARTICLES OF ORGANIZATION

Pursuant to §57C-2-22 of the General Statutes of North Carolina, the undersigned limited liability company hereby submits the following Articles of Amendment for the purpose of amending its Articles of Organization.

- 1. The name of the limited liability company is: Duke Power Company LLC
- 2. The text of each amendment adopted is as follows (attach additional pages if necessary):

"ARTICLE FIRST. Name. The name of the limited liability company is Duke Energy Carolinas, LLC."

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- 3. (Check either a or b, whichever is applicable)
  - a.  The amendment(s) was (were) duly adopted by the unanimous vote of the organizers of the limited liability company prior to the identification of initial members of the limited liability company.
  - b.  The amendment(s) was (were) duly adopted by the unanimous vote of the members of the limited liability company or was (were) adopted as otherwise provided in the limited liability company's Articles of Organization or a written operating agreement.
- 4. These articles will be effective upon filing, unless a date and/or time is specified: October 1, 2006

This the 27 day of September, 2006

Duke Power Company LLC  
Name of Limited Liability Company

Robert Lucas III  
Signature

Robert T. Lucas III, Assistant Secretary  
Type or Print Name and Title

authorized to sign in accordance with NCGS 57C-3-24

NOTES:  
1. Filing fee is \$50. This document must be filed with the Secretary of State.

(Revised January 2000)  
CORPORATIONS DIVISION

P. O. BOX 29622

(Form L-17)  
RALPHIGH, NC 27626-0622

NC0001 - 12/15/2004 C T Press Co/Dea

U.S. Nuclear Regulatory Commission  
March 14, 2007  
Enclosure 2

## **LICENSEE EVALUATION**

Subject: License Amendment Request for Change of Licensee Name

- 1.0 SUMMARY DESCRIPTION
- 2.0 DETAILED DESCRIPTION
- 3.0 TECHNICAL EVALUATION
- 4.0 REGULATORY EVALUATION
  - 4.1. Significant Hazards Consideration
  - 4.2. Applicable Regulatory Requirements/Criteria
  - 4.3. Conclusions
- 5.0 ENVIRONMENTAL CONSIDERATION

## **LICENSEE EVALUATION**

Subject: License Amendment Request for Change of Licensee Name

### **1.0 SUMMARY DESCRIPTION**

This evaluation supports a request to amend Renewed Facility Operating Licenses (FOLs or licenses) DPR-38, DPR-47, and DPR-55 for Oconee Nuclear Station; NPF-9 and NPF-17 for McGuire Nuclear Station; NPF-35 and NPF-52 for Catawba Nuclear Station and NRC License SNM-2503 for the Oconee Independent Spent Fuel Storage Installation (ISFSI).

The proposed changes would revise the licenses to change the corporate name of the licensee from Duke Power Company LLC to Duke Energy Carolinas, LLC.

### **2.0 DETAILED DESCRIPTION**

On September 29, 2006, Duke Power Company LLC filed with the North Carolina Department of The Secretary of State "Articles of Amendment" amending its Articles of Organization to change its name to Duke Energy Carolinas, LLC. The name change became effective October 1, 2006. With the submittal of these license amendments, the NRC is requested to replace references to the name "Duke Power Company LLC" with references to the name "Duke Energy Carolinas, LLC" in all applicable locations of the Renewed FOLs DPR-38, DPR-47, and DPR-55 for Oconee Nuclear Station; NPF-9 and NPF-17 for McGuire Nuclear Station; NPF-35 and NPF-52 for Catawba Nuclear Station and NRC License SNM-2503 for the Oconee ISFSI. This request also applies to Appendix B (Additional Conditions) to Renewed License NPF-9 and NPF-17 for McGuire Units 1 and 2 and Appendix B (Additional Conditions) to Renewed License NPF-35 and NPF-52 for Catawba Units 1 and 2. Marked copies of each of these licenses are provided in Attachment 1 and proposed new pages are provided in Attachment 2. Any pending applications or license amendments heretofore submitted by Duke Power Company LLC but not yet acted upon by the NRC, which reference "Duke Power Company LLC" should also be replaced by "Duke Energy Carolinas, LLC." This administrative change will also be reflected in future correspondence with the NRC.

### **3.0 TECHNICAL EVALUATION**

These amendments contain proposed changes that affect the Renewed FOLs for Oconee Nuclear Station Units 1, 2, and 3; McGuire Nuclear Station Units 1 and 2; Catawba Nuclear Station Units 1 and 2; and the referenced Oconee ISFSI License. The proposed changes are administrative in nature and involve only a name change. The proposed changes do not alter any technical content of the licenses nor do they have any programmatic effect on the Duke Energy Carolinas Quality Assurance Program Topical Report. The name change will have no impact on the design, function,

or operation of any plant structures, systems, or components. As renamed, Duke Energy Carolinas, LLC will continue to be responsible for the safe operation of Oconee, McGuire and Catawba Nuclear Stations and the Oconee ISFSI.

#### **4.0 REGULATORY EVALUATION**

The proposed changes to the Renewed Facility Operating Licenses for Oconee, McGuire and Catawba Nuclear Stations are being submitted to the NRC pursuant to 10 CFR 50.90. The proposed changes to the Oconee ISFSI license are being submitted to the NRC pursuant to 10 CFR 72.56. These amendments are being submitted only for the purpose of updating the affected license documents to reflect a name change to Duke Energy Carolinas, LLC. Duke Power Company LLC filed the Articles of Amendment which changed its name to Duke Energy Carolinas, LLC with the North Carolina Department of the Secretary of State on September 29, 2006. The name change became effective October 1, 2006.

##### **4.1. Significant Hazards Consideration**

The licensee has evaluated whether or not a significant hazards consideration is involved with the proposed amendments by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed amendments are for a name change only. The amendments do not involve any change in the technical qualifications of the licensee or the design, configuration, or operation of the nuclear units. All Limiting Conditions for Operation, Limiting Safety System Settings and Safety Limits specified in the Technical Specifications remain unchanged. Also, the Physical Security Plans and related plans, the Operator Training and Requalification Programs, the Quality Assurance Programs, and the Emergency Plans will not be materially changed by the proposed name change. The name change amendments will not affect the executive oversight provided by the Chief Nuclear Officer and his staff.

Therefore, the proposed amendments do not involve any increase in the probability or consequences of an accident previously analyzed.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed amendments do not involve any change in the design, configuration, or operation of the nuclear plant. The current plant design, design bases, and plant safety analysis will remain the same.

The Limiting Conditions for Operations, Limiting Safety System Settings and Safety Limits specified in the Technical Specifications are not affected by the proposed changes. As such, the plant conditions for which the design basis accident analyses were performed remain valid.

The proposed amendments do not introduce a new mode of plant operation or new accident precursors, do not involve any physical alterations to plant configurations, or make changes to system set points that could initiate a new or different kind of accident.

Therefore, the proposed amendments do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The proposed amendments do not involve a change in the design, configuration, or operation of the nuclear plants. The change does not affect either the way in which the plant structures, systems, and components perform their safety function or their design and licensing bases.

Plant safety margins are established through Limiting Conditions for Operation, Limiting Safety System Settings and Safety Limits specified in the Technical Specifications. Because there is no change to the physical design of the plant, there is no change to any of these margins.

Therefore, the proposed amendments do not involve a significant reduction in a margin of safety.

Based on the above, the licensee concludes that the proposed amendments do not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c). Accordingly, a finding of "no significant hazards consideration" is justified.

#### 4.2. Applicable Regulatory Requirements/Criteria

The proposed amendments are administrative in nature and involve only a name change. This request is being submitted to the NRC pursuant to 10 CFR 50.90 and 10 CFR 72.56 only for the purpose of updating the affected license documents. The changes do not alter any technical content of the licenses or any technical content of the Technical Specifications requirements, nor do they have any programmatic effect on the Quality Assurance Program description. The corporate status of the licensee has not changed and no transfer within the scope of 10 CFR 50.80 or 10 CFR 72.50 will or has occurred.

#### 4.3. Conclusions

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by name change of the licensee, (2) operation of the nuclear plants will continue to 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.

### **5.0 ENVIRONMENTAL CONSIDERATION**

The change in licensee name will have no effect on the radiological or nonradiological operation of the plants.

The change will not increase the probability or consequences of any accidents, no changes are being made in the types of any effluents that may be released offsite from the plants, and there is no significant increase in the allowable individual or cumulative occupational radiation exposure at the plants. Accordingly, there are no significant radiological environmental impacts associated with the proposed amendments.

The change in licensee name does not involve features located entirely within the restricted area as defined in 10 CFR 20. It does not affect nonradiological plant effluents and has no other environmental impact. Accordingly, there are no significant nonradiological environmental impacts associated with the proposed amendments.

Pursuant to 10 CFR 51.22 (b), no environmental impact statement or environmental assessment needs to be prepared in connection with the issuance of these amendments.

U.S. Nuclear Regulatory Commission  
March 14, 2007  
Enclosure 2

**ATTACHMENT 1a**

**OCONEE NUCLEAR STATION**

**MARKED CHANGES TO CURRENT FOLS DPR-38, DPR-47 AND DPR-55**

*Energy Carolinas,*

~~DUKE POWER COMPANY/LLC~~

DOCKET NO. 50-269

OCONEE NUCLEAR STATION, UNIT 1

RENEWED FACILITY OPERATING LICENSE

Renewed License No. DPR-38

The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. DPR-38 issued on February 6, 1973, has now found that:

- a. The application to renew License No. DPR-38 filed by Duke Energy Corporation\* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter 1, and all required notifications to other agencies or bodies have been duly made;
- b. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21 (c), such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the Oconee Nuclear Station, Unit 1 (facility or plant), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
- c. There is reasonable assurance: (i) that the activities authorized by this renewed license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the applicable regulations set forth in 10 CFR Chapter 1, except as exempted from compliance;
- d. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements;"
- e. The renewal of this license will not be inimical to the common defense and security or the health and safety of the public; and
- f. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs, and considering available alternatives, the renewal of this license is in accordance with 10 CFR Part 51 and all applicable requirements have been satisfied.

*Duke Energy Carolinas, LLC*

\* Duke Energy Corporation ~~has~~ converted to Duke Power Company LLC ~~which~~ is the owner and operator of Oconee Nuclear Station, Unit 1. References to the "licensee" are to ~~Duke Power Company LLC~~.

*on April 3, 2006 and was re-named Duke Energy Carolinas, LLC as of October 1, 2006.*

Renewed License No. DPR-38  
Amendment No. ~~349~~

Energy Carolinas,

On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-38, issued on February 6, 1973, is superseded by Renewed Facility Operating License No. DPR-38, which is hereby issued to Duke ~~Power Company~~ LLC, to read as follows:

1. This license applies to the Oconee Nuclear Station, Unit 1, a pressurized water reactor and associated equipment (the facility) owned and operated by Duke ~~Power Company~~ LLC. The facility is located in eastern Oconee County, about eight miles northeast of Seneca, South Carolina, and is described in the "Updated Final Safety Analysis Report" (UFSAR) as supplemented and amended and the Environmental Report as supplemented and amended.
2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Duke ~~Power Company~~ LLC (the licensee):
  - A. Pursuant to Section 104b of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location on the Oconee Nuclear Station Site in accordance with the procedures and limitations set forth in this license;
  - B. Pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the UFSAR as supplemented and amended;
  - C. Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess, and use at any time byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration and as fission detectors in amounts as required;
  - D. Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components;
  - E. Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the Oconee Nuclear Station, Units 1, 2 and 3.
3. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter 1, Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50 and Section 70.32 of

Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

A. Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2568 megawatts thermal.

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 354 are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. This license is subject to the following antitrust conditions:

Applicant makes the commitments contained herein, recognizing that bulk power supply arrangements between neighboring entities normally tend to serve the public interest. In addition, where there are net benefits to all participants, such arrangements also serve the best interests of each of the participants. Among the benefits of such transactions are increased electric system reliability, a reduction in the cost of electric power, and minimization of the environmental effects of the production and sale of electricity.

Any particular bulk power supply transaction may afford greater benefits to one participant than to another. The benefits realized by a small system may be proportionately greater than those realized by a larger system. The relative benefits to be derived by the parties from a proposed transaction, however, should not be controlling upon a decision with respect to the desirability of participating in the transaction. Accordingly, applicant will enter into proposed bulk power transactions of the types hereinafter described which, on balance, provide net benefits to applicant. There are net benefits in a transaction if applicant recovers the cost of the transaction (as defined in ¶1 (d) hereof) and there is no demonstrable net detriment to applicant arising from that transaction.

1. As used herein:

- (a) "Bulk Power" means electric power and any attendant energy, supplied or made available at transmission or sub-transmission voltage by one electric system to another.
- (b) "Neighboring Entity" means a private or public corporation, a governmental agency or authority, a municipality, a cooperative, or a lawful association of any of the foregoing owning or operating, or

proposing to own or operate, facilities for the generation and transmission of electricity which meets each of the following criteria: (1) its existing or proposed facilities are economically and technically feasible of interconnection with those of the applicant and (2) with the exception of municipalities, cooperatives, governmental agencies or authorities, and associations, it is, or upon commencement of operations will be, a public utility and subject to regulation with respect to rates and service under the laws of North Carolina or South Carolina or under the Federal Power Act; provided, however, that as to associations, each member of such association is either a public utility as discussed in this clause (2) or a municipality, a cooperative or a governmental agency or authority.

- (c) Where the phrase "neighboring entity" is intended to include entities engaging or proposing to engage only in the distribution of electricity, this is indicated by adding the phrase "including distribution systems".
  - (d) "Cost" means any appropriate operating and maintenance expenses, together with all other costs, including a reasonable return on applicant's investment, which are reasonably allocable to a transaction. However, no value shall be included for loss of revenues due to the loss of any wholesale or retail customer as a result of any transaction hereafter described.
- 2.
- (a) Applicant will interconnect and coordinate reserves by means of the sale and exchange of emergency and scheduled maintenance bulk power with any neighboring entity(ies), when there are net benefits to each party, on terms that will provide for all of applicant's properly assignable costs as may be determined by the Federal Energy Regulatory Commission and consistent with such cost assignment will allow the other party the fullest possible benefits of such coordination.
  - (b) Emergency service and/or scheduled maintenance service to be provided by each party will be furnished to the fullest extent available from the supplying party and desired by the party in need. Applicant and each party will provide to the other emergency service and/or scheduled maintenance service if and when available from its own generation and, in accordance with recognized industry practice, from generation of others to the extent it can do so without impairing service to its customers, including other electric systems to whom it has firm commitments.
  - (c) Each party to a reserve coordination arrangement will establish its own reserve criteria, but in no event shall the minimum installed reserve on each system be less than 15%, calculated as a percentage of estimated peak load responsibility. Either party, if it

*No changes this page*

has, or has firmly planned, installed reserves in excess of the amount called for by its own reserve criterion, will offer any such excess as may in fact be available at the time for which it is sought and for such period as the selling party shall determine for purchase in accordance with reasonable industry practice by the other party to meet such other party's own reserve requirement. The parties will provide such amounts of spinning reserve as may be adequate to avoid the imposition of unreasonable demands on the other party(ies) in meeting the normal contingencies of operating its (their) system(s). However, in no circumstances shall such spinning reserve requirement exceed the installed reserve requirement.

- (d) Interconnections will not be limited to low voltages when higher voltages are available from applicant's installed facilities in the area where interconnection is desired and when the proposed arrangement is found to be technically and economically feasible.
  - (e) Interconnection and reserve coordination agreements will not embody provisions which impose limitations upon the use or resale of power and energy sold or exchanges pursuant to the agreement. Further, such arrangements will not prohibit the participants from entering into other interconnection and coordination arrangements, but may include appropriate provisions to assure that (i) applicant receives adequate notice of such additional interconnection or coordination, (ii) the parties will jointly consider and agree upon such measures, if any, as are reasonably necessary to protect the reliability of the interconnected systems and to prevent undue burdens from being imposed on any system, and (iii) applicant will be fully compensated for its costs. Reasonable industry practice as developed in the area from time to time will satisfy this provision.
3. Applicant currently has on file, and may hereafter file, with the Federal Energy Regulatory Commission contracts with neighboring entity(ies) providing for the sale and exchange of short-term power and energy, limited term power and energy, economy energy, nondisplacement energy, and emergency capacity and energy. Applicant will enter into contracts providing for the same or for like transactions with any neighboring entity on terms which enable applicant to recover the full costs allocable to such transaction.
  4. Applicant currently sells capacity and energy in bulk on a full requirements basis to several entities engaging in the distribution of electric power at retail. In addition, applicant supplies electricity directly to ultimate users in a number of municipalities. Should any such entity(ies) or municipality(ies) desire to become a neighboring entity as defined in ¶1 (b) hereof (either alone or through combination with other), applicant will assist in facilitating the necessary transition through the sale of partial requirements firm power

and energy. The provision of such firm partial requirements service shall be under such rates, terms and conditions as shall be found by the Federal Energy Regulatory Commission to provide for the recovery of applicant's costs. Applicant will sell capacity and energy in bulk on a full requirements basis to any municipality currently served by applicant when such municipality lawfully engages in the distribution of electric power at retail.

5. (a) Applicant will facilitate the exchange of electric power in bulk in wholesale transactions over its transmission facilities (1) between or among two or more neighboring entities, including distribution systems with which it is interconnected or may be interconnected in the future, and (2) between any such entity(ies) and any other electric system engaging in bulk power supply between whose facilities applicant's transmission lines and other transmission lines would form a continuous electric path, provided that permission to utilize such other transmission lines has been obtained. Such transaction shall be undertaken provided that the particular transaction reasonably can be accommodated by applicant's transmission system from a functional and technical standpoint and does not constitute the wheeling of power to a retail customer. Such transmission shall be on terms that fully compensate applicant for its cost. Any entity(ies) requesting such transmission arrangements shall give reasonable notice of its (their) schedule and requirements.
- (b) Applicant will include in its planning and construction program, sufficient transmission capacity as required for the transactions referred to in subparagraph (a) of this paragraph, provided that (1) the neighboring entity(ies) gives applicant sufficient advance notice as may be necessary reasonably to accommodate its (their) requirements from a functional and technical standpoint and (2) that such entity(ies) fully compensates applicant for its cost. In carrying out this subparagraph (b), however, applicant shall not be required to construct or add transmission facilities which (a) will be of no demonstrable present or future benefit to applicant, or (b) which could be constructed by the requesting entity(ies) without duplicating any portion of applicant's existing transmission lines, or (c) which would jeopardize applicant's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements. Where regulatory or environmental approvals are required for the construction or addition of transmission facilities, needed for the transactions referred to in subparagraph (a) of this paragraph, it shall be the responsibility of the entity(ies) seeking the transaction to participate in obtaining such approvals, including sharing in the cost thereof.

6. To increase the possibility of achieving greater reliability and economy of electric generation and transmission facilities, applicant will discuss load projections and system development plans with any neighboring entity(ies).
7. When applicant's plans for future nuclear generating units (for which application will hereafter be made to the Nuclear Regulatory Commission) have reached the stage of serious planning, but before firm decisions have been made as to the size and desired completion date of the proposed nuclear units, applicant will notify all neighboring entities, including distribution systems with peak loads smaller than applicant's, that applicant plans to construct such nuclear units. Neither the timing nor the information provided need be such as to jeopardize obtaining the required site at the lowest possible cost.
8. The foregoing commitments shall be implemented in a manner consistent with the provisions of the Federal Power Act and all other lawful local, State and Federal regulation and authority. Nothing in these commitments is intended to determine in advance the resolution of issues which are properly raised at the Federal Energy Regulatory Commission concerning such commitments, including allocation of costs or the rates to be charged. Applicant will negotiate (including the execution of a contingent statement of intent) with respect to the foregoing commitments with any neighboring entity including distribution systems where applicable engaging in or proposing to engage in bulk power supply transactions, but applicant shall not be required to enter into any final arrangement prior to resolution of any substantial questions as to the lawful authority of an entity to engage in the transactions. In addition, applicant shall not be obligated to enter into a given bulk power supply transaction if: (1) to do so would violate, or incapacitate it from performing any existing lawful contract it has with a third party; (2) there is contemporaneously available to it, a competing or alternative arrangement which affords it greater benefits which would be mutually exclusive of such arrangement; (3) to do so would adversely affect its system operations or the reliability of power supply to its customers; or (4) if to do so would jeopardize applicant's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements.

D. Fire Protection

*Energy Carolinas,*

Duke ~~Power Company~~ LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the UFSAR for the facility and as approved in the SER's dated August 11, 1978, and April 28, 1983; October 5, 1978, and June 9, 1981 Supplements to the SER dated August 11, 1978; and Exemptions dated February 2, 1982; August 31, 1983;

December 27, 1984; December 5, 1988; and August 21, 1989 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.

E. Physical Protection

*Energy Carolinas,*

Duke ~~Power Company~~ LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54 (p). The combined set of plans, which contains safeguards information protected under 10 CFR 73.21, is entitled: "Duke Energy Physical Security Plan" submitted by letter dated September 8, 2004, and supplemented on September 30, 2004, October 15, 2004, October 21, 2004, and October 27, 2004.

- F. In the update to the UFSAR required pursuant to 10 CFR 50.71 (e)(4) scheduled for July, 2001, the licensee shall update the UFSAR to include the UFSAR supplement submitted pursuant to 10 CFR 54.21 (d) as revised on March 27, 2000. Until the UFSAR update is complete, the licensee may make changes to the programs described in its UFSAR supplement without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.
- G. The licensee's UFSAR supplement submitted pursuant to 10 CFR 54.21 (d), as revised on March 27, 2000, describes certain future inspection activities to be completed before the period of extended operation. The licensee shall complete these activities no later than February 6, 2013.

4. This renewed license is effective as of the date of issuance and shall expire at midnight on February 6, 2033.

*No change this page*

5. Steam Generator Circumferential Crack Report:

Following each inservice inspection of steam generator tubes, the NRC shall be notified of the following prior to returning the steam generators to service:

- a. Indication of circumferential cracking in the secondary side roll (lower roll in the upper tubesheet or upper roll in the lower tubesheet) if rerolled.
  - b. Indication of circumferential cracking in the original roll or heat affected zone adjacent to the tube-to-tubesheet seal weld-if no reroll is present.
  - c. Determination of the best-estimate total leakage that would result from an analysis of the limiting Large Break Loss of Coolant Accident (LBLOCA) based on circumferential cracking in the original tube-to-tubesheet rolls, tube-to-tubesheet rerolls, and heat affected zones of seal welds as found during each inspection.
6. Demonstrate that the primary-to-secondary leakage following a LBLOCA, as described in Appendix A to BAW-2374, is acceptable, based on the as-found condition of the SGs. This is required to demonstrate that adequate margin and defense-in-depth are maintained. For the purpose of this evaluation, acceptable means a best estimate of the leakage expected in the event of a LBLOCA that would not result in a significant increase of radionuclide release (e.g., in excess of 10 CFR 100 limits). A summary of this evaluation shall be provided to the NRC within 3 months following completion of steam generator tube insetvice inspection with the report required by Technical Specification 5.6.8, Item b.

FOR THE NUCLEAR REGULATORY COMMISSION

Roy Zimmerman, Acting Director  
Office of Nuclear Reactor Regulation

Attachment:

- 1) Appendix A - Technical Specifications Renewed License No. DPR-38

Date of Issuance May 23, 2000

*Energy Carolinas,*

~~DUKE POWER COMPANY/LLC~~

DOCKET NO. 50-270

OCONEE NUCLEAR STATION, UNIT 2

RENEWED FACILITY OPERATING LICENSE

Renewed License No. DPR-47

The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. DPR-47 issued on October 6, 1973, has now found that:

- a. The application to renew License No. DPR-47 filed by Duke Energy Corporation\* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter 1, and all required notifications to other agencies or bodies have been duly made;
- b. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21 (a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21 (c), such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the Oconee Nuclear Station, Unit 2 (facility or plant), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
- c. There is reasonable assurance: (i) that the activities authorized by this renewed license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the applicable regulations set forth in 10 CFR Chapter 1, except as exempted from compliance;
- d. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements;"
- e. The renewal of this license will not be inimical to the common defense and security or the health and safety of the public; and
- f. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs, and considering available alternatives, the renewal of this license is in accordance with 10 CFR Part 51 and all applicable requirements have been satisfied.

*Duke Energy Carolinas, LLC*

\* Duke Energy Corporation ~~has~~ converted to Duke Power Company LLC ~~which~~ is the owner and operator of Oconee Nuclear Station, Unit 2. References to the "licensee" are to ~~Duke Power Company LLC~~.

*on April 3, 2006 and was re-named Duke Energy Carolinas, LLC as of October 1, 2006.*

Renewed License No. DPR-47  
Amendment No. ~~351~~

Energy Carolinas,

On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-47, issued on October 6, 1973, is superseded by Renewed Facility Operating License No. DPR-47, which is hereby issued to Duke ~~Power Company~~ LLC, to read as follows:

1. This license applies to the Oconee Nuclear Station, Unit 2, a pressurized water reactor and associated equipment (the facility) owned and operated by Duke ~~Power Company~~ LLC. The facility is located in eastern Oconee County, about eight miles northeast of Seneca, South Carolina, and is described in the "Updated Final Safety Analysis Report" (UFSAR) as supplemented and amended and the Environmental Report as supplemented and amended.
2. Subject to the ~~conditions~~ and requirements incorporated herein, the Commission hereby licenses Duke ~~Power Company~~ LLC (the licensee):
  - A. Pursuant to Section 104b of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location on the Oconee Nuclear Station Site in accordance with the procedures and limitations set forth in this license;
  - B. Pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel in accordance with the limitations for storage and amounts required for reactor operation, as described in the UFSAR as supplemented and amended;
  - C. Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess, and use at any time byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration and as fission detectors in amounts as required;
  - D. Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components;
  - E. Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the Oconee Nuclear Station, Units 1, 2 and 3.
3. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter 1, Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50 and Section 70.32 of

Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

A. Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2568 megawatts thermal.

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. (358) are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. This license is subject to the following antitrust conditions:

Applicant makes the commitments contained herein, recognizing that bulk power supply arrangements between neighboring entities normally tend to serve the public interest. In addition, where there are net benefits to all participants, such arrangements also serve the best interests of each of the participants. Among the benefits of such transactions are increased electric system reliability, a reduction in the cost of electric power, and minimization of the environmental effects of the production and sale of electricity.

Any particular bulk power supply transaction may afford greater benefits to one participant than to another. The benefits realized by a small system may be proportionately greater than those realized by a larger system. The relative benefits to be derived by the parties from a proposed transaction, however, should not be controlling upon a decision with respect to the desirability of participating in the transaction. Accordingly, applicant will enter into proposed bulk power transactions of the types hereinafter described which, on balance, provide net benefits to applicant. There are net benefits in a transaction if applicant recovers the cost of the transaction (as defined in ¶1 (d) hereof) and there is no demonstrable net detriment to applicant arising from that transaction.

1. As used herein:

- (a) "Bulk Power" means electric power and any attendant energy, supplied or made available at transmission or sub-transmission voltage by one electric system to another.
- (b) "Neighboring Entity" means a private or public corporation, a governmental agency or authority, a municipality, a cooperative, or a lawful association of any of the foregoing owning or operating, or

proposing to own or operate, facilities for the generation and transmission of electricity which meets each of the following criteria: (1) its existing or proposed facilities are economically and technically feasible of interconnection with those of the applicant and (2) with the exception of municipalities, cooperatives, governmental agencies or authorities, and associations, it is, or upon commencement of operations will be, a public utility and subject to regulation with respect to rates and service under the laws of North Carolina or South Carolina or under the Federal Power Act; provided, however, that as to associations, each member of such association is either a public utility as discussed in this clause (2) or a municipality, a cooperative or a governmental agency or authority.

- (c) Where the phrase "neighboring entity" is intended to include entities engaging or proposing to engage only in the distribution of electricity, this is indicated by adding the phrase "including distribution systems".
  - (d) "Cost" means any appropriate operating and maintenance expenses, together with all other costs, including a reasonable return on applicant's investment, which are reasonably allocable to a transaction. However, no value shall be included for loss of revenues due to the loss of any wholesale or retail customer as a result of any transaction hereafter described.
- 2.
- (a) Applicant will interconnect and coordinate reserves by means of the sale and exchange of emergency and scheduled maintenance bulk power with any neighboring entity(ies), when there are net benefits to each party, on terms that will provide for all of applicant's properly assignable costs as may be determined by the Federal Energy Regulatory Commission and consistent with such cost assignment will allow the other party the fullest possible benefits of such coordination.
  - (b) Emergency service and/or scheduled maintenance service to be provided by each party will be furnished to the fullest extent available from the supplying party and desired by the party in need. Applicant and each party will provide to the other emergency service and/or scheduled maintenance service if and when available from its own generation and, in accordance with recognized industry practice, from generation of others to the extent it can do so without impairing service to its customers, including other electric systems to whom it has firm commitments.
  - (c) Each party to a reserve coordination arrangement will establish its own reserve criteria, but in no event shall the minimum installed reserve on each system be less than 15%, calculated as a percentage of estimated peak load responsibility. Either party, if it

has, or has firmly planned, installed reserves in excess of the amount called for by its own reserve criterion, will offer any such excess as may in fact be available at the time for which it is sought and for such period as the selling party shall determine for purchase in accordance with reasonable industry practice by the other party to meet such other party's own reserve requirement. The parties will provide such amounts of spinning reserve as may be adequate to avoid the imposition of unreasonable demands on the other party(ies) in meeting the normal contingencies of operating its (their) system(s). However, in no circumstances shall such spinning reserve requirement exceed the installed reserve requirement.

- (d) Interconnections will not be limited to low voltages when higher voltages are available from applicant's installed facilities in the area where interconnection is desired and when the proposed arrangement is found to be technically and economically feasible.
  - (e) Interconnection and reserve coordination agreements will not embody provisions which impose limitations upon the use or resale of power and energy sold or exchanges pursuant to the agreement. Further, such arrangements will not prohibit the participants from entering into other interconnection and coordination arrangements, but may include appropriate provisions to assure that (i) applicant receives adequate notice of such additional interconnection or coordination, (ii) the parties will jointly consider and agree upon such measures, if any, as are reasonably necessary to protect the reliability of the interconnected systems and to prevent undue burdens from being imposed on any system, and (iii) applicant will be fully compensated for its costs. Reasonable industry practice as developed in the area from time to time will satisfy this provision.
- 3. Applicant currently has on file, and may hereafter file, with the Federal Energy Regulatory Commission contracts with neighboring entity(ies) providing for the sale and exchange of short-term power and energy, limited term power and energy, economy energy, nondisplacement energy, and emergency capacity and energy. Applicant will enter into contracts providing for the same or for like transactions with any neighboring entity on terms which enable applicant to recover the full costs allocable to such transaction.
  - 4. Applicant currently sells capacity and energy in bulk on a full requirements basis to several entities engaging in the distribution of electric power at retail. In addition, applicant supplies electricity directly to ultimate users in a number of municipalities. Should any such entity(ies) or municipality(ies) desire to become a neighboring entity as defined in ¶1 (b) hereof (either alone or through combination with other), applicant will assist in facilitating the necessary transition through the sale of partial requirements firm power

and energy. The provision of such firm partial requirements service shall be under such rates, terms and conditions as shall be found by the Federal Energy Regulatory Commission to provide for the recovery of applicant's costs. Applicant will sell capacity and energy in bulk on a full requirements basis to any municipality currently served by applicant when such municipality lawfully engages in the distribution of electric power at retail.

5. (a) Applicant will facilitate the exchange of electric power in bulk in wholesale transactions over its transmission facilities (1) between or among two or more neighboring entities, including distribution systems with which it is interconnected or may be interconnected in the future, and (2) between any such entity(ies) and any other electric system engaging in bulk power supply between whose facilities applicant's transmission lines and other transmission lines would form a continuous electric path, provided that permission to utilize such other transmission lines has been obtained. Such transaction shall be undertaken provided that the particular transaction reasonably can be accommodated by applicant's transmission system from a functional and technical standpoint and does not constitute the wheeling of power to a retail customer. Such transmission shall be on terms that fully compensate applicant for its cost. Any entity(ies) requesting such transmission arrangements shall give reasonable notice of its (their) schedule and requirements.
- (b) Applicant will include in its planning and construction program, sufficient transmission capacity as required for the transactions referred to in subparagraph (a) of this paragraph, provided that (1) the neighboring entity(ies) gives applicant sufficient advance notice as may be necessary reasonably to accommodate its (their) requirements from a functional and technical standpoint and (2) that such entity(ies) fully compensates applicant for its cost. In carrying out this subparagraph (b), however, applicant shall not be required to construct or add transmission facilities which (a) will be of no demonstrable present or future benefit to applicant, or (b) which could be constructed by the requesting entity(ies) without duplicating any portion of applicant's existing transmission lines, or (c) which would jeopardize applicant's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements. Where regulatory or environmental approvals are required for the construction or addition of transmission facilities, needed for the transactions referred to in subparagraph (a) of this paragraph, it shall be the responsibility of the entity(ies) seeking the transaction to participate in obtaining such approvals, including sharing in the cost thereof.

6. To increase the possibility of achieving greater reliability and economy of electric generation and transmission facilities, applicant will discuss load projections and system development plans with any neighboring entity(ies).
7. When applicant's plans for future nuclear generating units (for which application will hereafter be made to the Nuclear Regulatory Commission) have reached the stage of serious planning, but before firm decisions have been made as to the size and desired completion date of the proposed nuclear units, applicant will notify all neighboring entities, including distribution systems with peak loads smaller than applicant's, that applicant plans to construct such nuclear units. Neither the timing nor the information provided need be such as to jeopardize obtaining the required site at the lowest possible cost.
8. The foregoing commitments shall be implemented in a manner consistent with the provisions of the Federal Power Act and all other lawful local, State and Federal regulation and authority. Nothing in these commitments is intended to determine in advance the resolution of issues which are properly raised at the Federal Energy Regulatory Commission concerning such commitments, including allocation of costs or the rates to be charged. Applicant will negotiate (including the execution of a contingent statement of intent) with respect to the foregoing commitments with any neighboring entity including distribution systems where applicable engaging in or proposing to engage in bulk power supply transactions, but applicant shall not be required to enter into any final arrangement prior to resolution of any substantial questions as to the lawful authority of an entity to engage in the transactions. In addition, applicant shall not be obligated to enter into a given bulk power supply transaction if: (1) to do so would violate, or incapacitate it from performing any existing lawful contract it has with a third party; (2) there is contemporaneously available to it, a competing or alternative arrangement which affords it greater benefits which would be mutually exclusive of such arrangement; (3) to do so would adversely affect its system operations or the reliability of power supply to its customers; or (4) if to do so would jeopardize applicant's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements.

D. Fire Protection

*Energy Carolinas,*

~~Duke Power Company~~ LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the UFSAR for the facility and as approved in the SER's dated August 11, 1978, and April 28, 1983; October 5, 1978, and June 9, 1981 Supplements to the SER dated August 11, 1978; and Exemptions dated February 2, 1982; August 31, 1983;

December 27, 1984; December 5, 1988; and August 21, 1989 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.

E. Physical Protection

*Energy Carolinas,*

Duke ~~Power Company~~ LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54 (p). The combined set of plans, which contains safeguards information protected under 10 CFR 73.21, is entitled: "Duke Energy Physical Security Plan" submitted by letter dated September 8, 2004, and supplemented on September 30, 2004, October 15, 2004, October 21, 2004, and October 27, 2004.

F. In the update to the UFSAR required pursuant to 10 CFR 50.71 (e)(4) scheduled for July, 2001, the licensee shall update the UFSAR to include the UFSAR supplement submitted pursuant to 10 CFR 54.21(d) as revised on March 27, 2000. Until the UFSAR update is complete, the licensee may make changes to the programs described in its UFSAR supplement without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

G. The licensee's UFSAR supplement submitted pursuant to 10 CFR 54.21 (d), as revised on March 27, 2000, describes certain future inspection activities to be completed before the period of extended operation. The licensee shall complete these activities no later than February 6, 2013.

4. This renewed license is effective as of the date of issuance and shall expire at midnight on October 6, 2033.

*No change this page*

5. Steam Generator Circumferential Crack Report:

Following each inservice inspection of steam generator tubes, the NRC shall be notified of the following prior to returning the steam generators to service:

- a. Indication of circumferential cracking in the secondary side roll (lower roll in the upper tubesheet or upper roll in the lower tubesheet) if rerolled.
  - b. Indication of circumferential cracking in the original roll or heat affected zone adjacent to the tube-to-tubesheet seal weld-if no reroll is present.
  - c. Determination of the best-estimate total leakage that would result from an analysis of the limiting Large Break Loss of Coolant Accident (LBLOCA) based on circumferential cracking in the original tube-to-tubesheet rolls, tube-to-tubesheet rerolls, and heat affected zones of seal welds as found during each inspection.
6. Demonstrate that the primary-to-secondary leakage following a LBLOCA, as described in Appendix A to BAW-2374, is acceptable, based on the as-found condition of the SGs. This is required to demonstrate that adequate margin and defense-in-depth are maintained. For the purpose of this evaluation, acceptable means a best estimate of the leakage expected in the event of a LBLOCA that would not result in a significant increase of radionuclide release (e.g., in excess of 10 CFR 100 limits). A summary of this evaluation shall be provided to the NRC within 3 months following completion of steam generator tube insetvice inspection with the report required by Technical Specification 5.6.8, Item b.

FOR THE NUCLEAR REGULATORY COMMISSION

Roy P. Zimmerman, Acting Director  
Office of Nuclear Reactor Regulation

Attachment:

1) Appendix A - Technical Specifications Renewed License No. DPR-47

Date of issuance: May 23, 2000

*Energy Carolinas,*

~~DUKE POWER COMPANY LLC~~

DOCKET NO. 50-287

OCONEE NUCLEAR STATION, UNIT 3

RENEWED FACILITY OPERATING LICENSE

Renewed License No. DPR-55

The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. DPR-55 issued on July 19, 1974, has now found that:

- a. The application to renew License No. DPR-55 filed by Duke Energy Corporation\* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter 1, and all required notifications to other agencies or bodies have been duly made;
- b. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21 (a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21 (c), such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the Oconee Nuclear Station, Unit 3 (facility or plant), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
- c. There is reasonable assurance: (i) that the activities authorized by this renewed license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the applicable regulations set forth in 10 CFR Chapter 1, except as exempted from compliance;
- d. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements;"
- e. The renewal of this license will not be inimical to the common defense and security or the health and safety of the public; and
- f. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs, and considering available alternatives, the renewal of this license is in accordance with 10 CFR Part 51 and all applicable requirements have been satisfied.

*Duke Energy Carolinas, LLC*

\* Duke Energy Corporation ~~has~~ converted to Duke Power Company LLC, which is the owner and operator of Oconee Nuclear Station, Unit 3. References to the "licensee" are to ~~Duke Power Company LLC~~.

*on April 3, 2006 and was re-named Duke Energy Carolinas, LLC as of October 1, 2006.*

Renewed License No. DPR-55  
Amendment No. ~~348~~

Energy Carolinas,

On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-55, issued on July 19, 1974, is superseded by Renewed Facility Operating License No. DPR-55, which is hereby issued to Duke Power Company LLC, to read as follows:

1. This license applies to the Oconee Nuclear Station, Unit 3, a pressurized water reactor and associated equipment (the facility) owned and operated by Duke Power Company LLC. The facility is located in eastern Oconee County, about eight miles northeast of Seneca, South Carolina, and is described in the "Updated Final Safety Analysis Report" (UFSAR) as supplemented and amended and the Environmental Report as supplemented and amended.
2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Duke Power Company LLC (the licensee):
  - A. Pursuant to Section 104b of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location on the Oconee Nuclear Station Site in accordance with the procedures and limitations set forth in this license;
  - B. Pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the UFSAR as supplemented and amended;
  - C. Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess, and use at any time byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration and as fission detectors in amounts as required;
  - D. Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components;
  - E. Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the Oconee Nuclear Station, Units 1, 2 and 3.
3. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter 1, Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50 and Section 70.32 of

Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

A. Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2568 megawatts thermal.

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 355 are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. This license is subject to the following antitrust conditions:

Applicant makes the commitments contained herein, recognizing that bulk power supply arrangements between neighboring entities normally tend to serve the public interest. In addition, where there are net benefits to all participants, such arrangements also serve the best interests of each of the participants. Among the benefits of such transactions are increased electric system reliability, a reduction in the cost of electric power, and minimization of the environmental effects of the production and sale of electricity.

Any particular bulk power supply transaction may afford greater benefits to one participant than to another. The benefits realized by a small system may be proportionately greater than those realized by a larger system. The relative benefits to be derived by the parties from a proposed transaction, however, should not be controlling upon a decision with respect to the desirability of participating in the transaction. Accordingly, applicant will enter into proposed bulk power transactions of the types hereinafter described which, on balance, provide net benefits to applicant. There are net benefits in a transaction if applicant recovers the cost of the transaction (as defined in ¶1 (d) hereof) and there is no demonstrable net detriment to applicant arising from that transaction.

1. As used herein:

- (a) "Bulk Power" means electric power and any attendant energy, supplied or made available at transmission or sub-transmission voltage by one electric system to another.
- (b) "Neighboring Entity" means a private or public corporation, a governmental agency or authority, a municipality, a cooperative, or a lawful association of any of the foregoing owning or operating, or

proposing to own or operate, facilities for the generation and transmission of electricity which meets each of the following criteria: (1) its existing or proposed facilities are economically and technically feasible of interconnection with those of the applicant and (2) with the exception of municipalities, cooperatives, governmental agencies or authorities, and associations, it is, or upon commencement of operations will be, a public utility and subject to regulation with respect to rates and service under the laws of North Carolina or South Carolina or under the Federal Power Act; provided, however, that as to associations, each member of such association is either a public utility as discussed in this clause (2) or a municipality, a cooperative or a governmental agency or authority.

- (c) Where the phrase "neighboring entity" is intended to include entities engaging or proposing to engage only in the distribution of electricity, this is indicated by adding the phrase "including distribution systems".
  - (d) "Cost" means any appropriate operating and maintenance expenses, together with all other costs, including a reasonable return on applicant's investment, which are reasonably allocable to a transaction. However, no value shall be included for loss of revenues due to the loss of any wholesale or retail customer as a result of any transaction hereafter described.
- 2.
- (a) Applicant will interconnect and coordinate reserves by means of the sale and exchange of emergency and scheduled maintenance bulk power with any neighboring entity(ies), when there are net benefits to each party, on terms that will provide for all of applicant's properly assignable costs as may be determined by the Federal Energy Regulatory Commission and consistent with such cost assignment will allow the other party the fullest possible benefits of such coordination.
  - (b) Emergency service and/or scheduled maintenance service to be provided by each party will be furnished to the fullest extent available from the supplying party and desired by the party in need. Applicant and each party will provide to the other emergency service and/or scheduled maintenance service if and when available from its own generation and, in accordance with recognized industry practice, from generation of others to the extent it can do so without impairing service to its customers, including other electric systems to whom it has firm commitments.
  - (c) Each party to a reserve coordination arrangement will establish its own reserve criteria, but in no event shall the minimum installed reserve on each system be less than 15%, calculated as a percentage of estimated peak load responsibility. Either party, if it

has, or has firmly planned, installed reserves in excess of the amount called for by its own reserve criterion, will offer any such excess as may in fact be available at the time for which it is sought and for such period as the selling party shall determine for purchase in accordance with reasonable industry practice by the other party to meet such other party's own reserve requirement. The parties will provide such amounts of spinning reserve as may be adequate to avoid the imposition of unreasonable demands on the other party(ies) in meeting the normal contingencies of operating its (their) system(s). However, in no circumstances shall such spinning reserve requirement exceed the installed reserve requirement.

- (d) Interconnections will not be limited to low voltages when higher voltages are available from applicant's installed facilities in the area where interconnection is desired and when the proposed arrangement is found to be technically and economically feasible.
  - (e) Interconnection and reserve coordination agreements will not embody provisions which impose limitations upon the use or resale of power and energy sold or exchanges pursuant to the agreement. Further, such arrangements will not prohibit the participants from entering into other interconnection and coordination arrangements, but may include appropriate provisions to assure that (i) applicant receives adequate notice of such additional interconnection or coordination, (ii) the parties will jointly consider and agree upon such measures, if any, as are reasonably necessary to protect the reliability of the interconnected systems and to prevent undue burdens from being imposed on any system, and (iii) applicant will be fully compensated for its costs. Reasonable industry practice as developed in the area from time to time will satisfy this provision.
3. Applicant currently has on file, and may hereafter file, with the Federal Energy Regulatory Commission contracts with neighboring entity(ies) providing for the sale and exchange of short-term power and energy, limited term power and energy, economy energy, nondisplacement energy, and emergency capacity and energy. Applicant will enter into contracts providing for the same or for like transactions with any neighboring entity on terms which enable applicant to recover the full costs allocable to such transaction.
  4. Applicant currently sells capacity and energy in bulk on a full requirements basis to several entities engaging in the distribution of electric power at retail. In addition, applicant supplies electricity directly to ultimate users in a number of municipalities. Should any such entity(ies) or municipality(ies) desire to become a neighboring entity as defined in ¶1 (b) hereof (either alone or through combination with other), applicant will assist in facilitating the necessary transition through the sale of partial requirements firm power

and energy. The provision of such firm partial requirements service shall be under such rates, terms and conditions as shall be found by the Federal Energy Regulatory Commission to provide for the recovery of applicant's costs. Applicant will sell capacity and energy in bulk on a full requirements basis to any municipality currently served by applicant when such municipality lawfully engages in the distribution of electric power at retail.

5. (a) Applicant will facilitate the exchange of electric power in bulk in wholesale transactions over its transmission facilities (1) between or among two or more neighboring entities, including distribution systems with which it is interconnected or may be interconnected in the future, and (2) between any such entity(ies) and any other electric system engaging in bulk power supply between whose facilities applicant's transmission lines and other transmission lines would form a continuous electric path, provided that permission to utilize such other transmission lines has been obtained. Such transaction shall be undertaken provided that the particular transaction reasonably can be accommodated by applicant's transmission system from a functional and technical standpoint and does not constitute the wheeling of power to a retail customer. Such transmission shall be on terms that fully compensate applicant for its cost. Any entity(ies) requesting such transmission arrangements shall give reasonable notice of its (their) schedule and requirements.
- (b) Applicant will include in its planning and construction program, sufficient transmission capacity as required for the transactions referred to in subparagraph (a) of this paragraph, provided that (1) the neighboring entity(ies) gives applicant sufficient advance notice as may be necessary reasonably to accommodate its (their) requirements from a functional and technical standpoint and (2) that such entity(ies) fully compensates applicant for its cost. In carrying out this subparagraph (b), however, applicant shall not be required to construct or add transmission facilities which (a) will be of no demonstrable present or future benefit to applicant, or (b) which could be constructed by the requesting entity(ies) without duplicating any portion of applicant's existing transmission lines, or (c) which would jeopardize applicant's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements. Where regulatory or environmental approvals are required for the construction or addition of transmission facilities, needed for the transactions referred to in subparagraph (a) of this paragraph, it shall be the responsibility of the entity(ies) seeking the transaction to participate in obtaining such approvals, including sharing in the cost thereof.

6. To increase the possibility of achieving greater reliability and economy of electric generation and transmission facilities, applicant will discuss load projections and system development plans with any neighboring entity(ies).
7. When applicant's plans for future nuclear generating units (for which application will hereafter be made to the Nuclear Regulatory Commission) have reached the stage of serious planning, but before firm decisions have been made as to the size and desired completion date of the proposed nuclear units, applicant will notify all neighboring entities, including distribution systems with peak loads smaller than applicant's, that applicant plans to construct such nuclear units. Neither the timing nor the information provided need be such as to jeopardize obtaining the required site at the lowest possible cost.
8. The foregoing commitments shall be implemented in a manner consistent with the provisions of the Federal Power Act and all other lawful local, State and Federal regulation and authority. Nothing in these commitments is intended to determine in advance the resolution of issues which are properly raised at the Federal Energy Regulatory Commission concerning such commitments, including allocation of costs or the rates to be charged. Applicant will negotiate (including the execution of a contingent statement of intent) with respect to the foregoing commitments with any neighboring entity including distribution systems where applicable engaging in or proposing to engage in bulk power supply transactions, but applicant shall not be required to enter into any final arrangement prior to resolution of any substantial questions as to the lawful authority of an entity to engage in the transactions. In addition, applicant shall not be obligated to enter into a given bulk power supply transaction if: (1) to do so would violate, or incapacitate it from performing any existing lawful contract it has with a third party; (2) there is contemporaneously available to it, a competing or alternative arrangement which affords it greater benefits which would be mutually exclusive of such arrangement; (3) to do so would adversely affect its system operations or the reliability of power supply to its customers; or (4) if to do so would jeopardize applicant's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements.

D. Fire Protection

*Energy Carolinas,*

Duke ~~Power Company~~ LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the UFSAR for the facility and as approved in the SER's dated August 11, 1978, and April 28, 1983; October 5, 1978, and June 9, 1981 Supplements to the SER dated August 11, 1978; and Exemptions dated February 2, 1982; August 31, 1983;

December 27, 1984; December 5, 1988; and August 21, 1989 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.

E. Physical Protection

*Energy Carolinas,*

~~Duke Power Company~~ LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54 (p). The combined set of plans, which contains safeguards information protected under 10 CFR 73.21, is entitled: "Duke Energy Physical Security Plan" submitted by letter dated September 8, 2004, and supplemented on September 30, 2004, October 15, 2004, October 21, 2004, and October 27, 2004.

F. In the update to the UFSAR required pursuant to 10 CFR 50.71 (e)(4) scheduled for July, 2001, the licensee shall update the UFSAR to include the UFSAR supplement submitted pursuant to 10 CFR 54.21 (d) as revised on March 27, 2000. Until the UFSAR update is complete, the licensee may make changes to the programs described in its UFSAR supplement without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

G. The licensee's UFSAR supplement submitted pursuant to 10 CFR 54.21 (d), as revised on March 27, 2000, describes certain future inspection activities to be completed before the period of extended operation. The licensee shall complete these activities no later than February 6, 2013.

4. This renewed license is effective as of the date of issuance and shall expire at midnight on July 19, 2034.

*No change This page*

5. Steam Generator Circumferential Crack Report:

Following each inservice inspection of steam generator tubes, the NRC shall be notified of the following prior to returning the steam generators to service:

- a. Indication of circumferential cracking in the secondary side roll (lower roll in the upper tubesheet or upper roll in the lower tubesheet) if rerolled.
  - b. Indication of circumferential cracking in the original roll or heat affected zone adjacent to the tube-to-tubesheet seal weld-if no reroll is present.
  - c. Determination of the best-estimate total leakage that would result from an analysis of the limiting Large Break Loss of Coolant Accident (LBLOCA) based on circumferential cracking in the original tube-to-tubesheet rolls, tube-to-tubesheet rerolls, and heat affected zones of seal welds as found during each inspection.
6. Demonstrate that the primary-to-secondary leakage following a LBLOCA, as described in Appendix A to BAW-2374, is acceptable, based on the as-found condition of the SGs. This is required to demonstrate that adequate margin and defense-in-depth are maintained. For the purpose of this evaluation, acceptable means a best estimate of the leakage expected in the event of a LBLOCA that would not result in a significant increase of radionuclide release (e.g., in excess of 10 CFR 100 limits). A summary of this evaluation shall be provided to the NRC within 3 months following completion of steam generator tube inset-service inspection with the report required by Technical Specification 5.6.8, Item b.

FOR THE NUCLEAR REGULATORY COMMISSION

Roy P. Zimmerman, Acting Director  
Office of Nuclear Reactor Regulation

Attachment:

1) Appendix A - Technical Specifications Renewed License No. DPR-55

Date of issuance: May 23, 2000

U.S. Nuclear Regulatory Commission  
March 14, 2007  
Enclosure 2

**ATTACHMENT 1b**

**MCGUIRE NUCLEAR STATION**

**MARKED CHANGES TO CURRENT FOLS NPF-9 AND NPF-17**

~~DUKE POWER COMPANY LLC~~

Energy Carolinas,

DOCKET NO. 50-369

MCGUIRE NUCLEAR STATION, UNIT 1

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-9

1. The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. NPF-9 issued on June 12, 1981, has now found that:
  - A. The application for renewed operating license filed by the Duke Energy Corporation\* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I and all required notifications to other agencies or bodies have been duly made;
  - B. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21 (c), such that there is reasonable assurance that the activities authorized by the renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the McGuire Nuclear Station, Unit 1 (facility or plant), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
  - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;
  - D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license 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;
  - E. The licensee is technically and financially qualified to engage in the activities authorized by this renewed operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;

Duke Energy Carolinas, LLC

Duke Energy Corporation ~~has~~ converted to Duke Power Company LLC, which is the owner and operator of McGuire Nuclear Station, Unit 1. References to the "licensee" or "Duke" are to ~~Duke Power Company LLC~~.

on April 3, 2006 and was re-named Duke Energy Carolinas, LLC as of October 1, 2006.

Renewed License No. NPF-9  
Amendment No. 232

Energy Carolinas,

- F. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
  - G. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
  - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. NPF-9 is in accordance with 10 CFR Part 51, of the Commission's regulations and all applicable requirements have been satisfied; and,
  - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed operating license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70.
2. Based on the foregoing findings, and pursuant to approval by the Nuclear Regulatory Commission at a meeting on June 9, 1981, the License for Fuel-Loading and Zero Power Testing issued on January 23, 1981, as amended, is superseded by Renewed Facility Operating License No. NPF-9 which is hereby issued to Duke Power Company LLC to read as follows:
- A. This renewed operating license applies to the McGuire Nuclear Station, Unit 1, a pressurized water reactor and associated equipment (the facility) owned and operated by Duke Power Company LLC. The facility is located on the licensee's site in Mecklenburg County, North Carolina, on the shore of Lake Norman approximately 17 miles northwest of Charlotte, North Carolina and is described in the Updated Final Safety Analysis Report, as supplemented and amended, and in the Environmental Report, as supplemented and amended.
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Duke Power Company LLC:
    - (1) Pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use, and operate the facility at the designated location in Mecklenburg County, North Carolina, in accordance with the procedures and limitations set forth in the renewed operating license;
    - (2) Pursuant to the Act and 10 CFR Part 70 to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Updated Final Safety Analysis Report, as supplemented and amended;
    - (3) Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

- (4) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
  - (5) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproducts and special nuclear materials as may be produced by the operation of McGuire Nuclear Station, Units 1 and 2, and;
  - (6) Pursuant to the Act and 10 CFR Parts 30 and 40, to receive, possess and process for release or transfer such byproduct material as may be produced by the Duke Training and Technology Center.
- C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at a reactor core full steady state power level of 3411 megawatts thermal (100%).

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. ~~236~~ are hereby incorporated into this renewed operating license. The licensee 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 June 12, 2021, 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.

*Energy Carolinas,*

(4) Fire Protection Program

Duke ~~Power Company~~ LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report for the facility and as approved in the SER dated March 1978 and Supplements 2, 5 and 6 dated March 1979, April 1981, and February 1983, respectively, and the safety evaluation dated May 15, 1989, subject to the following provision:

Duke 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.

(5) Additional Conditions

The Additional Conditions contained in Appendix B, as revised through Amendment No. 200, are hereby incorporated into this renewed operating license. Duke ~~Power Company~~ LLC shall operate the facility in accordance with the Additional Conditions.

(6) Antitrust Conditions

The licensee shall comply with the antitrust conditions delineated in Appendix C of this renewed operating license.

D. Physical Protection

Duke ~~Power Company~~ LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains safeguards information protected under 10 CFR 73.21, is entitled: "Duke Energy Physical Security Plan" submitted by letter dated September 8, 2004, and supplemented on September 30, 2004, October 15, 2004, October 21, 2004, and October 27, 2004.

E. Deleted by Amendment No. 233.

*no change this page*

- F. The licensee shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- G. The licensee is authorized to receive from the Oconee Nuclear Station, Units 1, 2, and 3, possess, and store irradiated Oconee fuel assemblies containing special nuclear material, enriched to not more than 3.24% by weight U-235 subject to the following conditions:
  - a. Oconee fuel assemblies may not be placed in the McGuire Nuclear Station, Unit 1 and 2, reactors.
  - b. Irradiated fuel shipped to McGuire Nuclear Station, Units 1 and 2, from Oconee shall have been removed from the Oconee reactor no less than 270 days prior to shipment.
  - c. No more than 300 Oconee irradiated fuel assemblies shall be received for storage at McGuire Nuclear Station.
  - d. Burnup of Oconee fuel shipped shall be no greater than 36,000 MW days per metric ton.
  - e. Receipt of irradiated Oconee fuel shall be limited by the use of the NFS-4 (NAC-1), NLI-1/2, TN-8, or TN-8L spent fuel casks.
  - f. The spent fuel pool crane travel shall be restricted by administrative controls to the paths required by Selected Licensee Commitment 16.9.20 whenever a spent fuel cask is being handled.
  - g. Oconee fuel assemblies may not be transferred from one McGuire spent fuel pool to the other.
- 3. This renewed operating license is effective as of the date of issuance and shall expire at midnight on June 12, 2041.

FOR THE NUCLEAR REGULATORY COMMISSION

J.E. Dyer, Director  
Office of Nuclear Reactor Regulation

Attachment:

- 1. Appendix A - Technical Specifications
- 2. Appendix B - Additional Conditions
- 3. Appendix C - Antitrust Conditions

Date of Issuance: December 5, 2003

Renewed License No. NPF-9  
Amendment No. 232

APPENDIX B

ADDITIONAL CONDITIONS

FACILITY OPERATING LICENSE NO. NPF-9

*Energy Carolinas,*

Duke ~~Power Company~~ LLC shall comply with the following conditions on the schedules noted below:

<u>Amendment Number</u>	<u>Additional Conditions</u>	<u>Implementation Date</u>
184	<p>The schedule for the performance of new and revised surveillance requirements shall be as follows:</p> <p>For surveillance requirements (SRs) that are new in Amendment No. 184 the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment No. 184. For SRs that existing prior to Amendment No. 184, including SRs with modified acceptance criteria and SRs whose intervals of performance are being extended, the first performance is due at the end of the first surveillance interval that begins on the date the surveillance was last performed prior to implementation of amendment No. 184. For SRs that existed prior to Amendment No. 184, whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of Amendment No. 184.</p>	Within 90 days of the date of this amendment
188	The maximum rod average burnup for any rod shall be limited to 60 GWd/mtU until the completion of an NRC environmental assessment supporting an increased limit.	Within 30 days of date of this amendment

Renewed License No. NPF-9  
Amendment No. 232

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APPENDIX C

ANTITRUST CONDITIONS

Pursuant to an Order by the Atomic Safety and Licensing Board, dated April 23, 1975, the Nuclear Regulatory Commission incorporates in Renewed Operating License NPF-9 the following antitrust conditions:

- a. The licensee makes the commitments contained herein, recognizing that bulk power supply arrangements between neighboring entities normally tend to serve the public interest. In addition, where there are net benefits to all participants such arrangements also serve the best interests of each of the participants. Among the benefits of such transactions are increased electric system reliability, a reduction in the cost of electric power, and minimization of the environmental effects of the production and sale of electricity.

Any particular bulk power supply transaction may afford greater benefits to one participant than to another. The benefits realized by a small system may be proportionately greater than those realized by a larger system. The relative benefits to be derived by the parties from a proposed transaction, however, should not be controlling upon a decision with respect to the desirability of participating in the transaction. Accordingly, the licensee will enter into proposed bulk power transactions of the types hereinafter described which, on balance, provide net benefits to the licensee. There are net benefits in a transaction if the licensee recovers the cost of the transaction, (as defined in subparagraph (1)(d) hereof) and there is no demonstrable net detriment to the licensee arising from the transaction.

- (1) As used herein:
  - (a) "Bulk Power" means electric power and any attendant energy, supplied or made available at transmission or sub-transmission voltage by one electric system to another.
  - (b) "Neighboring Entity" means a private or public corporation, a governmental agency or authority, a municipality, a cooperative, or a lawful association of any of the foregoing owning or operating, or proposing to own or operate, facilities for the generation and transmission of electricity which meets each of the following criteria: (1) its existing or proposed facilities are economically and technically feasible of interconnection with those of the licensee and (2) with the exception of municipalities, cooperatives, governmental agencies or authorities, and associations, it is, or upon commencement of operations will be, a public utility and subject to regulation with respect to rates and service under the laws of North Carolina or South Carolina or under the Federal Power Act; provided, however, that as to associations, each member of such association is either a public utility as discussed in this clause (2) or a municipality, a cooperative or a governmental agency or authority.

Renewed License No. NPF-9

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- (c) Where the phrase "neighboring entity" is intended to include entities engaging or proposing to engage only in the distribution of electricity, this is indicated by adding the phrase "including distribution systems."
  - (d) "Cost" means any appropriate operating and maintenance expenses, together with all other costs, including a reasonable return on the licensee's investment, which are reasonably allocable to a transaction. However, no value shall be included for loss of revenue due to the loss of any wholesale or retail customer as a result of any transaction hereafter described.
- (2)
- (a) The licensee will interconnect and coordinate reserves by means of the sale and exchange of emergency and scheduled maintenance bulk power with any neighboring entity(ies), when there are net benefits to each party, on terms that will provide for all of the licensee's properly assignable costs as may be determined by the Federal Energy Regulatory Commission and consistent with such cost assignment will allow the other party the fullest possible benefits of such coordination.
  - (b) Emergency service and/or scheduled maintenance service to be provided by each party will be furnished to the fullest extent available from the supplying party and desired by the party in need. The licensee and each party will provide to the other emergency service and/or scheduled maintenance service if and when available from its own generation and, in accordance with recognized industry practice, from generation of other to the extent it can do so without impairing service to its customers, including other electric systems to whom it has firm commitments.
  - (c) Each party to a reserve coordination arrangement will establish its own reserve criteria, but in no event shall the minimum installed reserve on each system be less than 15%, calculated as a percentage of estimated peak load responsibility. Either party, if it has, or has firmly planned, installed reserves in excess of the amount called for by its own reserve criterion, will offer any such excess as may in fact be available at the time for which it is sought and for such period as the selling party shall determine for purchase in accordance with reasonable industry practice by the other party to meet such other party's own reserve requirements. The parties will provide such amounts of spinning reserve as may be adequate to avoid the imposition of unreasonable demands on the other part(ies) in meeting the normal contingencies of operating its (their) system(s). However, in no circumstances shall such spinning reserve requirement exceed the installed reserve requirement.
  - (d) Interconnections will not be limited to low voltages when higher voltages are available from the licensee's installed facilities in the area where interconnection is desired and when the proposed arrangement is found to be technically and economically feasible.

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- (e) Interconnection and reserve coordination agreements will not embody provisions which impose limitations upon the use or resale of power and energy sold or exchanged pursuant to the agreement. Further, such arrangements will not prohibit the participants from entering into other interconnection and coordination arrangements, but may include appropriate provisions to assure that (i) the licensee receives adequate notice of such additional interconnection or coordination, (ii) the parties will jointly consider and agree upon such measures, if any, as are reasonably necessary to protect the reliability of the interconnected systems and to prevent undue burdens from being imposed on any system, and (iii) the licensee will be fully compensated for its costs. Reasonable industry practice as developed in the area from time to time will satisfy this provision.
  
- (3) The licensee currently has on file, and may hereafter file, with the Federal Energy Regulatory Commission contracts with neighboring entity(ies) providing for the sale and exchange of short-term power and energy, limited term power and energy, economy energy, non-displacement energy, and emergency capacity and energy. The Licensee will enter into contracts providing for the same or for like transactions with any neighboring entity on terms which enable the licensee to recover the full costs allocable to such transaction.
  
- (4) The licensee currently sells capacity and energy in bulk on a full requirements basis to several entities engaging in the distribution of electric power at retail. In addition, the licensee supplies electricity directly to ultimate users in a number of municipalities. Should any such entity(ies) or municipality(ies) desire to become a neighboring entity as defined in subparagraph (1)(b) hereof (either alone or through combination with others), the licensee will assist in facilitating the necessary transition through the sale of partial requirements firm power and energy to the extent that, except for such transition, the licensee would otherwise be supplying firm power and energy. The provision of such firm partial requirements service shall be under such rates, terms and conditions as shall be found by the Federal Energy Regulatory Commission to provide for the recovery of the licensee's cost. The licensee will sell capacity and energy in bulk on a full requirements basis to any municipality currently served by the licensee when such municipality lawfully engages in the distribution of electric power at retail.
  
- (5) (a) The licensee will facilitate the exchange of electric power in bulk in wholesale transactions over its transmission facilities (1) between or among two or more neighboring entities including distribution systems with which it is interconnected or may be interconnected in the future, and (2) between any such entity(ies) and any other electric system engaging in bulk power supply between whose facilities the licensee's transmission lines and other transmission lines would form a continuous electric path, provided that permission to utilize such other transmission lines has been obtained. Such transaction shall be undertaken provided that the particular transaction reasonably can be accommodated by the licensee's transmission system from a

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functional and technical standpoint and does not constitute the wheeling of power to a retail customer. Such transmission shall be on terms that fully compensate the licensee for its cost. Any entity(ies) requesting such transmission arrangements shall give reasonable notice of its (their) schedule and requirements.

- (b) The licensee will include in its planning and construction program sufficient transmission capacity as required for the transactions referred to in subparagraph (a) of this paragraph, provided that (1) the neighboring entity(ies) gives the licensee sufficient advance notice as may be necessary reasonably to accommodate its (their) requirements from a functional and technical standpoint and (2) that such entity(ies) fully compensate the licensee for its cost. In carrying out this subparagraph (b), however, the licensee shall not be required to construct or add transmission facilities which (a) will be of no demonstrable present or future benefit to the licensee, or (b) which could be constructed by the requesting entity(ies) without duplicating any portion of the licensee's existing transmission lines, or (c) which would jeopardize the licensee's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements. Where regulatory or environmental approvals are required for the construction or addition of transmission facilities needed for the transactions referred to in subparagraph (a) of this paragraph it shall be the responsibility of the entity(ies) seeking the transaction to participate in obtaining such approvals, including sharing in the cost thereof.
- (6) To increase the possibility of achieving greater reliability and economy of electric generation and transmission facilities, the licensee will discuss load projections and system development plans with any neighboring entity(ies).
- (7) When the licensee's plans for future nuclear generating units (for which application will hereafter be made to the Nuclear Regulatory commission) have reached the stage of serious planning, but before firm decisions have been made as to the size and desired completion date of the proposed nuclear units, the licensee will notify all neighboring entities including distribution systems with peak loads smaller than the licensee's that the licensee plans to construct such nuclear units. Neither the timing nor the information provided need be such as to jeopardize obtaining the required site at the lowest possible cost.
- (8) The foregoing commitments shall be implemented in a manner consistent with the provisions of the Federal Power Act and all other lawful local, state and Federal regulation and authority. Nothing in these commitments is intended to determine in advance the resolution of issues which are properly raised at the Federal Energy Regulatory Commission concerning such commitments, including allocation of costs or the rates to be charged. The licensee will negotiate (including the execution of a contingent statement of intent) with respect to the foregoing commitments with any neighboring entity including distribution systems where applicable engaging in or proposing to engage in bulk power supply transactions, but the licensee shall not be

*No change this page*

required to enter into any final arrangement prior to resolution of any substantial questions as to the lawful authority of an entity to engage in the transactions.

In addition, the licensee shall not be obligated to enter into a given bulk power supply transaction if: (1) to do so would violate, or incapacitate it from performing, and existing lawful contracts it has with a third party; (2) there is contemporaneously available to it a competing or alternate arrangement which affords it greater benefits which would be mutually exclusive of such arrangement; (3) to do so would adversely affect its system operations or the reliability of power supply to its customers, or (4) if to do so would jeopardize the licensee's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements.

Energy Carolinas,

~~DUKE POWER COMPANY~~ LLC

DOCKET NO. 50-370

MCGUIRE NUCLEAR STATION, UNIT 2

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-17

1. The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. NPF-17 issued on March 3, 1983, has now found that:

- A. The application for renewed operating license filed by the Duke Energy Corporation\* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I and all required notifications to other agencies or bodies have been duly made;
- B. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21 (c), such that there is reasonable assurance that the activities authorized by the renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the McGuire Nuclear Station, Unit 2 (facility or plant), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
- C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;
- D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license 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;
- E. The licensee is technically qualified to engage in the activities authorized by this renewed operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;

Duke Energy Carolinas, LLC

\* Duke Energy Corporation ~~has~~ converted to Duke Power Company LLC, ~~which~~ is the owner and operator of McGuire Nuclear Station, Unit 2. References to the "licensee" or "Duke" are to ~~Duke Power Company LLC~~

on April 3, 2006 and was re-named Duke Energy Carolinas, LLC as of October 1, 2006.

Energy Carolinas,

- F. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements", of the Commission's regulations;
  - G. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
  - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. NPF-17 is in accordance with 10 CFR Part 51, of the Commission's regulations and all applicable requirements have been satisfied; and,
  - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed operating license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70.
2. Based on the foregoing findings and the Initial Decisions issued by the Atomic Safety and Licensing Board dated April 18, 1979, and May 26, 1981, and the Decision of the Atomic Safety and Licensing Appeal Board dated March 30, 1982, regarding this facility, ~~Renewed Facility Operating License No. NPF-17 is hereby issued to Duke Power Company~~ LLC to read as follows:
- 3.
- A. This renewed operating license applies to the McGuire Nuclear Station, Unit 2, a pressurized water reactor and associated equipment (the facility) owned and operated by Duke ~~Power Company~~ LLC. The facility is located on the site in Mecklenburg County, North Carolina, on the shore of Lake Norman approximately 17 miles northwest of Charlotte, North Carolina, and is described in the Updated Final Safety Analysis Report, as supplemented and amended, and in the Environmental Report, as supplemented and amended.
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Duke ~~Power Company~~ LLC:
    - (1) Pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use, and operate the facility at the designated location in Mecklenburg County, North Carolina, in accordance with the procedures and limitations set forth in this renewed operating license;
    - (2) Pursuant to the Act and 10 CFR Part 70 to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Updated Final Safety Analysis Report, as supplemented and amended;
    - (3) Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

- (4) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
  - (5) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproducts and special nuclear materials as may be produced by the operation of McGuire Nuclear Station, Units 1 and 2; and,
  - (6) Pursuant to the Act and 10 CFR Parts 30 and 40, to receive, possess and process for release or transfer such byproduct material as may be produced by the Duke Training and Technology Center.
- C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at a reactor core full steady state power level of 3411 megawatts thermal (100%).

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 218 are hereby incorporated into this renewed operating license. The licensee 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 March 3, 2023, 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.

Energy Carolinas,

(4) Fire Protection Program

Duke ~~Power Company~~ LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report for the facility and as approved in the SER dated March 1978 and Supplements 2, 5, and 6 dated March 1979, April 1981, and February 1983, respectively, and the safety evaluation dated May 15, 1989, subject to the following provisions:

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.

(5) Protection of the Environment

Before engaging in additional construction or operational activities which may result in a significant adverse environmental impact that was not evaluated or that is significantly greater than that evaluated in the Final Environmental Statement dated April 1976, the licensee shall provide written notification to the Office of Nuclear Reactor Regulation.

(6) Additional Conditions

The Additional Conditions contained in Appendix B, as revised through Amendment No.181, are hereby incorporated into this renewed operating license. Duke ~~Power Company~~ LLC shall operate the facility in accordance with the Additional Conditions.

(7) Antitrust Conditions

The licensee shall comply with the antitrust conditions delineated in Appendix C of this renewed operating license.

D. Physical Protection

Duke ~~Power Company~~ LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains safeguards information protected under 10 CFR 73.21, is entitled: "Duke Energy Physical Security Plan" submitted by letter dated September 8, 2004, and supplemented on September 30, 2004, October 15, 2004, October 21, 2004, and October 27, 2004.

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- E. Deleted by Amendment No. 215. |
- F. The licensee shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- G. In accordance with the Commission's direction in its Statement of Policy, Licensing and Regulatory Policy and Procedures for Environmental Protection: Uranium Fuel Cycle Impacts, October 29, 1982, this renewed operating license is subject to the final resolution of the pending litigation involving Table S-3. See, Natural Resources Defense Council v. NRC, No. 74-1586 (D.C. cir. April 27, 1982).
- H. The licensee is authorized to receive from the Oconee Nuclear Station, Units 1, 2, and 3, possess, and store irradiated Oconee fuel assemblies containing special nuclear material, enriched to not more than 3.24% by weight U-235 subject to the following conditions:
  - a. Oconee fuel assemblies may not be placed in the McGuire Nuclear Station, Unit 1 and 2, reactors.
  - b. Irradiated fuel shipped to McGuire Nuclear Station, Units 1 and 2, from Oconee shall have been removed from the Oconee reactor no less than 270 days prior to shipment.

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- c. No more than 300 Oconee irradiated fuel assemblies shall be received for storage at McGuire Nuclear Station.
  - d. Burnup of Oconee fuel shipped shall be no greater than 36,000 MW days per metric ton.
  - e. Receipt of irradiated Oconee fuel shall be limited by the use of the NFS-4 (NAC-1), NLI-1/2, TN-8, or TN-8L spent fuel casks.
  - f. The spent fuel pool crane travel shall be restricted by administrative controls to the paths required by Selected Licensee Commitment 16.9.20 whenever a spent fuel cask is being handled.
  - g. Oconee fuel assemblies may not be transferred from one McGuire spent fuel pool to the other.
3. This renewed operating license is effective as of the date of issuance and shall expire at midnight on March 3, 2043.

FOR THE NUCLEAR REGULATORY COMMISSION

J.E. Dyer, Director  
Office of Nuclear Reactor Regulation

Attachment:

- 1. Appendix A - Technical Specifications
- 2. Appendix B - Additional Conditions
- 3. Appendix C - Antitrust Conditions

Date of Issuance: December 5, 2003

APPENDIX B

ADDITIONAL CONDITIONS

FACILITY OPERATING LICENSE NO. NPF-17

Energy Carolinas,

Duke ~~Power Company~~ LLC shall comply with the following conditions on the schedules noted below:

<u>Amendment Number</u>	<u>Additional Conditions</u>	<u>Implementation Date</u>
166	<p>The schedule for the performance of new and revised surveillance requirements shall be as follows:</p> <p>For surveillance requirements (SRs) that are new in Amendment No. 166 the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment No. 166. For SRs that existed prior to Amendment No. 166, including SRs with modified acceptance criteria and SRs whose intervals of performance are being extended, the first performance is due at the end of the first surveillance interval that begins on the date the surveillance was last performed prior to implementation of amendment No. 166. For SRs that existed prior to Amendment No. 166, whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of Amendment No. 166.</p>	Within 90 days of the date of this amendment.
169	The maximum rod average burnup for any rod shall be limited to 60 GWd/mtU until the completion of an NRC environmental assessment supporting an increased limit.	Within 30 days of date of amendment

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APPENDIX C

ANTITRUST CONDITIONS

Pursuant to an Order by the Atomic Safety and Licensing Board, dated April 23, 1975, the Nuclear Regulatory Commission incorporates in Operating License NPF-17 the following antitrust conditions:

- a. The licensee makes the commitments contained herein, recognizing that bulk power supply arrangements between neighboring entities normally tend to serve the public interest. In addition, where there are net benefits to all participants such arrangements also serve the best interests of each of the participants. Among the benefits of such transactions are increased electric system reliability, a reduction in the cost of electric power, and minimization of the environmental effects of the production and sale of electricity.

Any particular bulk power supply transaction may afford greater benefits to one participant than to another. The benefits realized by a small system may be proportionately greater than those realized by a larger system. The relative benefits to be derived by the parties from a proposed transaction, however, should not be controlling upon a decision with respect to the desirability of participating in the transaction. Accordingly, the licensee will enter into proposed bulk power transactions of the types hereinafter described which, on balance, provide net benefits to the licensee. There are net benefits in a transaction if the licensee recovers the cost of the transaction (as defined in subparagraph (1)(d) hereof) and there is no demonstrable net detriment to the licensee arising from the transaction.

- (1) As used herein:

- (a) "Bulk Power" means electric power and any attendant energy, supplied or made available at transmission or sub-transmission voltage by one electric system to another.
- (b) "Neighboring Entity" means a private or public corporation, a governmental agency or authority, a municipality, a cooperative, or a lawful association of any of the foregoing owning or operating, or proposing to own or operate, facilities for the generation and transmission of electricity which meets each of the following criteria: (1) its existing or proposed facilities are economically and technically feasible of interconnection with those of the licensee and (2) with the exception of municipalities, cooperatives, governmental agencies or authorities, and associations, it is, or upon commencement of operations will be, a public utility and subject to regulation with respect to rates and service under the laws of North Carolina or South Carolina or under the Federal Power Act; provided, however, that as to associations, each member of such association is either a public utility as discussed in this clause (2) or a municipality, a cooperative or a governmental agency or authority.

Renewed License No. NPF-17

*No change this page*

- (c) Where the phrase "neighboring entity" is intended to include entities engaging or proposing to engage only in the distribution of electricity, this is indicated by adding the phrase "including distribution systems."
  - (d) "Cost means any appropriate operating and maintenance expenses, together with all other costs, including a reasonable return on the licensee's investment, which are reasonably allocable to a transaction. However, no value shall be included for loss of revenue due to the loss of any wholesale or retail customer as a result of any transaction hereafter described.
- (2)
- (a) The licensee will interconnect and coordinate reserves by means of the sale and exchange of emergency and scheduled maintenance bulk power with any neighboring entity(ies), when there are net benefits to each party, on terms that will provide for all of the licensee's properly assignable costs as may be determined by the Federal Energy Regulatory Commission and consistent with such cost assignment will allow the other party the fullest possible benefits of such coordination.
  - (b) Emergency service and/or scheduled maintenance service to be provided by each party will be furnished to the fullest extent available from the supplying party and desired by the party in need. The licensee and each party will provide to the other emergency service and/or scheduled maintenance service if and when available from its own generation and, in accordance with recognized industry practice, from generation of other to the extent it can do so without impairing service to its customers, including other electric systems to whom it has firm commitments.
  - (c) Each party to a reserve coordination arrangement will establish its own reserve criteria, but in no event shall the minimum installed reserve on each system be less than 15%, calculated as a percentage of estimated peak load responsibility. Either party, if it has, or has firmly planned, installed reserves in excess of the amount called for by its own reserve criterion, will offer any such excess as may in fact be available at the time for which it is sought and for such period as the selling party shall determine for purchase in accordance with reasonable industry practice by the other party to meet such other party's own reserve requirements. The parties will provide such amounts of spinning reserve as may be adequate to avoid the imposition of unreasonable demands on the other part(ies) in meeting the normal contingencies of operating its (their) system(s). However, in no circumstances shall such spinning reserve requirement exceed the installed reserve requirement.
  - (d) Interconnections will not be limited to low voltages when higher voltages are available from the licensee's installed facilities in the area where interconnection is desired and when the proposed arrangement is found to be technically and economically feasible.

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- (e) Interconnection and reserve coordination agreements will not embody provisions which impose limitations upon the use or resale of power and energy sold or exchanged pursuant to the agreement. Further, such arrangements will not prohibit the participants from entering into other interconnection and coordination arrangements, but may include appropriate provisions to assure that (i) the licensee receives adequate notice of such additional interconnection or coordination, (ii) the parties will jointly consider and agree upon such measures, if any, as are reasonably necessary to protect the reliability of the interconnected systems and to prevent undue burdens from being imposed on any system, and (iii) the licensee will be fully compensated for its costs. Reasonable industry practice as developed in the area from time to time will satisfy this provision.
  
- (3) The licensee currently has on file, and may hereafter file, with the Federal Energy Regulatory Commission contracts with neighboring entity(ies) providing for the sale and exchange of short-term power and energy, limited term power and energy, economy energy, non- displacement energy, and emergency capacity and energy. The Licensee will enter into contracts providing for the same or for like transactions with any neighboring entity on terms which enable the licensee to recover the full costs allocable to such transaction.
  
- (4) The licensee currently sells capacity and energy in bulk on a full requirements basis to several entities engaging in the distribution of electric power at retail. In addition, the licensee supplies electricity directly to ultimate users in a number of municipalities. Should any such entity(ies) or municipality(ies) desire to become a neighboring entity as defined in subparagraph (1)(b) hereof (either alone or through combination with others), the licensee will assist in facilitating the necessary transition through the sale of partial requirements firm power and energy to the extent that, except for such transition, the licensee would otherwise be supplying firm power and energy. The provision of such firm partial requirements service shall be under such rates, terms and conditions as shall be found by the Federal Energy Regulatory Commission to provide for the recovery of the licensee's cost. The licensee will sell capacity and energy in bulk on a full requirements basis to any municipality currently served by the licensee when such municipality lawfully engages in the distribution of electric power at retail.
  
- (5) (a) The licensee will facilitate the exchange of electric power in bulk in wholesale transactions over its transmission facilities (1) between or among two or more neighboring entities including distribution systems with which it is interconnected or may be interconnected in the future, and (2) between any such entity(ies) and any other electric system engaging in bulk power supply between whose facilities the licensee's transmission lines and other transmission lines would form a continuous electric path, provided that permission to utilize such other transmission lines has been obtained. Such transaction shall be undertaken provided that the particular transaction reasonably can be accommodated by the licensee's transmission system from a

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functional and technical standpoint and does not constitute the wheeling of power to a retail customer. Such transmission shall be on terms that fully compensate the licensee for its cost. Any entity(ies) requesting such transmission arrangements shall give reasonable notice of its (their) schedule and requirements.

- (b) The licensee will include in its planning and construction program sufficient transmission capacity as required for the transactions referred to in subparagraph (a) of this paragraph, provided that (1) the neighboring entity(ies) gives the licensee sufficient advance notice as may be necessary reasonably to accommodate its (their) requirements from a functional and technical standpoint and (2) that such entity(ies) fully compensate the licensee for its cost. In carrying out this subparagraph (b), however, the licensee shall not be required to construct or add transmission facilities which (a) will be of no demonstrable present or future benefit to the licensee, or (b) which could be constructed by the requesting entity(ies) without duplicating any portion of the licensee's existing transmission lines, or (c) which would jeopardize the licensee's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements. Where regulatory or environmental approvals are required for the construction or addition of transmission facilities needed for the transactions referred to in subparagraph (a) of this paragraph it shall be the responsibility of the entity(ies) seeking the transaction to participate in obtaining such approvals, including sharing in the cost thereof.
- (6) To increase the possibility of achieving greater reliability and economy of electric generation and transmission facilities, the licensee will discuss load projections and system development plans with any neighboring entity(ies).
- (7) When the licensee's plans for future nuclear generating units (for which application will hereafter be made to the Nuclear Regulatory commission) have reached the stage of serious planning, but before firm decisions have been made as to the size and desired completion date of the proposed nuclear units, the licensee will notify all neighboring entities including distribution systems with peak loads smaller than the licensee's that the licensee plans to construct such nuclear units. Neither the timing nor the information provided need be such as to jeopardize obtaining the required site at the lowest possible cost.

The foregoing commitments shall be implemented in a manner consistent with the provisions of the Federal Power Act and all other lawful local, state and Federal regulation and authority. Nothing in these commitments is intended to determine in advance the resolution of issues which are properly raised at the Federal Energy Regulatory Commission concerning such commitments, including allocation of costs or the rates to be charged. The licensee will negotiate (including the execution of a contingent statement of intent) with respect to the foregoing commitments with any neighboring entity including distribution systems where applicable engaging in or proposing to engage in bulk power supply transactions, but the licensee shall not be

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required to enter into any final arrangement prior to resolution of any substantial questions as to the lawful authority of an entity to engage in the transactions.

In addition, the licensee shall not be obligated to enter into a given bulk power supply transaction if: (1) to do so would violate, or incapacitate it from performing, and existing lawful contracts it has with a third party; (2) there is contemporaneously available to it a competing or alternate arrangement which affords it greater benefits which would be mutually exclusive of such arrangement; (3) to do so would adversely affect its system operations or the reliability of power supply to its customers, or (4) if to do so would jeopardize the licensee's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements.

U.S. Nuclear Regulatory Commission  
March 14, 2007  
Enclosure 2

**ATTACHMENT 1c**

**CATAWBA NUCLEAR STATION**

**MARKED CHANGES TO CURRENT FOLS NPF-35 AND NPF-52**

Energy Carolinas,

~~DUKE POWER COMPANY~~ LLC

NORTH CAROLINA ELECTRIC MEMBERSHIP CORPORATION

SALUDA RIVER ELECTRIC COOPERATIVE, INC.

DOCKET NO. 50-413

CATAWBA NUCLEAR STATION, UNIT 1

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-35

1. The U.S. Nuclear Regulatory Commission (Commission) having previously made the findings set forth in License No. NPF-35 issued on January 17, 1985, has now found that:
  - A. The application for renewed operating license filed by the Duke Energy Corporation\* acting for itself, North Carolina Electric Membership Corporation, and Saluda River Electric Cooperative, Inc., (the licensees) complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
  - B. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for Catawba Nuclear Station, Unit 1 (facility or plant), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
  - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D. below);
  - D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license 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; (except as exempted from compliance in Section 2.D. below);

on April 3, 2006 and was re-named Duke Energy Carolinas LLC as of October 1, 2006

\* Duke Energy Corporation ~~has~~ converted to Duke Power Company LLC. References to "Duke" are to Duke ~~Power Company~~ LLC, which is an owner and the operator of Catawba Nuclear Station, Unit 1, and one of the "licensees."

Energy Carolinas,

Energy Carolinas,

- 2 -

- E. Duke ~~(Power Company) LLC~~ is technically qualified to engage in the activities authorized by this renewed operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter 1;
  - F. The licensees have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements", of the Commission's regulations;
  - G. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
  - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. NPF-35 is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied, and;
  - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed operating license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70.
2. Based on the foregoing findings and the Partial Initial Decisions issued by the Atomic Safety and Licensing Boards dated June 22, September 18, and November 27, 1984, regarding this facility and satisfaction of conditions therein imposed, except as hereinafter set forth, and the Commission's vote on January 17, 1985, Facility Operating License No. NPF-31 issued on December 6, 1984, superseded by Facility Operating License No. NPF-35 issued on January 17, 1985, is superseded by Renewed Facility Operating License No. NPF-35, hereby issued to Duke ~~(Power Company) LLC~~, the North Carolina Electric Membership Corporation, and the Saluda River Electric Cooperative, Inc., to read as follows:
- A. This renewed operating license applies to the Catawba Nuclear Station, Unit 1, a pressurized water reactor and associated equipment (the facility) owned by Duke ~~(Power Company) LLC~~, the North Carolina Electric Membership Corporation, and the Saluda River Electric Cooperative, Inc. The facility is located on the licensees' site in York County, South Carolina, on the shore of Lake Wylie approximately 6 miles north of Rock Hill, South Carolina, and is described in the Updated Final Safety Analysis Report, as supplemented and amended, and in the Environmental Report, as supplemented and amended.
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
- \*Duke ~~(Power Company) LLC~~ is authorized to act as agent for the North Carolina Electric Membership Corporation and the Saluda River Electric Cooperative, Inc., and has exclusive responsibility and control over the physical construction, operation and maintenance of the facility.

- (1) Duke ~~Power Company~~ LLC, pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use, and operate the facility at the designated location in York County, South Carolina, in accordance with the procedures and limitations set forth in this renewed operating license;
- (2) North Carolina Electric Membership Corporation and Saluda River Electric Cooperative, Inc., to possess the facility at the designated location in York County, South Carolina, in accordance with the procedures and limitations set forth in this renewed operating license;
- (3) Duke ~~Power Company~~ LLC, pursuant to the Act and 10 CFR Part 70 to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Updated Final Safety Analysis Report, as supplemented and amended;
- (4) Duke ~~Power Company~~ LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (5) Duke ~~Power Company~~ LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
- (6) Duke ~~Power Company~~ LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility authorized herein, and;
- (7) Duke ~~Power Company~~ LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of McGuire Nuclear Station, Units 1 and 2, and Oconee Nuclear Station, Units 1, 2 and 3.

C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

Duke ~~Power Company~~ LLC is authorized to operate the facility at reactor core full steady state power level of 3411 megawatts thermal (100%) in accordance with the conditions specified herein.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 234 which are attached hereto, are hereby incorporated into this renewed operating license. Duke Power Company 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 Power Company LLC shall comply with the antitrust conditions delineated in Appendix C to this renewed operating license.

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

Duke Power Company 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.

\*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.

Energy Carolinas,

(6) Additional Conditions

The Additional Conditions contained in Appendix B, as revised through Amendment No. 180, are hereby incorporated into this renewed operating license. Duke ~~Power Company~~ LLC shall operate the facility in accordance with the Additional Conditions.

D. The facility requires exemptions from certain requirements of Appendix J to 10 CFR Part 50, as delineated below and pursuant to evaluations contained in the referenced SER and SSERs. These include, (a) partial exemption from the requirement of paragraph III.D.2(b)(ii) of Appendix J, the testing of containment airlocks at times when the containment integrity is not required (Section 6.2.6 of the SER, and SSERs # 3 and #4), (b) exemption from the requirement of paragraph III.A.(d) of Appendix J, insofar as it requires the venting and draining of lines for type A tests (Section 6.2.6 of SSER #3), and (c) partial exemption from the requirements of paragraph III.B of Appendix J, as it relates to bellows testing (Section 6.2.6 of the SER and SSER #3). These exemptions are authorized by law, will not present an undue risk to the public health and safety, are consistent with the common defense and security, and are consistent with certain special circumstances as discussed in the referenced SER and SSERs. These exemptions are, therefore, hereby granted pursuant to 10 CFR 50.12. With the granting of these exemptions, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.

E. Physical Protection

Duke ~~Power Company~~ LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains safeguards information protected under 10 CFR 73.21, is entitled: "Duke Energy Physical Security Plan" submitted by letter dated September 8, 2004, and supplemented on September 30, 2004, October 15, 2004, October 21, 2004 and October 27, 2004.

F. Reporting to the Commission Deleted by Amendment No. 230

*No change this page*

- G. The licensees shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- 3. This renewed license is effective as of the date of issuance and shall expire at midnight on December 5, 2043.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed By:  
J. E. Dyer

J. E. Dyer, Director  
Office of Nuclear Reactor Regulation

Attachments:

- 1. Appendix A – Technical Specifications
- 2. Appendix B – Additional Conditions
- 3. Appendix C – Antitrust Conditions

Date of Issuance: December 5, 2003

Energy Carolinas,

APPENDIX B

ADDITIONAL CONDITIONS

FACILITY OPERATING LICENSE NO. NPF-35

Duke ~~Power Company~~ LLC shall comply with the following conditions on the schedules noted below:

<u>Amendment Number</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
159	This amendment requires the licensee to use administrative controls, as described in the licensee's letter of March 7, 1997, and evaluated in the staff's safety evaluation dated April 29, 1997, to restrict the dose-equivalent iodine levels to 0.46 microCurie per gram (in lieu of the limit in TS Section 3.4.8.a), and to 26 microCurie per gram (in lieu of the limit of TS Figure 3.4-1), until this license condition is removed by a future amendment.	Immediately upon issuance of the amendment
173	The licensee is authorized to relocate certain requirements included in appendix A to licensee-controlled documents. Implementation of this amendment shall include the relocation of these requirements to the appropriate documents as described in the licensee's letters dated May 27, 1997, as amended by letters dated March 9, March 20, April 20, June 3, June 24, July 7, July 21, August 5, September 8, and September 15, 1998, and evaluated in the NRC staff's Safety Evaluation associated with this amendment.	All relocation to be completed by January 31, 1999.

Renewed License No. NPF-35  
Amendment No. ~~229~~

*No change this page*

<u>Amendment Number</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
173	<p>The schedule for the performance of new and revised surveillance requirements shall be as follows:</p> <p>For surveillance requirements (SRs) that are new in Amendment No. 173 the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment No. 173. For SRs that existing prior to Amendment No. 173, including SRs with modified acceptance criteria and SRs who intervals of performance are being extended, the first performance is due at the end of the first surveillance interval that begins on the date the surveillance was last performed prior to implementation of amendment No. 173. For SRs that existed prior to Amendment No. 173, whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of Amendment No. 173</p>	By January 31, 1999
180	<p>The maximum rod average burnup for any rod shall be limited to 60 GWd/mtU until the completion of an NRC environmental assessment supporting an increased limit.</p>	Within 30 days of date of amendment.

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APPENDIX C  
ANTITRUST CONDITIONS

Pursuant to an Order by the Atomic Safety and Licensing Board, dated April 23, 1975, the Nuclear Regulatory Commission incorporates in Operating License NPR-35 the following antitrust conditions:

- a. The licensee makes the commitments contained herein, recognizing that bulk power supply arrangements between neighboring entities normally tend to serve the public interest. In addition, where there are net benefits to all participants such arrangements also serve the best interests of each of the participants. Among the benefits of such transactions are increased electric system reliability, a reduction in the cost of electric power, and minimization of the environmental effects of the production and sale of electricity.

Any particular bulk power supply transaction may afford greater benefits to one participant than to another. The benefits realized by a small system may be proportionately greater than those realized by a larger system. The relative benefits to be derived by the parties from a proposed transaction, however, should not be controlling upon a decision with respect to the desirability of participating in the transaction. Accordingly, the licensee will enter into proposed bulk power transactions of the types hereinafter described which, on balance, provide net benefits to the licensee. There are net benefits in a transaction if the licensee recovers the cost of the transaction, (as defined in subparagraph (1)(d) hereof) and there is no demonstrable net detriment to the licensee arising from the transaction.

- (1) As used herein:
  - (a) "Bulk Power" means electric power and any attendant energy, supplied or made available at transmission or sub-transmission voltage by one electric system to another.
  - (b) "Neighboring Entity" means a private or public corporation, a governmental agency or authority, a municipality, a cooperative, or a lawful association of any of the foregoing owning or operating, or proposing to own or operate, facilities for the generation and transmission of electricity which meets each of the following criteria: (1) its existing or proposed facilities are economically and technically feasible of interconnection with those of the licensee and (2) with the exception of municipalities, cooperatives, governmental agencies or authorities, and associations, it is, or upon commencement of operations will be, a public utility and subject to regulation with respect to rates and service under the laws of North Carolina or South Carolina or under the Federal Power Act; provided, however, that as to associations, each member of such association is either a public utility as discussed in this clause (2) or a

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- municipality, a cooperative or a governmental agency or authority.
- (c) Where the phrase "neighboring entity" is intended to include entities engaging or proposing to engage only in the distribution of electricity, this is indicated by adding the phrase "including distribution systems."
  - (d) "Cost" means any appropriate operating and maintenance expenses, together with all other costs, including a reasonable return on the licensee's investment, which are reasonably allocable to a transaction. However, no value shall be included for loss of revenue due to the loss of any wholesale or retail customer as a result of any transaction hereafter described.
- (2)
- (a) The licensee will interconnect and coordinate reserves by means of the sale and exchange of emergency and scheduled maintenance bulk power with any neighboring entity(ies), when there are net benefits to each party, on terms that will provide for all of the licensee's properly assignable costs as may be determined by the Federal Energy Regulatory Commission and consistent with such cost assignment will allow the other party the fullest possible benefits of such coordination.
  - (b) Emergency service and/or scheduled maintenance service to be provided by each party will be furnished to the fullest extent available from the supplying party and desired by the party in need. The licensee and each party will provide to the other emergency service and/or scheduled maintenance service if and when available from its own generation and, in accordance with recognized industry practice, from generation of others to the extent it can do so without impairing service to its customers, including other electric systems to whom it has firm commitments.
  - (c) Each party to a reserve coordination arrangement will establish its own reserve criteria, but in no event shall the minimum installed reserve on each system be less than 15%, calculated as a percentage of estimated peak load responsibility. Either party, if it has, or has firmly planned, installed reserves in excess of the amount called for by its own reserve criterion, will offer any such excess as may in fact be available at the time for which it is sought and for such period as the selling party shall determine for purchase in accordance with reasonable industry practice by the other party to meet such other party's own reserve requirements. The parties will provide such amounts of spinning reserve as may be adequate to avoid the imposition of unreasonable

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demands on the other part(ies) in meeting the normal contingencies of operating its (their) system(s). However, in no circumstances shall such spinning reserve requirement exceed the installed reserve requirement.

- (d) Interconnections will not be limited to low voltages when higher voltages are available from the licensee's installed facilities in the area where interconnection is desired and when the proposed arrangement is found to be technically and economically feasible.
  - (e) Interconnection and reserve coordination agreements will not embody provisions which impose limitations upon the use or resale of power and energy sold or exchanged pursuant to the agreement. Further, such arrangements will not prohibit the participants from entering into other interconnection and coordination arrangements, but may include appropriate provisions to assure that (i) the licensee receives adequate notice of such additional interconnection or coordination, (ii) the parties will jointly consider and agree upon such measures, if any, as are reasonably necessary to protect the reliability of the interconnected systems and to prevent undue burdens from being imposed on any system, and (iii) the licensee will be fully compensated for its costs. Reasonable industry practice as developed in the area from time to time will satisfy this provision.
- (3) The licensee currently has on file, and may hereafter file, with the Federal Energy Regulatory Commission contracts with neighboring entity(ies) providing for the sale and exchange of short-term power and energy, limited term power and energy, economy energy, non-displacement energy, and emergency capacity and energy. The Licensee will enter into contracts providing for the same or for like transactions with any neighboring entity on terms which enable the licensee to recover the full costs allocable to such transaction.
- (4) The licensee currently sells capacity and energy in bulk on a full requirements basis to several entities engaging in the distribution of electric power at retail. In addition, the licensee supplies electricity directly to ultimate users in a number of municipalities. Should any such entity(ies) or municipality(ies) desire to become a neighboring entity as defined in subparagraph (1)(b) hereof (either alone or through combination with others), the licensee will assist in facilitating the necessary transition through the sale of partial requirements firm power and energy to the extent that, except for such transition, the licensee would otherwise be supplying firm power and energy. The provision of such firm partial requirements service shall be under such rates, terms and conditions as shall be found by the Federal Energy Regulatory Commission to

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provide for the recovery of the licensee's cost. The licensee will sell capacity and energy in bulk on a full requirements basis to any municipality currently served by the licensee when such municipality lawfully engages in the distribution of electric power at retail.

- (5) (a) The licensee will facilitate the exchange of electric power in bulk in wholesale transactions over its transmission facilities (1) between or among two or more neighboring entities including distribution systems with which it is interconnected or may be interconnected in the future, and (2) between any such entity(ies) and any other electric system engaging in bulk power supply between whose facilities the licensee's transmission lines and other transmission lines would form a continuous electric path, provided that permission to utilize such other transmission lines has been obtained. Such transaction shall be undertaken provided that the particular transaction reasonably can be accommodated by the licensee's transmission system from a functional and technical standpoint and does not constitute the wheeling of power to a retail customer. Such transmission shall be on terms that fully compensate the licensee for its cost. Any entity(ies) requesting such transmission arrangements shall give reasonable notice of its (their) schedule and requirements.
- (b) The licensee will include in its planning and construction program sufficient transmission capacity as required for the transactions referred to in subparagraph (a) of this paragraph, provided that (1) the neighboring entity(ies) gives the licensee sufficient advance notice as may be necessary reasonably to accommodate its (their) requirements from a functional and technical standpoint and (2) that such entity(ies) fully compensate the licensee for its cost. In carrying out this subparagraph (b), however, the licensee shall not be required to construct or add transmission facilities which (a) will be of no demonstrable present or future benefit to the licensee, or (b) which could be constructed by the requesting entity(ies) without duplicating any portion of the licensee's existing transmission lines, or (c) which would jeopardize the licensee's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements. Where regulatory or environmental approvals are required for the construction or addition of transmission facilities needed for the transactions referred to in subparagraph (a) of this paragraph it shall be the responsibility of the entity(ies) seeking the transaction to participate in obtaining such approvals, including sharing in the cost thereof.
- (6) To increase the possibility of achieving greater reliability and economy of electric generation and transmission facilities, the licensee will discuss load projections and system development plans with any neighboring entity(ies).

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- (7) When the licensee's plans for future nuclear generating units (for which application will hereafter be made to the Nuclear Regulatory Commission) have reached the stage of serious planning, but before firm decisions have been made as to the size and desired completion date of the proposed nuclear units, the licensee will notify all neighboring entities including distribution systems with peak loads smaller than the licensee's that the licensee plans to construct such nuclear units. Neither the timing nor the information provided need be such as to jeopardize obtaining the required site at the lowest possible cost.
- (8) The foregoing commitments shall be implemented in a manner consistent with the provisions of the Federal Power Act and all other lawful local, state and Federal regulation and authority. Nothing in these commitments is intended to determine in advance the resolution of issues which are properly raised at the Federal Energy Regulatory Commission concerning such commitments, including allocation of costs or the rates to be charged. The licensee will negotiate (including the execution of a contingent statement of intent) with respect to the foregoing commitments with any neighboring entity including distribution systems where applicable engaging in or proposing to engage in bulk power supply transactions, but the licensee shall not be required to enter into any final arrangement prior to resolution of any substantial questions as to the lawful authority of an entity to engage in the transactions.

In addition, the licensee shall not be obligated to enter into a given bulk power supply transaction if: (1) to do so would violate, or incapacitate it from performing, any existing lawful contracts it has with a third party; (2) there is contemporaneously available to it a competing or alternative arrangement which affords it greater benefits which would be mutually exclusive of such arrangement; (3) to do so would adversely affect its system operations or the reliability of power supply to its customers, or (4) if to do so would jeopardize the licensee's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

April 3, 2006

Docket Nos. 50-413  
50-414

AMENDMENT TO INDEMNITY AGREEMENT NO. B-100  
AMENDMENT NO. 10

Effective April 3, 2006, Indemnity Agreement No. B-100, between Duke Energy Corporation, North Carolina Municipal Power Agency Number 1, North Carolina Electric Membership Corporation, Saluda River Electric Cooperative, Inc., Piedmont Municipal Power Agency and the Nuclear Regulatory Commission, dated January 3, 1984, as amended, is hereby further amended as follows:

Delete the name "Duke Energy Corporation" in the Indemnity Agreement wherever it appears and substitute the name "Duke Power Company LLC"

FOR THE UNITED STATES NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script, appearing to read "Chris for", written over a horizontal line.

Christopher I. Grimes, Director  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

Energy Carolinas,

~~DUKE POWER COMPANY~~ LLC

NORTH CAROLINA MUNICIPAL POWER AGENCY NO. 1

PIEDMONT MUNICIPAL POWER AGENCY

DOCKET NO. 50-414

CATAWBA NUCLEAR STATION, UNIT 2

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-52

1. The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. NPF-52 issued on May 15, 1986, has now found that:
  - A. The application for renewed operating license filed by the Duke Energy Corporation\* acting for itself, North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency (the licensees) complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I; and all required notifications to other agencies or bodies have been duly made;
  - B. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for Catawba Nuclear Station, Unit 2 (facility or plant) and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
  - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D. below);
  - D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license 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 (except as exempted from compliance in Section 2.D. below);

on April 3, 2006 and was re-named Duke Energy Carolinas, LLC as of October 1, 2006

\* Duke Energy Corporation ~~has~~ converted to Duke Power Company LLC. References to "Duke" are to Duke ~~Power Company~~ LLC, which is the operator of Catawba Nuclear Station, Unit 2, and one of the "licensees."

Energy Carolinas,

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- 2 -

- E. Duke Power Company LLC\* is technically qualified to engage in the activities authorized by this renewed operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
- F. The licensees have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
- G. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
- H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. NPF-52 is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied, and;
- I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed operating license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70.

2. Based on the foregoing findings and the July 26, 1985, and the November 21, 1985, affirmations by the Atomic Safety and Licensing Appeal Board of the Partial Initial Decisions issued by the Atomic Safety and Licensing Boards dated June 22, September 18, and November 27, 1984, regarding this facility and satisfaction of conditions therein imposed, and pursuant to approval by the Nuclear Regulatory Commission at a meeting held on May 14, 1986, Facility Operating License No. NPF-48, issued on February 24, 1986, superseded by Facility Operating License No. NPF-52 issued on May 15, 1986, is superseded by Renewed Facility Operating License No. NPF-52, hereby issued to Duke Power Company LLC, the North Carolina Municipal Power Agency No. 1, and Piedmont Municipal Power Agency to read as follows:

- A. This renewed operating license applies to the Catawba Nuclear Station, Unit 2, a pressurized water reactor and associated equipment (the facility) owned by the North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency and operated by Duke Power Company LLC. The facility is located on the licensees' site in York County, South Carolina, on the shore of Lake Wylie approximately 6 miles north of Rock Hill, South Carolina, and is described in the Final Safety Analysis Report, as supplemented and amended, and in the Environmental Report, as supplemented and amended;
- B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:

\*Duke Power Company LLC is authorized to act as agent for the North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency, and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

- (1) ~~Duke Power Company~~ LLC, pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use, and operate the facility at the designated location in York County, South Carolina, in accordance with the procedures and limitations set forth in this renewed operating license;
- (2) North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency, pursuant to the Act and 10 CFR Part 50, to possess the facility at the designated location in York County, South Carolina, in accordance with the procedures and limitations set forth in this renewed operating license;
- (3) ~~Duke Power Company~~ LLC, pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
- (4) ~~Duke Power Company~~ LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70 to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (5) ~~Duke Power Company~~ LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
- (6) ~~Duke Power Company~~ LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility authorized herein; and
- (7) ~~Duke Power Company~~ LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of McGuire Nuclear Station, Units 1 and 2, and Oconee Nuclear Station, Units 1, 2, and 3.

C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

~~Duke Power Company~~ LLC is authorized to operate the facility at a reactor core full steady state power level of 3411 megawatts thermal (100%) in accordance with the conditions specified herein.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 230 which are attached hereto, are hereby incorporated into this renewed operating license. Duke Power Company 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 Power Company LLC shall comply with the antitrust conditions delineated in Appendix C to this renewed operating license.

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

Duke Power Company 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.

\*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.

(6) Additional Conditions

The Additional Conditions contained in Appendix B, as revised through Amendment No. 224, are hereby incorporated into this renewed operating license. Duke Power Company LLC shall operate the facility in accordance with the Additional Conditions.

D. The facility requires exemptions from certain requirements of Appendix J to 10 CFR Part 50, as delineated below, and pursuant to evaluations contained in the referenced SER and SSER. These include: (a) partial exemption from the requirement of paragraph III.D.2(b)(ii) of Appendix J, the testing of containment airlocks at times when the containment integrity is not required (Section 6.2.6 of SSER #5), (b) exemption from the requirement of paragraph III.A.1(d) of Appendix J, insofar as it requires the venting and draining of lines for type A tests (Section 6.2.6 of SSER #5), and (c) partial exemption from the requirements of paragraph III.B of Appendix J, as it relates to bellows testing (Section 6.2.6 of the SER and SSER #5). These exemptions are authorized by law, will not present an undue risk to the public health and safety, are consistent with the common defense and security, and are consistent with certain special circumstances, as discussed in the referenced SER and SSER. These exemptions are, therefore, hereby granted pursuant to 10 CFR 50.12. With the granting of these exemptions, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.

E. Physical Protection

Duke Power Company LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains safeguards information protected under 10 CFR 73.21, is entitled: "Duke Energy Physical Security Plan" submitted by letter dated September 8, 2004, and supplemented on September 30, 2004, October 15, 2004, October 21, 2004 and October 27, 2004.

F. Reporting to the Commission Deleted by Amendment No. 226

G. The licensees shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.

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3. This renewed license is effective as of the date of issuance and shall expire at midnight on December 5, 2043.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed By:  
J. E. Dyer

J. E. Dyer, Director  
Office of Nuclear Reactor Regulation

Attachments:

1. Appendix A – Technical Specifications
2. Appendix B – Additional Conditions
3. Appendix C – Antitrust Conditions

Date of Issuance: December 5, 2003

Energy Carolinas,

APPENDIX B  
ADDITIONAL CONDITIONS

FACILITY OPERATING LICENSE NO. NPF-52

Duke ~~Power Company~~ LLC shall comply with the following conditions on the schedules noted below:

<u>Amendment Number</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
151	This amendment requires the licensee to use administrative controls, as described in the licensee's letter of March 7, 1997, and evaluated in the staff's safety evaluation dated April 29, 1997, to restrict the dose-equivalent iodine levels to 0.46 microCurie per gram (in lieu of the limit in TS Section 3.4.8.a), and to 26 microCurie per gram (in lieu of the limit of TS Figure 3.4-1), until this license condition is removed by a future amendment.	Immediately upon issuance of the amendment
165	The licensee is authorized to relocate certain requirements included in appendix A to licensee-controlled documents. Implementation of this amendment shall include the relocation of these requirements to the appropriate documents, as described in the licensee's letters dated May 27, 1997, as amended by letters dated March 9, March 20, April 20, June 3, June 24, July 7, July 21, August 5, September 8, and September 15, 1998, and evaluated in the NRC staff's Safety Evaluation associated with this amendment.	All relocation to be completed by January 31, 1999.

Renewed License No. NPF-52  
Amendment No. 225

*No change this page*

<u>Amendment Number</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
165	<p>The schedule for the performance of new and revised surveillance requirements shall be as follows:</p> <p>For surveillance requirements (SRs) that are new in Amendment No. 165 the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment No. 165. For SRs that existing prior to Amendment No. 165, including SRs with modified acceptance criteria and SRs who intervals of performance are being extended, the first performance is due at the end of the first surveillance interval that begins on the date the surveillance was last performed prior to implementation of amendment No. 165. For SRs that existed prior to Amendment No. 165, whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of Amendment No. 165</p>	By January 31, 1999
172	<p>The maximum rod average burnup for any rod shall be limited to 60 GWd/mtU until the completion of an NRC environmental assessment supporting an increased limit.</p>	Within 30 days of date of amendment.
	<p>This amendment requires the licensee to use administrative controls, as described in the licensee's letter of February 2, 2006, and evaluated in the Staff's Safety Evaluation dated March 31, 2006, to restrict the primary to secondary leakage through any one steam generator to 75 gallons per day and through all steam generators to 300 gallons per day (in lieu of the limits in TS Sections 3.4.13d. and 5.5.9b.3.), for Cycle 15 operation.</p>	Prior to any entry into Mode 4 during Cycle 15 operation

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APPENDIX C  
ANTITRUST CONDITIONS

Pursuant to an Order by the Atomic Safety and Licensing Board, dated April 23, 1975, the Nuclear Regulatory Commission incorporates in Operating License NPR-52 the following antitrust conditions:

- a. The licensee makes the commitments contained herein, recognizing that bulk power supply arrangements between neighboring entities normally tend to serve the public interest. In addition, where there are net benefits to all participants such arrangements also serve the best interests of each of the participants. Among the benefits of such transactions are increased electric system reliability, a reduction in the cost of electric power, and minimization of the environmental effects of the production and sale of electricity.

Any particular bulk power supply transaction may afford greater benefits to one participant than to another. The benefits realized by a small system may be proportionately greater than those realized by a larger system. The relative benefits to be derived by the parties from a proposed transaction, however, should not be controlling upon a decision with respect to the desirability of participating in the transaction. Accordingly, the licensee will enter into proposed bulk power transactions of the types hereinafter described which, on balance, provide net benefits to the licensee. There are net benefits in a transaction if the licensee recovers the cost of the transaction, (as defined in subparagraph (1)(d) hereof) and there is no demonstrable net detriment to the licensee arising from the transaction.

(1) As used herein:

- (a) "Bulk Power" means electric power and any attendant energy, supplied or made available at transmission or sub-transmission voltage by one electric system to another.
- (b) "Neighboring Entity" means a private or public corporation, a governmental agency or authority, a municipality, a cooperative, or a lawful association of any of the foregoing owning or operating, or proposing to own or operate, facilities for the generation and transmission of electricity which meets each of the following criteria: (1) its existing or proposed facilities are economically and technically feasible of interconnection with those of the licensee and (2) with the exception of municipalities, cooperatives, governmental agencies or authorities, and associations, it is, or upon commencement of operations will be, a public utility and subject to regulation with respect to rates and service under the laws of North Carolina or South Carolina or under the Federal Power Act; provided, however, that as to

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associations, each member of such association is either a public utility as discussed in this clause (2) or a municipality, a cooperative or a governmental agency or authority.

- (c) Where the phrase "neighboring entity" is intended to include entities engaging or proposing to engage only in the distribution of electricity, this is indicated by adding the phrase "including distribution systems."
  - (d) "Cost" means any appropriate operating and maintenance expenses, together with all other costs, including a reasonable return on the licensee's investment, which are reasonably allocable to a transaction. However, no value shall be included for loss of revenue due to the loss of any wholesale or retail customer as a result of any transaction hereafter described.
- (2)
- (a) The licensee will interconnect and coordinate reserves by means of the sale and exchange of emergency and scheduled maintenance bulk power with any neighboring entity(ies), when there are net benefits to each party, on terms that will provide for all of the licensee's properly assignable costs as may be determined by the Federal Energy Regulatory Commission and consistent with such cost assignment will allow the other party the fullest possible benefits of such coordination.
  - (b) Emergency service and/or scheduled maintenance service to be provided by each party will be furnished to the fullest extent available from the supplying party and desired by the party in need. The licensee and each party will provide to the other emergency service and/or scheduled maintenance service if and when available from its own generation and, in accordance with recognized industry practice, from generation of others to the extent it can do so without impairing service to its customers, including other electric systems to whom it has firm commitments.
  - (c) Each party to a reserve coordination arrangement will establish its own reserve criteria, but in no event shall the minimum installed reserve on each system be less than 15%, calculated as a percentage of estimated peak load responsibility. Either party, if it has, or has firmly planned, installed reserves in excess of the amount called for by its own reserve criterion, will offer any such excess as may in fact be available at the time for which it is sought and for such period as the selling party shall determine for purchase in accordance with reasonable industry practice by the other party to meet such other party's own reserve requirements. The parties will provide such amounts of spinning reserve as may be adequate to avoid the imposition of unreasonable

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demands on the other part(ies) in meeting the normal contingencies of operating its (their) system(s). However, in no circumstances shall such spinning reserve requirement exceed the installed reserve requirement.

- (d) Interconnections will not be limited to low voltages when higher voltages are available from the licensee's installed facilities in the area where interconnection is desired and when the proposed arrangement is found to be technically and economically feasible.
  - (e) Interconnection and reserve coordination agreements will not embody provisions which impose limitations upon the use or resale of power and energy sold or exchanged pursuant to the agreement. Further, such arrangements will not prohibit the participants from entering into other interconnection and coordination arrangements, but may include appropriate provisions to assure that (i) the licensee receives adequate notice of such additional interconnection or coordination, (ii) the parties will jointly consider and agree upon such measures, if any, as are reasonably necessary to protect the reliability of the interconnected systems and to prevent undue burdens from being imposed on any system, and (iii) the licensee will be fully compensated for its costs. Reasonable industry practice as developed in the area from time to time will satisfy this provision.
- (3) The licensee currently has on file, and may hereafter file, with the Federal Energy Regulatory Commission contracts with neighboring entity(ies) providing for the sale and exchange of short-term power and energy, limited term power and energy, economy energy, non-displacement energy, and emergency capacity and energy. The Licensee will enter into contracts providing for the same or for like transactions with any neighboring entity on terms which enable the Licensee to recover the full costs allocable to such transaction.
- (4) The licensee currently sells capacity and energy in bulk on a full requirements basis to several entities engaging in the distribution of electric power at retail. In addition, the licensee supplies electricity directly to ultimate users in a number of municipalities. Should any such entity(ies) or municipality(ies) desire to become a neighboring entity as defined in subparagraph (1)(b) hereof (either alone or through combination with others), the licensee will assist in facilitating the necessary transition through the sale of partial requirements firm power and energy to the extent that, except for such transition, the licensee would otherwise be supplying firm power and energy. The provision of such firm partial requirements service shall be under such rates, terms and conditions as shall be found by the Federal Energy Regulatory Commission to

provide for the recovery of the licensee's cost. The licensee will sell capacity and energy in bulk on a full requirements basis to any municipality currently served by the licensee when such municipality lawfully engages in the distribution of electric power at retail.

- (5) (a) The licensee will facilitate the exchange of electric power in bulk in wholesale transactions over its transmission facilities (1) between or among two or more neighboring entities including distribution systems with which it is interconnected or may be interconnected in the future, and (2) between any such entity(ies) and any other electric system engaging in bulk power supply between whose facilities the licensee's transmission lines and other transmission lines would form a continuous electric path, provided that permission to utilize such other transmission lines has been obtained. Such transaction shall be undertaken provided that the particular transaction reasonably can be accommodated by the licensee's transmission system from a functional and technical standpoint and does not constitute the wheeling of power to a retail customer. Such transmission shall be on terms that fully compensate the licensee for its cost. Any entity(ies) requesting such transmission arrangements shall give reasonable notice of its (their) schedule and requirements.
  - (b) The licensee will include in its planning and construction program sufficient transmission capacity as required for the transactions referred to in subparagraph (a) of this paragraph, provided that (1) the neighboring entity(ies) gives the licensee sufficient advance notice as may be necessary reasonably to accommodate its (their) requirements from a functional and technical standpoint and (2) that such entity(ies) fully compensate the licensee for its cost. In carrying out this subparagraph (b), however, the licensee shall not be required to construct or add transmission facilities which (a) will be of no demonstrable present or future benefit to the licensee, or (b) which could be constructed by the requesting entity(ies) without duplicating any portion of the licensee's existing transmission lines, or (c) which would jeopardize the licensee's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements. Where regulatory or environmental approvals are required for the construction or addition of transmission facilities needed for the transactions referred to in subparagraph (a) of this paragraph it shall be the responsibility of the entity(ies) seeking the transaction to participate in obtaining such approvals, including sharing in the cost thereof.
- (6) To increase the possibility of achieving greater reliability and economy of electric generation and transmission facilities, the licensee will discuss load projections and system development plans with any neighboring entity(ies).

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- (7) When the licensee's plans for future nuclear generating units (for which application will hereafter be made to the Nuclear Regulatory Commission) have reached the stage of serious planning, but before firm decisions have been made as to the size and desired completion date of the proposed nuclear units, the licensee will notify all neighboring entities including distribution systems with peak loads smaller than the licensee's that the licensee plans to construct such nuclear units. Neither the timing nor the information provided need be such as to jeopardize obtaining the required site at the lowest possible cost.
- (8) The foregoing commitments shall be implemented in a manner consistent with the provisions of the Federal Power Act and all other lawful local, state and Federal regulation and authority. Nothing in these commitments is intended to determine in advance the resolution of issues which are properly raised at the Federal Energy Regulatory Commission concerning such commitments, including allocation of costs or the rates to be charged. The licensee will negotiate (including the execution of a contingent statement of intent) with respect to the foregoing commitments with any neighboring entity including distribution systems where applicable engaging in or proposing to engage in bulk power supply transactions, but the licensee shall not be required to enter into any final arrangement prior to resolution of any substantial questions as to the lawful authority of an entity to engage in the transactions.

In addition, the licensee shall not be obligated to enter into a given bulk power supply transaction if: (1) to do so would violate, or incapacitate it from performing, any existing lawful contracts it has with a third party; (2) there is contemporaneously available to it a competing or alternative arrangement which affords it greater benefits which would be mutually exclusive of such arrangement; (3) to do so would adversely affect its system operations or the reliability of power supply to its customers, or (4) if to do so would jeopardize the licensee's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements.



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

April 3, 2006

Docket Nos. 50-413  
50-414

AMENDMENT TO INDEMNITY AGREEMENT NO. B-100  
AMENDMENT NO. 10

Effective April 3, 2006, Indemnity Agreement No. B-100, between Duke Energy Corporation, North Carolina Municipal Power Agency Number 1, North Carolina Electric Membership Corporation, Saluda River Electric Cooperative, Inc., Piedmont Municipal Power Agency and the Nuclear Regulatory Commission, dated January 3, 1984, as amended, is hereby further amended as follows:

Delete the name "Duke Energy Corporation" in the Indemnity Agreement wherever it appears and substitute the name "Duke Power Company LLC"

FOR THE UNITED STATES NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script, appearing to read "Chris for", written over a horizontal line.

Christopher I. Grimes, Director  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

U.S. Nuclear Regulatory Commission  
March 14, 2007  
Enclosure 2

**ATTACHMENT 1d**

**OCONEE INDEPENDENT SPENT FUEL STORAGE INSTALLATION  
MARKED CHANGES TO CURRENT NRC LICENSE NO. SNM-2503**

### LICENSE FOR INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter 1, Part 72, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, and possess the power reactor spent fuel and other radioactive materials associated with spent fuel storage designated below; to use such material for the purpose(s) and at the place(s) designated below; and to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified herein.

Licensee		3. License No.	SNM-2503
1. Duke <del>Power Company</del> LLC <i>Energy Carolinas</i>		Amendment No.	<i>8</i>
2. 526 South Church Street P. O. Box 1006 Charlotte, North Carolina 28201-1006		4. Expiration Date	January 31, 2010
		5. Docket or Reference No.	72-4

6. Byproduct, Source, and/or Special Nuclear Material

7. Chemical and/or Physical Form

8. Maximum Amount That Licensee May Possess at Any One Time Under This License

A. Spent fuel assemblies from Oconee Nuclear Station Units 1, 2, and 3 reactor using natural water for cooling and enriched not greater than 4 percent U-235 and associated radioactive materials related to receipt, storage, and transfer of the fuel assemblies

A. As UO<sub>2</sub> clad with zirconium or zirconium alloys

A. 996.86 TeU of spent fuel assemblies

9. Authorized Use:

The material identified in 6.A and 7.A above is authorized for receipt, possession, storage, and transfer.

For use in accordance with the conditions in this license and the attached Technical Specifications. The basis for this license was submitted in the Safety Analysis Report (SAR) dated March 31, 1988, as supplemented August 16, September 19, October 11, and November 23, 1988; February 7, April 11, May 9, June 5, and June 8, 1989; June 29, 1990; January 10, 1991; March 9, and November 16, 1993; January 19, 1998; July 10, October 31 (2 letters), November 1 and 26, and December 10, 2001, August 5, November 28 and December 14, 2005, and February 6, 2006, *and* \_\_\_\_\_.

10. Authorized Place of Use: The licensed material is to be received, possessed, transferred, and stored at the Oconee ISFSI located on the Oconee Nuclear Station site in Oconee County, South Carolina, as described in the Safety Analysis Report for the Oconee ISFSI.
11. The Technical Specifications contained in Appendix A attached hereto are incorporated into the license. The licensee shall operate the installation in accordance with the Technical Specifications in Appendix A.
12. The Safeguards License Condition contained in Appendix B attached hereto is hereby incorporated into the license. The licensee shall maintain a facility physical security program in accordance with this condition.
13. The Technical Specifications for Environmental Protection contained in Appendix C attached hereto are incorporated into the license. The licensee shall operate the installation in accordance with the Technical Specifications in Appendix C.
14. Pursuant to 10 CFR 72.7, the licensee is hereby exempted from the provisions of 10 CFR 72.122(i) with respect to providing instrumentation and control systems for the NUHOMS-24P dry shielded canister and horizontal storage module (DSC and HSM) during storage operations.
15. This license is effective as of the date of issuance shown below.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION



E. William Brach, Director  
Spent Fuel Project Office  
Office of Nuclear Material Safety  
and Safeguards  
Washington, DC 20555

Date of Issuance: January 29, 1990

~~Amendment No. 8, dated April 3, 2008~~

Attachments: Appendix A Cover Sheet and Page A-1  
Appendix B Cover Sheet  
Appendix C Cover Sheet

Amendment No. —, dated —

APPENDIX A

~~DUKE POWER COMPANY LLC~~

*Energy Carolinas,*

OCONEE

INDEPENDENT SPENT FUEL STORAGE INSTALLATION

TECHNICAL SPECIFICATIONS FOR

MATERIALS LICENSE SNM-2503

Amendment No. 

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## 1 INTRODUCTION

These Technical Specifications govern the safety of the receipt, possession, and storage of irradiated nuclear fuel at the Oconee Independent Spent Fuel Storage Installation and the transfer of such irradiated nuclear fuel to and from Units 1, 2, and 3 of the Oconee Nuclear Station and the Oconee Independent Spent Fuel Storage Installation.

### 1.1 Definitions

The following definitions apply for the purpose of these Technical Specifications.

- a. Administrative Controls: Provisions relating to organization and management procedures, recordkeeping, review and audit, and reporting necessary to assure that the operations involved in the storage of spent fuel at the Oconee ISFSI are performed in a safe manner.
- b. Design Features: Features of the facility associated with the basic design such as materials of construction, geometric arrangements, dimensions, etc., which, if altered or modified, could have a significant effect on safety.
- c. Functional and Operating Limits: Limits on fuel handling and storage conditions necessary to protect the integrity of the stored fuel, to protect employees against occupational exposures, and to guard against the uncontrolled release of radioactive materials.
- d. Fuel Assembly: The unit of nuclear fuel in the form that is charged or discharged from the core of a light-water reactor (LWR). Normally, will consist of a rectangular arrangement of fuel rods held together by end fittings, spacers, and tie rods.
- e. Limiting Conditions: The minimum or maximum functional capabilities or performance levels of equipment required for safe operation of the facility.

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- f. Surveillance Requirements: Surveillance requirements include: (i) inspection, test, and calibration activities to ensure that the necessary integrity of required systems, components, and the spent fuel in storage is maintained; (ii) confirmation that operation of the installation is within the required functional and operating limits; and (iii) a confirmation that the limiting conditions required for safe storage are met.
- g. Tonne (Te): One metric ton, equivalent to 1,000 kg or 2,204.6 lb. Fuel quantity is expressed in terms of the heavy metal content of the fuel measured in metric tons and written TeU.
- h. Loading Operations: Loading Operations include all cask preparation steps prior to cask transport from the fuel building area.

## 1.2 Preoperational License Conditions

The license issued under Part 72 shall not allow the loading of spent nuclear fuel until such time as the following preoperational license conditions are satisfied:

- 1. A training exercise (Dry Run) of all dry shielded canister (DSC), transfer cask (TC) and horizontal storage module (HSM) loading and handling activities shall be held which shall include but not be limited to those listed and which need not be performed in the order listed:
  - a. Loading DSC in cask.
  - b. DSC (length may be truncated) drying, welding, and cover gas backfilling operations.
  - c. Moving cask to and aligning and docking with NSM on the storage pad.
  - d. Insertion of DSC in HSM.
  - e. Withdrawal of DSC from HSM.

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- f. Returning the cask to the decontamination pit.
  - g. Removing the cask lid and cutting open the DSC (length may be truncated) assuming fuel cladding failure.
  - h. Removing the DSC from the cask.
  - i. All dry run activities shall be done using written procedures.
  - j. The activities listed above shall be performed or modified and performed to show that each activity can be successfully executed prior to actual fuel loading.
2. The Oconee Nuclear Station Emergency Plan shall be reviewed and modified as required to include the ISFSI. (Abnormal event notifications will have to be updated for ISFSI events.)
3. As required by Subpart H, a Physical Security Plan shall be established to implement a physical protection program for the ISFSI. Further, the Oconee Nuclear Station Safeguards Contingency Plan and the Guard Training and Qualification Plan shall be modified as necessary to incorporate commitments to support the ISFSI.
4. A training module shall be developed for the Oconee Nuclear Station Training Program establishing an ISFSI Training and Certification Program which will include the following:
- a. DSC, TC and HSM Design (overview)
  - b. ISFSI Facility Design (overview)
  - c. ISFSI Safety Analysis (overview)
  - d. Fuel loading and DSC and TC handling procedures and abnormal procedures
  - e. ISFSI License (overview).

5. The Oconee Nuclear Station health physics procedures shall be reviewed and modified as required to include the ISFSI.
6. The Oconee Nuclear Station Administrative Procedures shall be reviewed and modified as required to include the ISFSI.
7. A procedure shall be developed for the documentation of the characterizations performed to select spent fuel to be stored in the canisters and modules. Such procedure shall include independent verification of fuel assembly selection by an individual other than the original individual making the selection.
8. Written operating and abnormal/emergency procedures shall be prepared.

### 1.3 General License Conditions

#### 1.3.1 Quality Assurance

The design, construction, and operation of the ISFSI shall be accomplished in accordance with the U.S. Nuclear Regulatory Commission (NRC) Regulations specified in Title 10 of the U.S. Code of Federal Regulations. All commitments to the applicable NRC Regulatory Guides and to engineering and construction codes shall be carried out.

#### 1.3.2 Fuel and Cask Handling Activities

Fuel and TC movement and handling activities which are to be performed in the Oconee Nuclear Station Fuel Handling Building will be governed by the requirements of the Oconee Nuclear Station Facility Operating Licenses (DRP-38, -47 and -55) and associated Technical Specifications.

#### 1.3.3 Administrative Controls

The Oconee ISFSI is located on the Oconee Nuclear Station site and will be managed and operated by the Duke ~~Power Company~~ LLC staff. The administrative controls shall be in accordance with the requirements of the Oconee Nuclear Station Facility Operating Licenses (DPR-38,-47 and -55) and associated Technical Specifications.

*Energy Carolinas,*

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## 2 FUNCTIONAL AND OPERATING LIMITS

### 2.1 Fuel to be Stored at ISFSI

#### 2.1.1 Specification

The spent nuclear fuel to be received and stored at the Oconee ISFSI shall meet the following requirements:

- (1) Only fuel irradiated at the Oconee Units Nos. 1, 2, or 3 may be used.
- (2) Maximum initial enrichment shall not exceed 4.0 weight percent U-235.
- (3) Maximum assembly average burnup shall not exceed 40,000 megawatt-days per metric ton uranium or shall meet the alternative specifications set forth in Section 4.3.1 of these Technical Specifications.
- (4) Maximum heat generation rate shall not exceed 0.66 kilowatt per fuel assembly.
- (5) Fuel shall have cooled a minimum of 10 years after reactor discharge and prior to storage in the Oconee ISFSI or shall meet the alternative specifications set forth in Section 4.3.1 of these Technical Specifications.
- (6) Fuel shall be intact unconsolidated fuel.
- (7) Maximum assembly mass including control components shall not exceed 763 kilograms.
- (8) The nominal load per spacer disk shall not exceed 109 kilograms per assembly per disk.
- (9) Fuel assemblies known or suspected to have structural defects sufficiently severe to adversely affect fuel handling and transfer capability unless canned shall not be loaded into the DSC for storage.

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- (10) Immediately prior to insertion of a spent fuel assembly into a DSC, the identity of the assembly shall be independently verified by two individuals.
- (11) Prior to insertion of a spent fuel assembly into a DSC, a dissolved boron level in water in the reactor pool and introduced into the DSC cavity shall be independently verified as being  $\geq 1810$  ppm by two individuals.

### 2.1.2 Basis

The design criteria and subsequent safety analysis of the Oconee ISFSI assumed certain characteristics and limitations for the fuels that are to be received and stored. Specification 2.1.1 assures that these bases remain valid by defining the source of the spent fuel, maximum initial enrichment, irradiation history, maximum thermal heat generation, and minimum post irradiation cooling time.

The radiological analyses are based on a radiation spectrum for 4.0 weight percent U-235 fuel at 40,000 MWD/MTU burnup. Compliance with the enrichment and burnup limits will ensure that the Dry Storage Casks design criteria are not exceeded. In addition, design criteria will not be exceeded for fuel not specifically meeting the above requirements for burnup and post irradiation time if the alternative requirements set forth in Section 4.3.1 of these Technical Specifications are met.

## 2.2 Dry Shielded Canister (DSC)

### 2.2.1 Specification

The DSCs used to store spent nuclear fuel in HSMs at the Oconee ISFSI shall have the operating limits shown in Table 2-1.

### 2.2.2 Basis

The design criteria and subsequent safety analysis of the DSC assumed certain characteristics and operating limits for the use of the DSC. This specification assures that those design criteria are not exceeded.

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TABLE 2-1

OPERATING LIMITS

	<u>Operating Limit</u>
Max. Lifting Height with a Non-Redundant Lifting Device for Transfer Cask Outside the Fuel Storage Buildings	80 inches
Dose Rate	
. Surface of NSM	≤ 200 mrem/hr
(These limits conform to transportation cask dose rate limits. Actual dose rates for most surface locations on the loaded HSM will be significantly less.)	
DSC Tightness	
(Standard He-Leak Rate)	
. Top Shield Plug Closure Weld	≤ 10 <sup>-4</sup> atm-cc/s
. Siphon and Vent Port Cover Welds	≤ 10 <sup>-4</sup> atm-cc/s
. Top Cover Plate Weld	Dye Penetrant Test (ASME B&PV Code Section III, Division 1, Subsection NB-5350 (1983) Liquid Penetrant Acceptance Standards)
Max. Specific Power of One Fuel Assembly*	0.66 kW
Helium Pressure Limit (DSC Cavity)	2.5 psig ±2.5 psig
Pressure during Canister Drying (DSC Cavity)	≤ 3 torr (for not less than 30 min)
DSC Water Moderator during Loading and Unloading of Fuel Assemblies	≥ 1810 ppm (Boron concentration)
Time Limit to Complete DSC Draining after Removal from Spent Fuel Pool	≤ 50 hours

\* This limit may be analytically determined.

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## 2.3 Dry Shielded Canister Internal Cover Gas

### 2.3.1 Specification

The DSC shall be backfilled with helium.

### 2.3.2 Basis

The thermal analysis performed for the DSC assumes the use of helium as a cover gas. In addition, the use of an inert gas (helium) is to ensure long-term maintenance of fuel clad integrity.

## 2.4 Dry Shielded Canister Exterior Surface Contamination

### 2.4.1 Specification

Removable contamination on the DSC exterior shall be less than 22,000 dpm/100 cm<sup>2</sup> from beta, gamma sources and 2,200 dpm/100 cm<sup>2</sup> from alpha sources. Surveillance requirement 4.5.1 ensures that this requirement will be met.

### 2.4.2 Basis

Compliance with this limit ensures that the offsite dose limits in 10 CFR Part 20, 10 CFR Part 50 - Appendix 1, 10 CFR Part 72, and 40 CFR Part 190 are met.

## 2.5 Dry Shielded Canister Moderator

### 2.5.1 Specification

The DSC cavity shall be moderated only by supplied water with a boron concentration greater than or equal to 1,810 ppm.

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#### 2.5.2 Basis

This specification assures subcriticality of the DSC during fuel loading and unloading.

### 2.6 Dry Shielded Canister Draining

#### 2.6.1 Specification

The time to complete draining of the DSC cavity of water moderator shall not exceed 50 hours after removal of the DSC from a spent fuel pool.

#### 2.6.2 Basis

This specification assures subcriticality of the DSC after fuel loading.

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### 3 LIMITING CONDITIONS

#### 3.1 Limiting Condition - Handling Height

##### 3.1.1 Specification

This specification applies to handling of a cask being used for spent fuel storage outside of the Fuel Handling Building and its cask decontamination area.

- a. The TC shall not be handled at a height of greater than 80 inches.
- b. In the event of a cask drop from a height greater than 15 inches, fuel in a DSC in the cask shall be removed and inserted in a replacement DSC or, if damaged, returned to the spent fuel pool. The damaged DSC shall be decontaminated, removed from service and disposed of, as may be appropriate.

##### 3.1.2 Basis

The drop analyses performed for cask drop incidents for a DSC loaded in a TC confirm that drops up to 80 inches can be sustained without unacceptable damage to the cask and DSC. This limiting condition ensures that the handling height limits will not be exceeded at the storage pad or in transit to and from the spent fuel pool. Design of the DSC is to ASME B & PV Code Section III, Division 1, Subsection N8 for Class 1 components, Service Level D requirements.

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#### 4 SURVEILLANCE REQUIREMENTS

Requirements for surveillance of cask internal pressure, contamination levels, DSC weld leak rates, and fuel related parameters are contained in this section. These requirements are summarized in Table 4-1 from details contained in Sections 4.1 through 4.4.

TABLE 4-1

SURVEILLANCE REQUIREMENTS SUMMARY

<u>Section</u>	<u>Quantity or Item</u>	<u>Period</u>
4.1.1	Surveillance of the HSM Air Inlets and Outlets	D
4.2.1	Limits for Maximum Air Temperature Rise after Storage	S
4.3.1	Fuel Parameters	P
4.4.1	DSC and Cask Contamination	B
4.5.1	DSC Weld Testing	L
4.6.1	HSM Inspection	F
4.7.1	DSC Pressure	L

D - Daily on a normal basis, within 24 hours after an accident

S - At initial storage, 24 hours later, 7 days later

P - Prior to cask loading

B - Before and after cask loading and unloading

L - During loading operations

F - Five years and 10 years after initial storage

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#### 4.1 Surveillance of the HSM Air Inlets and Outlets

The HSM shall be inspected to verify that the air inlets and outlets are free from obstructions.

##### 4.1.1 Specifications

Normal visual inspection frequency	Daily
Accident visual inspection frequency	Within 24 hours after an accident

##### 4.1.2 Basis

To assure that no HSM air inlets or outlets are plugged for more than 48 hours and to assure that blockage of inlets and outlets due to an accident will be removed in less than 48 hours. Analysis in Chapter 8 of the Oconee ISFSI SAR showed that no temperature limits are exceeded if a module is completely plugged for 48 hours. Therefore, for normal operations, an inspection of the inlets and outlets once per day will assure that any local obstructions can be removed. Likewise, after an accident the HSMs should be examined within 24 hours to assure that air flow can be restored within 48 hours after the accident.

#### 4.2 Limits for the Maximum Air Temperature Rise

##### 4.2.1 Specification

Maximum air temperature rise shall not exceed 60°F (33.3°C). The maximum air temperature rise from HSM inlet to outlet shall be checked at the time the DSC is stored in the HSM, again 24 hours later, and again after 7 days.

##### 4.2.2 Basis

The 60°F (33.3°C) temperature rise was selected to limit the hottest rod in the DSC to below 644°F (340°C) at 70°F (21°) ambient air inlet temperature. The expected temperature rise is less than 60°F (i.e., 49°F (27.2°C)); see Table 8.1-2

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of the NUHOMS-24P topical report) and hence, the current design provides adequate margin for this specification. If the temperature rise is within the specifications, then the HSM and DSC are performing as designed and no further temperature measurements are required during normal surveillance.

#### 4.3 Fuel Parameters

##### 4.3.1 Specifications

Type	15 x 15 PWR Fuel
Burnup	≤40,000 MWd/MT
Initial (Beginning of Life) Enrichment	≤4.0 wt% U-235
Heat generation	≤ 0.66 kW/fuel assembly
Fuel cooling period	≥ 10 years
Total fuel assembly mass including control components	≤ 763 kg
Fuel assembly mass per space disk per assembly	≤ 109 kg

Any fuel not specifically filling the above requirements for burnup and post irradiation time may still be stored if all the following requirements are met:

Decay Power Per Assembly	≤ 0.66 kW
Neutron Source Per DSC	≤ 3.715 x 10 <sup>9</sup> n/sec/DSC, with spectrum bounded by Table 3.1-4 of the NUHOMS-24P Topical Report
Gamma Source Per DSC	≤3.85 x 10 <sup>16</sup> MeV/sec/DSC with spectrum bounded by that shown in Table 3.1-4 of the NUHOMS-24P Topical Report

*No change This page*

This specification is applicable to all fuel to be stored in the ISFSI. This information shall be documented for each fuel assembly to be loaded in a DSC.

#### 4.3.2 Basis

This specification was derived to insure that the peak fuel rod temperatures, surface doses, nuclear subcriticality and mass are below the design values.

#### 4.4 DSC and Cask Contamination

##### 4.4.1 Specification

###### 4.4.1.1

Prior to loading, the top 6 inches of the cask interior shall be smeared to ensure that removal contamination levels on the interior surfaces of the cask, excluding the drain and vent lines A are less than 22,000 dpm/100 cm<sup>2</sup> from beta, gamma sources and 2,200 dpm/100 cm<sup>2</sup> from alpha sources.

###### 4.4.1.2

After cask loading, but prior to moving the cask to the HSM, the top of the sealed DSC shall be smeared to ensure that removable contamination levels are less than 22,000 dpm/100 cm<sup>2</sup> from the beta, gamma sources and 2,200 dpm/100 cm<sup>2</sup> from alpha sources. This will ensure that the limits in 2.4.1 are met.

###### 4.4.1.3

After cask unloading, the interior surfaces of the cask shall be smeared to ensure that removable contamination levels on the interior surfaces of the cask, excluding the drain and vent lines, are less than 22,000 dpm/100 cm<sup>2</sup> from beta, gamma sources and 2,200 dpm/100 cm<sup>2</sup> from alpha sources. This will ensure that the limits in 2.4.1 are met.

*No change this page*

#### 4.4.2 Basis

This surveillance requirement will ensure compliance with the DSC surface contamination limits of 2.4.1.

#### 4.5 DSC Weld Testing

##### 4.5.1 Specification

During DSC loading operations, the top shield plug closure and the siphon and vent port cover welds shall be tested using a helium leak detector to ensure that, for each, leak tightness is less than or equal to  $10^{-4}$  atm-cc/s. The DSC top cover plate weld shall be dye penetrant tested.

##### 4.5.2 Basis

The safety analysis of leak tightness of the DSC as discussed is based on a weld being leak tight to  $10^{-4}$  atm-cc/s. This check is done to ensure compliance with this design criterion.

#### 4.6 HSM Inspection

##### 4.6.1 Specification

At intervals of 5 and 10 years after initial storage there shall be a visual inspection of the interior concrete surfaces of the first HSM loaded, in particular the top surface above the heat shield, to assure that no significant deterioration of the concrete has occurred. Only the first HSM at the site need be inspected.

##### 4.6.2 Basis

This surveillance provides added assurance that the structural properties of the HSM concrete will not be impaired as a result of high concrete surface temperatures during early years of fuel storage to the point that the shielding or structural integrity provided by the HSM is significantly affected.

*No change this page*

#### 4.7 DSC Pressure

##### 4.7.1 Specification

The helium backfill pressure in the DSC cavity shall be 2.5 psig  $\pm$  2.5 psig.

##### 4.7.2 Basis

The value of 2.5 psig was selected to assure that the pressure within the DSC is within pressure design limits during any expected normal operating condition.

*No change this page*

The Oconee ISFSI design approval was based upon review of specific design drawings, some of which have been deemed appropriate for inclusion in the Oconee ISFSI Safety Evaluation Report (SER). Drawings listed in Appendix B of the Oconee ISFSI SER have been reviewed and approved by the NRC. These drawings may be revised under the provisions of 10 CFR 72.48 as appropriate.

## 5.1 Site

### 5.1.1 Specification

The Oconee ISFSI is located on the Oconee Nuclear Station site as described in Section 2.1.2 of the Oconee ISFSI SAR.

## 5.2 Cask Design

### 5.2.1 Specification

The TC used in the Oconee ISFSI to transfer the DSC to the HSM is described in Section 1.3.1.3 of the Oconee ISFSI SAR.

## 5.3 DSC Design

### 5.3.1 Specification

The DSC is described in Section 1.3.1.1 of the Oconee ISFSI SAR.

All components comprising the DSC pressure boundary shall be provided from ASME SA 240, Type 304 stainless steel or its equivalent.

## 5.4 HSM Design

### 5.4.1 Specification

The HSM is described in Section 1.3.1.2 of the Oconee ISFSI SAR.

*No change this page*

The HSM shall be constructed of concrete with a compressive strength greater than or equal to 5000 psi (cured for 28 days; 90 percent of all specimens tested) and a minimum unit weight of 140 pounds per cubic foot. The concrete shall be composed of Type II Portland cement meeting the requirements of ASTM C150. The aggregate shall meet the specifications of ASTM C33.

## 5.5 Storage Pads

### 5.5.1 Specification

ISFSI storage pads are reinforced concrete pads nominally 3-feet thick. Design criteria of the storage pads are discussed in Section 2.5.5 of the Oconee ISFSI SAR.

## 5.6 Total Storage Capacity

### 5.6.1 Specification

The total storage capacity of the Oconee ISFSI is 996.86 TeU. This corresponds to 88 modules and canisters each containing 24 fuel assemblies.

Amendment No. 4, January 5, 1994

APPENDIX B

*Energy Carolinas,*

DUKE ~~POWER COMPANY~~ LLC

OCONEE

INDEPENDENT SPENT FUEL STORAGE INSTALLATION

SAFEGUARDS LICENSE CONDITIONS

MATERIALS LICENSE SNM-2503

Amendment No. 8

*No change this page*

1.1 PHYSICAL PROTECTION REQUIREMENTS FOR  
SPENT NUCLEAR FUEL IN DRY STORAGE

- 1.1.A The licensee shall establish and maintain a physical protection program in accordance with the provisions of his physical security plan entitled, "Oconee Nuclear Station, Independent Spent Fuel Storage Installation (ISFSI) Security Program, Revision 4," submitted by letter dated, January 10, 1991, (which includes a safeguards contingency plan as Chapter 3.0); and as it may further be revised under the provisions of 10 CFR 72.44(e) and 72.186.
- 1.1.B The licensee's physical protection program shall be supported by a security organization, with personnel trained and qualified in accordance with the provisions of 10 CFR Part 73, Appendix B, as outlined in the plan published under the title, "Oconee Nuclear Station Training and Qualification Plan, Revision 9," submitted by letter dated June 25, 1990; and as it may further be revised under the provisions of 10 CFR 72.44(e) and 72.186.

Amendment No. 2 dated February 7, 1991

*Energy Carolinas,*

APPENDIX C

~~DUKE POWER COMPANY LLC~~

OCONEE

INDEPENDENT SPENT FUEL STORAGE INSTALLATION  
TECHNICAL SPECIFICATIONS FOR ENVIRONMENTAL PROTECTION  
MATERIALS LICENSE SNM-2503

*No change this page*

## 1 INTRODUCTION

These technical specifications govern the protection of the environment during the receipt, possession, storage, and transfer of spent fuel at the Oconee ISFSI.

### 1.1 Radioactive Material Releases

#### 1.1.1 Specification - (pursuant to § 72.44(d))

Not applicable.

#### 1.1.2 Basis

Specifications are required pursuant to §72.44(d), stating limits on the release of radioactive materials for compliance with limits of 10 CFR Part 20 and "as low as is reasonably achievable objective" for effluents. DSC surface contamination within the limits of 2.4.1 ensures that the offsite dose will be inconsequential. In addition, there are no normal or off-normal releases or effluents expected from the double-sealed storage canisters of the ISFSI.

### 1.2 Effluent Control and Waste Treatment

#### 1.2.1 Specification - (pursuant to § 72.44(d)(1))

Not applicable.

#### 1.2.2 Basis

Specifications are required pursuant to § 72.44(d)(1) for operating procedures, for control of effluents, and for the maintenance and use of equipment in radioactive waste treatment systems to meet the requirements of § 72.104. However, there are, by the design of the sealed storage canisters at the ISFSI, no effluent releases, and all Oconee site TC loading and unloading operations and waste treatment therefrom will occur at the Oconee Nuclear Station under the specifications of its operating licenses.

*No change this page*

### 1.3 Environmental Monitoring Program

#### 1.3.1 Specification

The licensee shall include the Oconee ISFSI in the environmental monitoring for the Oconee Nuclear Station.

#### 1.3.2 Basis

An environmental monitoring program is required pursuant to § 72.44(d)(2).

### 1.4 Annual Environmental Report

#### 1.4.1 Specification

The annual radioactive effluent release reports under 10 CFR Part 50 license requirements for the Oconee Nuclear Station shall specify the quantity, if any, of each of the principal radionuclides released to the environment in liquid and in gaseous effluents during the ISFSI operation and such other information as may be required by the Commission to estimate maximum potential radiation dose commitment to the public resulting from effluent release. A copy of this report shall be submitted to the NRC Region II office and to the Director, Office of Nuclear Material Safety and Safeguards.

#### 1.4.2 Basis

The report of Specification 1.4.1 is required pursuant to 10 CFR § 72.44(d)(3).

Amendment No. 7

U.S. Nuclear Regulatory Commission  
March 14, 2007  
Enclosure 2

**ATTACHMENT 2a**

**OCONEE NUCLEAR STATION  
PROPOSED AMENDED – RETYPED  
FOLS DPR-38, DPR-47, AND DPR-55**

DUKE ENERGY CAROLINAS, LLC

DOCKET NO. 50-269

OCONEE NUCLEAR STATION, UNIT 1

RENEWED FACILITY OPERATING LICENSE

Renewed License No. DPR-38

The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. DPR-38 issued on February 6, 1973, has now found that:

- a. The application to renew License No. DPR-38 filed by Duke Energy Corporation\* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter 1, and all required notifications to other agencies or bodies have been duly made;
- b. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21 (c), such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the Oconee Nuclear Station, Unit 1 (facility or plant), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
- c. There is reasonable assurance: (i) that the activities authorized by this renewed license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the applicable regulations set forth in 10 CFR Chapter 1, except as exempted from compliance;
- d. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements;"
- e. The renewal of this license will not be inimical to the common defense and security or the health and safety of the public; and
- f. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs, and considering available alternatives, the renewal of this license is in accordance with 10 CFR Part 51 and all applicable requirements have been satisfied.

---

\* Duke Energy Corporation converted to Duke Power Company LLC on April 3, 2006 and was re-named Duke Energy Carolinas, LLC as of October 1, 2006. Duke Energy Carolinas, LLC is the owner and operator of Oconee Nuclear Station, Unit 1. References to the "licensee" are to Duke Energy Carolinas, LLC.

Renewed License No. DPR-38  
Amendment No.

On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-38, issued on February 6, 1973, is superseded by Renewed Facility Operating License No. DPR-38, which is hereby issued to Duke Energy Carolinas, LLC, to read as follows:

1. This license applies to the Oconee Nuclear Station, Unit 1, a pressurized water reactor and associated equipment (the facility) owned and operated by Duke Energy Carolinas, LLC. The facility is located in eastern Oconee County, about eight miles northeast of Seneca, South Carolina, and is described in the "Updated Final Safety Analysis Report" (UFSAR) as supplemented and amended and the Environmental Report as supplemented and amended.
2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Duke Energy Carolinas, LLC (the licensee):
  - A. Pursuant to Section 104b of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location on the Oconee Nuclear Station Site in accordance with the procedures and limitations set forth in this license;
  - B. Pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the UFSAR as supplemented and amended;
  - C. Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess, and use at any time byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration and as fission detectors in amounts as required;
  - D. Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components;
  - E. Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the Oconee Nuclear Station, Units 1, 2 and 3.
3. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter 1, Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50 and Section 70.32 of

Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

A. Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2568 megawatts thermal.

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. \_\_\_\_\_, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. This license is subject to the following antitrust conditions:

Applicant makes the commitments contained herein, recognizing that bulk power supply arrangements between neighboring entities normally tend to serve the public interest. In addition, where there are net benefits to all participants, such arrangements also serve the best interests of each of the participants. Among the benefits of such transactions are increased electric system reliability, a reduction in the cost of electric power, and minimization of the environmental effects of the production and sale of electricity.

Any particular bulk power supply transaction may afford greater benefits to one participant than to another. The benefits realized by a small system may be proportionately greater than those realized by a larger system. The relative benefits to be derived by the parties from a proposed transaction, however, should not be controlling upon a decision with respect to the desirability of participating in the transaction. Accordingly, applicant will enter into proposed bulk power transactions of the types hereinafter described which, on balance, provide net benefits to applicant. There are net benefits in a transaction if applicant recovers the cost of the transaction (as defined in ¶1 (d) hereof) and there is no demonstrable net detriment to applicant arising from that transaction.

1. As used herein:

- (a) "Bulk Power" means electric power and any attendant energy, supplied or made available at transmission or sub-transmission voltage by one electric system to another.
- (b) "Neighboring Entity" means a private or public corporation, a governmental agency or authority, a municipality, a cooperative, or a lawful association of any of the foregoing owning or operating, or

proposing to own or operate, facilities for the generation and transmission of electricity which meets each of the following criteria: (1) its existing or proposed facilities are economically and technically feasible of interconnection with those of the applicant and (2) with the exception of municipalities, cooperatives, governmental agencies or authorities, and associations, it is, or upon commencement of operations will be, a public utility and subject to regulation with respect to rates and service under the laws of North Carolina or South Carolina or under the Federal Power Act; provided, however, that as to associations, each member of such association is either a public utility as discussed in this clause (2) or a municipality, a cooperative or a governmental agency or authority.

- (c) Where the phrase "neighboring entity" is intended to include entities engaging or proposing to engage only in the distribution of electricity, this is indicated by adding the phrase "including distribution systems".
  - (d) "Cost" means any appropriate operating and maintenance expenses, together with all other costs, including a reasonable return on applicant's investment, which are reasonably allocable to a transaction. However, no value shall be included for loss of revenues due to the loss of any wholesale or retail customer as a result of any transaction hereafter described.
- 2.
- (a) Applicant will interconnect and coordinate reserves by means of the sale and exchange of emergency and scheduled maintenance bulk power with any neighboring entity(ies), when there are net benefits to each party, on terms that will provide for all of applicant's properly assignable costs as may be determined by the Federal Energy Regulatory Commission and consistent with such cost assignment will allow the other party the fullest possible benefits of such coordination.
  - (b) Emergency service and/or scheduled maintenance service to be provided by each party will be furnished to the fullest extent available from the supplying party and desired by the party in need. Applicant and each party will provide to the other emergency service and/or scheduled maintenance service if and when available from its own generation and, in accordance with recognized industry practice, from generation of others to the extent it can do so without impairing service to its customers, including other electric systems to whom it has firm commitments.
  - (c) Each party to a reserve coordination arrangement will establish its own reserve criteria, but in no event shall the minimum installed reserve on each system be less than 15%, calculated as a percentage of estimated peak load responsibility. Either party, if it

has, or has firmly planned, installed reserves in excess of the amount called for by its own reserve criterion, will offer any such excess as may in fact be available at the time for which it is sought and for such period as the selling party shall determine for purchase in accordance with reasonable industry practice by the other party to meet such other party's own reserve requirement. The parties will provide such amounts of spinning reserve as may be adequate to avoid the imposition of unreasonable demands on the other party(ies) in meeting the normal contingencies of operating its (their) system(s). However, in no circumstances shall such spinning reserve requirement exceed the installed reserve requirement.

- (d) Interconnections will not be limited to low voltages when higher voltages are available from applicant's installed facilities in the area where interconnection is desired and when the proposed arrangement is found to be technically and economically feasible.
  - (e) Interconnection and reserve coordination agreements will not embody provisions which impose limitations upon the use or resale of power and energy sold or exchanges pursuant to the agreement. Further, such arrangements will not prohibit the participants from entering into other interconnection and coordination arrangements, but may include appropriate provisions to assure that (i) applicant receives adequate notice of such additional interconnection or coordination, (ii) the parties will jointly consider and agree upon such measures, if any, as are reasonably necessary to protect the reliability of the interconnected systems and to prevent undue burdens from being imposed on any system, and (iii) applicant will be fully compensated for its costs. Reasonable industry practice as developed in the area from time to time will satisfy this provision.
3. Applicant currently has on file, and may hereafter file, with the Federal Energy Regulatory Commission contracts with neighboring entity(ies) providing for the sale and exchange of short-term power and energy, limited term power and energy, economy energy, nondisplacement energy, and emergency capacity and energy. Applicant will enter into contracts providing for the same or for like transactions with any neighboring entity on terms which enable applicant to recover the full costs allocable to such transaction.
  4. Applicant currently sells capacity and energy in bulk on a full requirements basis to several entities engaging in the distribution of electric power at retail. In addition, applicant supplies electricity directly to ultimate users in a number of municipalities. Should any such entity(ies) or municipality(ies) desire to become a neighboring entity as defined in ¶1 (b) hereof (either alone or through combination with other), applicant will assist in facilitating the necessary transition through the sale of partial requirements firm power

and energy. The provision of such firm partial requirements service shall be under such rates, terms and conditions as shall be found by the Federal Energy Regulatory Commission to provide for the recovery of applicant's costs. Applicant will sell capacity and energy in bulk on a full requirements basis to any municipality currently served by applicant when such municipality lawfully engages in the distribution of electric power at retail.

5. (a) Applicant will facilitate the exchange of electric power in bulk in wholesale transactions over its transmission facilities (1) between or among two or more neighboring entities, including distribution systems with which it is interconnected or may be interconnected in the future, and (2) between any such entity(ies) and any other electric system engaging in bulk power supply between whose facilities applicant's transmission lines and other transmission lines would form a continuous electric path, provided that permission to utilize such other transmission lines has been obtained. Such transaction shall be undertaken provided that the particular transaction reasonably can be accommodated by applicant's transmission system from a functional and technical standpoint and does not constitute the wheeling of power to a retail customer. Such transmission shall be on terms that fully compensate applicant for its cost. Any entity(ies) requesting such transmission arrangements shall give reasonable notice of its (their) schedule and requirements.
- (b) Applicant will include in its planning and construction program, sufficient transmission capacity as required for the transactions referred to in subparagraph (a) of this paragraph, provided that (1) the neighboring entity(ies) gives applicant sufficient advance notice as may be necessary reasonably to accommodate its (their) requirements from a functional and technical standpoint and (2) that such entity(ies) fully compensates applicant for its cost. In carrying out this subparagraph (b), however, applicant shall not be required to construct or add transmission facilities which (a) will be of no demonstrable present or future benefit to applicant, or (b) which could be constructed by the requesting entity(ies) without duplicating any portion of applicant's existing transmission lines, or (c) which would jeopardize applicant's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements. Where regulatory or environmental approvals are required for the construction or addition of transmission facilities, needed for the transactions referred to in subparagraph (a) of this paragraph, it shall be the responsibility of the entity(ies) seeking the transaction to participate in obtaining such approvals, including sharing in the cost thereof.

6. To increase the possibility of achieving greater reliability and economy of electric generation and transmission facilities, applicant will discuss load projections and system development plans with any neighboring entity(ies).
7. When applicant's plans for future nuclear generating units (for which application will hereafter be made to the Nuclear Regulatory Commission) have reached the stage of serious planning, but before firm decisions have been made as to the size and desired completion date of the proposed nuclear units, applicant will notify all neighboring entities, including distribution systems with peak loads smaller than applicant's, that applicant plans to construct such nuclear units. Neither the timing nor the information provided need be such as to jeopardize obtaining the required site at the lowest possible cost.
8. The foregoing commitments shall be implemented in a manner consistent with the provisions of the Federal Power Act and all other lawful local, State and Federal regulation and authority. Nothing in these commitments is intended to determine in advance the resolution of issues which are properly raised at the Federal Energy Regulatory Commission concerning such commitments, including allocation of costs or the rates to be charged. Applicant will negotiate (including the execution of a contingent statement of intent) with respect to the foregoing commitments with any neighboring entity including distribution systems where applicable engaging in or proposing to engage in bulk power supply transactions, but applicant shall not be required to enter into any final arrangement prior to resolution of any substantial questions as to the lawful authority of an entity to engage in the transactions. In addition, applicant shall not be obligated to enter into a given bulk power supply transaction if: (1) to do so would violate, or incapacitate it from performing any existing lawful contract it has with a third party; (2) there is contemporaneously available to it, a competing or alternative arrangement which affords it greater benefits which would be mutually exclusive of such arrangement; (3) to do so would adversely affect its system operations or the reliability of power supply to its customers; or (4) if to do so would jeopardize applicant's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements.

D. Fire Protection

Duke Energy Carolinas, LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the UFSAR for the facility and as approved in the SER's dated August 11, 1978, and April 28, 1983; October 5, 1978, and June 9, 1981 Supplements to the SER dated August 11, 1978; and Exemptions dated February 2, 1982; August 31, 1983;

December 27, 1984; December 5, 1988; and August 21, 1989 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.

E. Physical Protection

Duke Energy Carolinas, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54 (p). The combined set of plans, which contains safeguards information protected under 10 CFR 73.21, is entitled: "Duke Energy Physical Security Plan" submitted by letter dated September 8, 2004, and supplemented on September 30, 2004, October 15, 2004, October 21, 2004, and October 27, 2004.

- F. In the update to the UFSAR required pursuant to 10 CFR 50.71 (e)(4) scheduled for July, 2001, the licensee shall update the UFSAR to include the UFSAR supplement submitted pursuant to 10 CFR 54.21 (d) as revised on March 27, 2000. Until the UFSAR update is complete, the licensee may make changes to the programs described in its UFSAR supplement without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.
- G. The licensee's UFSAR supplement submitted pursuant to 10 CFR 54.21 (d), as revised on March 27, 2000, describes certain future inspection activities to be completed before the period of extended operation. The licensee shall complete these activities no later than February 6, 2013.

4. This renewed license is effective as of the date of issuance and shall expire at midnight on February 6, 2033.

5. Steam Generator Circumferential Crack Report:

Following each inservice inspection of steam generator tubes, the NRC shall be notified of the following prior to returning the steam generators to service:

- a. Indication of circumferential cracking in the secondary side roll (lower roll in the upper tubesheet or upper roll in the lower tubesheet) if rerolled.
  - b. Indication of circumferential cracking in the original roll or heat affected zone adjacent to the tube-to-tubesheet seal weld-if no reroll is present.
  - c. Determination of the best-estimate total leakage that would result from an analysis of the limiting Large Break Loss of Coolant Accident (LBLOCA) based on circumferential cracking in the original tube-to-tubesheet rolls, tube-to-tubesheet rerolls, and heat affected zones of seal welds as found during each inspection.
6. Demonstrate that the primary-to-secondary leakage following a LBLOCA, as described in Appendix A to BAW-2374, is acceptable, based on the as-found condition of the SGs. This is required to demonstrate that adequate margin and defense-in-depth are maintained. For the purpose of this evaluation, acceptable means a best estimate of the leakage expected in the event of a LBLOCA that would not result in a significant increase of radionuclide release (e.g., in excess of 10 CFR 100 limits). A summary of this evaluation shall be provided to the NRC within 3 months following completion of steam generator tube inservice inspection with the report required by Technical Specification 5.6.8, Item b.

FOR THE NUCLEAR REGULATORY COMMISSION

Roy Zimmerman, Acting Director  
Office of Nuclear Reactor Regulation

Attachment:

1) Appendix A - Technical Specifications Renewed License No. DPR-38

Date of Issuance May 23, 2000

DUKE ENERGY CAROLINAS, LLC

DOCKET NO. 50-270

OCONEE NUCLEAR STATION, UNIT 2

RENEWED FACILITY OPERATING LICENSE

Renewed License No. DPR-47

The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. DPR-47 issued on October 6, 1973, has now found that:

- a. The application to renew License No. DPR-47 filed by Duke Energy Corporation\* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter 1, and all required notifications to other agencies or bodies have been duly made;
- b. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21 (a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21 (c), such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the Oconee Nuclear Station, Unit 2 (facility or plant), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
- c. There is reasonable assurance: (i) that the activities authorized by this renewed license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the applicable regulations set forth in 10 CFR Chapter 1, except as exempted from compliance;
- d. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements;"
- e. The renewal of this license will not be inimical to the common defense and security or the health and safety of the public; and
- f. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs, and considering available alternatives, the renewal of this license is in accordance with 10 CFR Part 51 and all applicable requirements have been satisfied.

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\* Duke Energy Corporation converted to Duke Power Company LLC on April 3, 2006 and was re-named Duke Energy Carolinas, LLC as of October 1, 2006. Duke Energy Carolinas, LLC is the owner and operator of Oconee Nuclear Station, Unit 2. References to the "licensee" are to Duke Energy Carolinas, LLC.

Renewed License No. DPR-47  
Amendment No.

On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-47, issued on October 6, 1973, is superseded by Renewed Facility Operating License No. DPR-47, which is hereby issued to Duke Energy Carolinas, LLC, to read as follows:

1. This license applies to the Oconee Nuclear Station, Unit 2, a pressurized water reactor and associated equipment (the facility) owned and operated by Duke Energy Carolinas, LLC. The facility is located in eastern Oconee County, about eight miles northeast of Seneca, South Carolina, and is described in the "Updated Final Safety Analysis Report" (UFSAR) as supplemented and amended and the Environmental Report as supplemented and amended.
2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Duke Energy Carolinas, LLC (the licensee):
  - A. Pursuant to Section 104b of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the *designated location on the Oconee Nuclear Station Site in accordance with the procedures and limitations set forth in this license;*
  - B. Pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel in accordance with the limitations for storage and amounts required for reactor operation, as described in the UFSAR as supplemented and amended;
  - C. Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess, and use at any time byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration and as fission detectors in amounts as required;
  - D. Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components;
  - E. Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the Oconee Nuclear Station, Units 1, 2 and 3.
3. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter 1, Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50 and Section 70.32 of

Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

A. Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2568 megawatts thermal.

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. \_\_\_\_\_, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. This license is subject to the following antitrust conditions:

Applicant makes the commitments contained herein, recognizing that bulk power supply arrangements between neighboring entities normally tend to serve the public interest. In addition, where there are net benefits to all participants, such arrangements also serve the best interests of each of the participants. Among the benefits of such transactions are increased electric system reliability, a reduction in the cost of electric power, and minimization of the environmental effects of the production and sale of electricity.

Any particular bulk power supply transaction may afford greater benefits to one participant than to another. The benefits realized by a small system may be proportionately greater than those realized by a larger system. The relative benefits to be derived by the parties from a proposed transaction, however, should not be controlling upon a decision with respect to the desirability of participating in the transaction. Accordingly, applicant will enter into proposed bulk power transactions of the types hereinafter described which, on balance, provide net benefits to applicant. There are net benefits in a transaction if applicant recovers the cost of the transaction (as defined in ¶1 (d) hereof) and there is no demonstrable net detriment to applicant arising from that transaction.

1. As used herein:

- (a) "Bulk Power" means electric power and any attendant energy, supplied or made available at transmission or sub-transmission voltage by one electric system to another.
- (b) "Neighboring Entity" means a private or public corporation, a governmental agency or authority, a municipality, a cooperative, or a lawful association of any of the foregoing owning or operating, or

proposing to own or operate, facilities for the generation and transmission of electricity which meets each of the following criteria: (1) its existing or proposed facilities are economically and technically feasible of interconnection with those of the applicant and (2) with the exception of municipalities, cooperatives, governmental agencies or authorities, and associations, it is, or upon commencement of operations will be, a public utility and subject to regulation with respect to rates and service under the laws of North Carolina or South Carolina or under the Federal Power Act; provided, however, that as to associations, each member of such association is either a public utility as discussed in this clause (2) or a municipality, a cooperative or a governmental agency or authority.

- (c) Where the phrase "neighboring entity" is intended to include entities engaging or proposing to engage only in the distribution of electricity, this is indicated by adding the phrase "including distribution systems".
  - (d) "Cost" means any appropriate operating and maintenance expenses, together with all other costs, including a reasonable return on applicant's investment, which are reasonably allocable to a transaction. However, no value shall be included for loss of revenues due to the loss of any wholesale or retail customer as a result of any transaction hereafter described.
- 2.
- (a) Applicant will interconnect and coordinate reserves by means of the sale and exchange of emergency and scheduled maintenance bulk power with any neighboring entity(ies), when there are net benefits to each party, on terms that will provide for all of applicant's properly assignable costs as may be determined by the Federal Energy Regulatory Commission and consistent with such cost assignment will allow the other party the fullest possible benefits of such coordination.
  - (b) Emergency service and/or scheduled maintenance service to be provided by each party will be furnished to the fullest extent available from the supplying party and desired by the party in need. Applicant and each party will provide to the other emergency service and/or scheduled maintenance service if and when available from its own generation and, in accordance with recognized industry practice, from generation of others to the extent it can do so without impairing service to its customers, including other electric systems to whom it has firm commitments.
  - (c) Each party to a reserve coordination arrangement will establish its own reserve criteria, but in no event shall the minimum installed reserve on each system be less than 15%, calculated as a percentage of estimated peak load responsibility. Either party, if it

has, or has firmly planned, installed reserves in excess of the amount called for by its own reserve criterion, will offer any such excess as may in fact be available at the time for which it is sought and for such period as the selling party shall determine for purchase in accordance with reasonable industry practice by the other party to meet such other party's own reserve requirement. The parties will provide such amounts of spinning reserve as may be adequate to avoid the imposition of unreasonable demands on the other party(ies) in meeting the normal contingencies of operating its (their) system(s). However, in no circumstances shall such spinning reserve requirement exceed the installed reserve requirement.

- (d) Interconnections will not be limited to low voltages when higher voltages are available from applicant's installed facilities in the area where interconnection is desired and when the proposed arrangement is found to be technically and economically feasible.
  - (e) Interconnection and reserve coordination agreements will not embody provisions which impose limitations upon the use or resale of power and energy sold or exchanges pursuant to the agreement. Further, such arrangements will not prohibit the participants from entering into other interconnection and coordination arrangements, but may include appropriate provisions to assure that (i) applicant receives adequate notice of such additional interconnection or coordination, (ii) the parties will jointly consider and agree upon such measures, if any, as are reasonably necessary to protect the reliability of the interconnected systems and to prevent undue burdens from being imposed on any system, and (iii) applicant will be fully compensated for its costs. Reasonable industry practice as developed in the area from time to time will satisfy this provision.
3. Applicant currently has on file, and may hereafter file, with the Federal Energy Regulatory Commission contracts with neighboring entity(ies) providing for the sale and exchange of short-term power and energy, limited term power and energy, economy energy, nondisplacement energy, and emergency capacity and energy. Applicant will enter into contracts providing for the same or for like transactions with any neighboring entity on terms which enable applicant to recover the full costs allocable to such transaction.
4. Applicant currently sells capacity and energy in bulk on a full requirements basis to several entities engaging in the distribution of electric power at retail. In addition, applicant supplies electricity directly to ultimate users in a number of municipalities. Should any such entity(ies) or municipality(ies) desire to become a neighboring entity as defined in ¶1 (b) hereof (either alone or through combination with other), applicant will assist in facilitating the necessary transition through the sale of partial requirements firm power

and energy. The provision of such firm partial requirements service shall be under such rates, terms and conditions as shall be found by the Federal Energy Regulatory Commission to provide for the recovery of applicant's costs. Applicant will sell capacity and energy in bulk on a full requirements basis to any municipality currently served by applicant when such municipality lawfully engages in the distribution of electric power at retail.

5. (a) Applicant will facilitate the exchange of electric power in bulk in wholesale transactions over its transmission facilities (1) between or among two or more neighboring entities, including distribution systems with which it is interconnected or may be interconnected in the future, and (2) between any such entity(ies) and any other electric system engaging in bulk power supply between whose facilities applicant's transmission lines and other transmission lines would form a continuous electric path, provided that permission to utilize such other transmission lines has been obtained. Such transaction shall be undertaken provided that the particular transaction reasonably can be accommodated by applicant's transmission system from a functional and technical standpoint and does not constitute the wheeling of power to a retail customer. Such transmission shall be on terms that fully compensate applicant for its cost. Any entity(ies) requesting such transmission arrangements shall give reasonable notice of its (their) schedule and requirements.
- (b) Applicant will include in its planning and construction program, sufficient transmission capacity as required for the transactions referred to in subparagraph (a) of this paragraph, provided that (1) the neighboring entity(ies) gives applicant sufficient advance notice as may be necessary reasonably to accommodate its (their) requirements from a functional and technical standpoint and (2) that such entity(ies) fully compensates applicant for its cost. In carrying out this subparagraph (b), however, applicant shall not be required to construct or add transmission facilities which (a) will be of no demonstrable present or future benefit to applicant, or (b) which could be constructed by the requesting entity(ies) without duplicating any portion of applicant's existing transmission lines, or (c) which would jeopardize applicant's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements. Where regulatory or environmental approvals are required for the construction or addition of transmission facilities, needed for the transactions referred to in subparagraph (a) of this paragraph, it shall be the responsibility of the entity(ies) seeking the transaction to participate in obtaining such approvals, including sharing in the cost thereof.

6. To increase the possibility of achieving greater reliability and economy of electric generation and transmission facilities, applicant will discuss load projections and system development plans with any neighboring entity(ies).
7. When applicant's plans for future nuclear generating units (for which application will hereafter be made to the Nuclear Regulatory Commission) have reached the stage of serious planning, but before firm decisions have been made as to the size and desired completion date of the proposed nuclear units, applicant will notify all neighboring entities, including distribution systems with peak loads smaller than applicant's, that applicant plans to construct such nuclear units. Neither the timing nor the information provided need be such as to jeopardize obtaining the required site at the lowest possible cost.
8. The foregoing commitments shall be implemented in a manner consistent with the provisions of the Federal Power Act and all other lawful local, State and Federal regulation and authority. Nothing in these commitments is intended to determine in advance the resolution of issues which are properly raised at the Federal Energy Regulatory Commission concerning such commitments, including allocation of costs or the rates to be charged. Applicant will negotiate (including the execution of a contingent statement of intent) with respect to the foregoing commitments with any neighboring entity including distribution systems where applicable engaging in or proposing to engage in bulk power supply transactions, but applicant shall not be required to enter into any final arrangement prior to resolution of any substantial questions as to the lawful authority of an entity to engage in the transactions. In addition, applicant shall not be obligated to enter into a given bulk power supply transaction if: (1) to do so would violate, or incapacitate it from performing any existing lawful contract it has with a third party; (2) there is contemporaneously available to it, a competing or alternative arrangement which affords it greater benefits which would be mutually exclusive of such arrangement; (3) to do so would adversely affect its system operations or the reliability of power supply to its customers; or (4) if to do so would jeopardize applicant's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements.

D. Fire Protection

Duke Energy Carolinas, LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the UFSAR for the facility and as approved in the SER's dated August 11, 1978, and April 28, 1983; October 5, 1978, and June 9, 1981 Supplements to the SER dated August 11, 1978; and Exemptions dated February 2, 1982; August 31, 1983;

December 27, 1984; December 5, 1988; and August 21, 1989 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.

E. Physical Protection

Duke Energy Carolinas, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54 (p). The combined set of plans, which contains safeguards information protected under 10 CFR 73.21, is entitled: "Duke Energy Physical Security Plan" submitted by letter dated September 8, 2004, and supplemented on September 30, 2004, October 15, 2004, October 21, 2004, and October 27, 2004.

- F. In the update to the UFSAR required pursuant to 10 CFR 50.71 (e)(4) scheduled for July, 2001, the licensee shall update the UFSAR to include the UFSAR supplement submitted pursuant to 10 CFR 54.21(d) as revised on March 27, 2000. Until the UFSAR update is complete, the licensee may make changes to the programs described in its UFSAR supplement without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.
- G. The licensee's UFSAR supplement submitted pursuant to 10 CFR 54.21 (d), as revised on March 27, 2000, describes certain future inspection activities to be completed before the period of extended operation. The licensee shall complete these activities no later than February 6, 2013.

4. This renewed license is effective as of the date of issuance and shall expire at midnight on October 6, 2033.

5. Steam Generator Circumferential Crack Report:

Following each inservice inspection of steam generator tubes, the NRC shall be notified of the following prior to returning the steam generators to service:

- a. Indication of circumferential cracking in the secondary side roll (lower roll in the upper tubesheet or upper roll in the lower tubesheet) if rerolled.
  - b. Indication of circumferential cracking in the original roll or heat affected zone adjacent to the tube-to-tubesheet seal weld-if no reroll is present.
  - c. Determination of the best-estimate total leakage that would result from an analysis of the limiting Large Break Loss of Coolant Accident (LBLOCA) based on circumferential cracking in the original tube-to-tubesheet rolls, tube-to-tubesheet rerolls, and heat affected zones of seal welds as found during each inspection.
6. Demonstrate that the primary-to-secondary leakage following a LBLOCA, as described in Appendix A to BAW-2374, is acceptable, based on the as-found condition of the SGs. This is required to demonstrate that adequate margin and defense-in-depth are maintained. For the purpose of this evaluation, acceptable means a best estimate of the leakage expected in the event of a LBLOCA that would not result in a significant increase of radionuclide release (e.g., in excess of 10 CFR 100 limits). A summary of this evaluation shall be provided to the NRC within 3 months following completion of steam generator tube insetvice inspection with the report required by Technical Specification 5.6.8, Item b.

FOR THE NUCLEAR REGULATORY COMMISSION

Roy P. Zimmerman, Acting Director  
Office of Nuclear Reactor Regulation

Attachment:

1) Appendix A - Technical Specifications Renewed License No. DPR-47

Date of issuance: May 23, 2000

DUKE ENERGY CAROLINAS, LLC

DOCKET NO. 50-287

OCONEE NUCLEAR STATION, UNIT 3

RENEWED FACILITY OPERATING LICENSE

Renewed License No. DPR-55

The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. DPR-55 issued on July 19, 1974, has now found that:

- a. The application to renew License No. DPR-55 filed by Duke Energy Corporation\* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter 1, and all required notifications to other agencies or bodies have been duly made;
- b. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21 (a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21 (c), such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the Oconee Nuclear Station, Unit 3 (facility or plant), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
- c. There is reasonable assurance: (i) that the activities authorized by this renewed license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the applicable regulations set forth in 10 CFR Chapter 1, except as exempted from compliance;
- d. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements;"
- e. The renewal of this license will not be inimical to the common defense and security or the health and safety of the public; and
- f. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs, and considering available alternatives, the renewal of this license is in accordance with 10 CFR Part 51 and all applicable requirements have been satisfied.

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\* Duke Energy Corporation converted to Duke Power Company LLC on April 3, 2006 and was re-named Duke Energy Carolinas, LLC as of October 1, 2006. Duke Energy Carolinas, LLC is the owner and operator of Oconee Nuclear Station, Unit 3. References to the "licensee" are to Duke Energy Carolinas, LLC.

Renewed License No. DPR-55  
Amendment No.

On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-55, issued on July 19, 1974, is superseded by Renewed Facility Operating License No. DPR-55, which is hereby issued to Duke Energy Carolinas, LLC, to read as follows:

1. This license applies to the Oconee Nuclear Station, Unit 3, a pressurized water reactor and associated equipment (the facility) owned and operated by Duke Energy Carolinas, LLC. The facility is located in eastern Oconee County, about eight miles northeast of Seneca, South Carolina, and is described in the "Updated Final Safety Analysis Report" (UFSAR) as supplemented and amended and the Environmental Report as supplemented and amended.
2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Duke Energy Carolinas, LLC (the licensee):
  - A. Pursuant to Section 104b of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location on the Oconee Nuclear Station Site in accordance with the procedures and limitations set forth in this license;
  - B. Pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the UFSAR as supplemented and amended;
  - C. Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess, and use at any time byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration and as fission detectors in amounts as required;
  - D. Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components;
  - E. Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the Oconee Nuclear Station, Units 1, 2 and 3.
3. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter 1, Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50 and Section 70.32 of

Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

A. Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2568 megawatts thermal.

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. \_\_\_\_\_, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. This license is subject to the following antitrust conditions:

Applicant makes the commitments contained herein, recognizing that bulk power supply arrangements between neighboring entities normally tend to serve the public interest. In addition, where there are net benefits to all participants, such arrangements also serve the best interests of each of the participants. Among the benefits of such transactions are increased electric system reliability, a reduction in the cost of electric power, and minimization of the environmental effects of the production and sale of electricity.

Any particular bulk power supply transaction may afford greater benefits to one participant than to another. The benefits realized by a small system may be proportionately greater than those realized by a larger system. The relative benefits to be derived by the parties from a proposed transaction, however, should not be controlling upon a decision with respect to the desirability of participating in the transaction. Accordingly, applicant will enter into proposed bulk power transactions of the types hereinafter described which, on balance, provide net benefits to applicant. There are net benefits in a transaction if applicant recovers the cost of the transaction (as defined in ¶1 (d) hereof) and there is no demonstrable net detriment to applicant arising from that transaction.

1. As used herein:

- (a) "Bulk Power" means electric power and any attendant energy, supplied or made available at transmission or sub-transmission voltage by one electric system to another.
- (b) "Neighboring Entity" means a private or public corporation, a governmental agency or authority, a municipality, a cooperative, or a lawful association of any of the foregoing owning or operating, or

proposing to own or operate, facilities for the generation and transmission of electricity which meets each of the following criteria: (1) its existing or proposed facilities are economically and technically feasible of interconnection with those of the applicant and (2) with the exception of municipalities, cooperatives, governmental agencies or authorities, and associations, it is, or upon commencement of operations will be, a public utility and subject to regulation with respect to rates and service under the laws of North Carolina or South Carolina or under the Federal Power Act; provided, however, that as to associations, each member of such association is either a public utility as discussed in this clause (2) or a municipality, a cooperative or a governmental agency or authority.

- (c) Where the phrase "neighboring entity" is intended to include entities engaging or proposing to engage only in the distribution of electricity, this is indicated by adding the phrase "including distribution systems".
  - (d) "Cost" means any appropriate operating and maintenance expenses, together with all other costs, including a reasonable return on applicant's investment, which are reasonably allocable to a transaction. However, no value shall be included for loss of revenues due to the loss of any wholesale or retail customer as a result of any transaction hereafter described.
- 2.
- (a) Applicant will interconnect and coordinate reserves by means of the sale and exchange of emergency and scheduled maintenance bulk power with any neighboring entity(ies), when there are net benefits to each party, on terms that will provide for all of applicant's properly assignable costs as may be determined by the Federal Energy Regulatory Commission and consistent with such cost assignment will allow the other party the fullest possible benefits of such coordination.
  - (b) Emergency service and/or scheduled maintenance service to be provided by each party will be furnished to the fullest extent available from the supplying party and desired by the party in need. Applicant and each party will provide to the other emergency service and/or scheduled maintenance service if and when available from its own generation and, in accordance with recognized industry practice, from generation of others to the extent it can do so without impairing service to its customers, including other electric systems to whom it has firm commitments.
  - (c) Each party to a reserve coordination arrangement will establish its own reserve criteria, but in no event shall the minimum installed reserve on each system be less than 15%, calculated as a percentage of estimated peak load responsibility. Either party, if it

has, or has firmly planned, installed reserves in excess of the amount called for by its own reserve criterion, will offer any such excess as may in fact be available at the time for which it is sought and for such period as the selling party shall determine for purchase in accordance with reasonable industry practice by the other party to meet such other party's own reserve requirement. The parties will provide such amounts of spinning reserve as may be adequate to avoid the imposition of unreasonable demands on the other party(ies) in meeting the normal contingencies of operating its (their) system(s). However, in no circumstances shall such spinning reserve requirement exceed the installed reserve requirement.

- (d) Interconnections will not be limited to low voltages when higher voltages are available from applicant's installed facilities in the area where interconnection is desired and when the proposed arrangement is found to be technically and economically feasible.
  - (e) Interconnection and reserve coordination agreements will not embody provisions which impose limitations upon the use or resale of power and energy sold or exchanges pursuant to the agreement. Further, such arrangements will not prohibit the participants from entering into other interconnection and coordination arrangements, but may include appropriate provisions to assure that (i) applicant receives adequate notice of such additional interconnection or coordination, (ii) the parties will jointly consider and agree upon such measures, if any, as are reasonably necessary to protect the reliability of the interconnected systems and to prevent undue burdens from being imposed on any system, and (iii) applicant will be fully compensated for its costs. Reasonable industry practice as developed in the area from time to time will satisfy this provision.
- 3. Applicant currently has on file, and may hereafter file, with the Federal Energy Regulatory Commission contracts with neighboring entity(ies) providing for the sale and exchange of short-term power and energy, limited term power and energy, economy energy, nondisplacement energy, and emergency capacity and energy. Applicant will enter into contracts providing for the same or for like transactions with any neighboring entity on terms which enable applicant to recover the full costs allocable to such transaction.
  - 4. Applicant currently sells capacity and energy in bulk on a full requirements basis to several entities engaging in the distribution of electric power at retail. In addition, applicant supplies electricity directly to ultimate users in a number of municipalities. Should any such entity(ies) or municipality(ies) desire to become a neighboring entity as defined in ¶1 (b) hereof (either alone or through combination with other), applicant will assist in facilitating the necessary transition through the sale of partial requirements firm power

and energy. The provision of such firm partial requirements service shall be under such rates, terms and conditions as shall be found by the Federal Energy Regulatory Commission to provide for the recovery of applicant's costs. Applicant will sell capacity and energy in bulk on a full requirements basis to any municipality currently served by applicant when such municipality lawfully engages in the distribution of electric power at retail.

5. (a) Applicant will facilitate the exchange of electric power in bulk in wholesale transactions over its transmission facilities (1) between or among two or more neighboring entities, including distribution systems with which it is interconnected or may be interconnected in the future, and (2) between any such entity(ies) and any other electric system engaging in bulk power supply between whose facilities applicant's transmission lines and other transmission lines would form a continuous electric path, provided that permission to utilize such other transmission lines has been obtained. Such transaction shall be undertaken provided that the particular transaction reasonably can be accommodated by applicant's transmission system from a functional and technical standpoint and does not constitute the wheeling of power to a retail customer. Such transmission shall be on terms that fully compensate applicant for its cost. Any entity(ies) requesting such transmission arrangements shall give reasonable notice of its (their) schedule and requirements.
- (b) Applicant will include in its planning and construction program, sufficient transmission capacity as required for the transactions referred to in subparagraph (a) of this paragraph, provided that (1) the neighboring entity(ies) gives applicant sufficient advance notice as may be necessary reasonably to accommodate its (their) requirements from a functional and technical standpoint and (2) that such entity(ies) fully compensates applicant for its cost. In carrying out this subparagraph (b), however, applicant shall not be required to construct or add transmission facilities which (a) will be of no demonstrable present or future benefit to applicant, or (b) which could be constructed by the requesting entity(ies) without duplicating any portion of applicant's existing transmission lines, or (c) which would jeopardize applicant's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements. Where regulatory or environmental approvals are required for the construction or addition of transmission facilities, needed for the transactions referred to in subparagraph (a) of this paragraph, it shall be the responsibility of the entity(ies) seeking the transaction to participate in obtaining such approvals, including sharing in the cost thereof.

6. To increase the possibility of achieving greater reliability and economy of electric generation and transmission facilities, applicant will discuss load projections and system development plans with any neighboring entity(ies).
7. When applicant's plans for future nuclear generating units (for which application will hereafter be made to the Nuclear Regulatory Commission) have reached the stage of serious planning, but before firm decisions have been made as to the size and desired completion date of the proposed nuclear units, applicant will notify all neighboring entities, including distribution systems with peak loads smaller than applicant's, that applicant plans to construct such nuclear units. Neither the timing nor the information provided need be such as to jeopardize obtaining the required site at the lowest possible cost.
8. The foregoing commitments shall be implemented in a manner consistent with the provisions of the Federal Power Act and all other lawful local, State and Federal regulation and authority. Nothing in these commitments is intended to determine in advance the resolution of issues which are properly raised at the Federal Energy Regulatory Commission concerning such commitments, including allocation of costs or the rates to be charged. Applicant will negotiate (including the execution of a contingent statement of intent) with respect to the foregoing commitments with any neighboring entity including distribution systems where applicable engaging in or proposing to engage in bulk power supply transactions, but applicant shall not be required to enter into any final arrangement prior to resolution of any substantial questions as to the lawful authority of an entity to engage in the transactions. In addition, applicant shall not be obligated to enter into a given bulk power supply transaction if: (1) to do so would violate, or incapacitate it from performing any existing lawful contract it has with a third party; (2) there is contemporaneously available to it, a competing or alternative arrangement which affords it greater benefits which would be mutually exclusive of such arrangement; (3) to do so would adversely affect its system operations or the reliability of power supply to its customers; or (4) if to do so would jeopardize applicant's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements.

D. Fire Protection

Duke Energy Carolinas, LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the UFSAR for the facility and as approved in the SER's dated August 11, 1978, and April 28, 1983; October 5, 1978, and June 9, 1981 Supplements to the SER dated August 11, 1978; and Exemptions dated February 2, 1982; August 31, 1983;

December 27, 1984; December 5, 1988; and August 21, 1989 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.

E. Physical Protection

Duke Energy Carolinas, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54 (p). The combined set of plans, which contains safeguards information protected under 10 CFR 73.21, is entitled: "Duke Energy Physical Security Plan" submitted by letter dated September 8, 2004, and supplemented on September 30, 2004, October 15, 2004, October 21, 2004, and October 27, 2004.

F. In the update to the UFSAR required pursuant to 10 CFR 50.71 (e)(4) scheduled for July, 2001, the licensee shall update the UFSAR to include the UFSAR supplement submitted pursuant to 10 CFR 54.21 (d) as revised on March 27, 2000. Until the UFSAR update is complete, the licensee may make changes to the programs described in its UFSAR supplement without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

G. The licensee's UFSAR supplement submitted pursuant to 10 CFR 54.21 (d), as revised on March 27, 2000, describes certain future inspection activities to be completed before the period of extended operation. The licensee shall complete these activities no later than February 6, 2013.

4. This renewed license is effective as of the date of issuance and shall expire at midnight on July 19, 2034.

5. Steam Generator Circumferential Crack Report:

Following each inservice inspection of steam generator tubes, the NRC shall be notified of the following prior to returning the steam generators to service:

- a. Indication of circumferential cracking in the secondary side roll (lower roll in the upper tubesheet or upper roll in the lower tubesheet) if rerolled.
  - b. Indication of circumferential cracking in the original roll or heat affected zone adjacent to the tube-to-tubesheet seal weld-if no reroll is present.
  - c. Determination of the best-estimate total leakage that would result from an analysis of the limiting Large Break Loss of Coolant Accident (LBLOCA) based on circumferential cracking in the original tube-to-tubesheet rolls, tube-to-tubesheet rerolls, and heat affected zones of seal welds as found during each inspection.
6. Demonstrate that the primary-to-secondary leakage following a LBLOCA, as described in Appendix A to BAW-2374, is acceptable, based on the as-found condition of the SGs. This is required to demonstrate that adequate margin and defense-in-depth are maintained. For the purpose of this evaluation, acceptable means a best estimate of the leakage expected in the event of a LBLOCA that would not result in a significant increase of radionuclide release (e.g., in excess of 10 CFR 100 limits). A summary of this evaluation shall be provided to the NRC within 3 months following completion of steam generator tube insetvice inspection with the report required by Technical Specification 5.6.8, Item b.

FOR THE NUCLEAR REGULATORY COMMISSION

Roy P. Zimmerman, Acting Director  
Office of Nuclear Reactor Regulation

Attachment:

1) Appendix A - Technical Specifications Renewed License No. DPR-55

Date of issuance: May 23, 2000

U.S. Nuclear Regulatory Commission  
March 14, 2007  
Enclosure 2

**ATTACHMENT 2b**

**MCGUIRE NUCLEAR STATION  
PROPOSED AMENDED – RETYPED  
FOLS NPF-9 AND NPF-17**

DUKE ENERGY CAROLINAS, LLC

DOCKET NO. 50-369

MCGUIRE NUCLEAR STATION, UNIT 1

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-9

1. The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. NPF-9 issued on June 12, 1981, has now found that:
  - A. The application for renewed operating license filed by the Duke Energy Corporation\* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I and all required notifications to other agencies or bodies have been duly made;
  - B. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21 (c), such that there is reasonable assurance that the activities authorized by the renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the McGuire Nuclear Station, Unit 1 (facility or plant), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
  - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;
  - D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license 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;
  - E. The licensee is technically and financially qualified to engage in the activities authorized by this renewed operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;

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\* Duke Energy Corporation converted to Duke Power Company LLC on April 3, 2006 and was re-named Duke Energy Carolinas, LLC as of October 1, 2006. Duke Energy Carolinas, LLC is the owner and operator of McGuire Nuclear Station, Unit 1. References to the "licensee" or "Duke" are to Duke Energy Carolinas, LLC.

Renewed License No. NPF-9  
Amendment No.

- F. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
  - G. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
  - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. NFP-9 is in accordance with 10 CFR Part 51, of the Commission's regulations and all applicable requirements have been satisfied; and,
    - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed operating license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70.
2. Based on the foregoing findings, and pursuant to approval by the Nuclear Regulatory Commission at a meeting on June 9, 1981, the License for Fuel-Loading and Zero Power Testing issued on January 23, 1981, as amended, is superseded by Renewed Facility Operating License No. NPF-9 which is hereby issued to Duke Energy Carolinas, LLC to read as follows:
- A. This renewed operating license applies to the McGuire Nuclear Station, Unit 1, a pressurized water reactor and associated equipment (the facility) owned and operated by Duke Energy Carolinas, LLC. The facility is located on the licensee's site in Mecklenburg County, North Carolina, on the shore of Lake Norman approximately 17 miles northwest of Charlotte, North Carolina and is described in the Updated Final Safety Analysis Report, as supplemented and amended, and in the Environmental Report, as supplemented and amended.
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Duke Energy Carolinas, LLC:
    - (1) Pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use, and operate the facility at the designated location in Mecklenburg County, North Carolina, in accordance with the procedures and limitations set forth in the renewed operating license;
    - (2) Pursuant to the Act and 10 CFR Part 70 to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Updated Final Safety Analysis Report, as supplemented and amended;
    - (3) Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

- (4) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
  - (5) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproducts and special nuclear materials as may be produced by the operation of McGuire Nuclear Station, Units 1 and 2, and;
  - (6) Pursuant to the Act and 10 CFR Parts 30 and 40, to receive, possess and process for release or transfer such byproduct material as may be produced by the Duke Training and Technology Center.
- C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at a reactor core full steady state power level of 3411 megawatts thermal (100%).

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. \_\_\_\_\_, are hereby incorporated into this renewed operating license. The licensee 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 June 12, 2021, 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) Fire Protection Program

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 for the facility and as approved in the SER dated March 1978 and Supplements 2, 5 and 6 dated March 1979, April 1981, and February 1983, respectively, and the safety evaluation dated May 15, 1989, subject to the following provision:

Duke 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.

(5) Additional Conditions

The Additional Conditions contained in Appendix B, as revised through Amendment No. 200, are hereby incorporated into this renewed operating license. Duke Energy Carolinas, LLC shall operate the facility in accordance with the Additional Conditions.

(6) Antitrust Conditions

The licensee shall comply with the antitrust conditions delineated in Appendix C of this renewed operating license.

D. Physical Protection

Duke Energy Carolinas, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains safeguards information protected under 10 CFR 73.21, is entitled: "Duke Energy Physical Security Plan" submitted by letter dated September 8, 2004, and supplemented on September 30, 2004, October 15, 2004, October 21, 2004, and October 27, 2004.

E. Deleted by Amendment No. 233.

- F. The licensee shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
  - G. The licensee is authorized to receive from the Oconee Nuclear Station, Units 1, 2, and 3, possess, and store irradiated Oconee fuel assemblies containing special nuclear material, enriched to not more than 3.24% by weight U-235 subject to the following conditions:
    - a. Oconee fuel assemblies may not be placed in the McGuire Nuclear Station, Unit 1 and 2, reactors.
    - b. Irradiated fuel shipped to McGuire Nuclear Station, Units 1 and 2, from Oconee shall have been removed from the Oconee reactor no less than 270 days prior to shipment.
    - c. No more than 300 Oconee irradiated fuel assemblies shall be received for storage at McGuire Nuclear Station.
    - d. Burnup of Oconee fuel shipped shall be no greater than 36,000 MW days per metric ton.
    - e. Receipt of irradiated Oconee fuel shall be limited by the use of the NFS-4 (NAC-1), NLI-1/2, TN-8, or TN-8L spent fuel casks.
    - f. The spent fuel pool crane travel shall be restricted by administrative controls to the paths required by Selected Licensee Commitment 16.9.20 whenever a spent fuel cask is being handled.
    - g. Oconee fuel assemblies may not be transferred from one McGuire spent fuel pool to the other.
3. This renewed operating license is effective as of the date of issuance and shall expire at midnight on June 12, 2041.

FOR THE NUCLEAR REGULATORY COMMISSION

J.E. Dyer, Director  
Office of Nuclear Reactor Regulation

Attachment:

- 1. Appendix A - Technical Specifications
- 2. Appendix B - Additional Conditions
- 3. Appendix C - Antitrust Conditions

Date of Issuance: December 5, 2003

Renewed License No. NPF-9  
Amendment No. 232

APPENDIX B

ADDITIONAL CONDITIONS

FACILITY OPERATING LICENSE NO. NPF-9

Duke Energy Carolinas, LLC shall comply with the following conditions on the schedules noted below:

<u>Amendment Number</u>	<u>Additional Conditions</u>	<u>Implementation Date</u>
184	<p>The schedule for the performance of new and revised surveillance requirements shall be as follows:</p> <p>For surveillance requirements (SRs) that are new in Amendment No. 184 the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment No. 184. For SRs that existing prior to Amendment No. 184, including SRs with modified acceptance criteria and SRs whose intervals of performance are being extended, the first performance is due at the end of the first surveillance interval that begins on the date the surveillance was last performed prior to implementation of amendment No. 184. For SRs that existed prior to Amendment No. 184, whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of Amendment No. 184.</p>	Within 90 days of the date of this amendment
188	The maximum rod average burnup for any rod shall be limited to 60 GWd/mtU until the completion of an NRC environmental assessment supporting an increased limit.	Within 30 days of date of this amendment

Renewed License No. NPF-9  
Amendment No.

## APPENDIX C

### ANTITRUST CONDITIONS

Pursuant to an Order by the Atomic Safety and Licensing Board, dated April 23, 1975, the Nuclear Regulatory Commission incorporates in Renewed Operating License NPF-9 the following antitrust conditions:

- a. The licensee makes the commitments contained herein, recognizing that bulk power supply arrangements between neighboring entities normally tend to serve the public interest. In addition, where there are net benefits to all participants such arrangements also serve the best interests of each of the participants. Among the benefits of such transactions are increased electric system reliability, a reduction in the cost of electric power, and minimization of the environmental effects of the production and sale of electricity.

Any particular bulk power supply transaction may afford greater benefits to one participant than to another. The benefits realized by a small system may be proportionately greater than those realized by a larger system. The relative benefits to be derived by the parties from a proposed transaction, however, should not be controlling upon a decision with respect to the desirability of participating in the transaction. Accordingly, the licensee will enter into proposed bulk power transactions of the types hereinafter described which, on balance, provide net benefits to the licensee. There are net benefits in a transaction if the licensee recovers the cost of the transaction, (as defined in subparagraph (1)(d) hereof) and there is no demonstrable net detriment to the licensee arising from the transaction.

- (1) As used herein:
  - (a) "Bulk Power" means electric power and any attendant energy, supplied or made available at transmission or sub-transmission voltage by one electric system to another.
  - (b) "Neighboring Entity" means a private or public corporation, a governmental agency or authority, a municipality, a cooperative, or a lawful association of any of the foregoing owning or operating, or proposing to own or operate, facilities for the generation and transmission of electricity which meets each of the following criteria: (1) its existing or proposed facilities are economically and technically feasible of interconnection with those of the licensee and (2) with the exception of municipalities, cooperatives, governmental agencies or authorities, and associations, it is, or upon commencement of operations will be, a public utility and subject to regulation with respect to rates and service under the laws of North Carolina or South Carolina or under the Federal Power Act; provided, however, that as to associations, each member of such association is either a public utility as discussed in this clause (2) or a municipality, a cooperative or a governmental agency or authority.

Renewed License No. NPF-9

- (c) Where the phrase "neighboring entity" is intended to include entities engaging or proposing to engage only in the distribution of electricity, this is indicated by adding the phrase "including distribution systems."
  - (d) "Cost" means any appropriate operating and maintenance expenses, together with all other costs, including a reasonable return on the licensee's investment, which are reasonably allocable to a transaction. However, no value shall be included for loss of revenue due to the loss of any wholesale or retail customer as a result of any transaction hereafter described.
- (2)
- (a) The licensee will interconnect and coordinate reserves by means of the sale and exchange of emergency and scheduled maintenance bulk power with any neighboring entity(ies), when there are net benefits to each party, on terms that will provide for all of the licensee's properly assignable costs as may be determined by the Federal Energy Regulatory Commission and consistent with such cost assignment will allow the other party the fullest possible benefits of such coordination.
  - (b) Emergency service and/or scheduled maintenance service to be provided by each party will be furnished to the fullest extent available from the supplying party and desired by the party in need. The licensee and each party will provide to the other emergency service and/or scheduled maintenance service if and when available from its own generation and, in accordance with recognized industry practice, from generation of other to the extent it can do so without impairing service to its customers, including other electric systems to whom it has firm commitments.
  - (c) Each party to a reserve coordination arrangement will establish its own reserve criteria, but in no event shall the minimum installed reserve on each system be less than 15%, calculated as a percentage of estimated peak load responsibility. Either party, if it has, or has firmly planned, installed reserves in excess of the amount called for by its own reserve criterion, will offer any such excess as may in fact be available at the time for which it is sought and for such period as the selling party shall determine for purchase in accordance with reasonable industry practice by the other party to meet such other party's own reserve requirements. The parties will provide such amounts of spinning reserve as may be adequate to avoid the imposition of unreasonable demands on the other part(ies) in meeting the normal contingencies of operating its (their) system(s). However, in no circumstances shall such spinning reserve requirement exceed the installed reserve requirement.
  - (d) Interconnections will not be limited to low voltages when higher voltages are available from the licensee's installed facilities in the area where interconnection is desired and when the proposed arrangement is found to be technically and economically feasible.

- (e) Interconnection and reserve coordination agreements will not embody provisions which impose limitations upon the use or resale of power and energy sold or exchanged pursuant to the agreement. Further, such arrangements will not prohibit the participants from entering into other interconnection and coordination arrangements, but may include appropriate provisions to assure that (i) the licensee receives adequate notice of such additional interconnection or coordination, (ii) the parties will jointly consider and agree upon such measures, if any, as are reasonably necessary to protect the reliability of the interconnected systems and to prevent undue burdens from being imposed on any system, and (iii) the licensee will be fully compensated for its costs. Reasonable industry practice as developed in the area from time to time will satisfy this provision.
- (3) The licensee currently has on file, and may hereafter file, with the Federal Energy Regulatory Commission contracts with neighboring entity(ies) providing for the sale and exchange of short-term power and energy, limited term power and energy, economy energy, non-displacement energy, and emergency capacity and energy. The Licensee will enter into contracts providing for the same or for like transactions with any neighboring entity on terms which enable the licensee to recover the full costs allocable to such transaction.
- (4) The licensee currently sells capacity and energy in bulk on a full requirements basis to several entities engaging in the distribution of electric power at retail. In addition, the licensee supplies electricity directly to ultimate users in a number of municipalities. Should any such entity(ies) or municipality(ies) desire to become a neighboring entity as defined in subparagraph (1)(b) hereof (either alone or through combination with others), the licensee will assist in facilitating the necessary transition through the sale of partial requirements firm power and energy to the extent that, except for such transition, the licensee would otherwise be supplying firm power and energy. The provision of such firm partial requirements service shall be under such rates, terms and conditions as shall be found by the Federal Energy Regulatory Commission to provide for the recovery of the licensee's cost. The licensee will sell capacity and energy in bulk on a full requirements basis to any municipality currently served by the licensee when such municipality lawfully engages in the distribution of electric power at retail.
- (5) (a) The licensee will facilitate the exchange of electric power in bulk in wholesale transactions over its transmission facilities (1) between or among two or more neighboring entities including distribution systems with which it is interconnected or may be interconnected in the future, and (2) between any such entity(ies) and any other electric system engaging in bulk power supply between whose facilities the licensee's transmission lines and other transmission lines would form a continuous electric path, provided that permission to utilize such other transmission lines has been obtained. Such transaction shall be undertaken provided that the particular transaction reasonably can be accommodated by the licensee's transmission system from a

functional and technical standpoint and does not constitute the wheeling of power to a retail customer. Such transmission shall be on terms that fully compensate the licensee for its cost. Any entity(ies) requesting such transmission arrangements shall give reasonable notice of its (their) schedule and requirements.

- (b) The licensee will include in its planning and construction program sufficient transmission capacity as required for the transactions referred to in subparagraph (a) of this paragraph, provided that (1) the neighboring entity(ies) gives the licensee sufficient advance notice as may be necessary reasonably to accommodate its (their) requirements from a functional and technical standpoint and (2) that such entity(ies) fully compensate the licensee for its cost. In carrying out this subparagraph (b), however, the licensee shall not be required to construct or add transmission facilities which (a) will be of no demonstrable present or future benefit to the licensee, or (b) which could be constructed by the requesting entity(ies) without duplicating any portion of the licensee's existing transmission lines, or (c) which would jeopardize the licensee's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements. Where regulatory or environmental approvals are required for the construction or addition of transmission facilities needed for the transactions referred to in subparagraph (a) of this paragraph it shall be the responsibility of the entity(ies) seeking the transaction to participate in obtaining such approvals, including sharing in the cost thereof.
- (6) To increase the possibility of achieving greater reliability and economy of electric generation and transmission facilities, the licensee will discuss load projections and system development plans with any neighboring entity(ies).
- (7) When the licensee's plans for future nuclear generating units (for which application will hereafter be made to the Nuclear Regulatory commission) have reached the stage of serious planning, but before firm decisions have been made as to the size and desired completion date of the proposed nuclear units, the licensee will notify all neighboring entities including distribution systems with peak loads smaller than the licensee's that the licensee plans to construct such nuclear units. Neither the timing nor the information provided need be such as to jeopardize obtaining the required site at the lowest possible cost.
- (8) The foregoing commitments shall be implemented in a manner consistent with the provisions of the Federal Power Act and all other lawful local, state and Federal regulation and authority. Nothing in these commitments is intended to determine in advance the resolution of issues which are properly raised at the Federal Energy Regulatory Commission concerning such commitments, including allocation of costs or the rates to be charged. The licensee will negotiate (including the execution of a contingent statement of intent) with respect to the foregoing commitments with any neighboring entity including distribution systems where applicable engaging in or proposing to engage in bulk power supply transactions, but the licensee shall not be

required to enter into any final arrangement prior to resolution of any substantial questions as to the lawful authority of an entity to engage in the transactions.

In addition, the licensee shall not be obligated to enter into a given bulk power supply transaction if: (1) to do so would violate, or incapacitate it from performing, and existing lawful contracts it has with a third party; (2) there is contemporaneously available to it a competing or alternate arrangement which affords it greater benefits which would be mutually exclusive of such arrangement; (3) to do so would adversely affect its system operations or the reliability of power supply to its customers, or (4) if to do so would jeopardize the licensee's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements.

DUKE ENERGY CAROLINAS, LLC

DOCKET NO. 50-370

MCGUIRE NUCLEAR STATION, UNIT 2

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-17

1. The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. NPF-17 issued on March 3, 1983, has now found that:
  - A. The application for renewed operating license filed by the Duke Energy Corporation\* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I and all required notifications to other agencies or bodies have been duly made;
  - B. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21 (c), such that there is reasonable assurance that the activities authorized by the renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the McGuire Nuclear Station, Unit 2 (facility or plant), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
  - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;
  - D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license 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;
  - E. The licensee is technically qualified to engage in the activities authorized by this renewed operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;

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\* Duke Energy Corporation converted to Duke Power Company LLC on April 3, 2006 and was re-named Duke Energy Carolinas, LLC as of October 1, 2006. Duke Energy Carolinas, LLC is the owner and operator of McGuire Nuclear Station, Unit 2. References to the "licensee" or "Duke" are to Duke Energy Carolinas, LLC.

Renewed License No. NPF-17  
Amendment No.

- F. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements", of the Commission's regulations;
  - G. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
  - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. NPF-17 is in accordance with 10 CFR Part 51, of the Commission's regulations and all applicable requirements have been satisfied; and,
  - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed operating license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70.
2. Based on the foregoing findings and the Initial Decisions issued by the Atomic Safety and Licensing Board dated April 18, 1979, and May 26, 1981, and the Decision of the Atomic Safety and Licensing Appeal Board dated March 30, 1982, regarding this facility, Renewed Facility Operating License No. NPF-17 is hereby issued to Duke Energy Carolinas, LLC to read as follows:
- 3.
- A. This renewed operating license applies to the McGuire Nuclear Station, Unit 2, a pressurized water reactor and associated equipment (the facility) owned and operated by Duke Energy Carolinas, LLC. The facility is located on the site in Mecklenburg County, North Carolina, on the shore of Lake Norman approximately 17 miles northwest of Charlotte, North Carolina, and is described in the Updated Final Safety Analysis Report, as supplemented and amended, and in the Environmental Report, as supplemented and amended.
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Duke Energy Carolinas, LLC:
    - (1) Pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use, and operate the facility at the designated location in Mecklenburg County, North Carolina, in accordance with the procedures and limitations set forth in this renewed operating license;
    - (2) Pursuant to the Act and 10 CFR Part 70 to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Updated Final Safety Analysis Report, as supplemented and amended;
    - (3) Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

- (4) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
- (5) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproducts and special nuclear materials as may be produced by the operation of McGuire Nuclear Station, Units 1 and 2; and,
- (6) Pursuant to the Act and 10 CFR Parts 30 and 40, to receive, possess and process for release or transfer such byproduct material as may be produced by the Duke Training and Technology Center.

C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at a reactor core full steady state power level of 3411 megawatts thermal (100%).

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. \_\_\_\_\_, are hereby incorporated into this renewed operating license. The licensee 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 March 3, 2023, 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) Fire Protection Program

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 for the facility and as approved in the SER dated March 1978 and Supplements 2, 5, and 6 dated March 1979, April 1981, and February 1983, respectively, and the safety evaluation dated May 15, 1989, subject to the following provisions:

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.

(5) Protection of the Environment

Before engaging in additional construction or operational activities which may result in a significant adverse environmental impact that was not evaluated or that is significantly greater than that evaluated in the Final Environmental Statement dated April 1976, the licensee shall provide written notification to the Office of Nuclear Reactor Regulation.

(6) Additional Conditions

The Additional Conditions contained in Appendix B, as revised through Amendment No. 181, are hereby incorporated into this renewed operating license. Duke Energy Carolinas, LLC shall operate the facility in accordance with the Additional Conditions.

(7) Antitrust Conditions

The licensee shall comply with the antitrust conditions delineated in Appendix C of this renewed operating license.

D. Physical Protection

Duke Energy Carolinas, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains safeguards information protected under 10 CFR 73.21, is entitled: "Duke Energy Physical Security Plan" submitted by letter dated September 8, 2004, and supplemented on September 30, 2004, October 15, 2004, October 21, 2004, and October 27, 2004.

- E. Deleted by Amendment No. 215.
- F. The licensee shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- G. In accordance with the Commission's direction in its Statement of Policy, Licensing and Regulatory Policy and Procedures for Environmental Protection: Uranium Fuel Cycle Impacts, October 29, 1982, this renewed operating license is subject to the final resolution of the pending litigation involving Table S-3. See, Natural Resources Defense Council v. NRC, No. 74-1586 (D.C. cir. April 27, 1982).
- H. The licensee is authorized to receive from the Oconee Nuclear Station, Units 1, 2, and 3, possess, and store irradiated Oconee fuel assemblies containing special nuclear material, enriched to not more than 3.24% by weight U-235 subject to the following conditions:
  - a. Oconee fuel assemblies may not be placed in the McGuire Nuclear Station, Unit 1 and 2, reactors.
  - b. Irradiated fuel shipped to McGuire Nuclear Station, Units 1 and 2, from Oconee shall have been removed from the Oconee reactor no less than 270 days prior to shipment.

- c. No more than 300 Oconee irradiated fuel assemblies shall be received for storage at McGuire Nuclear Station.
  - d. Burnup of Oconee fuel shipped shall be no greater than 36,000 MW days per metric ton.
  - e. Receipt of irradiated Oconee fuel shall be limited by the use of the NFS-4 (NAC-1), NLI-1/2, TN-8, or TN-8L spent fuel casks.
  - f. The spent fuel pool crane travel shall be restricted by administrative controls to the paths required by Selected Licensee Commitment 16.9.20 whenever a spent fuel cask is being handled.
  - g. Oconee fuel assemblies may not be transferred from one McGuire spent fuel pool to the other.
3. This renewed operating license is effective as of the date of issuance and shall expire at midnight on March 3, 2043.

FOR THE NUCLEAR REGULATORY COMMISSION

J.E. Dyer, Director  
Office of Nuclear Reactor Regulation

Attachment:

1. Appendix A - Technical Specifications
2. Appendix B - Additional Conditions
3. Appendix C - Antitrust Conditions

Date of Issuance: December 5, 2003

APPENDIX B

ADDITIONAL CONDITIONS

FACILITY OPERATING LICENSE NO. NPF-17

Duke Energy Carolinas, LLC shall comply with the following conditions on the schedules noted below:

<u>Amendment Number</u>	<u>Additional Conditions</u>	<u>Implementation Date</u>
166	<p>The schedule for the performance of new and revised surveillance requirements shall be as follows:</p> <p>For surveillance requirements (SRs) that are new in Amendment No. 166 the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment No. 166. For SRs that existed prior to Amendment No. 166, including SRs with modified acceptance criteria and SRs whose intervals of performance are being extended, the first performance is due at the end of the first surveillance interval that begins on the date the surveillance was last performed prior to implementation of amendment No. 166. For SRs that existed prior to Amendment No. 166, whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of Amendment No. 166.</p>	Within 90 days of the date of this amendment.
169	The maximum rod average burnup for any rod shall be limited to 60 GWd/mtU until the completion of an NRC environmental assessment supporting an increased limit.	Within 30 days of date of amendment

## APPENDIX C

### ANTITRUST CONDITIONS

Pursuant to an Order by the Atomic Safety and Licensing Board, dated April 23, 1975, the Nuclear Regulatory Commission incorporates in Operating License NPF-17 the following antitrust conditions:

- a. The licensee makes the commitments contained herein, recognizing that bulk power supply arrangements between neighboring entities normally tend to serve the public interest. In addition, where there are net benefits to all participants such arrangements also serve the best interests of each of the participants. Among the benefits of such transactions are increased electric system reliability, a reduction in the cost of electric power, and minimization of the environmental effects of the production and sale of electricity.

Any particular bulk power supply transaction may afford greater benefits to one participant than to another. The benefits realized by a small system may be proportionately greater than those realized by a larger system. The relative benefits to be derived by the parties from a proposed transaction, however, should not be controlling upon a decision with respect to the desirability of participating in the transaction. Accordingly, the licensee will enter into proposed bulk power transactions of the types hereinafter described which, on balance, provide net benefits to the licensee. There are net benefits in a transaction if the licensee recovers the cost of the transaction (as defined in subparagraph (1)(d) hereof) and there is no demonstrable net detriment to the licensee arising from the transaction.

(1) As used herein:

- (a) "Bulk Power" means electric power and any attendant energy, supplied or made available at transmission or sub-transmission voltage by one electric system to another.
- (b) "Neighboring Entity" means a private or public corporation, a governmental agency or authority, a municipality, a cooperative, or a lawful association of any of the foregoing owning or operating, or proposing to own or operate, facilities for the generation and transmission of electricity which meets each of the following criteria: (1) its existing or proposed facilities are economically and technically feasible of interconnection with those of the licensee and (2) with the exception of municipalities, cooperatives, governmental agencies or authorities, and associations, it is, or upon commencement of operations will be, a public utility and subject to regulation with respect to rates and service under the laws of North Carolina or South Carolina or under the Federal Power Act; provided, however, that as to associations, each member of such association is either a public utility as discussed in this clause (2) or a municipality, a cooperative or a governmental agency or authority.

Renewed License No. NPF-17

- (c) Where the phrase "neighboring entity" is intended to include entities engaging or proposing to engage only in the distribution of electricity, this is indicated by adding the phrase "including distribution systems."
  - (d) "Cost means any appropriate operating and maintenance expenses, together with all other costs, including a reasonable return on the licensee's investment, which are reasonably allocable to a transaction. However, no value shall be included for loss of revenue due to the loss of any wholesale or retail customer as a result of any transaction hereafter described.
- (2)
- (a) The licensee will interconnect and coordinate reserves by means of the sale and exchange of emergency and scheduled maintenance bulk power with any neighboring entity(ies), when there are net benefits to each party, on terms that will provide for all of the licensee's properly assignable costs as may be determined by the Federal Energy Regulatory Commission and consistent with such cost assignment will allow the other party the fullest possible benefits of such coordination.
  - (b) Emergency service and/or scheduled maintenance service to be provided by each party will be furnished to the fullest extent available from the supplying party and desired by the party in need. The licensee and each party will provide to the other emergency service and/or scheduled maintenance service if and when available from its own generation and, in accordance with recognized industry practice, from generation of other to the extent it can do so without impairing service to its customers, including other electric systems to whom it has firm commitments.
  - (c) Each party to a reserve coordination arrangement will establish its own reserve criteria, but in no event shall the minimum installed reserve on each system be less than 15%, calculated as a percentage of estimated peak load responsibility. Either party, if it has, or has firmly planned, installed reserves in excess of the amount called for by its own reserve criterion, will offer any such excess as may in fact be available at the time for which it is sought and for such period as the selling party shall determine for purchase in accordance with reasonable industry practice by the other party to meet such other party's own reserve requirements. The parties will provide such amounts of spinning reserve as may be adequate to avoid the imposition of unreasonable demands on the other part(ies) in meeting the normal contingencies of operating its (their) system(s). However, in no circumstances shall such spinning reserve requirement exceed the installed reserve requirement.
  - (d) Interconnections will not be limited to low voltages when higher voltages are available from the licensee's installed facilities in the area where interconnection is desired and when the proposed arrangement is found to be technically and economically feasible.

- (e) Interconnection and reserve coordination agreements will not embody provisions which impose limitations upon the use or resale of power and energy sold or exchanged pursuant to the agreement. Further, such arrangements will not prohibit the participants from entering into other interconnection and coordination arrangements, but may include appropriate provisions to assure that (i) the licensee receives adequate notice of such additional interconnection or coordination, (ii) the parties will jointly consider and agree upon such measures, if any, as are reasonably necessary to protect the reliability of the interconnected systems and to prevent undue burdens from being imposed on any system, and (iii) the licensee will be fully compensated for its costs. Reasonable industry practice as developed in the area from time to time will satisfy this provision.
- (3) The licensee currently has on file, and may hereafter file, with the Federal Energy Regulatory Commission contracts with neighboring entity(ies) providing for the sale and exchange of short-term power and energy, limited term power and energy, economy energy, non- displacement energy, and emergency capacity and energy. The Licensee will enter into contracts providing for the same or for like transactions with any neighboring entity on terms which enable the licensee to recover the full costs allocable to such transaction.
- (4) The licensee currently sells capacity and energy in bulk on a full requirements basis to several entities engaging in the distribution of electric power at retail. In addition, the licensee supplies electricity directly to ultimate users in a number of municipalities. Should any such entity(ies) or municipality(ies) desire to become a neighboring entity as defined in subparagraph (1)(b) hereof (either alone or through combination with others), the licensee will assist in facilitating the necessary transition through the sale of partial requirements firm power and energy to the extent that, except for such transition, the licensee would otherwise be supplying firm power and energy. The provision of such firm partial requirements service shall be under such rates, terms and conditions as shall be found by the Federal Energy Regulatory Commission to provide for the recovery of the licensee's cost. The licensee will sell capacity and energy in bulk on a full requirements basis to any municipality currently served by the licensee when such municipality lawfully engages in the distribution of electric power at retail.
- (5) (a) The licensee will facilitate the exchange of electric power in bulk in wholesale transactions over its transmission facilities (1) between or among two or more neighboring entities including distribution systems with which it is interconnected or may be interconnected in the future, and (2) between any such entity(ies) and any other electric system engaging in bulk power supply between whose facilities the licensee's transmission lines and other transmission lines would form a continuous electric path, provided that permission to utilize such other transmission lines has been obtained. Such transaction shall be undertaken provided that the particular transaction reasonably can be accommodated by the licensee's transmission system from a

functional and technical standpoint and does not constitute the wheeling of power to a retail customer. Such transmission shall be on terms that fully compensate the licensee for its cost. Any entity(ies) requesting such transmission arrangements shall give reasonable notice of its (their) schedule and requirements.

- (b) The licensee will include in its planning and construction program sufficient transmission capacity as required for the transactions referred to in subparagraph (a) of this paragraph, provided that (1) the neighboring entity(ies) gives the licensee sufficient advance notice as may be necessary reasonably to accommodate its (their) requirements from a functional and technical standpoint and (2) that such entity(ies) fully compensate the licensee for its cost. In carrying out this subparagraph (b), however, the licensee shall not be required to construct or add transmission facilities which (a) will be of no demonstrable present or future benefit to the licensee, or (b) which could be constructed by the requesting entity(ies) without duplicating any portion of the licensee's existing transmission lines, or (c) which would jeopardize the licensee's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements. Where regulatory or environmental approvals are required for the construction or addition of transmission facilities needed for the transactions referred to in subparagraph (a) of this paragraph it shall be the responsibility of the entity(ies) seeking the transaction to participate in obtaining such approvals, including sharing in the cost thereof.
- (6) To increase the possibility of achieving greater reliability and economy of electric generation and transmission facilities, the licensee will discuss load projections and system development plans with any neighboring entity(ies).
- (7) When the licensee's plans for future nuclear generating units (for which application will hereafter be made to the Nuclear Regulatory commission) have reached the stage of serious planning, but before firm decisions have been made as to the size and desired completion date of the proposed nuclear units, the licensee will notify all neighboring entities including distribution systems with peak loads smaller than the licensee's that the licensee plans to construct such nuclear units. Neither the timing nor the information provided need be such as to jeopardize obtaining the required site at the lowest possible cost.

The foregoing commitments shall be implemented in a manner consistent with the provisions of the Federal Power Act and all other lawful local, state and Federal regulation and authority. Nothing in these commitments is intended to determine in advance the resolution of issues which are properly raised at the Federal Energy Regulatory Commission concerning such commitments, including allocation of costs or the rates to be charged. The licensee will negotiate (including the execution of a contingent statement of intent) with respect to the foregoing commitments with any neighboring entity including distribution systems where applicable engaging in or proposing to engage in bulk power supply transactions, but the licensee shall not be

required to enter into any final arrangement prior to resolution of any substantial questions as to the lawful authority of an entity to engage in the transactions.

In addition, the licensee shall not be obligated to enter into a given bulk power supply transaction if: (1) to do so would violate, or incapacitate it from performing, and existing lawful contracts it has with a third party; (2) there is contemporaneously available to it a competing or alternate arrangement which affords it greater benefits which would be mutually exclusive of such arrangement; (3) to do so would adversely affect its system operations or the reliability of power supply to its customers, or (4) if to do so would jeopardize the licensee's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements.

U.S. Nuclear Regulatory Commission  
March 14, 2007  
Enclosure 2

**ATTACHMENT 2c**

**CATAWBA NUCLEAR STATION  
PROPOSED AMENDED – RETYPED  
FOLS NPF-35 AND NPF-52**

DUKE ENERGY CAROLINAS, LLC

NORTH CAROLINA ELECTRIC MEMBERSHIP CORPORATION

SALUDA RIVER ELECTRIC COOPERATIVE, INC.

DOCKET NO. 50-413

CATAWBA NUCLEAR STATION, UNIT 1

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-35

1. The U.S. Nuclear Regulatory Commission (Commission) having previously made the findings set forth in License No. NPF-35 issued on January 17, 1985, has now found that:
  - A. The application for renewed operating license filed by the Duke Energy Corporation\* acting for itself, North Carolina Electric Membership Corporation, and Saluda River Electric Cooperative, Inc., (the licensees) complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
  - B. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for Catawba Nuclear Station, Unit 1 (facility or plant), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
  - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D. below);
  - D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license 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;(except as exempted from compliance in Section 2.D. below);

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\* Duke Energy Corporation converted to Duke Power Company LLC on April 3, 2006 and was re-named Duke Energy Carolinas, LLC as of October 1, 2006. References to "Duke" are to Duke Energy Carolinas, LLC, which is an owner and the operator of Catawba Nuclear Station, Unit 1, and one of the "licensees."

- E. Duke Energy Carolinas, LLC\* is technically qualified to engage in the activities authorized by this renewed operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter 1;
  - F. The licensees have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements", of the Commission's regulations;
  - G. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
  - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. NPF-35 is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied, and;
  - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed operating license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70.
2. Based on the foregoing findings and the Partial Initial Decisions issued by the Atomic Safety and Licensing Boards dated June 22, September 18, and November 27, 1984, regarding this facility and satisfaction of conditions therein imposed, except as hereinafter set forth, and the Commission's vote on January 17, 1985, Facility Operating License No. NPF-31 issued on December 6, 1984, superseded by Facility Operating License No. NPF-35 issued on January 17, 1985, is superseded by Renewed Facility Operating License No. NPF-35, hereby issued to Duke Energy Carolinas, LLC, the North Carolina Electric Membership Corporation, and the Saluda River Electric Cooperative, Inc., to read as follows:
- A. This renewed operating license applies to the Catawba Nuclear Station, Unit 1, a pressurized water reactor and associated equipment (the facility) owned by Duke Energy Carolinas, LLC, the North Carolina Electric Membership Corporation, and the Saluda River Electric Cooperative, Inc. The facility is located on the licensees' site in York County, South Carolina, on the shore of Lake Wylie approximately 6 miles north of Rock Hill, South Carolina, and is described in the Updated Final Safety Analysis Report, as supplemented and amended, and in the Environmental Report, as supplemented and amended.
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:

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\*Duke Energy Carolinas, LLC is authorized to act as agent for the North Carolina Electric Membership Corporation and the Saluda River Electric Cooperative, Inc., and has exclusive responsibility and control over the physical construction, operation and maintenance of the facility.

- (1) Duke Energy Carolinas, LLC, pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use, and operate the facility at the designated location in York County, South Carolina, in accordance with the procedures and limitations set forth in this renewed operating license;
- (2) North Carolina Electric Membership Corporation and Saluda River Electric Cooperative, Inc., to possess the facility at the designated location in York County, South Carolina, in accordance with the procedures and limitations set forth in this renewed operating license;
- (3) Duke Energy Carolinas, LLC, pursuant to the Act and 10 CFR Part 70 to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Updated Final Safety Analysis Report, as supplemented and amended;
- (4) Duke Energy Carolinas, LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (5) Duke Energy Carolinas, LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
- (6) Duke Energy Carolinas, LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility authorized herein, and;
- (7) Duke Energy Carolinas, LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of McGuire Nuclear Station, Units 1 and 2, and Oconee Nuclear Station, Units 1, 2 and 3.

C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

Duke Energy Carolinas, LLC is authorized to operate the facility at reactor core full steady state power level of 3411 megawatts thermal (100%) in accordance with the conditions specified herein.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. \_\_\_\_\_ 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) Fire Protection Program (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.

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\*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.

(6) Additional Conditions

The Additional Conditions contained in Appendix B, as revised through Amendment No. 180, are hereby incorporated into this renewed operating license. Duke Energy Carolinas, LLC shall operate the facility in accordance with the Additional Conditions.

- D. The facility requires exemptions from certain requirements of Appendix J to 10 CFR Part 50, as delineated below and pursuant to evaluations contained in the referenced SER and SSERs. These include, (a) partial exemption from the requirement of paragraph III.D.2(b)(ii) of Appendix J, the testing of containment airlocks at times when the containment integrity is not required (Section 6.2.6 of the SER, and SSERs # 3 and #4), (b) exemption from the requirement of paragraph III.A.(d) of Appendix J, insofar as it requires the venting and draining of lines for type A tests (Section 6.2.6 of SSER #3), and (c) partial exemption from the requirements of paragraph III.B of Appendix J, as it relates to bellows testing (Section 6.2.6 of the SER and SSER #3). These exemptions are authorized by law, will not present an undue risk to the public health and safety, are consistent with the common defense and security, and are consistent with certain special circumstances as discussed in the referenced SER and SSERs. These exemptions are, therefore, hereby granted pursuant to 10 CFR 50.12. With the granting of these exemptions, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.

E. Physical Protection

Duke Energy Carolinas, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains safeguards information protected under 10 CFR 73.21, is entitled: "Duke Energy Physical Security Plan" submitted by letter dated September 8, 2004, and supplemented on September 30, 2004, October 15, 2004, October 21, 2004 and October 27, 2004.

F. Reporting to the Commission Deleted by Amendment No. 230

- G. The licensees shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- 3. This renewed license is effective as of the date of issuance and shall expire at midnight on December 5, 2043.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed By:  
J. E. Dyer

J. E. Dyer, Director  
Office of Nuclear Reactor Regulation

Attachments:

- 1. Appendix A – Technical Specifications
- 2. Appendix B – Additional Conditions
- 3. Appendix C – Antitrust Conditions

Date of Issuance: December 5, 2003

APPENDIX B

ADDITIONAL CONDITIONS

FACILITY OPERATING LICENSE NO. NPF-35

Duke Energy Carolinas, LLC shall comply with the following conditions on the schedules noted below:

<u>Amendment Number</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
159	This amendment requires the licensee to use administrative controls, as described in the licensee's letter of March 7, 1997, and evaluated in the staff's safety evaluation dated April 29, 1997, to restrict the dose-equivalent iodine levels to 0.46 microCurie per gram (in lieu of the limit in TS Section 3.4.8.a), and to 26 microCurie per gram (in lieu of the limit of TS Figure 3.4-1), until this license condition is removed by a future amendment.	Immediately upon issuance of the amendment
173	The licensee is authorized to relocate certain requirements included in appendix A to licensee-controlled documents. Implementation of this amendment shall include the relocation of these requirements to the appropriate documents as described in the licensee's letters dated May 27, 1997, as amended by letters dated March 9, March 20, April 20, June 3, June 24, July 7, July 21, August 5, September 8, and September 15, 1998, and evaluated in the NRC staff's Safety Evaluation associated with this amendment.	All relocation to be completed by January 31, 1999.

Renewed License No. NPF-35  
Amendment No.

<u>Amendment Number</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
173	<p>The schedule for the performance of new and revised surveillance requirements shall be as follows:</p> <p>For surveillance requirements (SRs) that are new in Amendment No. 173 the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment No. 173. For SRs that existing prior to Amendment No. 173, including SRs with modified acceptance criteria and SRs who intervals of performance are being extended, the first performance is due at the end of the first surveillance interval that begins on the date the surveillance was last performed prior to implementation of amendment No. 173. For SRs that existed prior to Amendment No. 173, whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of Amendment No. 173</p>	By January 31, 1999
180	The maximum rod average burnup for any rod shall be limited to 60 GWd/mtU until the completion of an NRC environmental assessment supporting an increased limit.	Within 30 days of date of amendment.

APPENDIX C  
ANTITRUST CONDITIONS

Pursuant to an Order by the Atomic Safety and Licensing Board, dated April 23, 1975, the Nuclear Regulatory Commission incorporates in Operating License NPR-35 the following antitrust conditions:

- a. The licensee makes the commitments contained herein, recognizing that bulk power supply arrangements between neighboring entities normally tend to serve the public interest. In addition, where there are net benefits to all participants such arrangements also serve the best interests of each of the participants. Among the benefits of such transactions are increased electric system reliability, a reduction in the cost of electric power, and minimization of the environmental effects of the production and sale of electricity.

Any particular bulk power supply transaction may afford greater benefits to one participant than to another. The benefits realized by a small system may be proportionately greater than those realized by a larger system. The relative benefits to be derived by the parties from a proposed transaction, however, should not be controlling upon a decision with respect to the desirability of participating in the transaction. Accordingly, the licensee will enter into proposed bulk power transactions of the types hereinafter described which, on balance, provide net benefits to the licensee. There are net benefits in a transaction if the licensee recovers the cost of the transaction, (as defined in subparagraph (1)(d) hereof) and there is no demonstrable net detriment to the licensee arising from the transaction.

(1) As used herein:

- (a) "Bulk Power" means electric power and any attendant energy, supplied or made available at transmission or sub-transmission voltage by one electric system to another.
- (b) "Neighboring Entity" means a private or public corporation, a governmental agency or authority, a municipality, a cooperative, or a lawful association of any of the foregoing owning or operating, or proposing to own or operate, facilities for the generation and transmission of electricity which meets each of the following criteria: (1) its existing or proposed facilities are economically and technically feasible of interconnection with those of the licensee and (2) with the exception of municipalities, cooperatives, governmental agencies or authorities, and associations, it is, or upon commencement of operations will be, a public utility and subject to regulation with respect to rates and service under the laws of North Carolina or South Carolina or under the Federal Power Act; provided, however, that as to associations, each member of such association is either a public utility as discussed in this clause (2) or a

municipality, a cooperative or a governmental agency or authority.

- (c) Where the phrase "neighboring entity" is intended to include entities engaging or proposing to engage only in the distribution of electricity, this is indicated by adding the phrase "including distribution systems."
  - (d) "Cost" means any appropriate operating and maintenance expenses, together with all other costs, including a reasonable return on the licensee's investment, which are reasonably allocable to a transaction. However, no value shall be included for loss of revenue due to the loss of any wholesale or retail customer as a result of any transaction hereafter described.
- (2)
- (a) The licensee will interconnect and coordinate reserves by means of the sale and exchange of emergency and scheduled maintenance bulk power with any neighboring entity(ies), when there are net benefits to each party, on terms that will provide for all of the licensee's properly assignable costs as may be determined by the Federal Energy Regulatory Commission and consistent with such cost assignment will allow the other party the fullest possible benefits of such coordination.
  - (b) Emergency service and/or scheduled maintenance service to be provided by each party will be furnished to the fullest extent available from the supplying party and desired by the party in need. The licensee and each party will provide to the other emergency service and/or scheduled maintenance service if and when available from its own generation and, in accordance with recognized industry practice, from generation of others to the extent it can do so without impairing service to its customers, including other electric systems to whom it has firm commitments.
  - (c) Each party to a reserve coordination arrangement will establish its own reserve criteria, but in no event shall the minimum installed reserve on each system be less than 15%, calculated as a percentage of estimated peak load responsibility. Either party, if it has, or has firmly planned, installed reserves in excess of the amount called for by its own reserve criterion, will offer any such excess as may in fact be available at the time for which it is sought and for such period as the selling party shall determine for purchase in accordance with reasonable industry practice by the other party to meet such other party's own reserve requirements. The parties will provide such amounts of spinning reserve as may be adequate to avoid the imposition of unreasonable

demands on the other part(ies) in meeting the normal contingencies of operating its (their) system(s). However, in no circumstances shall such spinning reserve requirement exceed the installed reserve requirement.

- (d) Interconnections will not be limited to low voltages when higher voltages are available from the licensee's installed facilities in the area where interconnection is desired and when the proposed arrangement is found to be technically and economically feasible.
  - (e) Interconnection and reserve coordination agreements will not embody provisions which impose limitations upon the use or resale of power and energy sold or exchanged pursuant to the agreement. Further, such arrangements will not prohibit the participants from entering into other interconnection and coordination arrangements, but may include appropriate provisions to assure that (i) the licensee receives adequate notice of such additional interconnection or coordination, (ii) the parties will jointly consider and agree upon such measures, if any, as are reasonably necessary to protect the reliability of the interconnected systems and to prevent undue burdens from being imposed on any system, and (iii) the licensee will be fully compensated for its costs. Reasonable industry practice as developed in the area from time to time will satisfy this provision.
- (3) The licensee currently has on file, and may hereafter file, with the Federal Energy Regulatory Commission contracts with neighboring entity(ies) providing for the sale and exchange of short-term power and energy, limited term power and energy, economy energy, non-displacement energy, and emergency capacity and energy. The Licensee will enter into contracts providing for the same or for like transactions with any neighboring entity on terms which enable the licensee to recover the full costs allocable to such transaction.
  - (4) The licensee currently sells capacity and energy in bulk on a full requirements basis to several entities engaging in the distribution of electric power at retail. In addition, the licensee supplies electricity directly to ultimate users in a number of municipalities. Should any such entity(ies) or municipality(ies) desire to become a neighboring entity as defined in subparagraph (1)(b) hereof (either alone or through combination with others), the licensee will assist in facilitating the necessary transition through the sale of partial requirements firm power and energy to the extent that, except for such transition, the licensee would otherwise be supplying firm power and energy. The provision of such firm partial requirements service shall be under such rates, terms and conditions as shall be found by the Federal Energy Regulatory Commission to

provide for the recovery of the licensee's cost. The licensee will sell capacity and energy in bulk on a full requirements basis to any municipality currently served by the licensee when such municipality lawfully engages in the distribution of electric power at retail.

- (5)
  - (a) The licensee will facilitate the exchange of electric power in bulk in wholesale transactions over its transmission facilities (1) between or among two or more neighboring entities including distribution systems with which it is interconnected or may be interconnected in the future, and (2) between any such entity(ies) and any other electric system engaging in bulk power supply between whose facilities the licensee's transmission lines and other transmission lines would form a continuous electric path, provided that permission to utilize such other transmission lines has been obtained. Such transaction shall be undertaken provided that the particular transaction reasonably can be accommodated by the licensee's transmission system from a functional and technical standpoint and does not constitute the wheeling of power to a retail customer. Such transmission shall be on terms that fully compensate the licensee for its cost. Any entity(ies) requesting such transmission arrangements shall give reasonable notice of its (their) schedule and requirements.
  - (b) The licensee will include in its planning and construction program sufficient transmission capacity as required for the transactions referred to in subparagraph (a) of this paragraph, provided that (1) the neighboring entity(ies) gives the licensee sufficient advance notice as may be necessary reasonably to accommodate its (their) requirements from a functional and technical standpoint and (2) that such entity(ies) fully compensate the licensee for its cost. In carrying out this subparagraph (b), however, the licensee shall not be required to construct or add transmission facilities which (a) will be of no demonstrable present or future benefit to the licensee, or (b) which could be constructed by the requesting entity(ies) without duplicating any portion of the licensee's existing transmission lines, or (c) which would jeopardize the licensee's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements. Where regulatory or environmental approvals are required for the construction or addition of transmission facilities needed for the transactions referred to in subparagraph (a) of this paragraph it shall be the responsibility of the entity(ies) seeking the transaction to participate in obtaining such approvals, including sharing in the cost thereof.
- (6) To increase the possibility of achieving greater reliability and economy of electric generation and transmission facilities, the licensee will discuss load projections and system development plans with any neighboring entity(ies).

- (7) When the licensee's plans for future nuclear generating units (for which application will hereafter be made to the Nuclear Regulatory Commission) have reached the stage of serious planning, but before firm decisions have been made as to the size and desired completion date of the proposed nuclear units, the licensee will notify all neighboring entities including distribution systems with peak loads smaller than the licensee's that the licensee plans to construct such nuclear units. Neither the timing nor the information provided need be such as to jeopardize obtaining the required site at the lowest possible cost.
- (8) The foregoing commitments shall be implemented in a manner consistent with the provisions of the Federal Power Act and all other lawful local, state and Federal regulation and authority. Nothing in these commitments is intended to determine in advance the resolution of issues which are properly raised at the Federal Energy Regulatory Commission concerning such commitments, including allocation of costs or the rates to be charged. The licensee will negotiate (including the execution of a contingent statement of intent) with respect to the foregoing commitments with any neighboring entity including distribution systems where applicable engaging in or proposing to engage in bulk power supply transactions, but the licensee shall not be required to enter into any final arrangement prior to resolution of any substantial questions as to the lawful authority of an entity to engage in the transactions.

In addition, the licensee shall not be obligated to enter into a given bulk power supply transaction if: (1) to do so would violate, or incapacitate it from performing, any existing lawful contracts it has with a third party; (2) there is contemporaneously available to it a competing or alternative arrangement which affords it greater benefits which would be mutually exclusive of such arrangement; (3) to do so would adversely affect its system operations or the reliability of power supply to its customers, or (4) if to do so would jeopardize the licensee's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements.



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

WASHINGTON, D.C. 20555-0001

April 3, 2006

Docket Nos. 50-413  
50-414

**AMENDMENT TO INDEMNITY AGREEMENT NO. B-100  
AMENDMENT NO. 10**

Effective April 3, 2006, Indemnity Agreement No. B-100, between Duke Energy Corporation, North Carolina Municipal Power Agency Number 1, North Carolina Electric Membership Corporation, Saluda River Electric Cooperative, Inc., Piedmont Municipal Power Agency and the Nuclear Regulatory Commission, dated January 3, 1984, as amended, is hereby further amended as follows:

Delete the name "Duke Energy Corporation" in the Indemnity Agreement wherever it appears and substitute the name "Duke Power Company LLC"

**FOR THE UNITED STATES NUCLEAR REGULATORY COMMISSION**

A handwritten signature in cursive script, appearing to read "Chris for", written over a horizontal line.

Christopher I. Grimes, Director  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

DUKE ENERGY CAROLINAS, LLC

NORTH CAROLINA MUNICIPAL POWER AGENCY NO. 1

PIEDMONT MUNICIPAL POWER AGENCY

DOCKET NO. 50-414

CATAWBA NUCLEAR STATION, UNIT 2

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-52

1. The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. NPF-52 issued on May 15, 1986, has now found that:
  - A. The application for renewed operating license filed by the Duke Energy Corporation\* acting for itself, North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency (the licensees) complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I; and all required notifications to other agencies or bodies have been duly made;
  - B. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for Catawba Nuclear Station, Unit 2 (facility or plant) and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
  - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D. below);
  - D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license 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 (except as exempted from compliance in Section 2.D. below);

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\* Duke Energy Corporation converted to Duke Power Company LLC on April 3, 2006 and was re-named Duke Energy Carolinas, LLC as of October 1, 2006. References to "Duke" are to Duke Energy Carolinas, LLC, which is the operator of Catawba Nuclear Station, Unit 2, and one of the "licensees."

- E. Duke Energy Carolinas, LLC\* is technically qualified to engage in the activities authorized by this renewed operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
  - F. The licensees have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
  - G. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
  - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. NPF-52 is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied, and;
  - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed operating license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70.
2. Based on the foregoing findings and the July 26, 1985, and the November 21, 1985, affirmations by the Atomic Safety and Licensing Appeal Board of the Partial Initial Decisions issued by the Atomic Safety and Licensing Boards dated June 22, September 18, and November 27, 1984, regarding this facility and satisfaction of conditions therein imposed, and pursuant to approval by the Nuclear Regulatory Commission at a meeting held on May 14, 1986, Facility Operating License No. NPF-48, issued on February 24, 1986, superseded by Facility Operating License No. NPF-52 issued on May 15, 1986, is superseded by Renewed Facility Operating License No. NPF-52, hereby issued to Duke Energy Carolinas, LLC, the North Carolina Municipal Power Agency No. 1, and Piedmont Municipal Power Agency to read as follows:
- A. This renewed operating license applies to the Catawba Nuclear Station, Unit 2, a pressurized water reactor and associated equipment (the facility) owned by the North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency and operated by Duke Energy Carolinas, LLC. The facility is located on the licensees' site in York County, South Carolina, on the shore of Lake Wylie approximately 6 miles north of Rock Hill, South Carolina, and is described in the Final Safety Analysis Report, as supplemented and amended, and in the Environmental Report, as supplemented and amended;
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:

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\*Duke Energy Carolinas, LLC is authorized to act as agent for the North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency, and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

- (1) Duke Energy Carolinas, LLC, pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use, and operate the facility at the designated location in York County, South Carolina, in accordance with the procedures and limitations set forth in this renewed operating license;
- (2) North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency, pursuant to the Act and 10 CFR Part 50, to possess the facility at the designated location in York County, South Carolina, in accordance with the procedures and limitations set forth in this renewed operating license;
- (3) Duke Energy Carolinas, LLC, pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
- (4) Duke Energy Carolinas, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70 to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (5) Duke Energy Carolinas, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
- (6) Duke Energy Carolinas, LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility authorized herein; and
- (7) Duke Energy Carolinas, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of McGuire Nuclear Station, Units 1 and 2, and Oconee Nuclear Station, Units 1, 2, and 3.

C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

Duke Energy Carolinas, LLC is authorized to operate the facility at a reactor core full steady state power level of 3411 megawatts thermal (100%) in accordance with the conditions specified herein.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. \_\_\_\_\_ 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.

(5) Fire Protection Program (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.

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\*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.

(6) Additional Conditions

The Additional Conditions contained in Appendix B, as revised through Amendment No. 224, are hereby incorporated into this renewed operating license. Duke Energy Carolinas, LLC shall operate the facility in accordance with the Additional Conditions.

- D. The facility requires exemptions from certain requirements of Appendix J to 10 CFR Part 50, as delineated below, and pursuant to evaluations contained in the referenced SER and SSER. These include: (a) partial exemption from the requirement of paragraph III.D.2(b)(ii) of Appendix J, the testing of containment airlocks at times when the containment integrity is not required (Section 6.2.6 of SSER #5), (b) exemption from the requirement of paragraph III.A.1(d) of Appendix J, insofar as it requires the venting and draining of lines for type A tests (Section 6.2.6 of SSER #5), and (c) partial exemption from the requirements of paragraph III.B of Appendix J, as it relates to bellows testing (Section 6.2.6 of the SER and SSER #5). These exemptions are authorized by law, will not present an undue risk to the public health and safety, are consistent with the common defense and security, and are consistent with certain special circumstances, as discussed in the referenced SER and SSER. These exemptions are, therefore, hereby granted pursuant to 10 CFR 50.12. With the granting of these exemptions, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.

E. Physical Protection

Duke Energy Carolinas, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains safeguards information protected under 10 CFR 73.21, is entitled: "Duke Energy Physical Security Plan" submitted by letter dated September 8, 2004, and supplemented on September 30, 2004, October 15, 2004, October 21, 2004 and October 27, 2004.

F. Reporting to the Commission Deleted by Amendment No. 226

- G. The licensees shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.

3. This renewed license is effective as of the date of issuance and shall expire at midnight on December 5, 2043.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed By:  
J. E. Dyer

J. E. Dyer, Director  
Office of Nuclear Reactor Regulation

Attachments:

1. Appendix A – Technical Specifications
2. Appendix B – Additional Conditions
3. Appendix C – Antitrust Conditions

Date of Issuance: December 5, 2003

APPENDIX B

ADDITIONAL CONDITIONS

FACILITY OPERATING LICENSE NO. NPF-52

Duke Energy Carolinas, LLC shall comply with the following conditions on the schedules noted below:

<u>Amendment Number</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
151	This amendment requires the licensee to use administrative controls, as described in the licensee's letter of March 7, 1997, and evaluated in the staff's safety evaluation dated April 29, 1997, to restrict the dose-equivalent iodine levels to 0.46 microCurie per gram (in lieu of the limit in TS Section 3.4.8.a), and to 26 microCurie per gram (in lieu of the limit of TS Figure 3.4-1), until this license condition is removed by a future amendment.	Immediately upon issuance of the amendment
165	The licensee is authorized to relocate certain requirements included in appendix A to licensee-controlled documents. Implementation of this amendment shall include the relocation of these requirements to the appropriate documents, as described in the licensee's letters dated May 27, 1997, as amended by letters dated March 9, March 20, April 20, June 3, June 24, July 7, July 21, August 5, September 8, and September 15, 1998, and evaluated in the NRC staff's Safety Evaluation associated with this amendment.	All relocation to be completed by January 31, 1999.

Renewed License No. NPF-52  
Amendment No.

<u>Amendment Number</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
165	<p>The schedule for the performance of new and revised surveillance requirements shall be as follows:</p> <p>For surveillance requirements (SRs) that are new in Amendment No. 165 the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment No. 165. For SRs that existing prior to Amendment No. 165, including SRs with modified acceptance criteria and SRs who intervals of performance are being extended, the first performance is due at the end of the first surveillance interval that begins on the date the surveillance was last performed prior to implementation of amendment No. 165. For SRs that existed prior to Amendment No. 165, whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of Amendment No. 165</p>	By January 31, 1999
172	The maximum rod average burnup for any rod shall be limited to 60 GWd/mtU until the completion of an NRC environmental assessment supporting an increased limit.	Within 30 days of date of amendment.
	This amendment requires the licensee to use administrative controls, as described in the licensee's letter of February 2, 2006, and evaluated in the Staff's Safety Evaluation dated March 31, 2006, to restrict the primary to secondary leakage through any one steam generator to 75 gallons per day and through all steam generators to 300 gallons per day (in lieu of the limits in TS Sections 3.4.13d. and 5.5.9b.3.), for Cycle 15 operation.	Prior to any entry into Mode 4 during Cycle 15 operation

APPENDIX C  
ANTITRUST CONDITIONS

Pursuant to an Order by the Atomic Safety and Licensing Board, dated April 23, 1975, the Nuclear Regulatory Commission incorporates in Operating License NPR-52 the following antitrust conditions:

- a. The licensee makes the commitments contained herein, recognizing that bulk power supply arrangements between neighboring entities normally tend to serve the public interest. In addition, where there are net benefits to all participants such arrangements also serve the best interests of each of the participants. Among the benefits of such transactions are increased electric system reliability, a reduction in the cost of electric power, and minimization of the environmental effects of the production and sale of electricity.

Any particular bulk power supply transaction may afford greater benefits to one participant than to another. The benefits realized by a small system may be proportionately greater than those realized by a larger system. The relative benefits to be derived by the parties from a proposed transaction, however, should not be controlling upon a decision with respect to the desirability of participating in the transaction. Accordingly, the licensee will enter into proposed bulk power transactions of the types hereinafter described which, on balance, provide net benefits to the licensee. There are net benefits in a transaction if the licensee recovers the cost of the transaction, (as defined in subparagraph (1)(d) hereof) and there is no demonstrable net detriment to the licensee arising from the transaction.

(1) As used herein:

- (a) "Bulk Power" means electric power and any attendant energy, supplied or made available at transmission or sub-transmission voltage by one electric system to another.
- (b) "Neighboring Entity" means a private or public corporation, a governmental agency or authority, a municipality, a cooperative, or a lawful association of any of the foregoing owning or operating, or proposing to own or operate, facilities for the generation and transmission of electricity which meets each of the following criteria: (1) its existing or proposed facilities are economically and technically feasible of interconnection with those of the licensee and (2) with the exception of municipalities, cooperatives, governmental agencies or authorities, and associations, it is, or upon commencement of operations will be, a public utility and subject to regulation with respect to rates and service under the laws of North Carolina or South Carolina or under the Federal Power Act; provided, however, that as to

associations, each member of such association is either a public utility as discussed in this clause (2) or a municipality, a cooperative or a governmental agency or authority.

- (c) Where the phrase "neighboring entity" is intended to include entities engaging or proposing to engage only in the distribution of electricity, this is indicated by adding the phrase "including distribution systems."
  - (d) "Cost" means any appropriate operating and maintenance expenses, together with all other costs, including a reasonable return on the licensee's investment, which are reasonably allocable to a transaction. However, no value shall be included for loss of revenue due to the loss of any wholesale or retail customer as a result of any transaction hereafter described.
- (2)
- (a) The licensee will interconnect and coordinate reserves by means of the sale and exchange of emergency and scheduled maintenance bulk power with any neighboring entity(ies), when there are net benefits to each party, on terms that will provide for all of the licensee's properly assignable costs as may be determined by the Federal Energy Regulatory Commission and consistent with such cost assignment will allow the other party the fullest possible benefits of such coordination.
  - (b) Emergency service and/or scheduled maintenance service to be provided by each party will be furnished to the fullest extent available from the supplying party and desired by the party in need. The licensee and each party will provide to the other emergency service and/or scheduled maintenance service if and when available from its own generation and, in accordance with recognized industry practice, from generation of others to the extent it can do so without impairing service to its customers, including other electric systems to whom it has firm commitments.
  - (c) Each party to a reserve coordination arrangement will establish its own reserve criteria, but in no event shall the minimum installed reserve on each system be less than 15%, calculated as a percentage of estimated peak load responsibility. Either party, if it has, or has firmly planned, installed reserves in excess of the amount called for by its own reserve criterion, will offer any such excess as may in fact be available at the time for which it is sought and for such period as the selling party shall determine for purchase in accordance with reasonable industry practice by the other party to meet such other party's own reserve requirements. The parties will provide such amounts of spinning reserve as may be adequate to avoid the imposition of unreasonable

demands on the other part(ies) in meeting the normal contingencies of operating its (their) system(s). However, in no circumstances shall such spinning reserve requirement exceed the installed reserve requirement.

- (d) Interconnections will not be limited to low voltages when higher voltages are available from the licensee's installed facilities in the area where interconnection is desired and when the proposed arrangement is found to be technically and economically feasible.
  - (e) Interconnection and reserve coordination agreements will not embody provisions which impose limitations upon the use or resale of power and energy sold or exchanged pursuant to the agreement. Further, such arrangements will not prohibit the participants from entering into other interconnection and coordination arrangements, but may include appropriate provisions to assure that (i) the licensee receives adequate notice of such additional interconnection or coordination, (ii) the parties will jointly consider and agree upon such measures, if any, as are reasonably necessary to protect the reliability of the interconnected systems and to prevent undue burdens from being imposed on any system, and (iii) the licensee will be fully compensated for its costs. Reasonable industry practice as developed in the area from time to time will satisfy this provision.
- (3) The licensee currently has on file, and may hereafter file, with the Federal Energy Regulatory Commission contracts with neighboring entity(ies) providing for the sale and exchange of short-term power and energy, limited term power and energy, economy energy, non-displacement energy, and emergency capacity and energy. The Licensee will enter into contracts providing for the same or for like transactions with any neighboring entity on terms which enable the Licensee to recover the full costs allocable to such transaction.
- (4) The licensee currently sells capacity and energy in bulk on a full requirements basis to several entities engaging in the distribution of electric power at retail. In addition, the licensee supplies electricity directly to ultimate users in a number of municipalities. Should any such entity(ies) or municipality(ies) desire to become a neighboring entity as defined in subparagraph (1)(b) hereof (either alone or through combination with others), the licensee will assist in facilitating the necessary transition through the sale of partial requirements firm power and energy to the extent that, except for such transition, the licensee would otherwise be supplying firm power and energy. The provision of such firm partial requirements service shall be under such rates, terms and conditions as shall be found by the Federal Energy Regulatory Commission to

provide for the recovery of the licensee's cost. The licensee will sell capacity and energy in bulk on a full requirements basis to any municipality currently served by the licensee when such municipality lawfully engages in the distribution of electric power at retail.

- (5) (a) The licensee will facilitate the exchange of electric power in bulk in wholesale transactions over its transmission facilities (1) between or among two or more neighboring entities including distribution systems with which it is interconnected or may be interconnected in the future, and (2) between any such entity(ies) and any other electric system engaging in bulk power supply between whose facilities the licensee's transmission lines and other transmission lines would form a continuous electric path, provided that permission to utilize such other transmission lines has been obtained. Such transaction shall be undertaken provided that the particular transaction reasonably can be accommodated by the licensee's transmission system from a functional and technical standpoint and does not constitute the wheeling of power to a retail customer. Such transmission shall be on terms that fully compensate the licensee for its cost. Any entity(ies) requesting such transmission arrangements shall give reasonable notice of its (their) schedule and requirements.
  - (b) The licensee will include in its planning and construction program sufficient transmission capacity as required for the transactions referred to in subparagraph (a) of this paragraph, provided that (1) the neighboring entity(ies) gives the licensee sufficient advance notice as may be necessary reasonably to accommodate its (their) requirements from a functional and technical standpoint and (2) that such entity(ies) fully compensate the licensee for its cost. In carrying out this subparagraph (b), however, the licensee shall not be required to construct or add transmission facilities which (a) will be of no demonstrable present or future benefit to the licensee, or (b) which could be constructed by the requesting entity(ies) without duplicating any portion of the licensee's existing transmission lines, or (c) which would jeopardize the licensee's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements. Where regulatory or environmental approvals are required for the construction or addition of transmission facilities needed for the transactions referred to in subparagraph (a) of this paragraph it shall be the responsibility of the entity(ies) seeking the transaction to participate in obtaining such approvals, including sharing in the cost thereof.
- (6) To increase the possibility of achieving greater reliability and economy of electric generation and transmission facilities, the licensee will discuss load projections and system development plans with any neighboring entity(ies).

- (7) When the licensee's plans for future nuclear generating units (for which application will hereafter be made to the Nuclear Regulatory Commission) have reached the stage of serious planning, but before firm decisions have been made as to the size and desired completion date of the proposed nuclear units, the licensee will notify all neighboring entities including distribution systems with peak loads smaller than the licensee's that the licensee plans to construct such nuclear units. Neither the timing nor the information provided need be such as to jeopardize obtaining the required site at the lowest possible cost.
- (8) The foregoing commitments shall be implemented in a manner consistent with the provisions of the Federal Power Act and all other lawful local, state and Federal regulation and authority. Nothing in these commitments is intended to determine in advance the resolution of issues which are properly raised at the Federal Energy Regulatory Commission concerning such commitments, including allocation of costs or the rates to be charged. The licensee will negotiate (including the execution of a contingent statement of intent) with respect to the foregoing commitments with any neighboring entity including distribution systems where applicable engaging in or proposing to engage in bulk power supply transactions, but the licensee shall not be required to enter into any final arrangement prior to resolution of any substantial questions as to the lawful authority of an entity to engage in the transactions.

In addition, the licensee shall not be obligated to enter into a given bulk power supply transaction if: (1) to do so would violate, or incapacitate it from performing, any existing lawful contracts it has with a third party; (2) there is contemporaneously available to it a competing or alternative arrangement which affords it greater benefits which would be mutually exclusive of such arrangement; (3) to do so would adversely affect its system operations or the reliability of power supply to its customers, or (4) if to do so would jeopardize the licensee's ability to finance or construct on reasonable terms facilities needed to meet its own anticipated system requirements.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

April 3, 2006

Docket Nos. 50-413  
50-414

AMENDMENT TO INDEMNITY AGREEMENT NO. B-100  
AMENDMENT NO. 10

Effective April 3, 2006, Indemnity Agreement No. B-100, between Duke Energy Corporation, North Carolina Municipal Power Agency Number 1, North Carolina Electric Membership Corporation, Saluda River Electric Cooperative, Inc., Piedmont Municipal Power Agency and the Nuclear Regulatory Commission, dated January 3, 1984, as amended, is hereby further amended as follows:

Delete the name "Duke Energy Corporation" in the Indemnity Agreement wherever it appears and substitute the name "Duke Power Company LLC"

FOR THE UNITED STATES NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script, appearing to read "Chris for", written over a horizontal line.

Christopher I. Grimes, Director  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

U.S. Nuclear Regulatory Commission  
March 14, 2007  
Enclosure 2

**ATTACHMENT 2d**

**OCONEE INDEPENDENT SPENT FUEL STORAGE INSTALLATION**

**PROPOSED AMENDED – RETYPED**

**NRC LICENSE NO. SNM-2503**

1. Duke Energy Carolinas, LLC
  2. 526 South Church Street  
PO Box 1006  
Charlotte, North Carolina 28201-1006
  3. License Number: SNM-2503  
Amendment No. \_\_\_\_\_
  4. Expiration Date: January 31, 2010
  5. Docket Number: 72-4
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A. 9. Authorized Use

For use in accordance with the condition in this license and the attached Technical Specifications. The basis for this license was submitted in the Safety Analysis Report (SAR) dated March 31, 1988, as supplemented August 16, September 19, October 11, and November 23, 1988; February 7, April 11, May 9, June 5, and June 8, 1989; June 29, 1990; January 10, 1991; March 9, and November 16, 1993; January 19, 1998; July 10, October 31 (2 letters), November 1 and 26, and December 10, 2001; August 5, November 28 and December 14, 2005, February 6, 2006, and \_\_\_\_\_

(to be issued by NRC)

(to be issued by NRC)

Amendment No. \_\_\_\_\_, dated \_\_\_\_\_

APPENDIX A

DUKE ENERGY CAROLINAS, LLC  
OCONEE  
INDEPENDENT SPENT FUEL STORAGE INSTALLATION  
TECHNICAL SPECIFICATIONS FOR  
MATERIALS LICENSE SNM-2503

Amendment No. \_\_\_\_

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# 1 INTRODUCTION

These Technical Specifications govern the safety of the receipt, possession, and storage of irradiated nuclear fuel at the Oconee Independent Spent Fuel Storage Installation and the transfer of such irradiated nuclear fuel to and from Units 1, 2, and 3 of the Oconee Nuclear Station and the Oconee Independent Spent Fuel Storage Installation.

## 1.1 Definitions

The following definitions apply for the purpose of these Technical Specifications.

- a. Administrative Controls: Provisions relating to organization and management procedures, recordkeeping, review and audit, and reporting necessary to assure that the operations involved in the storage of spent fuel at the Oconee ISFSI are performed in a safe manner.
- b. Design Features: Features of the facility associated with the basic design such as materials of construction, geometric arrangements, dimensions, etc., which, if altered or modified, could have a significant effect on safety.
- c. Functional and Operating Limits: Limits on fuel handling and storage conditions necessary to protect the integrity of the stored fuel, to protect employees against occupational exposures, and to guard against the uncontrolled release of radioactive materials.
- d. Fuel Assembly: The unit of nuclear fuel in the form that is charged or discharged from the core of a light-water reactor (LWR). Normally, will consist of a rectangular arrangement of fuel rods held together by end fittings, spacers, and tie rods.
- e. Limiting Conditions: The minimum or maximum functional capabilities or performance levels of equipment required for safe operation of the facility.

- f. Surveillance Requirements: Surveillance requirements include: (i) inspection, test, and calibration activities to ensure that the necessary integrity of required systems, components, and the spent fuel in storage is maintained; (ii) confirmation that operation of the installation is within the required functional and operating limits; and (iii) a confirmation that the limiting conditions required for safe storage are met.
- g. Tonne (Te): One metric ton, equivalent to 1,000 kg or 2,204.6 lb. Fuel quantity is expressed in terms of the heavy metal content of the fuel measured in metric tons and written TeU.
- h. Loading Operations: Loading Operations include all cask preparation steps prior to cask transport from the fuel building area.

## 1.2 Preoperational License Conditions

The license issued under Part 72 shall not allow the loading of spent nuclear fuel until such time as the following preoperational license conditions are satisfied:

1. A training exercise (Dry Run) of all dry shielded canister (DSC), transfer cask (TC) and horizontal storage module (HSM) loading and handling activities shall be held which shall include but not be limited to those listed and which need not be performed in the order listed:
  - a. Loading DSC in cask.
  - b. DSC (length may be truncated) drying, welding, and cover gas backfilling operations.
  - c. Moving cask to and aligning and docking with NSM on the storage pad.
  - d. Insertion of DSC in HSM.
  - e. Withdrawal of DSC from HSM.

- f. Returning the cask to the decontamination pit.
  - g. Removing the cask lid and cutting open the DSC (length may be truncated) assuming fuel cladding failure.
  - h. Removing the DSC from the cask.
  - i. All dry run activities shall be done using written procedures.
  - j. The activities listed above shall be performed or modified and performed to show that each activity can be successfully executed prior to actual fuel loading.
2. The Oconee Nuclear Station Emergency Plan shall be reviewed and modified as required to include the ISFSI. (Abnormal event notifications will have to be updated for ISFSI events.)
3. As required by Subpart H, a Physical Security Plan shall be established to implement a physical protection program for the ISFSI. Further, the Oconee Nuclear Station Safeguards Contingency Plan and the Guard Training and Qualification Plan shall be modified as necessary to incorporate commitments to support the ISFSI.
4. A training module shall be developed for the Oconee Nuclear Station Training Program establishing an ISFSI Training and Certification Program which will include the following:
- a. DSC, TC and HSM Design (overview)
  - b. ISFSI Facility Design (overview)
  - c. ISFSI Safety Analysis (overview)
  - d. Fuel loading and DSC and TC handling procedures and abnormal procedures
  - e. ISFSI License (overview).

5. The Oconee Nuclear Station health physics procedures shall be reviewed and modified as required to include the ISFSI.
6. The Oconee Nuclear Station Administrative Procedures shall be reviewed and modified as required to include the ISFSI.
7. A procedure shall be developed for the documentation of the characterizations performed to select spent fuel to be stored in the canisters and modules. Such procedure shall include independent verification of fuel assembly selection by an individual other than the original individual making the selection.
8. Written operating and abnormal/emergency procedures shall be prepared.

### 1.3 General License Conditions

#### 1.3.1 Quality Assurance

The design, construction, and operation of the ISFSI shall be accomplished in accordance with the U.S. Nuclear Regulatory Commission (NRC) Regulations specified in Title 10 of the U.S. Code of Federal Regulations. All commitments to the applicable NRC Regulatory Guides and to engineering and construction codes shall be carried out.

#### 1.3.2 Fuel and Cask Handling Activities

Fuel and TC movement and handling activities which are to be performed in the Oconee Nuclear Station Fuel Handling Building will be governed by the requirements of the Oconee Nuclear Station Facility Operating Licenses (DRP-38, -47 and -55) and associated Technical Specifications.

#### 1.3.3 Administrative Controls

The Oconee ISFSI is located on the Oconee Nuclear Station site and will be managed and operated by the Duke Energy Carolinas, LLC staff. The administrative controls shall be in accordance with the requirements of the Oconee Nuclear Station Facility Operating Licenses (DPR-38,-47 and -55) and associated Technical Specifications.

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## 2 FUNCTIONAL AND OPERATING LIMITS

### 2.1 Fuel to be Stored at ISFSI

#### 2.1.1 Specification

The spent nuclear fuel to be received and stored at the Oconee ISFSI shall meet the following requirements:

- (1) Only fuel irradiated at the Oconee Units Nos. 1, 2, or 3 may be used.
- (2) Maximum initial enrichment shall not exceed 4.0 weight percent U-235.
- (3) Maximum assembly average burnup shall not exceed 40,000 megawatt-days per metric ton uranium or shall meet the alternative specifications set forth in Section 4.3.1 of these Technical Specifications.
- (4) Maximum heat generation rate shall not exceed 0.66 kilowatt per fuel assembly.
- (5) Fuel shall have cooled a minimum of 10 years after reactor discharge and prior to storage in the Oconee ISFSI or shall meet the alternative specifications set forth in Section 4.3.1 of these Technical Specifications.
- (6) Fuel shall be intact unconsolidated fuel.
- (7) Maximum assembly mass including control components shall not exceed 763 kilograms.
- (8) The nominal load per spacer disk shall not exceed 109 kilograms per assembly per disk.
- (9) Fuel assemblies known or suspected to have structural defects sufficiently severe to adversely affect fuel handling and transfer capability unless canned shall not be loaded into the DSC for storage.

- (10) Immediately prior to insertion of a spent fuel assembly into a DSC, the identity of the assembly shall be independently verified by two individuals.
- (11) Prior to insertion of a spent fuel assembly into a DSC, a dissolved boron level in water in the reactor pool and introduced into the DSC cavity shall be independently verified as being  $\geq 1810$  ppm by two individuals.

### 2.1.2 Basis

The design criteria and subsequent safety analysis of the Oconee ISFSI assumed certain characteristics and limitations for the fuels that are to be received and stored. Specification 2.1.1 assures that these bases remain valid by defining the source of the spent fuel, maximum initial enrichment, irradiation history, maximum thermal heat generation, and minimum post irradiation cooling time.

The radiological analyses are based on a radiation spectrum for 4.0 weight percent U-235 fuel at 40,000 MWD/MTU burnup. Compliance with the enrichment and burnup limits will ensure that the Dry Storage Casks design criteria are not exceeded. In addition, design criteria will not be exceeded for fuel not specifically meeting the above requirements for burnup and post irradiation time if the alternative requirements set forth in Section 4.3.1 of these Technical Specifications are met.

## 2.2 Dry Shielded Canister (DSC)

### 2.2.1 Specification

The DSCs used to store spent nuclear fuel in HSMs at the Oconee ISFSI shall have the operating limits shown in Table 2-1.

### 2.2.2 Basis

The design criteria and subsequent safety analysis of the DSC assumed certain characteristics and operating limits for the use of the DSC. This specification assures that those design criteria are not exceeded.

TABLE 2-1

OPERATING LIMITS

	<u>Operating Limit</u>
Max. Lifting Height with a Non-Redundant Lifting Device for Transfer Cask Outside the Fuel Storage Buildings	80 inches
Dose Rate	
. Surface of NSM	≤ 200 mrem/hr
(These limits conform to transportation cask dose rate limits. Actual dose rates for most surface locations on the loaded HSM will be significantly less.)	
DSC Tightness	
(Standard He-Leak Rate)	
. Top Shield Plug Closure Weld	≤ 10 <sup>-4</sup> atm-cc/s
. Siphon and Vent Port Cover Welds	≤ 10 <sup>-4</sup> atm-cc/s
. Top Cover Plate Weld	Dye Penetrant Test (ASME B&PV Code Section III, Division 1, Subsection NB-5350 (1983) Liquid Penetrant Acceptance Standards)
Max. Specific Power of One Fuel Assembly*	0.66 kW
Helium Pressure Limit (DSC Cavity)	2.5 psig ±2.5 psig
Pressure during Canister Drying (DSC Cavity)	≤ 3 torr (for not less than 30 min)
DSC Water Moderator during Loading and Unloading of Fuel Assemblies	≥ 1810 ppm (Boron concentration)
Time Limit to Complete DSC Draining after Removal from Spent Fuel Pool	≤ 50 hours

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\* This limit may be analytically determined.

## 2.3 Dry Shielded Canister Internal Cover Gas

### 2.3.1 Specification

The DSC shall be backfilled with helium.

### 2.3.2 Basis

The thermal analysis performed for the DSC assumes the use of helium as a cover gas. In addition, the use of an inert gas (helium) is to ensure long-term maintenance of fuel clad integrity.

## 2.4 Dry Shielded Canister Exterior Surface Contamination

### 2.4.1 Specification

Removable contamination on the DSC exterior shall be less than 22,000 dpm/100 cm<sup>2</sup> from beta, gamma sources and 2,200 dpm/100 cm<sup>2</sup> from alpha sources. Surveillance requirement 4.5.1 ensures that this requirement will be met.

### 2.4.2 Basis

Compliance with this limit ensures that the offsite dose limits in 10 CFR Part 20, 10 CFR Part 50 - Appendix 1, 10 CFR Part 72, and 40 CFR Part 190 are met.

## 2.5 Dry Shielded Canister Moderator

### 2.5.1 Specification

The DSC cavity shall be moderated only by supplied water with a boron concentration greater than or equal to 1,810 ppm.

### 2.5.2 Basis

This specification assures subcriticality of the DSC during fuel loading and unloading.

## 2.6 Dry Shielded Canister Draining

### 2.6.1 Specification

The time to complete draining of the DSC cavity of water moderator shall not exceed 50 hours after removal of the DSC from a spent fuel pool.

### 2.6.2 Basis

This specification assures subcriticality of the DSC after fuel loading.

### 3 LIMITING CONDITIONS

#### 3.1 Limiting Condition - Handling Height

##### 3.1.1 Specification

This specification applies to handling of a cask being used for spent fuel storage outside of the Fuel Handling Building and its cask decontamination area.

- a. The TC shall not be handled at a height of greater than 80 inches.
- b. In the event of a cask drop from a height greater than 15 inches, fuel in a DSC in the cask shall be removed and inserted in a replacement DSC or, if damaged, returned to the spent fuel pool. The damaged DSC shall be decontaminated, removed from service and disposed of, as may be appropriate.

##### 3.1.2 Basis

The drop analyses performed for cask drop incidents for a DSC loaded in a TC confirm that drops up to 80 inches can be sustained without unacceptable damage to the cask and DSC. This limiting condition ensures that the handling height limits will not be exceeded at the storage pad or in transit to and from the spent fuel pool. Design of the DSC is to ASME B & PV Code Section III, Division 1, Subsection N8 for Class 1 components, Service Level D requirements.

## 4 SURVEILLANCE REQUIREMENTS

Requirements for surveillance of cask internal pressure, contamination levels, DSC weld leak rates, and fuel related parameters are contained in this section. These requirements are summarized in Table 4-1 from details contained in Sections 4.1 through 4.4.

TABLE 4-1

SURVEILLANCE REQUIREMENTS SUMMARY

<u>Section</u>	<u>Quantity or Item</u>	<u>Period</u>
4.1.1	Surveillance of the HSM Air Inlets and Outlets	D
4.2.1	Limits for Maximum Air Temperature Rise after Storage	S
4.3.1	Fuel Parameters	P
4.4.1	DSC and Cask Contamination	B
4.5.1	DSC Weld Testing	L
4.6.1	HSM Inspection	F
4.7.1	DSC Pressure	L

D - Daily on a normal basis, within 24 hours after an accident

S - At initial storage, 24 hours later, 7 days later

P - Prior to cask loading

B - Before and after cask loading and unloading

L - During loading operations

F - Five years and 10 years after initial storage

## 4.1 Surveillance of the HSM Air Inlets and Outlets

The HSM shall be inspected to verify that the air inlets and outlets are free from obstructions.

### 4.1.1 Specifications

Normal visual inspection frequency	Daily
Accident visual inspection frequency	Within 24 hours after an accident

### 4.1.2 Basis

To assure that no HSM air inlets or outlets are plugged for more than 48 hours and to assure that blockage of inlets and outlets due to an accident will be removed in less than 48 hours. Analysis in Chapter 8 of the Oconee ISFSI SAR showed that no temperature limits are exceeded if a module is completely plugged for 48 hours. Therefore, for normal operations, an inspection of the inlets and outlets once per day will assure that any local obstructions can be removed. Likewise, after an accident the HSMs should be examined within 24 hours to assure that air flow can be restored within 48 hours after the accident.

## 4.2 Limits for the Maximum Air Temperature Rise

### 4.2.1 Specification

Maximum air temperature rise shall not exceed 60°F (33.3°C). The maximum air temperature rise from HSM inlet to outlet shall be checked at the time the DSC is stored in the HSM, again 24 hours later, and again after 7 days.

### 4.2.2 Basis

The 60°F (33.3°C) temperature rise was selected to limit the hottest rod in the DSC to below 644°F (340°C) at 70°F (21°) ambient air inlet temperature. The expected temperature rise is less than 60°F (i.e., 49°F (27.2°C); see Table 8.1-2

of the NUHOMS-24P topical report) and hence, the current design provides adequate margin for this specification. If the temperature rise is within the specifications, then the HSM and DSC are performing as designed and no further temperature measurements are required during normal surveillance.

#### 4.3 Fuel Parameters

##### 4.3.1 Specifications

Type	15 x 15 PWR Fuel
Burnup	≤40,000 MWd/MT
Initial (Beginning of Life) Enrichment	≤4.0 wt% U-235
Heat generation	≤ 0.66 kW/fuel assembly
Fuel cooling period	≥ 10 years
Total fuel assembly mass including control components	≤ 763 kg
Fuel assembly mass per space disk per assembly	≤ 109 kg

Any fuel not specifically filling the above requirements for burnup and post irradiation time may still be stored if all the following requirements are met:

Decay Power Per Assembly	≤ 0.66 kW
Neutron Source Per DSC	≤ 3.715 x 10 <sup>9</sup> n/sec/DSC, with spectrum bounded by Table 3.1-4 of the NUHOMS-24P Topical Report
Gamma Source Per DSC	≤3.85 x 10 <sup>16</sup> MeV/sec/DSC with spectrum bounded by that shown in Table 3.1-4 of the NUHOMS-24P Topical Report

This specification is applicable to all fuel to be stored in the ISFSI. This information shall be documented for each fuel assembly to be loaded in a DSC.

#### 4.3.2 Basis

This specification was derived to insure that the peak fuel rod temperatures, surface doses, nuclear subcriticality and mass are below the design values.

### 4.4 DSC and Cask Contamination

#### 4.4.1 Specification

##### 4.4.1.1

Prior to loading, the top 6 inches of the cask interior shall be smeared to ensure that removal contamination levels on the interior surfaces of the cask, excluding the drain and vent lines A are less than 22,000 dpm/100 cm<sup>2</sup> from beta, gamma sources and 2,200 dpm/100 cm<sup>2</sup> from alpha sources.

##### 4.4.1.2

After cask loading, but prior to moving the cask to the HSM, the top of the sealed DSC shall be smeared to ensure that removable contamination levels are less than 22,000 dpm/100 cm<sup>2</sup> from the beta, gamma sources and 2,200 dpm/100 cm<sup>2</sup> from alpha sources. This will ensure that the limits in 2.4.1 are met.

##### 4.4.1.3

After cask unloading, the interior surfaces of the cask shall be smeared to ensure that removable contamination levels on the interior surfaces of the cask, excluding the drain and vent lines, are less than 22,000 dpm/100 cm<sup>2</sup> from beta, gamma sources and 2,200 dpm/100 cm<sup>2</sup> from alpha sources. This will ensure that the limits in 2.4.1 are met.

#### 4.4.2 Basis

This surveillance requirement will ensure compliance with the DSC surface contamination limits of 2.4.1.

### 4.5 DSC Weld Testing

#### 4.5.1 Specification

During DSC loading operations, the top shield plug closure and the siphon and vent port cover welds shall be tested using a helium leak detector to ensure that, for each, leak tightness is less than or equal to  $10^{-4}$  atm-cc/s. The DSC top cover plate weld shall be dye penetrant tested.

#### 4.5.2 Basis

The safety analysis of leak tightness of the DSC as discussed is based on a weld being leak tight to  $10^{-4}$  atm-cc/s. This check is done to ensure compliance with this design criterion.

### 4.6 HSM Inspection

#### 4.6.1 Specification

At intervals of 5 and 10 years after initial storage there shall be a visual inspection of the interior concrete surfaces of the first HSM loaded, in particular the top surface above the heat shield, to assure that no significant deterioration of the concrete has occurred. Only the first HSM at the site need be inspected.

#### 4.6.2 Basis

This surveillance provides added assurance that the structural properties of the HSM concrete will not be impaired as a result of high concrete surface temperatures during early years of fuel storage to the point that the shielding or structural integrity provided by the HSM is significantly affected.

## 4.7 DSC Pressure

### 4.7.1 Specification

The helium backfill pressure in the DSC cavity shall be 2.5 psig  $\pm$  2.5 psig.

### 4.7.2 Basis

The value of 2.5 psig was selected to assure that the pressure within the DSC is within pressure design limits during any expected normal operating condition.

The Oconee ISFSI design approval was based upon review of specific design drawings, some of which have been deemed appropriate for inclusion in the Oconee ISFSI Safety Evaluation Report (SER). Drawings listed in Appendix B of the Oconee ISFSI SER have been reviewed and approved by the NRC. These drawings may be revised under the provisions of 10 CFR 72.48 as appropriate.

## 5.1 Site

### 5.1.1 Specification

The Oconee ISFSI is located on the Oconee Nuclear Station site as described in Section 2.1.2 of the Oconee ISFSI SAR.

## 5.2 Cask Design

### 5.2.1 Specification

The TC used in the Oconee ISFSI to transfer the DSC to the HSM is described in Section 1.3.1.3 of the Oconee ISFSI SAR.

## 5.3 DSC Design

### 5.3.1 Specification

The DSC is described in Section 1.3.1.1 of the Oconee ISFSI SAR.

All components comprising the DSC pressure boundary shall be provided from ASME SA 240, Type 304 stainless steel or its equivalent.

## 5.4 HSM Design

### 5.4.1 Specification

The HSM is described in Section 1.3.1.2 of the Oconee ISFSI SAR.

The HSM shall be constructed of concrete with a compressive strength greater than or equal to 5000 psi (cured for 28 days; 90 percent of all specimens tested) and a minimum unit weight of 140 pounds per cubic foot. The concrete shall be composed of Type II Portland cement meeting the requirements of ASTM C150. The aggregate shall meet the specifications of ASTM C33.

## 5.5 Storage Pads

### 5.5.1 Specification

ISFSI storage pads are reinforced concrete pads nominally 3-feet thick. Design criteria of the storage pads are discussed in Section 2.5.5 of the Oconee ISFSI SAR.

## 5.6 Total Storage Capacity

### 5.6.1 Specification

The total storage capacity of the Oconee ISFSI is 996.86 TeU. This corresponds to 88 modules and canisters each containing 24 fuel assemblies.

Amendment No. 4, January 5, 1994

APPENDIX B

DUKE ENERGY CAROLINAS, LLC  
OCONEE  
INDEPENDENT SPENT FUEL STORAGE INSTALLATION  
SAFEGUARDS LICENSE CONDITIONS  
MATERIALS LICENSE SNM-2503

Amendment No. \_\_\_\_

1.1 PHYSICAL PROTECTION REQUIREMENTS FOR  
SPENT NUCLEAR FUEL IN DRY STORAGE

- 1.1.A The licensee shall establish and maintain a physical protection program in accordance with the provisions of his physical security plan entitled, "Oconee Nuclear Station, Independent Spent Fuel Storage Installation (ISFSI) Security Program, Revision 4," submitted by letter dated, January 10, 1991, (which includes a safeguards contingency plan as Chapter 3.0); and as it may further be revised under the provisions of 10 CFR 72.44(e) and 72.186.
- 1.1.B The licensee's physical protection program shall be supported by a security organization, with personnel trained and qualified in accordance with the provisions of 10 CFR Part 73, Appendix B, as outlined in the plan published under the title, "Oconee Nuclear Station Training and Qualification Plan, Revision 9," submitted by letter dated June 25, 1990; and as it may further be revised under the provisions of 10 CFR 72.44(e) and 72.186.

Amendment No. 2 dated February 7, 1991

APPENDIX C

DUKE ENERGY CAROLINAS, LLC  
OCONEE  
INDEPENDENT SPENT FUEL STORAGE INSTALLATION  
TECHNICAL SPECIFICATIONS FOR ENVIRONMENTAL PROTECTION  
MATERIALS LICENSE SNM-2503

Amendment No. \_\_\_\_

## 1 INTRODUCTION

These technical specifications govern the protection of the environment during the receipt, possession, storage, and transfer of spent fuel at the Oconee ISFSI.

### 1.1 Radioactive Material Releases

#### 1.1.1 Specification - (pursuant to § 72.44(d))

Not applicable.

#### 1.1.2 Basis

Specifications are required pursuant to §72.44(d), stating limits on the release of radioactive materials for compliance with limits of 10 CFR Part 20 and "as low as is reasonably achievable objective" for effluents. DSC surface contamination within the limits of 2.4.1 ensures that the offsite dose will be inconsequential. In addition, there are no normal or off-normal releases or effluents expected from the double-sealed storage canisters of the ISFSI.

### 1.2 Effluent Control and Waste Treatment

#### 1.2.1 Specification - (pursuant to § 72.44(d)(1))

Not applicable.

#### 1.2.2 Basis

Specifications are required pursuant to § 72.44(d)(1) for operating procedures, for control of effluents, and for the maintenance and use of equipment in radioactive waste treatment systems to meet the requirements of § 72.104. However, there are, by the design of the sealed storage canisters at the ISFSI, no effluent releases, and all Oconee site TC loading and unloading operations and waste treatment therefrom will occur at the Oconee Nuclear Station under the specifications of its operating licenses.

### 1.3 Environmental Monitoring Program

#### 1.3.1 Specification

The licensee shall include the Oconee ISFSI in the environmental monitoring for the Oconee Nuclear Station.

#### 1.3.2 Basis

An environmental monitoring program is required pursuant to § 72.44(d)(2).

### 1.4 Annual Environmental Report

#### 1.4.1 Specification

The annual radioactive effluent release reports under 10 CFR Part 50 license requirements for the Oconee Nuclear Station shall specify the quantity, if any, of each of the principal radionuclides released to the environment in liquid and in gaseous effluents during the ISFSI operation and such other information as may be required by the Commission to estimate maximum potential radiation dose commitment to the public resulting from effluent release. A copy of this report shall be submitted to the NRC Region II office and to the Director, Office of Nuclear Material Safety and Safeguards.

#### 1.4.2 Basis

The report of Specification 1.4.1 is required pursuant to 10 CFR § 72.44(d)(3).

Amendment No. 7