

August 6, 2007

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

SUBJECT: CATAWBA NUCLEAR STATION, UNITS 1 AND 2, "NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENTS TO FACILITY OPERATING LICENSES, PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION, AND OPPORTUNITY FOR A HEARING," FOR REVISION TO THE TECHNICAL SPECIFICATIONS CONCERNING MODIFICATIONS TO THE EMERGENCY CORE COOLING SYSTEM SUMPS (TAC NOS. MD5163 AND MD5164)

Dear Mr. Morris:

Enclosed is a copy of a "Notice of Consideration of Issuance of Amendments to Facility Operating Licenses, Proposed No Significant Hazards Consideration Determination, and Opportunity for a Hearing," related to the application dated March 29, 2007.

The proposed amendments would revise the Catawba Nuclear Station, Units 1 and 2, Technical Specification Section 3.5.2.8, and the associated Bases and authorize changes to the Updated Final Safety Analysis Report concerning modifications to the emergency core cooling system sumps.

This Notice has been forwarded to the Office of Federal Register for publication.

Sincerely,

**/RA/**

John F. Stang, Senior Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-413 and 50-414

Enclosure:  
*Federal Register* Notice

cc w/encl: See next page

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Catawba Nuclear Station, Units 1 & 2

Page 2 of 2

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UNITED STATES NUCLEAR REGULATORY COMMISSION

DUKE POWER COMPANY LLC

DOCKET NOS. 50-413 AND 50-414

NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENTS TO  
FACILITY OPERATING LICENSES, PROPOSED NO SIGNIFICANT HAZARDS  
CONSIDERATION DETERMINATION, AND OPPORTUNITY FOR A HEARING

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of amendments to Facility Operating License Nos. NPF-35 and NPF-52 issued to Duke Power Company LLC (the licensee) for operation of the Catawba Nuclear Station, Units 1 and 2, respectively, located in York County, South Carolina.

The proposed amendment would revise the Catawba Nuclear Station, Units 1 and 2, Technical Specification Section 3.5.2.8, and the associated Bases and authorize changes to the Updated Final Safety Analysis Report concerning modifications to the emergency core cooling system sumps.

Before issuance of the proposed license amendment, the Commission will have made findings required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations.

The Commission has made a proposed determination that the amendment request involves no significant hazards consideration. Under the Commission's regulations in Title 10 of the CODE OF FEDERAL REGULATIONS (10 CFR), Part 50, Section 50.92, this means that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously

evaluated; or (3) involve a significant reduction in a margin of safety. As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

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

Response: No.

Implementation of the proposed amendment does not significantly increase the probability or the consequences of an accident previously evaluated. The containment sump strainer structures function to mitigate the consequences of an accident. As stated in Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors," the current 50% screen blockage assumption identified in Regulatory Guide (RG) 1.82, Rev. 0, "Sumps for Emergency Core Cooling and Containment Spray Systems," should be replaced with a more comprehensive means of assessing debris effects on a plant-specific basis. The 50% screen blockage assumption did not require a plant-specific evaluation of the debris-blockage potential and usually results in a non-conservative analysis for screen blockage effects.

As stated in Duke's [the licensee's] letters of March 1 and September 1, 2005, Catawba confirmed the Emergency Core Cooling System (ECCS) and Containment Spray System (CSS) recirculation functions under debris loading conditions would be in compliance with the regulatory positions listed in the Regulatory Requirements Section of Generic Letter 2004-02. The design of the modified containment sump structure will accommodate the effects of debris loading as determined by a baseline and refined evaluations specific to Catawba. These evaluations use the guidance of NEI [Nuclear Energy Institute] 04-07, "Pressurized Water Reactor Sump Performance Evaluation Methodology, Revision 0," dated December 2004, as amended by the NRC's [Nuclear Regulatory Commission's] Safety Evaluation Report.

Removal of the implied licensing basis requirement to physically separate the containment sump into two halves or provide ECCS train separation within the same containment sump will not impact the assumptions made in Chapter 15 of the Catawba UFSAR [Updated Final Safety Analysis Report]. There are no changes in any failure mode or effects analysis associated with this change. Since there are no credible failures which could result in the introduction of unfiltered debris within the strainer assembly beyond the design limits, the need to maintain this physical separation is not warranted.

Although the configurations of the existing containment sump trash racks and screen and the replacement sump strainer assemblies are different, they serve the same fundamental purpose of passively removing debris from the sump's suction supply of the supported system pumps. Removal of trash racks does not

impact the adequacy of the pump NPSH [net positive suction head] assumed in the safety analysis. Likewise, the change does not reduce the reliability of any supported systems or introduce any new system interactions. The greatly increased surface area of the new strainer is designed to reduce head loss and reduce the approach velocity at the strainer face significantly, decreasing the risk of impact from large debris entrained in the sump flow stream.

Thus, based on the above, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

Response: No.

The proposed licensing basis changes will not create the possibility of a new or different kind of accident. The ECCS containment sump serves as a portion of the ECCS accident mitigation system. It is, therefore, not an accident initiator. Duke's evaluation concludes that there are no credible failures which could result in the introduction of debris within the strainer assembly and clog downstream components. Accordingly, there is no change in the consequences of an accident previously evaluated in the UFSARs.

Catawba is replacing the ECCS Sump trash racks and screens with strainer assemblies in support of the response to Generic Letter 2004-02. These strainer assemblies are passive components in standby safety systems used for accident mitigation. As such, they cannot be accident initiators.

A change to Catawba Technical Specification Surveillance Requirement 3.5.2.8 does not alter the nature of events postulated in the Safety Analysis Report nor do they introduce any unique precursor mechanisms.

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

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

Response: No.

Margin of safety is related to the confidence in the ability of the fission product barriers to perform their design functions during and following an accident situation. These barriers include the fuel cladding, the reactor coolant system, and the containment system. The performance of the fuel cladding, the reactor coolant system, and the containment system will not be impacted by the proposed change.

Nuclear safety is greatly enhanced by the proposed licensing basis changes by ensuring consistent interpretation and implementation of their requirements.

As previously stated, Duke's evaluation concludes that there are no credible failure mechanisms which could result in the introduction of debris above design limits within the strainer assembly and clog downstream components. The partitioning of the containment sump into two halves is therefore unnecessary and does not result in any increase in safety or protection.

The proposed change to Technical Specification SR [Surveillance Requirement] 3.5.2.8 will have no effect on the manner in which safety limits, limiting safety system settings, or limiting conditions for operation are determined nor will there be any effect on those plant systems necessary to assure the accomplishment of protective functions. The proposed change does not adversely affect the fuel, fuel cladding, Reactor Coolant System, or containment integrity.

Thus, it is concluded that the proposed changes do not involve a significant reduction in the margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

The Commission is seeking public comments on this proposed determination. Any comments received within 30 days after the date of publication of this notice will be considered in making any final determination.

Normally, the Commission will not issue the amendment until the expiration of 60 days after the date of publication of this notice. The Commission may issue the license amendment before expiration of the 60-day period provided that its final determination is that the amendment involves no significant hazards consideration. In addition, the Commission may issue the amendment prior to the expiration of the 30-day comment period should circumstances change during the 30-day comment period such that failure to act in a timely way would result, for example, in derating or shutdown of the facility. Should the Commission take action prior to the expiration of either the comment period or the notice period, it will publish in the *Federal Register* a notice of issuance. Should the Commission make a final No Significant

Hazards Consideration Determination, any hearing will take place after issuance. The Commission expects that the need to take this action will occur very infrequently.

Written comments may be submitted by mail to the Chief, Rulemaking, Directives and Editing Branch, Division of Administrative Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and should cite the publication date and page number of this *Federal Register* notice. Written comments may also be delivered to Room 6D59, Two White Flint North, 11545 Rockville Pike, Rockville, Maryland, from 7:30 a.m. to 4:15 p.m. Federal workdays. Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR), located at One White Flint North, Public File Area O1 F21, 11555 Rockville Pike (first floor), Rockville, Maryland.

The filing of requests for hearing and petitions for leave to intervene is discussed below.

Within 60 days after the date of publication of this notice, the licensee may file a request for a hearing with respect to issuance of the amendment to the subject facility operating license and any person whose interest may be affected by this proceeding and who wishes to participate as a party in the proceeding must file a written request for a hearing and a petition for leave to intervene. Requests for a hearing and a petition for leave to intervene shall be filed in accordance with the Commission's "Rules of Practice for Domestic Licensing Proceedings" in 10 CFR Part 2. Interested persons should consult a current copy of 10 CFR 2.309, which is available at the Commission's PDR, located at One White Flint North, Public File Area O1F21, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible from the Agencywide Documents Access and Management System's (ADAMS) Public Electronic Reading Room on the Internet at the NRC Web site, <http://www.nrc.gov/reading-rm/doc-collections/cfr/>. If a request for a hearing or petition for leave to intervene is filed by the above date, the Commission or a presiding officer designated by the Commission or by the Chief Administrative Judge of the Atomic Safety and Licensing

Board Panel, will rule on the request and/or petition; and the Secretary or the Chief Administrative Judge of the Atomic Safety and Licensing Board will issue a notice of a hearing or an appropriate order.

As required by 10 CFR 2.309, a petition for leave to intervene shall set forth with particularity the interest of the petitioner in the proceeding, and how that interest may be affected by the results of the proceeding. The petition should specifically explain the reasons why intervention should be permitted with particular reference to the following general requirements: 1) the name, address and telephone number of the requestor or petitioner; 2) the nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding; 3) the nature and extent of the requestor's/petitioner's property, financial, or other interest in the proceeding; and 4) the possible effect of any decision or order which may be entered in the proceeding on the requestors/petitioner's interest. The petition must also identify the specific contentions which the petitioner/requestor seeks to have litigated at the proceeding.

Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the petitioner/requestor shall provide a brief explanation of the bases for the contention and a concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing. The petitioner/requestor must also provide references to those specific sources and documents of which the petitioner is aware and on which the petitioner intends to rely to establish those facts or expert opinion. The petition must include sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact. Contentions shall be limited to matters within the scope of the amendment under consideration. The contention must be one which, if proven, would entitle the petitioner to relief. A petitioner/requestor who fails to satisfy these requirements with respect to at least one contention will not be permitted to participate as a party.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene, and have the opportunity to participate fully in the conduct of the hearing.

If a hearing is requested, the Commission will make a final determination on the issue of no significant hazards consideration. The final determination will serve to decide when the hearing is held. If the final determination is that the amendment request involves no significant hazards consideration, the Commission may issue the amendment and make it immediately effective, notwithstanding the request for a hearing. Any hearing held would take place after issuance of the amendment. If the final determination is that the amendment request involves a significant hazards consideration, any hearing held would take place before the issuance of any amendment.

Nontimely requests and/or petitions and contentions will not be entertained absent a determination by the Commission or the presiding officer of the Atomic Safety and Licensing Board that the petition, request and/or the contentions should be granted based on a balancing of the factors specified in 10 CFR 2.309(c)(1)(i)-(viii).

A request for a hearing or a petition for leave to intervene must be filed by: 1) first class mail addressed to the Office of the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemaking and Adjudications Staff; 2) courier, express mail, and expedited delivery services: Office of the Secretary, Sixteenth Floor, One White Flint North, 11555 Rockville Pike, Rockville, Maryland, 20852, Attention: Rulemaking and Adjudications Staff; 3) E-mail addressed to the Office of the Secretary, U.S. Nuclear Regulatory Commission, [HEARINGDOCKET@NRC.GOV](mailto:HEARINGDOCKET@NRC.GOV); or 4) facsimile transmission addressed to the Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC, Attention: Rulemakings and Adjudications Staff at (301) 415-1101, verification number is (301) 415-1966. A copy of the request for hearing and petition for leave to intervene should

also be sent to the Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and it is requested that copies be transmitted either by means of facsimile transmission to 301-415-3725 or by email to [OGCMailCenter@nrc.gov](mailto:OGCMailCenter@nrc.gov). A copy of the request for hearing and petition for leave to intervene should also be sent to Ms. Lisa F. Vaughn, Associate General Counsel and Managing Attorney, Duke Energy Carolinas, LLC, 526 South Church Street, EC07H, Charlotte, North Carolina 28202, attorney for the licensee.

For further details with respect to this action, see the application for amendment dated March 29, 2007 (ADAMS Accession No. ML071020044), which is available for public inspection at the Commission's PDR, located at One White Flint North, Public File Area O1 F21, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible from the Agencywide Documents Access and Management System's (ADAMS) Public

Electronic Reading Room on the Internet at the NRC Web site, <http://www.nrc.gov/reading-room/adams.html>. Persons who do not have access to ADAMS or who encounter problems in

accessing the documents located in ADAMS, should contact the NRC PDR Reference staff by telephone at 1-800-397-4209, 301-415-4737, or by e-mail to [pdr@nrc.gov](mailto:pdr@nrc.gov).

Dated at Rockville, Maryland, this 6<sup>th</sup> day of August 2007.

FOR THE NUCLEAR REGULATORY COMMISSION

***/RA/***

John F. Stang, Senior Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation