



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

February 23, 2009

Mr. Bruce H. Hamilton  
Vice President  
McGuire Nuclear Station  
Duke Energy Carolinas, LLC  
12700 Hagers Ferry Road  
Huntersville, NC 28078

SUBJECT: MCGUIRE NUCLEAR STATION, UNITS 1 AND 2- INDIVIDUAL NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE, PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION, AND OPPORTUNITY FOR HEARING (TAC NOS. MD8400 AND MD8401)

Dear Mr. Hamilton:

The U.S. Nuclear Regulatory Commission has forwarded the enclosed "Notice of Consideration of Issuance of Amendment to Facility Operating License, Proposed No Significant Hazards Consideration Determination, and Opportunity for a Hearing," to the Office of the Federal Register for publication.

This notice relates to your application dated March 20, 2008, as supplemented May 28, 2008, October 6, 2008, December 17, 2008 and February 12, 2009, in which you proposed to revise the McGuire Nuclear Station, Units 1 and 2 licensing basis by adopting the alternative source term (AST) radiological analysis methodology as allowed by Title 10 of the *Code of Federal Regulations*, Part 50, Section 50.67, "Accident Source Term, for the Loss of Coolant Accident." This amendment request represents full scope implementation of the AST as described in NRC Regulatory Guide 1.183, "Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors, Revision 0."

If you have any questions, please contact me at 301-415-1345.

Sincerely,

A handwritten signature in black ink, appearing to read "John Stang".

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

Docket Nos. 50-369 and 50-370

Enclosure:  
Notice of Consideration

cc w/encl: Distribution via Listserv

UNITED STATES NUCLEAR REGULATORY COMMISSION

DUKE ENERGY CAROLINAS, LLC

DOCKET NOS. 50-369 AND 50-370

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

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an amendment to Facility Operating License Nos. NPF-9 and NPF-17 issued to Duke Energy Carolinas, LLC (the licensee), for operation of the McGuire Nuclear Station, Units 1 and 2, located in Mecklenburg County, North Carolina.

The proposed amendments revise the McGuire Nuclear Station, Units 1 and 2, licensing basis by adopting the alternative source term (AST) radiological analysis methodology as allowed by Title 10 of the *Code of Federal Regulations*, Part 50, Section 50.67, "Accident Source Term, for the Loss of Coolant Accident." This amendment request represents full scope implementation of the AST as described in NRC Regulatory Guide 1.183, "Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors, Revision 0."

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), 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:

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

No. AST is an updated methodology used to evaluate the dose consequences of the Loss of Coolant Accident (LOCA). This type of change is analytical, thus, does not increase the probability of an accident previously evaluated. It has been demonstrated that the dose consequences of the re-analyzed accident remain within the dose limits of 10 CFR 50.67 and Regulatory Guide 1.183.

This proposed change assumes an increase in the amount of unfiltered air in-leakage into the control room. The current Technical Information Document (TID) based McGuire dose consequence analysis for the LOCA assumed control room unfiltered in-leakage of 10 scfm. Tracer gas testing performed at McGuire revealed that unfiltered in-leakage into the control room exceeded this amount by as much as 167 scfm as discussed in McGuire's response to NRC GL 2003-01 dated February 19, 2004. Use of the AST methodology can accommodate a larger control room pressurization unfiltered in-leakage rate without exceeding any regulatory dose limits.

A comparison of the AST analysis results and the TID values (UFSAR Table 15-12) shows that the EAB and LPZ (off-site) doses decrease while the control room dose increases. The new AST based analysis not only implements changes which affect both off-site and control room doses, such as the change in source term methodology, it also includes changes to the LOCA model which only impact the control room dose, and are responsible for the increased result. These new attributes include a control room in-leakage model that reflects the control room tracer gas testing results and a recomputed control room shine component of the post LOCA control room dose. The dose consequences of the revised analysis, however, are below the 10 CFR 50.67 acceptance criteria for both off-site and control room doses and are not considered a significant increase.

AST radiological methodology does not adversely affect accident initiators or precursors. Nor will it alter or prevent the ability of structures, systems, and components from performing their intended function to mitigate the consequences of an accident.

Therefore, this LAR will not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

No. AST is an updated methodology that was used to re-evaluate the dose consequences of the McGuire UFSAR previously analyzed accidents. This new analysis does not cause any change in the post accident operation of any plant system, structure, or component.

This LAR does not involve an addition or modification to any plant system, structure, or component. This change does not affect the post accident operation of any plant system, structure, or component as directed in plant procedures. New or modified equipment or personnel failure modes that might initiate a new or different type accident are not created as a result of the proposed change.

Therefore, no new or different accident is created by changing to the AST methodology prescribed in Regulatory Guide 1.183.

3. Does this LAR involve a significant reduction in a margin of safety?

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 accident conditions. These barriers include the fuel cladding, the reactor coolant system, and the containment system. The proposed re-analysis of the LOCA dose consequences using AST will have no effect on the performance of these barriers. This LAR does not involve an addition or modification to any plant system, structure, or component. This change will not affect the post accident operation of any plant system, structure, or component as directed in plant procedures.

Therefore, the proposed LAR will not involve a significant reduction in a 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, TWB-05-B01M, 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. 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.

Within 60 days after the date of publication of this notice, any person(s) whose interest may be affected by this action may file a request for a hearing and a petition to intervene with respect to issuance of the amendment to the subject facility operating license. 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 person(s) 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 requestor's/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.

All documents filed in NRC adjudicatory proceedings, including a request for hearing, a petition for leave to intervene, any motion or other document filed in the proceeding prior to the submission of a request for hearing or petition to intervene, and documents filed by interested governmental entities participating under 10 CFR 2.315(c), must be filed in accordance with the NRC E-Filing rule, which the NRC promulgated on August 28, 2007 (72 FR 49139). The E-Filing process requires participants to submit and serve all adjudicatory documents over the internet, or in some cases to mail copies on electronic storage media. Participants may not submit paper copies of their filings unless they seek a waiver in accordance with the procedures described below.

To comply with the procedural requirements of E-Filing, at least ten (10) days prior to the filing deadline, the petitioner/ requestor must contact the Office of the Secretary by e-mail at [hearing.docket@nrc.gov](mailto:hearing.docket@nrc.gov), or by calling (301) 415-1677, to request (1) a digital ID certificate, which allows the participant (or its counsel or representative) to digitally sign documents and access the E-Submittal server for any proceeding in which it is participating; and/or (2) creation of an electronic docket for the proceeding (even in instances in which the petitioner/requestor

(or its counsel or representative) already holds an NRC-issued digital ID certificate). Each petitioner/ requestor will need to download the Workplace Forms Viewer™ to access the Electronic Information Exchange (EIE), a component of the E-Filing system. The Workplace Forms Viewer™ is free and is available at <http://www.nrc.gov/site-help/e-submittals/install-viewer.html>. Information about applying for a digital ID certificate is available on NRC's public website at <http://www.nrc.gov/site-help/e-submittals/apply-certificates.html>.

Once a petitioner/requestor has obtained a digital ID certificate, had a docket created, and downloaded the EIE viewer, it can then submit a request for hearing or petition for leave to intervene. Submissions should be in Portable Document Format (PDF) in accordance with NRC guidance available on the NRC public website at <http://www.nrc.gov/site-help/e-submittals.html>. A filing is considered complete at the time the filer submits its documents through EIE. To be timely, an electronic filing must be submitted to the EIE system no later than 11:59 p.m. Eastern Time on the due date. Upon receipt of a transmission, the E-Filing system time-stamps the document and sends the submitter an e-mail notice confirming receipt of the document. The EIE system also distributes an e-mail notice that provides access to the document to the NRC Office of the General Counsel and any others who have advised the Office of the Secretary that they wish to participate in the proceeding, so that the filer need not serve the documents on those participants separately. Therefore, applicants and other participants (or their counsel or representative) must apply for and receive a digital ID certificate before a hearing request/petition to intervene is filed so that they can obtain access to the document via the E-Filing system.

A person filing electronically may seek assistance through the "Contact Us" link located on the NRC website at <http://www.nrc.gov/site-help/e-submittals.html> or by calling the NRC electronic filing Help Desk, which is available between 8:00 a.m. and 8:00 p.m., Eastern Time, Monday through Friday. The electronic filing Help Desk can be contacted by telephone at 1-866-672-7640 or by e-mail at [MSHD.Resource@nrc.gov](mailto:MSHD.Resource@nrc.gov).

Participants who believe that they have a good cause for not submitting documents electronically must file a motion, in accordance with 10 CFR 2.302(g), with their initial paper filing requesting authorization to continue to submit documents in paper format. Such filings must be submitted 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; or (2) courier, express mail, or expedited delivery service to the Office of the Secretary, Sixteenth Floor, One White Flint North, 11555 Rockville, Pike, Rockville, Maryland, 20852, Attention: Rulemaking and Adjudications Staff. Participants filing a document in this manner are responsible for serving the document on all other participants. Filing is considered complete by first-class mail as of the time of deposit in the mail, or by courier, express mail, or expedited delivery service upon depositing the document with the provider of the service.

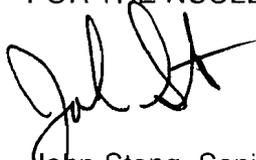
Non-timely requests and/or petitions and contentions will not be entertained absent a determination by the Commission or the presiding officer of the Atomic Safety and Licensing Board that the petition and/or request should be granted and/or the contentions should be admitted, based on a balancing of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

Documents submitted in adjudicatory proceedings will appear in NRC's electronic hearing docket which is available to the public at [http://ehd.nrc.gov/ehd\\_proceeding/home.asp](http://ehd.nrc.gov/ehd_proceeding/home.asp), unless excluded pursuant to an order of the Commission, an Atomic Safety and Licensing Board, or a Presiding Officer. Participants are requested not to include personal privacy information, such as social security numbers, home addresses, or home phone numbers in their filings. With respect to copyrighted works, except for limited excerpts that serve the purpose of the adjudicatory filings and would constitute a Fair Use application, Participants are requested not to include copyrighted materials in their submissions.

For further details with respect to this license amendment application, see the application for amendment and supplements dated March 20, 2008, May 28, 2008, October 6, 2008, December 17, 2008 and February 12, 2009, which are available for public inspection at the Commission's PDR, located at One White Flint North, File Public Area O1 F21, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically 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/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.resource@nrc.gov](mailto:pdr.resource@nrc.gov).

Dated at Rockville, Maryland, this 23<sup>rd</sup> day of February 2009.

FOR THE NUCLEAR REGULATORY COMMISSION



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

February 23, 2009

Mr. Bruce H. Hamilton  
Vice President  
McGuire Nuclear Station  
Duke Energy Carolinas, LLC  
12700 Hagers Ferry Road  
Huntersville, NC 28078

**SUBJECT: MCGUIRE NUCLEAR STATION, UNITS 1 AND 2- INDIVIDUAL NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE, PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION, AND OPPORTUNITY FOR HEARING (TAC NOS. MD8400 AND MD8401)**

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If you have any questions, please contact me at 301-415-1345.

Sincerely,

*/RA/*

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

Docket Nos. 50-369 and 50-370

Enclosure:  
Notice of Consideration

cc w/encl: Distribution via Listserv

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OFFICE	NRR/LPL2-1/PM	NRR/LPL2-1/LA	NRR/LPL2-1/BC	NRR/LPL2-1/PM
NAME	JStang	MO'Brien	MWong (JGitter for)	JStang
DATE	2/23/09	2/23/09	2/23/09	2/23/09

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