



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

October 14, 2014

Mr. K. Henderson
Site Vice President
Catawba Nuclear Station
Duke Energy Carolinas, LLC
4800 Concord Road
York, SC 29745

Mr. Steven D. Capps
Vice President
McGuire Nuclear Station
Duke Energy Carolinas, LLC
12700 Hagers Ferry Road
Huntersville, NC 28078

SUBJECT: CATAWBA NUCLEAR STATION, UNITS 1 AND 2, AND MCGUIRE NUCLEAR STATION, UNITS 1 AND 2 - REQUEST FOR ADDITIONAL INFORMATION REGARDING LICENSE AMENDMENT REQUEST RE: METHODOLOGY REPORT DPC-NE-3001-P, REVISION 1, MULTIDIMENSIONAL REACTOR TRANSIENTS AND SAFETY ANALYSIS PHYSICS PARAMETERS METHODOLOGY (TAC NOS. MF3119, MF3120, MF3121, AND MF3122)

Dear Mr. Henderson and Mr. Capps:

By letter dated November 14, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13325B142), Duke Energy Carolinas, LLC (Duke, the licensee), submitted a license amendment request for Catawba Nuclear Station, Units 1 and 2, and McGuire Nuclear Station, Units 1 and 2. The proposed amendment requested review and approval to the Methodology Report DPC-NE-3001-P, Revision 1, "Multidimensional Reactor Transients and Safety Analysis Physics Parameters Methodology." By letter dated June 27, 2014 (ADAMS Accession No. ML14183B259), Duke provided a response to NRC staff RAIs on the subject amendment request.

The Nuclear Regulatory Commission (NRC) staff is reviewing your submittal and response and has determined that additional information is needed to complete its review. The specific questions are found in the enclosed request for additional information (RAI). The RAI questions were provided in draft form to Duke on September 24, 2014. The draft questions were sent to facilitate a teleconference to ensure that the questions were understandable, the regulatory basis for the questions was clear, and to determine if the information was previously docketed.

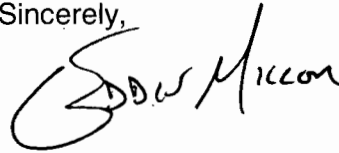
On October 1, 2014, Duke staff indicated that they could respond within 30 days from the date of this letter.

K. Henderson and S. Capps

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If you have any questions regarding this matter, I may be reached at (301) 415-2481 or by e-mail at ed.miller@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "G. Edward Miller". The signature is written in a cursive style with a large, looped initial "G".

G. Edward Miller, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-369, 50-370, 50-413, and 50-414

REQUEST FOR ADDITIONAL INFORMATION

MCGUIRE NUCLEAR STATION, UNITS 1 AND 2

CATAWBA NUCLEAR STATION, UNITS 1 AND 2

LICENSE AMENDMENT REQUEST

METHODOLOGY REPORT DPC-NE-3001-P, REVISION 1

DOCKET NOS. 50-369, 50-370, 50-413, AND 50-414

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The Nuclear Regulatory Commission (NRC) staff is reviewing your submittal and response and has determined that additional information is needed to complete its review.

SNPB-RAI-1) Please submit the following documents, which were referenced as support for the validation and verification of the models in SIMULATE-3K:

- SSP-98/13, Revision 6, "SIMULATE-3K Models & Methodology"
- SSP-04/443, Revision 2, "LWR Core Reactivity Transients. SIMULATE-3K Models and Assessment"

Please also provide the following document, which was referenced in support of the SIMULATE-3 methodology:

- SOA-95/18, "SIMULATE-3 Methodology, Advanced Three Dimensional Two-Group Reactor Analysis Code"

SNPB-RAI-2) The hot full power (HFP) steam line break (SLB) analysis is initiated from nominal conditions, according to Section 5.3.1, because it uses the statistical core design (SCD) methodology described in DPC-NE-2005P-A. This is appropriate for departure from nucleate boiling ratio (DNBR) analysis, because the uncertainties have been statistically convoluted into the DNBR limit.

Duke appears to use the same analysis to check the fuel centerline temperature against the centerline fuel melt (CFM) limit. If this reading of the methodology is correct, please justify use of the nominal SCD initial conditions to be appropriate. If this reading is incorrect, please clarify the methodology that will be used to calculate fuel centerline temperature and compare to the limit.

SNPB-RAI-3) With respect to Section B2.2.1, How did Duke account for thermal conductivity degradation impacts. What, if any codes have been employed for the purpose described in the section, and how are they used?

K. Henderson and S. Capps

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If you have any questions regarding this matter, I may be reached at (301) 415-2481 or by e-mail at ed.miller@nrc.gov.

Sincerely,

/RA/

G. Edward Miller, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-369, 50-370, 50-413, and 50-414

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ADAMS Accession No. ML14276A561

***via e-mail**

OFFICE	NRR/DORL/LPL2-1/PM	NRR/DORL/LPL2-1/LA	NRR/DSS/SNPB/BC	NRR/DORL/LPL2-1/BC
NAME	GEMiller	SFiguroa	JDean*	RPascarelli
DATE	08/08/14	10/06/14	09/22/14	10/14/14

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