



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

December 17, 2015

Mr. Arthur Zaremba
Nuclear CFAM – Regulatory Affairs
Duke Energy Carolinas, LLC
Mail Code EC2ZF/P.O. Box 1006
Charlotte, NC 28201-1006

SUBJECT: CATAWBA NUCLEAR STATION, UNITS 1 AND 2; MCGUIRE NUCLEAR STATION, UNITS 1 AND 2; AND OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3: REQUEST FOR ADDITIONAL INFORMATION REGARDING LICENSE AMENDMENT REQUEST TO USE AN ALTERNATE FISSION GAS GAP RELEASE FRACTION (TAC NOS. MF6480, MF6481, MF6482, MF6483, MF6484, MF6485 AND MF6486)

Dear Mr. Zaremba:

By letter dated July 15, 2015 (Agencywide Documents Access and Management System Accession No. ML15196A093), Duke Energy Carolinas, LLC, license amendment requires to use a new set of fission gas gap release fractions for high burnup fuel rods that exceed the linear heat generation rate limit detailed in Regulatory Guide 1.183, Table 3, Footnote 11.

The U.S. Nuclear Regulatory Commission staff has reviewed the submittal and determined that additional information is needed in order to complete our review. The enclosed document describes this request for additional information (RAI). On December 10, 2015, you indicated that a response to the RAI would be provided by within 45 days from the date of this letter.

If you have any questions, please call me at 301-415-2481.

Sincerely,

A handwritten signature in black ink, appearing to read "G. Edward Miller".

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

Docket Nos. 50-413, 50-414, 50-369, 50-370, 50-269, 50-270, and 50-287

Enclosure: Request for Additional
Information

cc w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION

CATAWBA NUCLEAR STATION, UNITS 1 AND 2

MCGUIRE NUCLEAR STATION, UNITS 1 AND 2

OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3

LICENSE AMENDMENT REQUEST

ALTERNATE FISSION GAS GAP RELEASE FRACTIONS

DOCKET NOS. 50-413 AND 50-414

DOCKET NOS. 50-369 AND 50-370

DOCKET NOS. 50-269, 50-270, AND 50-287

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ARCB-RAI-1

For those changes to the current licensing basis (CLB) parameters used in the affected dose consequence analyses provide additional information describing, for each affected design basis accident, all the basic parameters used in the dose consequence analyses. For each parameter, please indicate; the CLB value, the revised value where applicable, the basis for any changes made to the CLB values, and the applicable reference location within either the Updated Final Safety Analysis Report or Technical Specifications. If possible, the NRC staff requests that this information be presented in separate tables for each accident evaluated.

ARCB-RAI-2

Appendix B of RG 1.183, Regulatory Position 1.1 states:

“The number of fuel rods damaged during the accident should be based on a conservative analysis that considers the most limiting case. This analysis should consider parameters such as the weight of the dropped heavy load or the weight of a dropped fuel assembly (plus any attached handling grapples), the height of the drop, and the compression, torsion, and shear stresses on the irradiated fuel rods. Damage to adjacent fuel assemblies, if applicable (e.g., events over the reactor vessel), should be considered.”

Enclosure

Please explain how the revised fuel handling accident analysis determines the most limiting case, and how it shows that the limiting case is not the drop of an object other than an irradiated fuel assembly.

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Sincerely,
/RA/
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ADAMS Accession No. ML15348A260

*via e-mail

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