



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

August 27, 2014

Mr. Scott Batson
Site Vice President
Oconee Nuclear Station
Duke Energy Carolinas, LLC
7800 Rochester Highway
Seneca, SC 29672-0752

SUBJECT: OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3 – CLOSEOUT OF NRC
GENERIC LETTER 2004-02, "POTENTIAL IMPACT OF DEBRIS BLOCKAGE
ON EMERGENCY RECIRCULATION DURING DESIGN BASIS ACCIDENTS AT
PRESSURIZED-WATER REACTORS" (TAC NOS. MC4698, MC4699 AND
MC4700)

Dear Mr. Batson:

The U.S. Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML042360586) dated September 13, 2004, requesting that licensees address the issues raised by Generic Safety Issue (GSI) - 191, "Assessment of Debris Accumulation on Pressurized Water Reactor Sump Performance."

The stated purpose of GL 2004-02 was focused on demonstrating compliance with Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Section 50.46, "Acceptance Criteria For Emergency Core Cooling Systems For Light Water Reactors." Specifically, the GL requested addressees to perform an evaluation of the emergency core cooling system (ECCS) and containment spray system (CSS) recirculation and, if necessary, take additional action to ensure system function. This action was requested in light of the potential susceptibility of pressurized-water reactor (PWR) sump screens to blockage during a design basis accident requiring recirculation operation of the ECCS or CSS, and based on the potential for additional adverse effects due to debris blockage of flowpaths necessary for ECCS and CSS recirculation and containment drainage.

By letters dated March 1, 2005 (ADAMS Accession No. ML050670465) and September 1, 2005 (ADAMS Accession No. ML052500399), Duke Energy Carolinas, LLC (the licensee) provided responses to GL 2004-02 for the Oconee Nuclear Station (Oconee) Units 1, 2, and 3. In order for the NRC staff to complete its review, by letter dated February 9, 2006 (ADAMS Accession No. ML060380002), the NRC issued a request for additional information (RAI).

By letter dated February 29, 2008 (ADAMS Accession No. ML080710159), the licensee provided responses to the RAIs. The NRC staff reviewed the responses, and by letter dated July 1, 2008 (ADAMS Accession No. ML081750635), concluded that it had no further questions regarding the licensee's completion of corrective actions for GL 2004-02, with the exception of the resolution of the issue of in-vessel downstream effects. The NRC staff's conclusion is based on the very low debris loading at Oconee, as discussed in the licensee's February 29, 2008, RAI response.

S. Batson

- 2 -

By letter dated February 27, 2014 (ADAMS Accession No. ML14065A040), the licensee addressed in-vessel downstream effects, the remaining open issue for Oconee associated with GL 2004-02. The NRC staff performed a review of the licensee's response. The NRC staff conclusions have been documented in a separate summary (ADAMS Accession No. ML14218A807).

The NRC staff has reviewed all Duke Energy Carolinas, LLC, responses and RAI supplements to GL 2004-02. Based on the NRC staff's review, the staff finds that Duke Energy Carolinas, LLC, has provided adequate information as requested by GL 2004-02. The NRC staff finds the information provided demonstrates that debris will not inhibit the ECCS or CSS performance of the systems' intended functions in accordance with 10 CFR 50.46 to assure adequate long-term core cooling following a design basis accident. Therefore, the NRC staff finds the licensee's responses to GL 2004-02 are adequate and considers GL 2004-02 closed for the Oconee Nuclear Station, Units 1, 2, and 3. No further information or action is requested of the licensee.

If you have any questions, please call me at 301-415-4032.

Sincerely,

A handwritten signature in black ink that reads "James R. Hall". The signature is written in a cursive style with a large, looping initial "J".

James R. Hall, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-269, 50-270, and 50-287

cc: Distribution via Listserv

By letter dated February 27, 2014 (ADAMS Accession No. ML14065A040), the licensee addressed in-vessel downstream effects, the remaining open issue for Oconee associated with GL 2004-02. The NRC staff performed a review of the licensee's response. The NRC staff conclusions have been documented in a separate summary (ADAMS Accession No. ML14218A807).

The NRC staff has reviewed all Duke Energy Carolinas, LLC, responses and RAI supplements to GL 2004-02. Based on the NRC staff's review, the staff finds that Duke Energy Carolinas, LLC, has provided adequate information as requested by GL 2004-02. The NRC staff finds the information provided demonstrates that debris will not inhibit the ECCS or CSS performance of the systems' intended functions in accordance with 10 CFR 50.46 to assure adequate long-term core cooling following a design basis accident. Therefore, the NRC staff finds the licensee's responses to GL 2004-02 are adequate and considers GL 2004-02 closed for the Oconee Nuclear Station, Units 1, 2, and 3. No further information or action is requested of the licensee.

If you have any questions, please call me at 301-415-4032.

Sincerely,

/RA/

James R. Hall, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-269, 50-270, and 50-287

cc: Distribution via Listserv

DISTRIBUTION:

PUBLIC

RidsAcrcAcnw_MailCTR Resource
RidsNrrDorlLpl2-1 Resource
RidsNrrSsib Resource
RidsNrrPMOconee Resource (hard copy)
JStang

LPL2-1 R/F
RidsNrrDirsltsb Resource
RidsNrrDorlDpr Resource
RidsNrrLASFiguroa Resource
RidsRgn2MailCenter Resource
SSanders

ADAMS Accession No.: ML14219A482

OFFICE	NRR/LPL2-1/PM	NRR/LPL2-1/LA	NRR/PGCB/ABC
NAME	RHall (KCotton for)	SFiguroa	SStuchell
DATE	08/14/14	08/11/14	08/22/14
OFFICE	NRR/SSIB/ABC	NRR/LPL2-1/BC	NRR/LPL2-1/PM
NAME	VCusumano	RPascarelli	RHall
DATE	08/22/14	08/27/14	08/27/14

OFFICIAL RECORD COPY