



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

July 7, 2016

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

SUBJECT: CATAWBA NUCLEAR STATION, UNITS 1 AND 2 – REQUEST FOR  
ADDITIONAL INFORMATION REGARDING LICENSE AMENDMENT  
REQUEST TO IMPLEMENT A RISK-INFORMED, PERFORMANCE-BASED  
FIRE PROTECTION PROGRAM (CAC NOS. MF2936 AND MF2937)

Dear Mr. Henderson:

By letter dated September 25, 2013 (Agencywide Documents Access and Management System Accession No. ML13276A503), Duke Energy Carolinas, LLC submitted a license amendment request to change its fire protection program to one based on the National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," 2001 Edition.

The U.S. Nuclear Regulatory Commission staff is continuing its review and has determined that additional information is needed in the probabilistic risk assessment area as discussed in the enclosed Request for Additional Information.

Sincerely,

A handwritten signature in cursive script that reads "Bob Martin".

Bob Martin, 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:  
Request for Additional Information

cc w/enclosure: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION

ADOPTION OF NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 805

DUKE ENERGY CAROLINAS, LLC

CATAWBA NUCLEAR STATION, UNITS 1 AND 2

DOCKET NOS. 50-413 AND 50-414

By letter dated September 25, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13276A503), Duke Energy Carolinas, LLC (the licensee) submitted a license amendment request to change its fire protection program to one based on the National Fire Protection Association (NFPA) 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," 2001 Edition.

By letter dated June 15, 2016 (ADAMS Accession No. ML16169A107), the licensee submitted additional information. The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the June 15, 2016, letter and determined that additional information in the probabilistic risk assessment (PRA) area is required to continue the review, as follows.

**PRA RAI 24**

In its letter dated June 15, 2016, the licensee stated that, "A gap was identified in the NFPA 805 safe shutdown analysis related to the reactor coolant pump [RCP] seals and the time available to start the Standby Shutdown Facility's (SSF) standby make-up pump (SMUP)." The NRC staff's understanding of the licensee's PRA is that the SSF is an important contributor to keeping the risk from fires low, and that RCP seal loss-of-coolant accidents are an important contributor to fire risk. Because of the potential importance of the scenarios, the NRC staff requests additional information to determine whether the risk results following the RCP analysis update will remain acceptable or whether additional modifications or evaluations are needed. Please provide the following:

- Summarize the PRA models in which the time available to start the SSF SMUP are used.
- Describe the changes to the PRA input values that may occur when the time available will change.
- Provide the risk results (total core damage frequency, total large early release frequency, change-in-risk associated with transition to NFPA 805) of a sensitivity study based on a reasonable bounding estimate of the change in the time available.
- If the risk results indicate that the risk acceptance guidelines would be exceeded after the RCP analysis update, please describe what actions can be taken to bring the risk results below the acceptance guidelines.

Enclosure

July 7, 2016

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

SUBJECT: CATAWBA NUCLEAR STATION, UNITS 1 AND 2 – REQUEST FOR  
ADDITIONAL INFORMATION REGARDING LICENSE AMENDMENT  
REQUEST TO IMPLEMENT A RISK-INFORMED, PERFORMANCE-BASED  
FIRE PROTECTION PROGRAM (CAC NOS. MF2936 AND MF2937)

Dear Mr. Henderson:

By letter dated September 25, 2013 (Agencywide Documents Access and Management System Accession No. ML13276A503), Duke Energy Carolinas, LLC submitted a license amendment request to change its fire protection program to one based on the National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," 2001 Edition.

The U.S. Nuclear Regulatory Commission staff is continuing its review and has determined that additional information is needed in the probabilistic risk assessment area as discussed in the enclosed Request for Additional Information.

Sincerely,

*/RA/*

Bob Martin, 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:  
Request for Additional Information

cc w/enclosure: Distribution via Listserv

**DISTRIBUTION:**

PUBLIC LPL2-1 R/F  
RidsNrrDraApla  
RidsNrrDorIDpr

RidsACRS\_MailCTR  
RidsNrrPMCatawba  
RidsNrrLALRonewicz

RidsNrrDorlLpl2-1  
RidsRgn2MailCenter

**ADAMS Accession No.: ML16187A066**

OFFICE	DORL/LPL2-1/PM	DORL/LPL2-1/LA	DRA/APLA/BC	DORL/LPL2-1/BC	DORL/LPL2-1/PM
NAME	BMartin	LRonewicz	SRosenberg (S/Dinsmore for)	MMarkley	BMartin
DATE	07/05/16	07/06/16	07/05/16	07/07/16	07/07/16

OFFICIAL RECORD COPY