



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

September 22, 2021

LICENSEE: Duke Energy Carolinas, LLC

FACILITY: Catawba Nuclear Station, Units 1 and 2, and McGuire Nuclear Station, Units 1 and 2

SUBJECT: SUMMARY OF AUGUST 30, 2021, PUBLIC MEETING WITH DUKE ENERGY CAROLINAS, LLC, REGARDING PRE-APPLICATION MEETING TO DISCUSS MODERATOR TEMPERATURE COEFFICIENT METHODOLOGY REVISION (EPID L-2021-LRM-0078)

On August 30, 2021, an Observation public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of Duke Energy Carolinas, LLC (Duke Energy, the licensee). The purpose of the meeting was for Duke Energy to discuss a proposed license amendment request to revise the conditional exemption of the end-of-cycle (EOC) moderator temperature coefficient (MTC) measurement methodology required by technical specification (TS) surveillance requirement (SR) 3.1.3.2 for Catawba Nuclear Station, Units 1 and 2 (Catawba), and McGuire Nuclear Station, Units 1 and 2 (McGuire).

The meeting notice and agenda, dated August 3, 2021, are available in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML21215A014, and the licensee's presentation is available in ADAMS as Accession No. ML21236A286. A list of the meeting's attendees is provided as an enclosure to this letter.

#### Background

On April 14, 2015, (ADAMS Accession No. ML15063A271), the NRC issued an amendment for Catawba and McGuire which changed the TS 3.1.3, "Moderator Temperature Coefficient" and allowed the EOC MTC SR 3.1.3.2 to not be performed if certain conditions were met. The NRC's amendment issuance and conclusion for acceptability of DPC-NE-1007, Revision 0, dated March 2012 (ADAMS Accession No. ML12153A329), includes the clarifications and additional justifications provided in the licensee's RAI responses, as seen in supplemental letters dated March 13, 2013 (ADAMS Accession No. ML13074A304), and November 25, 2014 (ADAMS Accession No. ML14332A301).

#### Teleconference

During the teleconference, Duke Energy discussed the presentation as written.

#### NRC Questions to Duke Energy

The NRC staff asked if a TS change would be required due to the new revision of the methodology report. The licensee stated that it would not be required since TS Section 3.1.3 does not include revision numbers for the references and the licensee added that the Core

Operating Limits Report (CORL) would be updated with the new revision after the amendment's anticipated approval. The NRC staff asked if this methodology applied to EOC MTC surveillance could be used for advanced fuel designs. The licensee stated they would have to validate if advanced fuel designs could utilize this based on the SE for the previously approved methodology. The NRC staff asked how many reactor neutron flux maps are used for data. The licensee stated that a reactor neutron flux map is taken once per month, thus 12 over the year. The NRC staff queried what happens if a failed measurement is taken in the core flux map right before a MTC measurement is required. The licensee stated that it is very unlikely that they would get a failure that late in the cycle but would take it as a comment to assess. The licensee also stated that they planned to include in their submission an analytical exercise that shows that the incore tilt has a small impact on the MTC. The NRC staff asked what the basis is for this licensing action. The licensee stated that Westinghouse developed WCAP-13749, that the NRC approved, to allow conditional exemption of the EOC MTC measurement. Catawba and McGuire could not utilize this topical report due to the analytical methods used within the WCAP thus, the licensee developed the methodology report DPC-NE-1007-P that the NRC -- including with its RAI clarifications -- approved for use in the 2015 Catawba and McGuire amendments (see background section above). The pending amendment request would propose to allow plant-specific deviations from some of the exemption criteria utilized in the 2015 amendment. The NRC stated that an amendment sufficiency item for the upcoming amendment should include the 2015 amendment's methodology acceptance basis (i.e, the current licensing basis (CLB) for SR 3.1.3.2) and a separate listing of the deviations requested beyond that CLB with a technical justification for each deviation. Additionally, the pending submittal should identify, but not resubmit, a full bibliography that identifies the CLB associated with the 2015 amendment.

For licensing clarity, if the licensing basis is unclear or ambiguous an online audit may be used to supplement. In addition, based on this unique one-of-a-kind application relative to the processing standards of the NRC, issuance will occur one year from the acceptance review.

#### Public Questions to NRC

No members of the public were in attendance.

#### Closing

No regulatory decisions or commitments were made during the meeting. Public Meeting Feedback forms were available, but no comments were received.

Please direct any inquiries to me at 301-415-0615, or [Zackary.stone@nrc.gov](mailto:Zackary.stone@nrc.gov).

Zackary R. Stone, 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, 50-414

Enclosures:  
List of Attendees

cc: Listserv

LIST OF ATTENDEES

AUGUST 30, 2021, PUBLIC MEETING WITH DUKE ENERGY CAROLINAS

REGARDING A PRE-APPLICATION MEETING TO DISCUSS

MODERATOR TEMPERATURE COEFFICIENT METHODOLOGY REVISION

CATAWBA NUCLEAR STATION, UNITS 1 AND 2

MCGUIRE NUCLEAR STATION, UNITS 1 AND 2

Nuclear Regulatory Commission Staff

Zackary Stone

John Klos

Michael Markley

Adam Rau

Robert Beaton

Sean Meighan

Matthew Hamm

Joshua Kaizer

Duke Energy Carolinas Participants

Arthur Zaremba

Michael Blom

Jeff Abbott

David Bortz

Dennis Earp Jr.

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RBeaton, NRR	SKrepel, NRR	SMeighan, NRR
JKaizer, NRR	MHamm, NRR	JKlos, NRR

**ADAMS Accession No.** Meeting Notice ML21215A014 Meeting Summary ML21236A283 Handouts ML21236A286

OFFICE	NRR/DORL/LPL2-1/PM	NRR/DORL/LPL2-1/LA	NRR/DSS/SNSB/BC	NRR/DSS/STSB/BC
NAME	ZStone	KGoldstein	SKrepel	NJordan (Acting)
DATE	08/31/2021	09/01/2021	09/01/2021	08/31/2021
OFFICE	NRR/DSS/SFNB/BC	NRR/DORL/LPL2-1/BC	NRR/DORL/LPL2-1/PM	
NAME	RLukes	MMarkley (EMiller for)	ZStone	
DATE	08/31/2021	09/22/2021	09/22/2021	

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