



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

February 13, 2018

MEMORANDUM TO: Brian E. Holian, Acting Director
Office of Nuclear Reactor Regulation

FROM: Edwin M. Hackett, Chairman **/RA/**
Committee to Review Generic Requirements

SUBJECT: COMMITTEE TO REVIEW GENERIC REQUIREMENTS:
MINUTES OF MEETING NUMBERS 448, 449, and 451

Via memo dated September 8, 2017 (ADAMS No. [ML17237C031](#)), you requested the Committee to Review Generic Requirements (CRGR, the Committee) to review and endorse proposed draft Task Interface Agreement (TIA) entitled, "Oconee Nuclear Station, Units 1, 2, and 3 – Final Response to Task Interface Agreement 2014-05, Design Analysis for Single Failure and the Integration of Class 1E Direct Current Control Cabling in Raceways with High Energy Cabling" (ADAMS Accession No. [ML17264A031](#)).

Consistent with the request, the staff provided a discussion of the background and regulatory implications to the Committee in support of its formal meetings. On September 26, 2017, the CRGR held Meeting No. 448 with the staff to discuss the proposed TIA Response. NRR staff conducted the briefing and answered the Committee's questions. The staff's presentation is available in ADAMS via Accession No. [ML17258A012](#). Enclosure 1 provides the list of meeting attendees.

On October 24, 2017, the CRGR held Meeting No. 449 as a public meeting to gain additional insights and perspectives on the proposed TIA response with Duke Energy, the licensee for Oconee Nuclear Station Units 1, 2, and 3 (ONS). The licensee concluded that four positions outlined in the proposed TIA response constituted new or revised regulatory positions. These included: (1) Limitations on Crediting Cable Armor for Electrical Separation, (2) Changes in Application of Single Failure Criteria for Separate Cables, (3) Changes in Single Failure Considerations Regarding Equipment Quality Classification, and (4) Changes to the Timing of Single Failures for Emergency AC Power. The licensee emphasized that ONS continues to operate safely and that Protective Service Water (PSW) modifications have significantly improved plant safety. The licensee identified concerns with the application of the TIA response beyond the electrical cable configurations found in trench #3 (from the Keowee Hydro Station to transformer CT-4) and the PSW duct bank to other parts of the ONS design basis and to Duke Energy's other operating facilities, McGuire and Catawba, which share some common licensing basis elements on armored cables. The licensee discussed that the use of armored cables has been an established part of the licensing basis since the approval of the original construction and operating license at ONS. The meeting presentations and transcript are available in ADAMS via Accession Nos. [ML17333A157](#) and [ML17333A088](#), respectively.

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In addition, on November 15, 2017, Duke Energy sent a letter (ADAMS No. [ML17334A030](#)) to the CRGR to clarify a response provided to the Committee on October 24, 2017. During the public meeting, the CRGR received no public comments and received no meeting feedback forms following the meeting.

Subsequently, the CRGR held meeting No. 451 with the NRC staff, on November 7, 2017, to discuss the concerns raised by the licensee. The CRGR identified revisions to the draft TIA response to focus application of the document to electrical cable configurations found in trench #3 and the PSW duct bank.

In considering the review of the draft TIA response and information presented at the three meetings with the licensee and NRC staff, the Committee found that the language in the TIA response could be enhanced to avoid potential misapplication of the staff's conclusions to other parts of ONS's design or licensing basis or to the McGuire and Catawba facilities. The Committee provided recommendations to NRR staff to revise the TIA response to (1) ensure the scope of the TIA response is narrowed to trench #3 and the PSW duct bank; (2) clarify consideration of the medium-voltage cable test report; (3) clarify that cable shielding does not provide equivalent protection to cable armoring in consideration of NRC accepted industry standards or provisions in the ONS licensing basis; and (4) clarify the limits on the TIA response's use and application.

CONCLUSIONS and RECOMMENDATIONS

Following the review of the proposed TIA response and external interactions, the Committee identified a number of opportunities to ensure the language of the proposed TIA response appropriately focused the scope to the issues under review. The Committee endorsed the TIA response for issuance following staff-incorporated changes and found that the revised TIA response does not contain backfitting or new staff positions. The CRGR cautions that broad application of the proposed TIA response would not be appropriate and could result in unanalyzed backfits to the facility.

Enclosures:

- Enclosure 1: List of Attendees for CRGR Meeting No. 448
- Enclosure 2: List of Attendees for CRGR Meeting No. 449
- Enclosure 3: List of Attendees for CRGR Meeting No. 451
- Enclosure 4: List of References

SUBJECT: COMMITTEE TO REVIEW GENERIC REQUIREMENTS: MINUTES OF
MEETING NUMBERS 448, 449, AND 451

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ADAMS Accession No.: ML17289A542

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DATE	1/18/18	2/5/18	2/2/18	2/13/18

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**CRGR MEETING No. 448
LIST OF ATTENDEES
(September 26, 2017)**

CRGR Members

Edwin M. Hackett, Chairman
Brian J. McDermott, NRR
Scott W. Moore, NMSS
Darrell Roberts, NSIR and RIII
John D. Monninger, NRO
Cathy L. Scott, OGC
Les R. Cupidon, CRGR Staff

NRC Staff

Rich Harper, OCM/KLS
Isaac Anchondo, NRR/DORL/LPL2-1
M.J. Ross-Lee, NRR/DE
Mike Markley, NRR/DORL/LPL2-1
Theresa Clark, OEDO
Nicholas J. DiFrancesco, RES/FO
Roy Mathew, NRR/DE/EEOB
Sharon Morris, NRR/DE/EEOB
Nanette Valliere, OCM/SB
Tony Gody, R-II/DRS
Jonathan Bartley, R-II/DRS
Mark Jeffers, R-III
Thomas Koshy, RES/DE/ICEEB
Kenn Miller, RES/DE/ICEEB
Audrey Klett, NRR/DORL/LPL2-1
Jeanne Johnston, NRR/DORL/LSPB
Eric Benner, NRR/DORL
John Lubinski, NRR/DE
Doug Broaddus, NRR/DORL
Anne T. Boland, NRR/DORL

CRGR MEETING No. 449
LIST OF ATTENDEES
(October 24, 2017)

CRGR Members

Edwin M. Hackett, Chairman
Brian J. McDermott, NRR
Scott W. Moore, NMSS
Darrell Roberts, NSIR and RIII
John D. Monninger, NRO
Cathy L. Scott, OGC
Les R. Cupidon, CRGR Staff

Licensee Staff

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Todd Grant, Duke Energy
Ryan Greco, Duke Energy
Chris Nolan, Duke Energy
Ed Burchfield, Duke Energy
Scott Batson, Duke Energy
David Cummings, Duke Energy
Thomas C. Poindexter, Morgan Lewis for
Duke Energy
Ray Price Jr., Duke Energy
Dean Hubbard, Duke Energy

NRC Staff

Steven Arndt, NRR/DE
Andrey Klett, NRR/DORL/LPL2-1
Tim Reed, NRR/DORL
Tony Gody, R-II/DRS
Samson Lee, NRR/DORL
Shakur Walker, R-II/DRS
Harry Barrett, NRR/DRA/APLA
Eric Benner, NRR/DORL
Mike Markley, NRR/DORL/LPL2-1
Roy Mathew, NRR/DE
Kenn Miller, RES/DE
Jesse Quichocho, NRR/DE/EEOB
C.J. Fong, NRC/OCM/KLS
Thomas Koshy, RES/ICEEB
Theresa Clark, OEDO
John Lubinski, NRR/DE

Mark Miller, R-II/DRS*
Gurcharan Matharu, NRR/EEOB*
Jonathan Bartley, R-II

Public

Darani Reddick, Exelon Corporation
Jeff Sharkey, Southern Nuclear
Jerry Bonanno, Nuclear Energy Institute

Deann R., Curtiss Wright*
Alan Jelalian, Engineering Planning and
Management (EPM), Inc.*
Russell Thompson, Tennessee Valley
Authority*
Greg Richardson*
David Wilson*

*Via teleconference

**CRGR MEETING No. 451
LIST OF ATTENDEES
(November 7, 2017)**

CRGR Members

Edwin M. Hackett, Chairman
Brian J. McDermott, NRR
Scott W. Moore, NMSS
Darrell Roberts, NSIR and RIII
John D. Monninger, NRO
Cathy L. Scott, OGC
Les R. Cupidon, CRGR Staff

NRC Staff

John Lubinski, NRR/DE
Kenn Miller, RES/DE/ICEEB
Eric Benner, NRR/DORL
Doug Broaddus, NRR/DORL
Jessie Quichocho, NRR/DE/EEOB
Hari Kodali, NRR/DE/EEOB
Roy Mathew, NRR/DE/EEOB
Mike Markley, NRR/DORL/LPL2-1
Steve Arndt, NRR/DE
Eva Brown, NRR/DORL/LSPB
Theresa Clark, OEDO
Tim Reed, NRR/DORL/LSPB
Samson Lee, NRR/DORL/LSPB
Audrey Klett, NRR/DORL/LPL2-1
Kenneth Miller, RES/DE/ICEEB * Via Phone
Nicholas J. DiFrancesco, RES/FO

**CRGR MEETING Nos. 448, 449, and 451
LIST OF REFERENCES**

Request for Review and Endorsement of the Oconee Nuclear Station, Units 1, 2, and 3 – Response to Task Interface Agreement 2014-05, Design Analysis for Single Failure and the Integration of Class 1E Direct Current Control Cabling in raceways with High Energy Power Cabling (CAC NOS. MF4626, MF4627, AND MF4628), September 7, 2017 (ADAMS No. [ML17237C031](#))

NRC Slide Presentation to the Committee to Review Generic Requirements on Oconee Nuclear Station Cable Separation TIA, September 26, 2017 (ADAMS No. [ML17258A012](#)).

Oconee Nuclear Station - Transmittal of Revised Draft TIA 2014-05 Response Related to the Design Analysis for Single Failure and the Integration of Class 1E Direct Current Control Cabling in Electrical Raceways with High Energy Power (CAC MF4626-MF4628), September 29, 2017 (ADAMS No. [ML17264A032](#)).

Revised September 2017 Draft Response to Task Interface Agreement 2014-05 to Licensee Re: Oconee Design Analysis for Single Failure/Integration of Class 1E Direct Current Control Cabling in Raceways with High Energy Power Cabling (CAC Nos. MF4626, MF4627, MF4628) (ADAMS No. [ML17264A031](#)).

Oconee Nuclear Station - Duke Energy Presentation to the NRC Committee to Review Generic Requirements (CRGR), October 24, 2017 (ADAMS No. [ML17333A157](#)).

Transcript of October 24, 2017, Meeting with CRGR to Discuss Duke Energy Views Associated with a Revised Draft Task Interface Agreement Response (ADAMS No. [ML17333A088](#)).

Meeting Notice for CRGR meeting to Discuss Duke Energy Backfitting Views Associated with a Revised Draft Task Interface Agreement Response Regarding Oconee Nuclear Station, October 13, 2017 (ADAMS No. [ML17296A497](#)).

Letter from Thomas D. Ray of Duke Energy (Oconee Nuclear Station) NOS-2017-085 re Duke Energy Comments on the October 24, 2017 Public Meeting with NRC Committee to Review Generic Requirements (CRGR), November 15, 2017 (ADAMS No. [ML17334A030](#)).