



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

April 17, 2019

MEMORANDUM TO: Tara Inverso, Chief
ROP Support and Generic Communications Branch
Division of Inspection and Regional Support
Office of Nuclear Reactor Regulation

FROM: Tekia V. Govan, Project Manager **/RA/**
ROP Support and Generic Communications Branch
Division of Inspection and Regional Support
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF A CATEGORY 2 PUBLIC MEETING HELD WITH
EXTERNAL STAKEHOLDERS TO DISCUSS LESSONS LEARNED
AFTER THE ISSUANCE OF REGULATORY ISSUE SUMMARY 2002-
22, SUPPLEMENT 1, "CLARIFICATION ON ENDORSEMENT OF
NUCLEAR ENERGY INSTITUTE GUIDANCE IN DESIGNING DIGITAL
UPGRADES INSTRUMENTATION AND CONTROL SYSTEMS"

On February 27, 2019, the U.S. Nuclear Regulatory Commission (NRC) staff held a Category 2 public meeting with external stakeholders in Rockville, Maryland. The purpose of the meeting was to discuss lessons learned after the issuance of Regulatory Issue Summary (RIS) 2002-22, Supplement 1, "Clarification on Endorsement of Nuclear Energy Institute Guidance in Designing Digital Upgrades in Instrumentation and Control Systems," (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18143B633).

Meeting Summary

NRC and industry management made brief opening remarks, and introductions were made by all in attendance. The NRC staff presented an overview of RIS 2002-22, Supplement 1 (ADAMS Accession No. ML19056A537). As part of this presentation, the NRC staff provided examples of digital modifications that the industry can conduct without prior NRC approval using a qualitative assessment. Specifically, the NRC staff provided an example of the replacement of an existing emergency diesel generator voltage regulator being replaced with a digital reference adjuster, as a component that could be modified under 10 Code of Federal Regulations (CFR) 50.59 using the guidance provided in RIS 2002-22, Supplement 1.

The Nuclear Energy Institute (NEI) made a presentation that provided an industry perspective on the use of RIS 2002-22, Supplement 1, since its issuance in May 2018 (ADAMS Accession No. ML19056A533). NEI provided some areas that they believed licensees could improve to ensure the success of digital modifications under 10 CFR 50.59, such as:

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- 10 CFR 50.59 screening and evaluation questions associated with digital plant changes;
- documentation and explanation of why the design has a low likelihood of failure; and
- industry working together and sharing information regarding digital project designs.

NEI also discussed the expectation of implementing digital modifications, such as diesel generator controls, turbine and feedwater controls, and digital inverters in 2019 through 2020. Specifically, Dominion Energy plans to use RIS 2002-22, Supplement 1, for a digital modification in the switchyard. Dominion Energy noted that this modification was recently inspected during a NRC Region 1 triennial modifications team inspection.

NextEra Energy provided a presentation on their use of RIS 2002-22, Supplement 1, to develop draft qualitative assessment documentation for the replacement of an analog rod control system with the Westinghouse advanced rod control hybrid digital control system with ovation-based logic and upgrading the existing ovation main turbine control system (ADAMS Accession No. ML19056A528). This draft qualitative assessment followed the RIS to determine that common cause failure is sufficiently low given design features and operating experience with the system. Through the development of this draft qualitative assessment, NextEra determined that the use of operating experience is essential in the process but has some challenges when attempting to comply with the RIS. NextEra noted that they will be conducting a fleet-wide training on RIS 2002-22, Supplement 1, led by Duke Energy staff. NRC staff has been invited to provide a RIS overview at this meeting via teleconference.

Both NEI and NextEra's presentations contained positive comments on the usability of RIS 2002-22, Supplement 1, with the expectation of implementing digital modifications, in 2019 through 2020. Because of this RIS, industry has cited a better understanding of NRC's expectations for qualitative assessment and a significant reduction in the level of details to respond to 10 CFR 50.59 evaluation questions.

The meeting concluded with external stakeholder questions regarding the timing of the next NRC guidance document for digital modifications. The endorsement of NEI 96-07, Appendix D, "Supplemental Guidance for Application of 10 CFR 50.59 to Digital Modifications" is expected to be issued by the NRC staff in July 2019. The NRC staff is also working with the nuclear industry to develop revised technical guidance for addressing common cause failure as documented in NRC Branch Technical Position 7-19.

The NRC staff made no decisions or took any agency positions during this meeting.

Enclosures:

1. Meeting Agenda
2. List of Attendees

SUMMARY OF A CATEGORY 2 PUBLIC MEETING HELD WITH EXTERNAL STAKEHOLDERS TO DISCUSS LESSONS LEARNED AFTER THE ISSUANCE OF REGULATORY ISSUE SUMMARY 2002-22, SUPPLEMENT 1, "CLARIFICATION ON ENDORSEMENT OF NUCLEAR ENERGY INSTITUTE GUIDANCE IN DESIGNING DIGITAL UPGRADES INSTRUMENTATION AND CONTROL SYSTEMS" Date: April 17, 2019

ADAMS ACCESSION Nos.: ML19106A187

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| OFFICE | NRR/DIRS/IRGB/PM | NRR/DIRS/IRGB/LA | NRR/DIRS/IRGB/TR | NRR/DIRS/IRGB/BC | NRR/DIRS/IRGB/PM |
| NAME | TGovan | BCurran *w/edits | PMcKenna *w/edits | TInverso | TGovan |
| DATE | 04/16/2019 | 04/16/2019 | 04/17/2019 | 04/17/2019 | 04/17/2019 |

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PUBLIC MEETING AGENDA

Category 2 meeting to discuss the Regulatory Issue Summary 2002-22, Supplement 1, Lessons Learned

February 27, 2019, 09:00 AM to 02:00 PM

**NRC Three White Flint North, 1-C03
11601 Landsdown Street
Rockville, MD**

| <u>Time</u> | <u>Topic</u> | <u>Lead</u> |
|--------------------|--|-----------------------------|
| 9:00 a.m. | Meeting Introductions and Opening Remarks | NRC/Industry |
| 9:20 a.m. | NRC Overview of RIS 2002-22, Supplement 1 | P. McKenna, NRC |
| 10:20 a.m. | Break | |
| 10:30 a.m. | NEI Perspective and Examples using RIS 2002-22, Supplement 1 | N. Archambo, Duke Energy |
| 12:00 p.m. | Lunch | |
| 1:00 p.m. | Digital Modifications and Preparing for the 10 CFR 50.59 Review | W. Frewin, NextEra |
| 1:45 p.m. | Public Comments | |
| 2:00 p.m. | Closing Remarks/Meeting Adjourned | |

LIST OF ATTENDEES

Category 2 meeting to discuss the Regulatory Issue Summary 2002-22, Supplement 1, Lessons Learned

February 27, 2019, 09:00 AM to 02:00 PM

NRC Three White Flint North, 1-C03
11601 Landsdown Street
Rockville, MD

| <u>Name</u> | <u>Organization</u> |
|----------------------|---------------------|
| 1. Jana Bergman | Curtiss-Wright |
| 2. Matthew Shakur | Westinghouse |
| 3. Steve Vaughn | NEI |
| 4. Wesley Frewin | NextEra Energy |
| 5. Rossnyev Alvarado | NRC |
| 6. Paul Phelps | Dominion Energy |
| 7. Phil McKenna | NRC |
| 8. Chris Miller | NRC |
| 9. Perry Buckberg | NRC |
| 10. Eric Bowman | NRC |
| 11. David Rahn | NRC |
| 12. Neil Archambo | Duke Energy |
| 13. Jerud Hanson | INL |
| 14. Dan Stoodard | Dominion Energy |
| 15. Steven Arndt | NRC |
| 16. Eric Benner | NRC |
| 17. Michael Waters | NRC |
| 18. Dave Beaulieu | NRC |
| 19. Wendell Morton | NRC |

20. Tekia Govan

NRC

Participated via conference line and webinar

21. Dave Heinig

Sargent and Lundy

22. Daniel Colburns

Dominion Energy

23. Rob Burg

Engineering Planning and
Management

24. Eric Bernard

MPR Associates

25. Michael Bailey

Bailey Engineering Services

26. William Barasa

Sargent and Lundy

27. William Sotos

Certrec

28. Michael Sortwell

AEP

29. John Connelly

Exelon

30. Daniel Cronin

University of Florida – Training
Reactors

31. Dan Ferman

Member of the public

32. Warren Garnett

Member of the public

33. Maria Start

Member of the public

34. Joseph Holonich

NRC

35. John Troday

Member of the public

36. Ismael Garcia

NRC

37. Ty Rogers

GE

38. Donald Chase

Curtiss Wright

39. Frank Mascitelli

Exelon

40. Mark Burzynski

Rolls Royce