



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

August 2, 2022

MEMORANDUM TO: Steven Lynch, Chief  
Advanced Reactors Policy Branch  
Division of Advanced Reactors and Non-power  
Production and Utilization Facilities  
Office of Nuclear Reactor Regulation

FROM: Michael Orenak, Project Manager  
Advanced Reactor Licensing Branch 1  
Division of Advanced Reactors and Non-power  
Production and Utilization Facilities  
Office of Nuclear Reactor Regulation

*Michael Orenak*

Signed by Orenak, Michael  
on 08/02/22

SUBJECT: SUMMARY OF THE JUNE 9, 2022, PUBLIC MEETING TO  
DISCUSS THE U.S. NUCLEAR REGULATORY COMMISSION  
COMMENTS ON THE FIRST REVISION OF THE WHITE  
PAPER, "TECHNOLOGY INCLUSIVE RISK INFORMED  
CHANGE EVALUATION (TIRICE) FOR NON-LIGHT WATER  
REACTORS" (EPID N-2022-ADV-0004)

On June 9, 2022, an observation public meeting was held to discuss the U.S. Nuclear Regulatory Commission (NRC) staff's comments on Revision A of the white paper, "Technology Inclusive Risk Informed Change Evaluation (TIRICE) for Non-Light Water Reactors," which was submitted to the NRC on May 6, 2022. The NRC staff provided their initial comments to the industry on May 20, 2022, in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML22143A805. The industry representative responded to the NRC comments on June 3, 2022, by providing three documents: individual responses to the NRC comments, a markup of changes from Revision A to Revision B, and a clean Revision B. Those documents are available at ML22154A458, ML22154A456, and ML22154A457, respectively.

The public meeting notice and agenda, dated May 24, 2022, are available at ML22159A257. The industry's presentation slides are available at ML22159A228. The Enclosure provides the list of meeting attendees.

### Meeting Summary

After introductions, Southern Company provided a short update on the status of the project. Next, they provided a presentation that discussed their responses to the prevalent/important NRC comments received on Revision A of the TIRICE white paper. During the presentation, discussions arose between the NRC staff and the industry on multiple slides. The first discussion was on slide 8 regarding design certifications (DCs). The NRC staff asked why the change process for a combined license that references a Title 10 of *the code of federal regulations* (10 CFR) Part 52 DC is not included in the TIRICE process. For the DCs that are currently captured under 10 CFR Part 52, there is a section of the rule that includes processes

for changes and departures that includes a 10 CFR 50.59-like change process. The industry representative responded that they thought including DCs would complicate the process, considering that the 10 CFR Part 53 draft rule would be issued before the TIRICE process would come into effect for an operating power reactor. The NRC staff responded that they would like to see DCs be included in the TIRICE process so that there is consistency across all reactors that use the NEI 18-04, Revision 1, "Risk-Informed Performance-Based Technology Guidance for Non Light Water Reactor Licensing Basis Development," ML19241A336 process.

For slide 9, the NRC staff asked if the entire scope of NEI 18-04, Revision 1, encompasses TIRICE, meaning that any reactor that uses NEI 18-04, Revision 1, can use TIRICE in its entirety. The industry representative responded that it does; however, they emphasized that this TIRICE white paper was developed to present concepts and is not a guidance document. Therefore, changes can/will be made.

For slide 11, the NRC commented on proposed changes that result in reductions in margin as well as proposed changes that result in licensing basis events (LBEs) that cross the frequency-consequence (F-C) curve, stating that the NRC staff are considering these issues in 10 CFR Part 53. The NRC staff's primary questions are whether a proposed change could possibly challenge the NRC's original approval, meaning would movement of the LBE results from the original F-C curve location require re-approval by the NRC staff. The NRC staff will consider the discussion during future refinements to the preliminary draft rule text being developed for 10 CFR Part 53.

For slide 12, significant discussion arose around how to address design goals that might be adopted by select licensees in areas such as emergency planning zones, siting, and staffing. An example could be where a licensee takes advantage of margins between the F-C target and the calculated frequency and consequences of event sequences for the subject plant design to justify a reduced emergency planning zone. The question to the industry working group was how plant changes effecting the consequences from event sequences would be assessed against the design goals used to justify the reduced emergency planning zone. The NRC staff pointed to a criterion included in the preliminary draft rule text being developed for 10 CFR Part 53 as a possible approach.

For slide 14, the NRC staff asked industry about having a summary of the defense-in-depth (DID) change control process captured in the safety analysis report (SAR) because it would permit flexibility and tailored processes for each licensee. The industry representative responded that they did consider adding it to Chapter 4 of the SAR but did not do so because the industry desired to have a singular overall change process and avoid having multiple change processes. The NRC then stated that they preferred to capture the DID change process in the SAR.

For slide 15, the NRC staff stated that they were more looking for the TIRICE white paper to provide a process on what to do when a plant change results in an LBE sequence change such that a structure, system, or component that was not in the plant's technical specifications meets the criteria to be included in the technical specifications. The industry representative noted that they would take the NRC staff's updated comment into consideration to determine if more guidance in this area is appropriate.

After discussion of the NRC comments, a discussion was held regarding the planning of the tabletop exercises. The NRC staff asked if the documents are going to be available to the NRC staff before and during the exercise. The industry representative stated that an online Certrec

portal will be set up and requested the NRC staff information, which the NRC said will be provided. The NRC staff requested that the portal remain open for a week or two after the exercises and the industry representative said that he will work with the NRC project manager to determine the correct date to end access. Finally, the NRC staff asked if the results from the tabletop exercises will be made publicly available. The industry stated it would be, but the format is to be determined.

There were no questions from the public at the end of the meeting.

Enclosure:  
List of Attendees

CONTACT: Michael Orenak, NRR/DANU/UAL1  
301-415-3229

SUBJECT: SUMMARY OF THE JUNE 9, 2022, PUBLIC MEETING TO DISCUSS THE U.S. NUCLEAR REGULATORY COMMISSION COMMENTS ON THE FIRST REVISION OF THE WHITE PAPER, "TECHNOLOGY INCLUSIVE RISK INFORMED CHANGE EVALUATION (TIRICE) FOR NON-LIGHT WATER REACTORS."  
DATED: AUGUST 2, 2022

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**ADAMS Accession No.: ML22187A091**

**NRR-106**

<b>OFFICE</b>	NRR/DANU/UAL1/PM	NRR/DANU/UAL1/LA	NRR/DANU/UARP/BC	NRR/DANU/UAL1/PM
<b>NAME</b>	MOrenak	DGreene	SLynch	MOrenak
<b>DATE</b>	7/6/2022	7/7/2022	8/2/2022	8/2/2022

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## List of Attendees

### PUBLIC MEETING TO DISCUSS COMMENTS ON THE FIRST REVISION OF THE WHITE PAPER, "TECHNOLOGY INCLUSIVE RISK INFORMED CHANGE EVALUATION (TIRICE) FOR NON-LIGHT WATER REACTORS."

Thursday, June 9, 2022

<b>Name</b>	<b>Organization</b>
Michael Orenak	U.S. Nuclear Regulatory Commission (NRC)
Bill Reckley	NRC
Chris VanWert	NRC
Joe Sebrosky	NRC
John Segala	NRC
Amy Cabbage	NRC
Steve Lynch	NRC
Ian Jung	NRC
Caroline Tilton	NRC
Scott Tonsfeldt	NRC
Scott Bussey	NRC
Charles Murray	NRC
Casper Sun	NRC
Michael Tschiltz	Consultant to Southern Company
Steve Nesbit	LMNT Consulting
Justin Wheat	Enercon
Karl Fleming	KNF Consulting Services LLC
Pete Lablond	LeBlond & Associates
Ed Wallace	GNBC Associates, Inc.
Amir Afzali	Southern Company
Brandon Chisolm	Southern Company Services
Ben Holtzman	NEI
Don Helton	NASA
Rani Franovich	The Breakthrough Institute
Jana Bergman	Curtiss-Wright