



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

July 7, 2023

MEMORANDUM TO: Michelle W. Hayes, Chief
Licensing and Regulatory Infrastructure Branch
Division of New and Renewed Licenses
Office of Nuclear Reactor Regulation

FROM: Mahmoud Jardaneh, Project Manager /RA/
Advanced Reactor Licensing Branch 2
Division of Advanced Reactors and Non-Power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF THE JULY 26, 2023, PARTIALLY CLOSED
MEETING WITH GE HITACHI NUCLEAR ENERGY TO INITIATE
THE BWRX-300 SAFETY STRATEGY TOPICAL REPORT
READINESS ASSESSMENT

The U.S. Nuclear Regulatory Commission (NRC) staff held a partially closed meeting with GE Hitachi Nuclear Energy (GEH) on July 26, 2023, to initiate the NRC staff readiness assessment of the draft topical report (TR) NEDC-33934P, "BWRX-300 Safety Strategy," for the BWRX-300 small modular reactor (SMR) design. The purpose of this meeting was for GEH to provide an overview of the draft TR and for the NRC staff to ask clarifying questions to facilitate their assessment of the draft TR made available for NRC staff viewing in a GEH controlled electronic reading room.

The staff is conducting the readiness assessment based on the NRC Office of Nuclear Reactor Regulation's Office Instruction LIC-116, Revision 0, "Preapplication Readiness Assessment," (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20104B698) and as outlined in Appendix A, "Pre-Application Engagement Guidance," to the NRC Draft Interim Staff Guidance, "Review of Risk-Informed, Technology-Inclusive Advanced Reactor Applications—Roadmap," (ML22048B546). The readiness assessment plan is available at ML23188A095.

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The partially closed meeting notice can be found under ML23193A346. This meeting notice was posted on the NRC public website as a partially closed meeting because the draft TR was not submitted to the NRC but was made available for NRC staff viewing as proprietary commercial information. The enclosure provides the list of meeting attendees.

The NRC staff started the meeting by giving an overview about previous engagements with GEH regarding the proposed BWRX-300 SMR's Safety Strategy, including a review of the GEH BWRX-300 Safety Strategy White Paper (ML22341A058) submitted for NRC staff review in December 2022 and meetings with the staff on March 8 and April 5, 2023 (ML23087A077).

The NRC staff also introduced the Canadian Nuclear Safety Commission (CNSC) review team participating in this meeting as part of a 2019 memorandum of cooperation between the NRC and CNSC, and a September 2022 Charter on Collaboration on GEH's BWRX-300 Design.

GEH representatives provided an overview of the draft TR, describing how GEH will meet the NRC regulatory requirements using its proposed safety strategy design process. The NRC staff asked clarifying questions focused on the following topics:

- GEH approach to meet the intent of Regulatory Treatment for Non-safety Systems
- The degree of separation between instrumentation maintaining normal operating conditions and instrumentation responding to anticipated operational occurrences
- Management of the reliability of structures, systems, and components considered important to safety but not safety-related
- Considerations for establishment of external hazard levels in the design-basis
- The overall goals of the proposed safety strategy for the BWRX-300 design
- Accident dose treatment
- 10 CFR 50.46 requirements for loss of coolant accident analysis
- Treatment of low probability external events
- Emergency planning related to the GEH Safety Strategy approach using the proposed defense line architecture
- The International Atomic Energy Agency pre-printed guidance used for practical elimination applications.

At the conclusion of the open portion of the meeting, the public was invited to make comments or ask questions of the NRC staff. No comments or questions from members of the public were received.

During the closed portion of the meeting, the NRC staff and GEH staff continued a more in-depth discussion of questions on some of the topics raised during the open portion of the meeting. There were no regulatory decisions made during this meeting.

The staff will review the draft TR and provide feedback in a future meeting with GEH.

Project No. 99900003

Enclosure:
List of Attendees

SUBJECT: SUMMARY OF THE JULY 26, 2023, PARTIALLY CLOSED MEETING WITH GE
 HITACHI NUCLEAR ENERGY TO KICKOFF THE BWRX-300 SAFETY
 STRATEGY TOPICAL REPORT READINESS ASSESSMENT
 DATED: JULY 7, 2023

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NRC-001

OFFICE	NRR/DANU/UAL2: PM	NRR/DNRL/NLIB: LA
NAME	MJardaneh	SGreen
DATE	07/21/2023	08/29/2023
OFFICE	NRR/DNRL/NLIB: BC	NRR/DANU/UAL2: PM
NAME	MHayes	JGlisan
DATE	8/31/2023	8/31/2023

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**U.S. NUCLEAR REGULATORY COMMISSION SUMMARY OF THE
JULY 26, 2023, PARTIALLY CLOSED MEETING WITH GE HITACHI
NUCLEAR ENERGY TO KICKOFF THE BWRX-300 SAFETY STRATEGY
TOPICAL REPORT READINESS ASSESSMENT**

List of Attendees

Name	Organization
Angelo Stubbs	U.S. Nuclear Regulatory Commission (NRC)
Anne-Marie Grady	NRC
Ben Parks	NRC
Biro Mihaela	NRC
Brian Lee	NRC
Brian Wittick	NRC
Calvin Cheung	NRC
Chris Van Wert	NRC
Dinesh Taneja	NRC
Edward Robinson	NRC
Elijah Dickson	NRC
Getachew Tesfaye	NRC
Getachew Tesfaye	NRC
Jacob Davis	NRC
Jim Shea	NRC
Jordan Glisan	NRC
Jorge Munoz	NRC
Joseph Ashcraft	NRC
Kaihwa Hsu	NRC
Mahmoud Jardaneh	NRC
Marie Pohida	NRC
Michelle Hayes	NRC
Mihaela Brio	NRC
Mike Franovich	NRC
Ondra Dukes	NRC
Phan Hanh	NRC
Rebecca Patton	NRC
Ryan Nolan	NRC
Shanlai Lu	NRC
Shilp Vasavada	NRC
Stacey Rosenberg	NRC
Stephen Philpott	NRC
Steve Jones	NRC
Elnara Nasimi	Canadian Nuclear Safety Commission (CNSC)
Chantal Morin	CNSC
Yong Chang Liu	CNSC

Name	Organization
David Hinds	General Electric-Hitachi (GEH)
Dennis Demitrack	GEH
Frostie White	GEH
George Wadkins	GEH
Jesus Diaz-Quiroz	GEH
Michael Cook	GEH
Michelle Moorrees	GEH
Randy Jacobs	GEH
Scott Zinkham	GEH
Shelby Small	GEH
Suzanne Karkour	GEH
Thomas Demitrack	GEH
Thomas Walker	GEH
Bernard Gilligan	HGNE
Jun Matsumoto	HGNE
Jassar Balraj	Ontario Power Generation (OPG)
Nikola Popov	OPG
Saad Khan	OPG
Brian McDermott	Tennessee Valley Authority (TVA)
Dennis Petrarca	TVA
James Thornton	TVA
Justin Tyler Huber	TVA
Kelvin Jevon Montague	TVA
Kevin Casey	TVA
Michele Moorrees	TVA
Owen Scott	TVA
Philip John	TVA
Ray Schiele	TVA
Raymond Joseph	TVA
Stephen Kimura	TVA
Tony Fraley	TVA
Veronica Kyles	TVA
Leigh Lloveras	Break Through Institute
Mary H. Miller	Dominion Energy
Chris Nolan	Duke Energy
Mike Montecalvo	TerraPower