U.S. NUCLEAR REGULATORY COMMISSION SUMMARY OF THE NOVEMBER 30, 2022, PUBLIC OBSERVATION MEETING TO DISCUSS PRE-APPLICATION LICENSING TOPICAL REPORT ON INSTRUMENTATION AND CONTROLS ARCHITECTURE FOR THE BWRX-300 SMALL MODULAR REACTOR

Meeting Summary

On November 30, 2022, an Observation Public Meeting was held between the U.S. Nuclear Regulatory Commission (NRC) staff, GE-Hitachi Nuclear Energy Americas, LLC (GEH), and other stakeholders as identified in Enclosure 2. The purpose of this public meeting was to discuss GEH's future licensing topical report (LTR) on Instrumentation and Controls (I&C) Architecture. GEH gave a presentation to introduce their plans to submit the topical report (TR).

The information presented and discussed during the meeting was non-proprietary, eliminating the need for a closed session of the meeting.

The topics discussed during this meeting included the following:

- An introduction with background information
- Instrumentation and Controls Architecture TR Overview
- I&C Regulatory Framework
- I&C Design Overview

The meeting commenced at 10:00 a.m. with the NRC staff opening remarks, as well as introductions by the participants. After the introductions, GEH used the "Presentation Slides for Pre-Application Meeting for Planned Submittal of GE Hitachi Nuclear Energy BWRX-300 Instrumentation and Controls Architecture Topical Report" material submitted to the NRC as an overview of its planned LTR, "BWRX-300 Instrumentation and Controls Architecture (NEDC-33925P)" expected to be submitted for staff review in 2023.

The presentation began with the evolution of the boiling-water reactor technology followed by a general description of the BWRX-300. The early part of the presentation covered the safety philosophies and mitigation strategies of the reactor design. Before getting into the overview of the TR, GEH shared their safety classification as follows:

- Defense Line 3 primary safety functions are implemented in Safety Class 1 equipment,
- Defense Line 4 primary safety functions are implemented in at least Safety Class 2 equipment, and
- Defense Line 2 primary safety function are implemented in at least Safety Class 3 equipment.

GEH then turned to the overview of the I&C architecture TR. They made it clear that their goal for the LTR is to get early feedback from the NRC and to demonstrate regulatory compliance with requirements I&C related topics applicable to 10 CFR Part 50, Appendix A General Design Criteria. In addition, the presentation highlighted the scope of the LTR. The scope includes an I&C overview, safety I&C system configurations, I&C data communication networks, system

descriptions and design principles, system design process for I&C safety classified systems, and planned use of I&C codes and standards.

The next portion of the meeting was spent discussing how the BWRX-300 fits into the I&C regulatory framework. GEH cited the NRC I&C Design Review Guide to show awareness on what the NRC is looking for when it reviews these topics later in the process. GEH closed the presentation with the design overview for the I&C architecture as well as acknowledging International Electrotechnical Commission standards for their I&C systems design. It was noted that their goal is to align BWRX-300 standard plant design with proven engineering design practices and processes that represent state-of-the-art methods.

NRC staff made comments and asked several clarifying questions in addition to providing constructive feedback to GEH on their proposed approach. There were no questions or concerns from the public. The presentation from GEH did not contain any proprietary information so a closed portion of this meeting was not necessary. As a result, the meeting was adjourned at 12:15 pm.