ENCLOSURE 2

M250354

Presentation Slides for First Pre-Submittal Meeting for Application of SECY 25-0074 to BWRX-300 Expedited Construction and Manufacturing of Certain Structures, Systems, and Components

GVH Non-Proprietary Information

IMPORTANT NOTICE

This is a non-proprietary version of Enclosure 1, from which the proprietary information has been removed. Portions of the enclosure that have been removed are indicated by an open and closed bracket as shown here [[ ]].

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NRC MEETING ON APPLICATION OF SECY 25-0074 TO BWRX-300 EXPEDITED CONSTRUCTION AND MANUFACTURING OF CERTAIN STRUCTURES, SYSTEMS, AND COMPONENTS

January 09, 2026

OPEN SESSION

Agenda

- Open Session
  - Purpose and scope of presentation
  - Desired regulatory feedback by NRC
- Closed Session
  - Background and applicable regulation / guidance
  - Proposed expedited activities
  - Relevant precedents
  - Benefits of expedited construction and manufacturing
  - Follow-up activities
  - Discussion

Purpose & Scope of Presentation

- Describe the desired regulatory feedback by the NRC
- Present the background and regulatory basis for interpretation of SECY 25-0074 as it applies to construction of the BWRX-300
- Receive NRC feedback on the use of a Licensing Topical Report (LTR) as the appropriate regulatory vehicle to **attain assurance** and alignment on interpretation
- Present basic methodology (decision logic) used to identify potential expedited activities
- Present proposed expedited construction and manufacturing activities that will be allowed prior to issuance of a Construction Permit (CP)
- Discuss relevant precedents
- Describe benefits of proposed LTR
- Request action by the NRC and discuss next steps

Desired Regulatory Feedback from NRC

- Review and provide feedback on the interpretation of SECY 25-0074 as it applies to BWRX-300 construction
- Get alignment on what level of engagement is required with the NRC prior to commencing expedited activities (e.g., would an Early Site Permit (ESP) or CP application be required first?)
- Provide feedback on the methodology for determining which expedited construction and manufacturing activities will be allowed for a BWRX-300 deployment without the need for certain NRC approvals
- Review and provide feedback on the requested BWRX-300 expedited activities
- Discuss the NRC's view on BWRX-300 applicants incorporating the approved LTR by reference in their:
  - ESP applications
  - CP applications
  - Limited Work Authorization (LWA) requests
  - Exemption requests

CLOSED SESSION

BWRX-300 Design is Optimized for Cost and Ease of Construction

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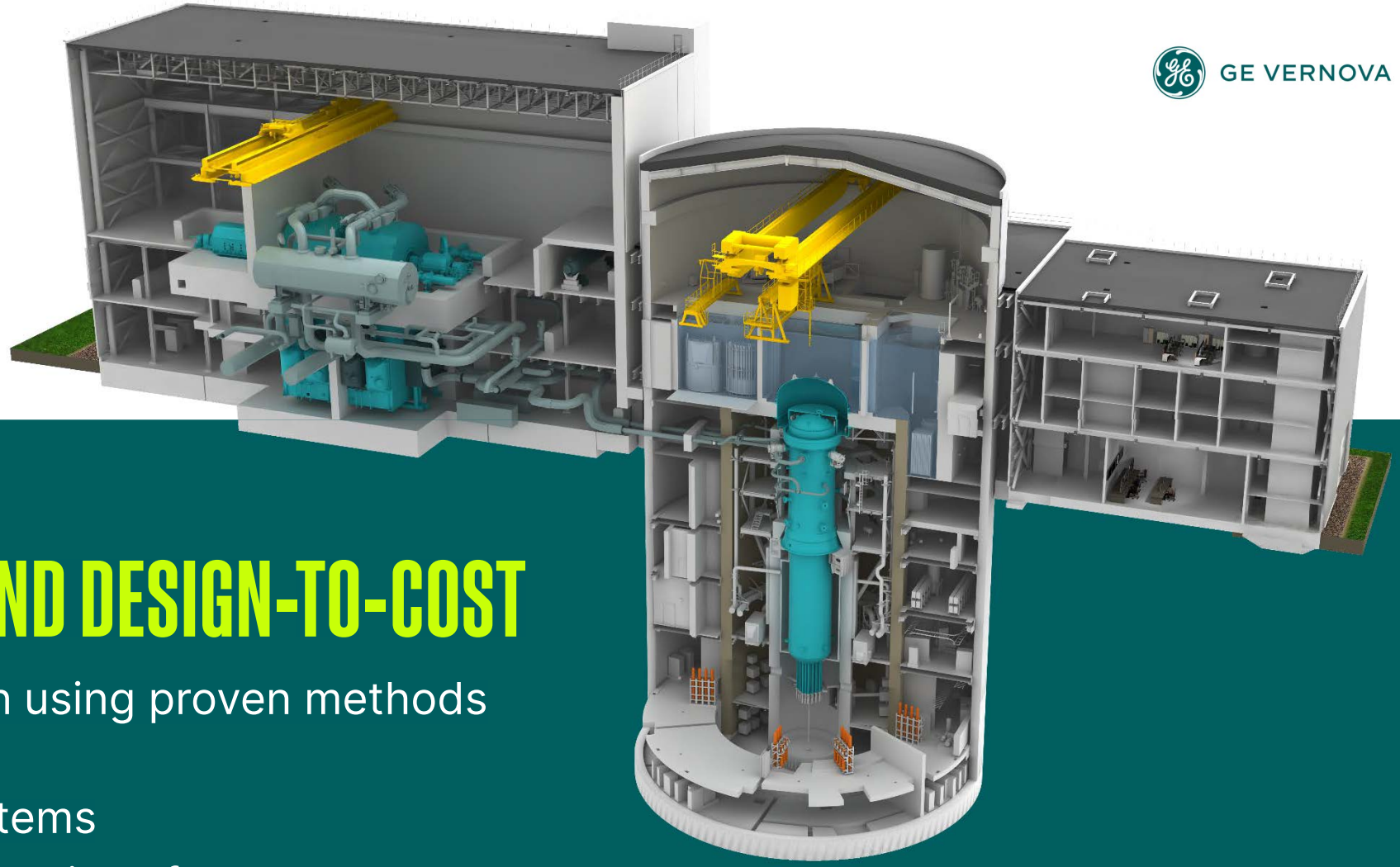

CONSTRUCTABILITY AND DESIGN-TO-COST

- Underground construction using proven methods from other industries
- Maximum use of catalog items
- Significant volume reduction in safety-related concrete (concrete used for Safety Class 1 structures)

BWRX-300 Small Modular Reactor
Sample Basic Site Layout Showing Early Construction

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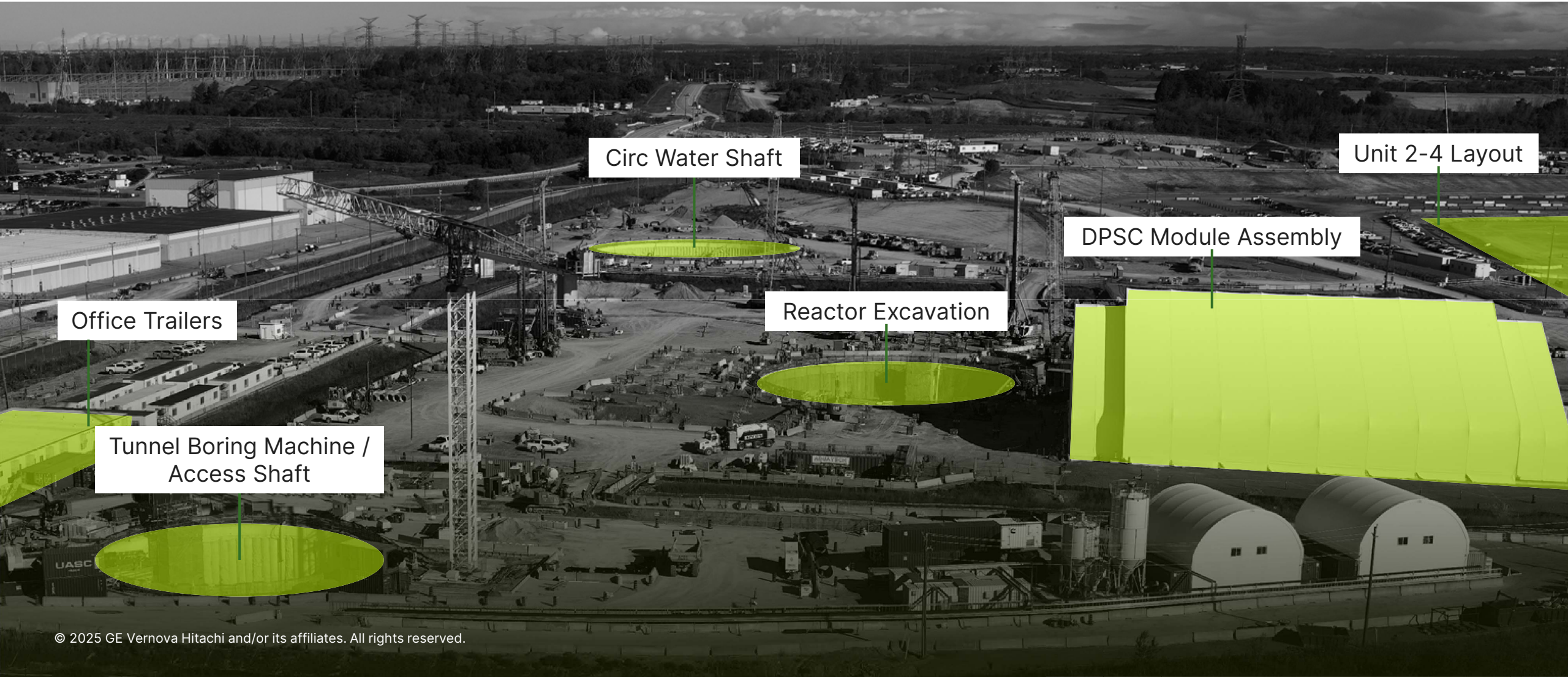

Background

- CP, ESP authorizing LWA activities, Combined License (COL), or LWA issuance is required to allow construction activities which require NRC approval to commence
- Many site preparation, construction and manufacturing activities of Structures, Systems and Components (SSCs) have “no reasonable nexus to radiological health and safety or the common defense and security” or their indirect effect on such health and safety or the common defense and security “is so low as to be considered negligible”
- These activities are classified as “preconstruction” and do not require NRC approval to proceed
- NRC has already recognized that certain activities do not require their approval, as outlined in SECY 25-0074, and has approved other applicant LWA and exemption requests

Applicable Regulations and NRC Guidance

- SECY 25-0074 (August 2025) – Expedited Construction of Certain Structures, Systems, and Components
  - Provides NRC staff's strategy for allowing current and potential applicants to build or install SSCs that do not have a "reasonable nexus to safety" on optimized timeframes.

- Reg. Guide 1.206, Rev. 1 (October 2018) – Applications for Nuclear Power Plants
  - Supports application prep for ESPs, Standard Design Certifications (DCs), and COLs
  - Specifies that LWAs may be submitted by COL or ESP applicants, and ESP holders as an amendment to the ESP
  - Provides examples that clarify the delineation between preconstruction and construction activities

- COL/ESP-ISG-004 (retired) – Interim Staff Guidance on the Definition of Construction and on Limited Work Authorizations
  - Superseded by RG 1.206 Rev. 1, but provides an explanatory discussion of "construction" and "preconstruction" that remains valid

- 10 CFR 50.10 – License Required; Limited Work Authorization
  - 10 CFR 50.10(a)(1) – specifies which activities are considered "construction"
  - 10 CFR 50.10(a)(2) – specifies which activities are not considered "construction"
  - 10 CFR 50.10(c) - requirement for CP, ESP authorizing LWA activities, COL, or LWA to begin construction

Environmental Regulations Remain in Effect for Expedited Construction Activities

- Potential applicants are still required to obtain and maintain permits or authorizations from the U.S. Army Corps of Engineers (USACE) and other Federal, State, and local agencies and permitting authorities before undertaking certain activities.

- The National Environmental Policy Act (NEPA) of 1969 requires Federal agencies (including the NRC) to consider the potential effects of their actions on the affected human environment, which includes aesthetic, historic, and cultural resources. This includes evaluating the cumulative environmental impacts of “reasonably foreseeable actions.”

- Extensive preconstruction, especially deep excavations and permanent structures, will need to be evaluated by the NRC in accordance with the NEPA in order for the NRC to issue Environmental Impact Statements (EISs)

Overview of Proposed LTR

- Describe expedited construction and manufacturing of certain SSCs for the BWRX-300
- Provide a brief overview of the BWRX-300 design and separation between nuclear and balance-of-plant (BOP) SSCs
- Identify methodology for determining allowable BWRX-300 preconstruction activities
- Provide a list of specific expedited activities
- Ensure those construction and manufacturing activities that have a “reasonable nexus to radiological safety or the common defense and security” will only proceed once a COL or CP is issued for a site applicant
- Applicable regulatory requirements and guidance will be discussed
- Relevant precedents associated with this effort will be provided
- Additional pre-submittal meeting(s) will be scheduled as necessary to provide NRC staff more information to facilitate its review of the LTR

Draft Methodology for Determining Allowable Expedited Activities Will Employ Decision Logic

- Is an activity defined as “not construction” per 10CFR50.10(a)(2)? If so, then it can proceed. If not, then:

- The guidance provided in SECY 25-0074 will be applied. Activities that would not fall under the scope of construction are those:

  - That do not directly affect the radiological health and safety of the public or the common defense and security, and their indirect effect on such health and safety or common defense and security is so low as to be considered negligible
  - Not directly relied upon to mitigate an accident or transient or used in plant emergency operating procedures (10 CFR 50.10(a)(1)(ii)),
  - Whose failure would not directly prevent safety-related SSCs (i.e., Safety Class 1 SSCs) from performing their safety-related function (i.e., Safety Category 1 function) (10 CFR 50.10(a)(1)(iii)),
  - Whose failure would not directly cause a scram or actuation of a safety-related system (Safety Class 1) (10 CFR 50.10(a)(1)(iv)),
  - Which are not used directly to comply with security or emergency preparedness requirements(10 CFR 50.1 0(a)(1)(v), (vi), and (vii))
  - And whose indirect effect is so low as to be considered negligible

Additional Factors to Consider in the Methodology

- Preparation activities associated with the Reactor Building (RB) shaft would not have a reasonable nexus to radiological safety or common defense and security. The inspection, testing, and in-service monitoring described in LTR NEDO 33914-A Revision 2, will demonstrate RB structural integrity. Delaying preparation of the reactor building shaft until after a CP or COL is issued would cause construction delays, resulting in undue hardship or other costs per 10CFR50.12.

- Does the proposed activity fit within the NRC's EIS conclusions issued to an applicant?

- Conservatisms will be employed as appropriate, when utilizing the methodology/design logic, so as not to approach the threshold of "a reasonable nexus to radiological safety"

Quality Assurance (QA) and Record Retention to Assure NRC

- “Appendix B-like” controls will be used for expedited activities where feasible, even if not explicitly required, in order to maintain alignment with QA requirements for NRC approvals
- Applicants will ensure traceability through the maintenance of preconstruction records

Intended Use of the Approved LTR

- Could be incorporated by reference in an applicant's ESP/CP/COL/LWA/Exemption request with the applicant adding any site-specific considerations

- Will provide a repeatable, design-specific framework that:
  - Preserves NRC oversight of work that has a reasonable nexus to safety
  - Allows activities with no reasonable nexus to safety to proceed on an expedited timeline
  - Can be generically referenced by multiple applicants

EXPEDITED CONSTRUCTION & MANUFACTURING OF CERTAIN SSCS

The proposed expedited activities in the following table are categorized as shown below and justified by one or more of the following:

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Proposed Expedited Activities Covered by LTR

Category	Activity	Justification/applicable regulation

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Proposed Expedited Activities Covered by LTR (continued)

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Category	Activity	Justification

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Proposed Expedited Activities Covered by LTR (continued)

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Category	Activity	Justification
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Proposed Expedited Activities Covered by LTR (continued)

Category	Activity	Justification
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RELEVANT PRECEDENTS

Current BWRX-300 Construction Permit Application

- TVA CRNS Early Site Permit Application (ESPA) submitted 2019
  - ➢ NRC EIS issued which states:
    "Preconstruction includes activities such as site preparation (e.g., clearing, grading, and installation of erosion control, and other environmental mitigation measures), erection of fences, excavation, erection of support buildings or facilities, building service facilities (e.g., roads, parking lots, rail lines, transmission lines, sanitary-treatment system, potable water system), and procurement or fabrication of components occurring at a location other than the final, in-place location at the site."
  - ➢ ESP approved by NRC June 2019, no LWA requested

- Exemption request submitted by TVA November 2023 to conduct certain excavation support activities prior to issuance of a CP Application (CPA) for the CRNS site. Approved by NRC December 2024, allowing:
  - ➢ Excavation for the Reactor Building
  - ➢ Installation of initial ground support system to ensure worker safety during excavation activities
  - ➢ Abandon in place the initial ground support system

- CRNS CPA submitted April 2025

- Supplemental EIS (draft) for CRNS CP issued by NRC November 2025
  - ➢ "Activities associated with building the facility that are not within the purview of the NRC are grouped under the term "preconstruction," such as clearing, grading, excavating, erection of support buildings and transmission lines. Because the preconstruction activities are not under the purview of the NRC, their impacts are considered in the context of reasonably foreseeable actions."

Other Relevant Precedents

- Terra Power CPA submitted for a Natrium sodium fast reactor design at the Kemmerer 1 site
  - Topical Report “Regulatory Management of Natrium Nuclear Island and Energy Island Design Interfaces” provides approach to decouple the proposed Energy Island (EI) from the Nuclear Island (NI)
  - NRC approved the topical report for referencing in licensing actions
  - NRC approved an exemption request to allow certain construction activities for Natrium EI SSCs classified as non-safety-related with no special treatment (NST), the failure of which could cause the reactor to scram or actuation of a safety-related system, without a LWA while the NRC staff continues its review of the Kemmerer 1 CPA. This exemption was granted due to compliance with a regulation that would result in undue hardship (substantial costs due to delays in construction and commercial operation)

- Blue Energy Topical Report BE-BOPTR-02-NP Rev. 0 “Resequencing Balance-of-Plant and Nuclear Island Construction for Blue Energy Deployments” (June 2025)
  - Requests NRC approval of the methodology and determinations, subject to any NRC limitations and conditions, to be referenced in future licensing submittals to support a more efficient and effective deployment strategy in alignment with the ADVANCE Act

- Holtec SMR White Paper for LWA

- Nuscale LWA and exemption request for Reactor and Radwaste Building excavations and foundations (withdrawn)

SUMMARY

Benefits of Proposed LTR

- Ability to expedite the construction and manufacturing of certain SSCs without compromising NRC oversight of construction activities that have a reasonable nexus to safety, thereby protecting the public and environment
- LTR gives some level of certainty to allow start of construction. No customer will spend $600-700 million without some certainty.
- Time and cost savings associated with plant construction
- Unforeseen construction and manufacturing obstacles can be identified and remediated in a timely manner
- Future BWRX-300 applicants can incorporate the approved LTR by reference, providing consistency among applications and reducing required NRC review time
- NRC's implementation of licensing efficiency efforts facilitates nuclear technology deployment in support of the "Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy Act of 2024" (ADVANCE Act)

Action Being Requested by NRC

- Provide feedback on GVH's interpretation of SECY 25-0074 as it applies to BWRX-300 expedited construction and manufacturing activities
- Provide feedback on the use of an LTR as the appropriate type of regulatory submittal
- Discuss any potential limitations and conditions that may be applicable to the LTR
- Provide specific questions to be answered by the LTR

Follow-up Activities for LTR Preparation

- GVH will work on refining the decision tool and documenting its use in identifying proposed expedited construction and manufacturing activities, including justification based on NRC regulations and guidance
- Refine the scope of specific proposed expedited activities included in the LTR
- Participate in additional pre-submittal meetings as necessary to facilitate the NRC's review
- Plan to submit LTR by mid-2026, with requested approval by the end of 2026

DISCUSSION