



GE VERNOVA

# HITACHI

**Proprietary Notice**

~~This letter transmits proprietary information.~~ Upon the removal of Enclosure 1, the balance of the letter may be considered non-proprietary.

M260015  
March 4, 2026

Docket Number: 99900003

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D.C. 20555-0001

ATTN : Michele Sampson, Director, Division of New and Renewed Licenses, NRR, USNRC

**Subject:** White Paper – Justification that Installation of Certain Structures, Systems, and Components for a BWRX-300 are Preconstruction Activities – Topic 2

Enclosed is a White Paper regarding the justification that installation of certain structures, systems, and components for a BWRX-300 are preconstruction activities that do not require prior NRC approval.

Enclosure 1 contains proprietary information of the type that GE Vernova Hitachi Nuclear Energy Americas, LLC (GVH) maintains in confidence and withholds from public disclosure. The affidavit contained within Enclosure 3 identifies that the information contained in Enclosure 1 has been handled and classified as proprietary to GVH. GVH hereby requests that the information in Enclosure 1 be withheld from public disclosure in accordance with the provisions of 10 CFR 2.390 and 9.17. Upon removal of Enclosure 1, the remainder of this submittal is non-proprietary.

**Suzanne Karkour**

Vice President, New Power Plant and Product Licensing  
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If you have any questions, please contact me at +1 289-385-1935.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. Karkour', with a long horizontal flourish extending to the right.

Suzanne Karkour  
Vice President, New Power Plant and Product Licensing  
GE Vernova-Hitachi Nuclear Energy Americas, LLC

**Enclosures:**

1. White Paper - Justification that Installation of Certain Structures, Systems, and Components for a BWRX-300 are Preconstruction Activities – Topic 2, GVH - Proprietary Information - Non-Public
2. White Paper - Justification that Installation of Certain Structures, Systems, and Components for BWRX-300 are Preconstruction Activities – Topic 2, GVH - Non-Proprietary Information - Public
3. Affidavit, GVH - Non-Proprietary Information

cc: Mahmoud Jardeneh, USNRC  
Stacy Joseph, USNRC  
Michelle Catts, GVH  
Suzanne Karkour, GVH  
Michael Hamer, GVH

PLM Specification – 010N6716 Revision 0

**Document Components:**

001 M260015 Cover Letter.pdf  
002 M260015 Enclosure 1 Proprietary.pdf  
003 M260015 Enclosure 2 Non-Proprietary.pdf  
004 M260015 Enclosure 3 Affidavit Non-Proprietary.pdf

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## ENCLOSURE 2

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White Paper  
Justification that Installation of Certain Structures, Systems, and  
Components for a BWRX-300 are Preconstruction Activities – Topic 2

GVH Non-Proprietary Information - Public

### **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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## 1.0 INTRODUCTION

### 1.1 Purpose

By letter dated February 4, 2026, GE Vernova Hitachi Nuclear Energy Americas LLC (GVH) submitted a white paper to the U.S. Nuclear Regulatory Commission (NRC): *Justification that Installation of Certain Structures, Systems, and Components (SSCs) for a BWRX-300 are Preconstruction Activities* - [[ (Topic 1).

The purpose of this first white paper was to request feedback from the NRC that this activity does not constitute construction as defined in 10 CFR 50.10(a)(1).

The purpose of this second white paper is to request pre-application feedback from the NRC staff regarding the justification that installation of additional SSCs for a BWRX-300 may be treated as activities that do not constitute construction as defined in 10 CFR 50.10(a)(1) – Topic 2. Specific activities included in Topic 2 are:

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Activities defined as construction by 10 CFR 50.10(a)(1) require prior approval from the NRC in the form of a Construction Permit (CP), Combined License (COL), Limited Work Authorization (LWA), or exemption from NRC requirements. Activities not meeting the definition of construction can be classified as preconstruction and do not require prior NRC approval. Performing preconstruction activities prior to receiving a CP, COL, LWA or exemptions reduces the overall construction schedule of a BWRX-300, decreases construction costs, and improves economic viability.

Obtaining confirmatory feedback from the NRC regarding GVH's justification of activities as preconstruction will allow the methodology for determining which activities qualify as preconstruction to be consistently applied to future BWRX-300 projects and incorporated into a Licensing Topical Report (LTR) – NEDC-34403P, with planned submittal by end of Q1 2026. This will reduce the time required for the NRC to review future applications, thereby increasing licensing efficiency.

### 1.2 Scope

This document includes the following:

- A general description of the BWRX-300
- A technical evaluation describing the BWRX-300 safety strategy and classification of SSCs. Also presented in the technical evaluation are descriptions of the safety classification of CWS piping and power block buildings other than the RB
- A regulatory evaluation addressing NRC regulatory requirements and guidance. This includes proposed content for a Licensing Topical Report (LTR) that can be incorporated by reference by future applicants for CPs or COLs.

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## **2.0 BWRX-300 GENERAL DESCRIPTION**

The BWRX-300 is an approximately 300 MWe, water-cooled, natural circulation Small Modular Reactor (SMR) utilizing simple passive safety systems driven by natural phenomena. It is designed by GVH for deployment in the United States and internationally. It is the tenth generation of the Boiling Water Reactor (BWR) and is an evolution of the NRC-certified design for the 1,520 MWe Economic Simplified Boiling Water Reactor (ESBWR).

## **3.0 TECHNICAL EVALUATION**

### **3.1 BWRX-300 Safety Strategy and Classification of Structures, Systems, and Components**

GVH submitted LTR NEDC-33934P, *BWRX-300 Safety Strategy* to the NRC for their review. This Safety Strategy applies a Defense-in-Depth (D-in-D) design approach to achieve an internationally deployable design with an inherent high level of safety. As part of this approach, the safety classification process for SSCs of the BWRX-300 includes four safety classes: Safety Class 1 (SC1), Safety Class 2 (SC2), Safety Class 3 (SC3), and Non-safety Class (SCN). Safety classes are assigned to components (generally not systems) based on the safety category functions that they perform. SC1 SSCs are equivalent to the “safety-related SSCs” definition in 10 CFR 50.2. SC2, SC3, and SCN SSCs are “non-safety-related” as defined in 10 CFR 50.2.

Buildings and structures are assigned a safety classification based on the highest safety classification of the components they house or protect, excluding components for which failure of the supporting structure results in fail-safe performance of the component’s safety category function(s).

The BWRX-300 design assigns seismic category designations based on NRC seismic categories. Seismic category I is assigned to those SSCs that are required to maintain their structural integrity and safety functions during and after a seismic event. All BWRX-300 Seismic Category I SSCs are housed in the deeply embedded RB. Seismic category II is assigned to those SSCs that are not required to remain functional during or after a seismic event but whose failure during a seismic event could adversely affect the ability of any seismic category I SSC to accomplish its Safety Category 1 function. Seismic category RW-IIa is assigned to SSCs required for the management and storage of radiological material. Seismic category Non-Seismic is assigned to SSCs that fit none of the other categories.

The BWRX-300 design assigns Quality Group designations per the guidance in Regulatory Guide (RG) 1.206, *Quality Group Classifications and Standards for Water-, Steam, and Radioactive-Waste-Containing Components of Nuclear Power Plants* as a method for establishing the appropriate codes and standards based on the importance of the pressure-retaining function of the component. Quality Group A essentially refers to components that are part of the reactor coolant pressure boundary. Quality Groups B and C essentially refer to other components that are “important to safety.” Quality Group D includes those components that are not part of the reactor coolant pressure boundary or included in Quality Groups B or C, but that are part of systems or portions of systems that contain or may contain radioactive material.

The BWRX-300 design is developed in a manner that reduces the risk of human actions leading to Postulated Initiating Events (PIEs) and minimizes reliance on human actions following a PIE,

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consistent with both regulatory expectations for modern nuclear power plant designs and current industry good practice. The design basis includes two notable, top-level claims reflecting non-reliance on operator actions in response to initiating events:

- For any PIE or event sequence in the Anticipated Operating Occurrence (AOO) or Design Basis Accident (DBA) event categories, the Fundamental Safety Functions (FSFs) can be performed and maintained for 72 hours without operator action. This claim is substantiated using conservative analysis techniques, in the Conservative Deterministic Safety Analysis described in the BWRX-300 Safety Strategy.
- For any PIE or event sequence within the scope of the coping capability sequence selection process, the FSFs can be performed and maintained for 7 days without operator action. This claim is substantiated using analysis techniques described in the BWRX-300 Safety Strategy.

### 3.2 Circulating Water System Piping

The CWS provides cooling water to the main condenser and transfers heat from the main condenser to the environment through the Normal Heat Sink (NHS). CWS pumps take suction from the NHS via a connecting water passage and discharge through a common underground pipe. In the Turbine Building (TB), the piping comes above grade and is routed into the tube side of the main condenser to act as the cooling flow for condensing main turbine exhaust steam. Circulating Water (CW) exiting the main condenser is piped back underground to the NHS. For BWRX-300 deployments in cold climates, a hot CW return line is provided to recycle water returning from the condenser in cold weather conditions as required to prevent freezing in the NHS.

Providing cooling water to the main condenser and transferring heat from the main condenser to the environment is classified as a Safety Category 3 function as defined by the BWRX-300 Safety Strategy. Since the CWS does not perform a Safety Category 1 function, it is not considered by the Safety Strategy to be a “safety-related” system as defined by 10 CFR 50.2. CWS piping is classified as SC3, Non-Seismic, and Quality Group D.

### 3.3 Foundation Supports and Foundations for Power Block Buildings other than RB

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These buildings are located adjacent to the RB and are separated by seismic gaps sized based on local building code or interaction requirement for structures adjacent to the RB. These power block structures may be supported by shallow foundations unless the need for deeper foundations is warranted by site-specific requirements.

The RB houses Reactor Pressure Vessel (RPV), containment, reactor safety systems, and power supplies and equipment. It also houses the refueling floor, refueling and fuel handling systems, fuel pool, water needed for the BWRX-300 passive safety-related cooling systems, and the polar crane. The RB protects the containment structure from external hazards (i.e., wind loads, fires, floods, tornado loads, aircraft impact, tornado-borne missiles) and external beyond design basis scenarios (i.e., aircraft impact, blast impact).

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The only SC1 civil structure of the BWRX-300 is the RB. The TB, CB, SB, and Reactor Auxiliary Bay are classified as SC2 based on the BWRX-300 safety classification of the equipment they support or protect. These non-SC1 structures are not required to support the performance of Safety Category 1 functions, which are those that meet the “safety-related” NRC definition. The RWB is classified as SC3.

As such, these non-SC1 structures are not considered to be “safety-related” by NRC definition. In addition, their foundations are not relied upon to support, anchor, or protect safety-related SSCs, nor could their failure credibly prevent SC1 SSCs from fulfilling their safety functions.

### **3.4 Construction of Power Block Buildings other than RB**

The TB, CB, RWB, SB, and Reactor Auxiliary Bay structures support or protect SSCs that are not required to remain functional during or after a seismic event or can perform their desired function regardless of structure performance (fail-safe SC1 SSCs). These structures pose an interaction potential on the BWRX-300 Seismic Category I RB structure due to their proximity. They are categorized as Seismic Category II, except for the RWB, which is categorized as Seismic Category RW-IIa.

The TB houses the turbine generator, main condenser, portions of the main steam and condensate and feedwater systems, exciter and isophase bus ducts, off-gas system cooler, the condensate filters and demineralizers, standby diesel generators, bridge crane and other systems. The SB houses interim (less than 24-hour) storage and handling areas for new fuel on the first floor, non-control-room-related support functions, cold shop, and health physics to control access to the radiologically controlled area and an owner configurable office. The RWB houses process systems such as the liquid waste management system, the solid waste management system, and a portion of the off-gas system.

The CB houses the Main Control Room (MCR), operation and Technical Support Center (TSC), and electrical, control, instrumentation equipment, and various other functional areas. The CB also houses the primary protected route between the MCR, and the Secondary Control Room (SCR) housed within the RB. The Reactor Auxiliary Bay is comprised of four arc sectors around the RB. The Reactor Auxiliary Bay houses access pathways between buildings, space for components which are not inside the RB but need to be close, and the primary protected route between the MCR and SCR in the south-west arc. The Reactor Auxiliary Bay satisfies the structural gap needed between RB and surrounding buildings to prevent collisions during a seismic event. The MCR and SCR are provided as physically and electrically separate facilities such that for any PIE, at least one facility remains accessible, functional, and habitable long enough to fulfill the required safety function of the facility. The MCR and primary evacuation route between the MCR and the SCR are designed to maintain their structural integrity under a seismic or extreme wind event to prevent incapacitating injury to the MCR occupants or their egress to the SCR. The MCR and MCR to SCR primary evacuation route is hardened by design against perforations by extreme wind missiles. Unobstructed access of the primary evacuation route between the MCR and the SCR is provided. The MCR meets the bullet-resistant requirements of 10 CFR 73.55(e)(5). The TSC is not designed to meet the habitability requirements during DBAs and Design Extension Conditions (DECs), nor withstand the most adverse conditions expected during the design life of the facility. An alternative approach to meet these requirements is that the licensee maintains a backup location

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with equivalent functionality for TSC personnel to relocate to off-site, when evacuation of the TSC is required, as well as a procedure for TSC evacuation.

## **4.0 Regulatory Evaluation**

### **4.1 NRC Regulatory Requirements and Guidance**

The following regulatory requirements and guidance are applicable to construction activities for a BWRX-300 installation. Activities classified as preconstruction do not require prior NRC approval. Activities classified as construction do require NRC approval, by either a CP, COL, LWA, or exemption from regulatory requirements.

#### **4.1.1 10 CFR 50.2**

10 CFR 50.2, *Definitions*, defines “safety-related SSCs” as meeting the following requirements: “... those structures, systems and components that are relied upon to remain functional during and following design basis events to assure:

- (1) The integrity of the reactor coolant pressure boundary,
- (2) The capability to shut down the reactor and maintain it in a safe shutdown condition, or
- (3) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposure comparable to the applicable guideline exposures set forth in § 50.34(a)(1) or § 100.11 of this chapter, as applicable.”

#### **4.1.2 10 CFR 50.10**

10 CFR 50.10, *License Required; Limited Work Authorization* provides the regulatory definition of those activities that are considered construction and preconstruction.

10 CFR 50.10(a)(1) specifies those activities that constitute construction and require NRC approval prior to commencing. These include driving of piles, subsurface preparation, placement of backfill, concrete or permanent retaining walls within an excavation, installation of foundations or in-place assembly, erection, fabrication, or testing, which are for:

- Safety-related structures, systems, or components (SSCs) of a facility
- SSCs relied upon to mitigate accidents or transients or used in plant emergency operating procedures
- SSCs whose failure could prevent safety-related SSCs from fulfilling their safety-related function
- SSCs whose failure could cause a reactor scram or actuation of a safety-related system, and
- SSCs necessary to comply with security, fire protection, or emergency preparedness requirements.

10 CFR 50.10(a)(2) specifies those activities that are considered “not construction” and therefore do not require NRC approval to proceed. These include:

- Site exploration
- Site preparation, including clearing, grading, installation of drainage, erosion, and other environmental mitigation measures, and construction of temporary roads and borrow areas

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- Erection of fences and other access control measures
- Excavation
- Erection of support buildings (such as construction equipment storage sheds, warehouse and shop facilities, utilities, concrete mixing plants, docking and unloading facilities, and office buildings) for use in connection with the construction of the facility
- Building of service facilities, such as paved roads, parking lots, railroad spurs, exterior utility and lighting systems, potable water systems, sanitary sewerage treatment facilities, and transmission lines, and
- Procurement or fabrication of components or portions of the proposed facility occurring at other than the final, in-place location at the facility.

#### **4.1.3 SECY 25-0074**

SECY-25-0074, *Expedited Construction of Certain Structures, Systems, and Components* provides the NRC staff's strategy for allowing current and potential applicants to build or install SSCs that do not have a reasonable nexus to radiological health safety and/or the common defense and security without prior NRC approval. In regard to the provisions of 10 CFR 50.10(a)(1)(ii)-(vii), which pertain to non-safety-related SSCs, the NRC staff will ensure that the application of the definition of construction for a facility focuses on only those SSCs that have a reasonable nexus to radiological safety and common defense and security based on a review of the design of that facility. The non-safety-related SSCs that are not within the scope of the definition of construction would include those SSCs 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. They could include non-safety-related SSCs that are 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 from performing their safety-related function (10 CFR 50.10(a)(1)(iii)), whose failure would not directly cause a scram or actuation of a safety-related system (10 CFR 50.10(a)(1)(iv)), which are not used directly to comply with security and emergency preparedness requirements (10 CFR 50.10(a)(1)(v), (vi), and (vii)) and whose indirect effect is so low as to be considered negligible.

This guidance acknowledges that for advanced reactor designs, loss of some balance-of-plant SSCs can or will result in a loss of cooling or heat transfer capability of balance-of-plant SSCs, which will result in a reactor scram. However, this would be an indirect effect because the loss of the SSCs would change plant conditions, which would ultimately result in an actuation of components that would directly result in a reactor scram or actuation of safety-related equipment. If the failure of those balance-of-plant SSCs has an indirect effect on public health and safety and common defense and security that is so low as to be considered negligible, then installation of those SSCs could be determined to not be construction.

#### **4.1.4 Regulatory Guide 1.206**

RG 1.206, *Applications for Nuclear Power Plants*, provides guidance on the scope and content of licensing applications and identifies activities that may be conducted prior to issuance of a CP or COL. Section C.2.18 of RG 1.206 recognizes that certain construction-related activities may be

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performed prior to licensing approval, provided they are sufficiently separated from safety-related SSCs and do not adversely affect their design, construction, or performance.

RG 1.206 further acknowledges that activities involving non-safety-related SSCs may be excluded from the scope of construction requiring NRC approval when it can be demonstrated that their failure would not result in a reactor trip, actuation of a safety-related system, or adverse interaction with safety-related SSCs. This guidance is consistent with the framework established in 10 CFR 50.10 and the Commission's direction in SECY 25-0074.

#### 4.2 Justification

The installation of [[ ]] per 10 CFR 50.10(a)(1) because CWS piping is not a safety-related SSC of a facility, is not relied upon to mitigate accidents or transients or used in plant emergency operating procedures, its failure would not prevent safety-related SSCs from fulfilling their safety-related function, and is not necessary to comply with security or emergency preparedness requirements. Failure of BWRX-300 CWS piping outside the TB could indirectly cause a scram, but consistent with the NRC staff policy direction in SECY 25-0074, such indirect effects do not constitute a reasonable nexus to radiological health and safety or the common defense and security. [[

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While the CB houses the MCR, FSFs required for the BWRX-300 during AOO or DBA events can be performed and maintained for 72 hours without operator action. For event sequences within the scope of the coping capability sequence selection process, the FSFs can be performed and maintained for 7 days without operator action. Even though the CB houses the TSC, which is used in emergency operating procedures and for emergency preparedness requirements, a backup location with equivalent functionality for TSC personnel will be provided. The protected path between the MCR and SCR housed in the CB and reactor auxiliary bay is designed to withstand events which otherwise cause the MCR to be unavailable, to the extent required for personnel to transit from the MCR to the SCR and is designed to withstand seismic and high wind conditions such that traversal is possible.

BWRX-300 power block buildings other than the RB are not SC1 structures. Their failure would not affect SSCs relied upon to mitigate accidents or transients and would not prevent safety-related SSCs from fulfilling their safety-related function(s). The failure of these buildings would not directly result in a reactor scram or actuation of a safety system. The failure of these buildings could affect equipment associated with security, fire protection, emergency preparedness, and emergency operating procedure functions. The guidance provided in SECY 25-0074 acknowledges that "installation of some systems and components within the structure may be considered construction under 10 CFR 50.10 if they have a direct effect on any one of the individual criteria or if the impact of their indirect effect is more than negligible." In this case, according to SECY 25-0074, an applicant "could submit an exemption request to the NRC to allow for this construction activity to occur before issuance of a license, and the exemption will be granted if the underlying requirements of 10 CFR 50.12 are met." These activities involve the excavation for and construction of structures only, and do not involve installation of systems and components within their respective structures.

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### **4.3 Licensing Topical Report Content**

An LTR will be prepared which will combine the evaluation contained in this white paper, along with that of other white papers to be submitted for other BWRX-300 preconstruction determinations. Table 1 shows the planned preconstruction activities for a typical BWRX-300 installation which do not require NRC pre-approval. These activities will not be included in the LTR. Table 2 shows the potential preconstruction activities to be presented in a series of white papers which will provide the justifications for considering them to qualify as preconstruction. These activities will be evaluated for inclusion in the LTR.

The LTR will describe the methodology, or decision logic, that is used to determine which activities are classified as preconstruction. [[

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It is intended that once the LTR is approved by the NRC, it can be incorporated by reference by BWRX-300 applicants. This will facilitate the performance of justified preconstruction activities without the need for a CP, COL, LWA or exemption to NRC requirements. As a result, NRC required reviews and approvals, along with associated review time, will be minimized, thereby improving regulatory efficiency. It will also result in time and cost savings associated with construction of BWRX-300 plants.

### **4.4 Environmental Considerations**

All preconstruction activities taking place at a plant site are subject to applicable federal, state, and local environmental permitting requirements. The environmental effects of preconstruction activities will be included when considering cumulative environmental impacts of plant construction to support the NRC's development of EISs, and its responsibilities under the National Environmental Policy Act (NEPA) of 1969.

## **5.0 CONCLUSION**

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**Table 1: BWRX-300 Planned Preconstruction Activities (NRC approval not required)**

Category	Activity	Preconstruction Justification
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**Table 2: BWRX-300 Potential Preconstruction Activities**  
**(to be described in white papers and included in LTR)**

Category	Activity	Justification
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ENCLOSURE 3

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Affidavit

# GE Vernova-Hitachi Nuclear Energy Americas, LLC

## AFFIDAVIT

I, **Suzanne Karkour**, state as follows:

- (1) I am Vice President, New Power Plant and Product Licensing, GE Vernova-Hitachi Nuclear Energy Americas, LLC (GVH), and have been delegated the function of reviewing the information described in paragraph (2) which is sought to be withheld and have been authorized to apply for its withholding.
- (2) The information sought to be withheld is contained in Enclosure 1 of GVH Letter M260015, “White Paper - Justification that Installation of Certain Structures, Systems, and Components for a BWRX-300 are Preconstruction Activities – Topic 2.” GVH proprietary text is identified by dotted underline within double square brackets. [[This sentence is an example.<sup>{3}</sup>]] Figures and large objects containing GVH proprietary information are identified with double square brackets before and after the object. In all cases, the superscript notation <sup>{3}</sup> refers to Paragraph (3) of this affidavit, which provides the basis for the proprietary determination.
- (3) In making this application for withholding of proprietary information of which it is the owner or licensee:
  - (a) In the United States, GVH relies upon the exemption from disclosure set forth in the Freedom of Information Act (“FOIA”), 5 USC Sec. 552(b)(4), and the Trade Secrets Act, 18 USC Sec. 1905, and Nuclear Regulatory Commission (NRC) regulations 10 CFR 9.17(a)(4), and 2.390(a)(4) for “trade secrets” (Exemption 4). The material for which exemption from disclosure is here sought also qualify under the narrower definition of “trade secret”, within the meanings assigned to those terms for purposes of FOIA Exemption 4 in, respectively, Critical Mass Energy Project v. Nuclear Regulatory Commission, 975 F.2d 871 (DC Cir. 1992), and Public Citizen Health Research Group v. FDA, 704 F.2d 1280 (DC Cir. 1983).
- (4) In the United States, some examples of categories of information which fit into the definition of proprietary information in (3)(a) above are:
  - (a) Information that discloses a process, method, or apparatus, including supporting data and analyses, where prevention of its use by GVH’s competitors without license from GVH constitutes a competitive economic advantage over other companies;
  - (b) Information which, if used by a competitor, would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product;
  - (c) Information which reveals aspects of past, present, or future GVH customer-funded development plans and programs, resulting in potential products to GVH;
  - (d) In the U.S., information which discloses patentable subject matter for which it may be desirable to obtain patent protection.

## GE Vernova-Hitachi Nuclear Energy Americas, LLC

The information sought to be withheld is considered to be proprietary for the reasons set forth in paragraphs (4)(a) through (4)(d) above.

- (5) To address the U.S. requirements in 10 CFR 2.390(b)(4) requirements, the information sought to be withheld is being submitted to the NRC in confidence. The information is of a sort customarily held in confidence by GVH and is in fact so held. The information sought to be withheld has, to the best of my knowledge and belief, consistently been held in confidence by GEH, no public disclosure has been made, and it is not available in public sources. All disclosures to third parties including any required transmittals to the NRC, have been made, or must be made, pursuant to regulatory provisions or proprietary agreements which provide for maintenance of the information in confidence. Its initial designation as proprietary information, and the subsequent steps taken to prevent its unauthorized disclosure, are as set forth in paragraphs (6) and (7) following.
- (6) Initial approval of proprietary treatment of a document is made by the manager of the originating component, the person most likely to be acquainted with the value and sensitivity of the information in relation to industry knowledge, or subject to the terms under which it was licensed to GVH.
- (7) The procedure for approval of external release of such a document typically requires review by the staff manager, project manager, principal scientist or other equivalent authority, by the manager of the cognizant marketing function (or his delegate), and by the Legal Operation, for technical content, competitive effect, and determination of the accuracy of the proprietary designation. Disclosures outside GVH are limited to regulatory bodies, customers, and potential customers, and their agents, suppliers, and licensees, and others with a legitimate need for the information, and then only in accordance with appropriate regulatory provisions or proprietary agreements.
- (8) The information identified in paragraph (2) is classified as proprietary because it contains preliminary proprietary design information for BWRX-300 systems and components, and regulatory acceptance criteria intended to be used for the safety analysis of the BWRX-300. The development of the preliminary proprietary design information for systems and components and proposed regulatory acceptance criteria for this new reactor technology was achieved at a significant cost to GVH.

The development of the evaluation process for this new reactor technology design, along with the interpretation and application of the regulatory acceptance criteria, is derived from the extensive experience database that constitutes a major GVH asset.

- (9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to GVH's competitive position and foreclose or reduce the availability of profit-making opportunities. The development of this new reactor technology is part of GVH's comprehensive BWR safety and technology base, and its commercial value extends beyond the original development cost. The value of the technology base goes beyond the extensive physical database and analytical methodology and includes development of the expertise to determine and apply the appropriate evaluation process. In addition, the technology base includes the value derived from providing analyses done with NRC-approved methods.

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The research, development, engineering, analytical, and NRC review costs for this reactor technology comprise a substantial investment of time and money by GVH.

The precise value of the expertise to devise an evaluation process and apply the correct analytical methodology to a new reactor technology is difficult to quantify, but it clearly is substantial.

GVH's competitive advantage will be lost if its competitors are able to use the results of the GVH experience to normalize or verify their own process or if they are able to claim an equivalent understanding by demonstrating that they can arrive at the same or similar conclusions.

The value of this information to GVH would be lost if the information were disclosed to the public. Making such information available to competitors without these competitors having been required to undertake a similar expenditure of resources would unfairly provide competitors with a windfall and deprive GVH of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing this very valuable reactor technology.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 4<sup>th</sup> day of March 2026.

A handwritten signature in black ink, appearing to read 'S. Karkour', with a long horizontal flourish extending to the right.

Suzanne Karkour

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