



**HITACHI**

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***Proprietary Notice***

This letter forwards proprietary information in accordance with 10 CFR 2.390. Upon the removal of Enclosure 2, the balance of this letter may be considered non-proprietary.

MFN 09-485

Docket No. 52-010

July 23, 2009

U.S. Nuclear Regulatory Commission  
11555 Rockville Pike  
Document Control Desk  
Rockville, MD 20852

**Subject: Response to Portion of NRC Request for Additional Information Letter No. 289 Related to ESBWR Design Certification Application – Instrumentation and Control - RAI Number 7.1-137**

The purpose of this letter is to submit the GE Hitachi Nuclear Energy (GEH) responses to the U.S. Nuclear Regulatory Commission (NRC) Request for Additional Information (RAI) sent by NRC letter No. 289, dated December 29, 2008 (Reference 1).

Enclosure 1 contains GEH response to RAI 7.1-137. DCD changes requested in this RAI, related to Tier 2\* marking in the DCD, were completed as part of GEH response to RAI 14.3-402 S01 (MFN 09-206, dated June 3, 2009 (Reference 2)), therefore no further changes are required for this response.

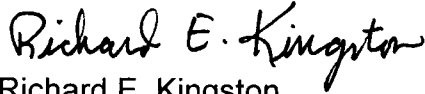
Enclosure 2, ((LTR) GEH ESBWR Cyber Security Program Plan, NEDE-33295P), contains GEH proprietary information as defined by 10 CFR 2.390. GEH customarily maintains this information in confidence and withholds it from public disclosure. Enclosure 3 is the public version, which does not contain proprietary information and is suitable for public disclosure.

The affidavit contained in Enclosure 4 identifies that the information contained in Enclosure 2 has been handled and classified as proprietary to GEH. GEH hereby requests that the information of Enclosure 2 be withheld from public disclosure in accordance with the provisions of 10 CFR 2.390 and 9.17.

Doc 8  
NRC

If you have any questions or require additional information, please contact me.

Sincerely,



Richard E. Kingston  
Vice President, ESBWR Licensing

References:

1. MFN 09-006 - Letter from U.S. Nuclear Regulatory Commission to Mr. Robert E. Brown, GEH, *Request For Additional Information Letter No. 289 Related To ESBWR Design Certification Application*, dated December 29, 2009.
2. MFN 09-355 – GEH Response to Portion of NRC Request for Additional Information Letter No. 324 Related to ESBWR Design Certification Application – RAI 14.3-402 Supplement 1, dated June 3, 2009.

Enclosures:

1. MFN 09-485 -Response to Portion NRC Request for Additional Information Letter No. 289 Related to ESBWR Design Certification Application – Instrumentation and Control - RAI 7.1-137
2. MFN 09-485 -Response to Portion of NRC Request for Additional Information Letter No. 289 Related to ESBWR Design Certification Application – GEH ESBWR Cyber Security Program Plan, NEDE-33295P – Proprietary Version
3. MFN 09-485 -Response to Portion of NRC Request for Additional Information Letter No. 289 Related to ESBWR Design Certification Application – GEH ESBWR Cyber Security Program Plan, NEDO-33295 - Public Version
4. MFN 09-485 -Response to Portion of NRC Request for Additional Information Letter No. 289 Related to ESBWR Design Certification Application – GEH ESBWR Cyber Security Program Plan, NEDE-33295P - Affidavit

cc: AE Cabbage      USNRC (with enclosure)  
JG Head            GEH/Wilmington (with enclosure)  
DH Hinds          GEH/Wilmington (with enclosure)  
eDRF Sections    0000-0095-6515 (RAI Number 7.1-137)  
                          0000-0074-4841 (ESBWR Cyber Security Program Plan)

**MFN 09-485**

**Enclosure 4**

**Response to Portion of NRC Request for**

**Additional Information Letter No. 289**

**Related to ESBWR Design Certification Application**

**GEH ESBWR Cyber Security Program Plan, NEDE-33295P**

**AFFIDAVIT**

# GE-Hitachi Nuclear Energy Americas LLC

## AFFIDAVIT

I, Larry J. Tucker, state as follows:

- (1) I am the Manager, ESBWR Engineering, GE Hitachi Nuclear Energy (“GEH”), 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 2 of GEH’s letter, MFN-09-485 Mr. Richard E. Kingston to U.S. Nuclear Energy Commission, entitled Response to Portion of NRC Request for Additional Information Letter No. 289 Related to ESBWR Design Certification Application – Instrumentation and Control - RAI Number 7.1-137. The proprietary information in Enclosure 2, which is entitled “MFN 09-485 -Response to Portion of NRC Request for Additional Information Letter No. 289 Related to ESBWR Design Certification Application – GEH ESBWR Cyber Security Program Plan, NEDE-33295P – Proprietary Version,” is indicated as the content contained between opening double brackets ([[) and closing double brackets (]]) and the text is red in color. ~~[[This sentence is an example.<sup>{3}</sup>]].~~ Figures and large equation objects containing GEH proprietary information are identified with double square brackets before and after the object. In each case, 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, GEH 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 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, 975F2d871 (DC Cir. 1992), and Public Citizen Health Research Group v. FDA, 704F2d1280 (DC Cir. 1983).
- (4) Some examples of categories of information which fit into the definition of proprietary information are:
  - a. Information that discloses a process, method, or apparatus, including supporting data and analyses, where prevention of its use by GEH’s competitors without license from GEH 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 GEH customer-funded development plans and programs, resulting in potential products to GEH;
- d. Information which discloses patentable subject matter for which it may be desirable to obtain patent protection.

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

- (5) To address 10 CFR 2.390(b)(4), the information sought to be withheld is being submitted to NRC in confidence. The information is of a sort customarily held in confidence by GEH, 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 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 GEH. Access to such documents within GEH is limited on a "need to know" basis.
- (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 for technical content, competitive effect, and determination of the accuracy of the proprietary designation. Disclosures outside GEH 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) above is classified as proprietary because it contains details of GEH's design and licensing methodology. The development of the methods used in these analyses, along with the testing, development and approval of the supporting methodology was achieved at a significant cost to GEH.

- (9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to GEH's competitive position and foreclose or reduce the availability of profit-making opportunities. The information is part of GEH'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.

The research, development, engineering, analytical and NRC review costs comprise a substantial investment of time and money by GEH.

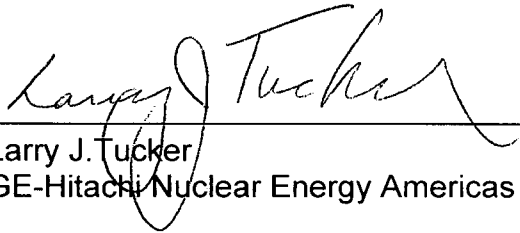
The precise value of the expertise to devise an evaluation process and apply the correct analytical methodology is difficult to quantify, but it clearly is substantial.

GEH's competitive advantage will be lost if its competitors are able to use the results of the GEH 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 GEH would be lost if the information were disclosed to the public. Making such information available to competitors without their having been required to undertake a similar expenditure of resources would unfairly provide competitors with a windfall, and deprive GEH of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing and obtaining these very valuable analytical tools.

I declare under penalty of perjury that the foregoing affidavit and the matters stated therein are true and correct to the best of my knowledge, information, and belief.

Executed on this 23<sup>rd</sup> day of July, 2009.

  
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Larry J. Tucker  
GE-Hitachi Nuclear Energy Americas LLC

**MFN 09-485**

**Enclosure 1**

**Response to Portion of NRC Request for  
Additional Information Letter No. 289  
Related to ESBWR Design Certification Application**

**RAI Number 7.1-137**

Enclosure 1

**NRC RAI 7.1-137**

*The staff has questions on the overall alignment and functional arrangement of GEH's cyber security activities. The overall organization of the various activities that fall under the term "cyber security" for the entire ESBWR process is unclear. It is also unclear how the activities described in the Cyber Security Program Plan fit into the overall cyber security activities.*

*A. Expand and clarify the concept of how GEH intends to develop an overall and comprehensive set of cyber security material that will be used by GEH as well as the applicant. How will the responsibilities/commitments be divided between GEH and the applicants?*

*B. Identify which parts of the cyber security material (including the material provided in the Cyber Security Program Plan and the material that will be provided in the future) is to be part of the design certification, which is to be considered part of an operational program, which is COL applicant's responsibility, and which falls into a different category per GEH's concept. Also identify what information will be considered Tier 2\*.*

*C. Additionally, the Cyber Security Program Plan uses related terms Cyber Security Plan, Cyber Security Program, as well as Cyber Security Program Plan in an unclear manner. Confirm that the proper terms are used appropriately and that the material referred to by a specific term is correct.*

**GEH Response**

*A) Expand and clarify the concept of how GEH intends to develop an overall and comprehensive set of cyber security material that will be used by GEH as well as the applicant. How will the responsibilities/commitments be divided between GEH and the applicants?*

The licensing topical report (LTR), GEH ESBWR Cyber Security Program Plan, NEDE-33295P, (CySPP) has been revised to clarify:

The scope and responsibilities of GEH. GEH is responsible for a) the design and development of the ESBWR cyber security materials, b) the quality assurance program to ensure the completeness, correctness, robustness and security of the cyber security materials, and c) the development maintenance, and execution of the incident response and recovery plans for cyber security material within GEH's scope of supply. During various meetings and teleconferences with NRC, the Staff and GEH have agreed that the responsibilities of the applicants and the responsibilities and commitments that are divided between GEH and the applicants are outside the scope of this CySPP. Thus, licensee responsibilities will not be described in the CySPP.

The cyber security program strategy and approach. GEH will develop a set of cyber security policies and procedures, as described in Section 3.2 of the CySPP to guide the design, implementation, verification and validation (V&V) of cyber security material. These policies and procedures are an integral part of the cyber security program and will be maintained throughout the life of the cyber security program.



The coordination between the CySPP with the LTRs, ESBWR - Software Quality Assurance Program Manual (SQAPM), NEDE-33245P, and ESBWR - Software Management Program Manual (SMPM), NEDE-33226P. The CySPP, SMPM and SQAPM describe the documentation set required for the design, implementation, test, and V&V of the cyber security material (see the DCD Tier 1, Section 3.2 markups associated with the GEH response to RAI 14.3-402 MFN 09-078 dated 2/2/09 for DAC/ITAAC related to software development process). The CySPP will govern the conduct of the cyber security activities required to provide high assurance that the protected material is cyber secured. The CySPP will identify the interface points required to coordinate the cyber security activities with the SMPM and SQAPM, which will govern the conduct of the software development process.

*B.) Identify which parts of the cyber security material (including the material provided in the Cyber Security Program Plan and the material that will be provided in the future) is to be part of the design certification, which is to be considered part of an operational program, which is COL applicant's responsibility, and which falls into a different category per GEH's concept. Also identify what information will be considered Tier 2\*.*

The LTR, GEH ESBWR Cyber Security Program Plan, NEDE-33295P, (CySPP) is categorized as a Tier 2\* document. The operational program consists of the cyber security policies and procedures, as described in Section 3.2 of the CySPP. These policies and procedures are not part of the design certification. As described in response to Item A, the COL applicant's responsibility is outside the scope of the CySPP.

Below is a list of cyber security material that will be developed as the design matures. These materials are not part of the design certification.

<b>Cyber Security Materials</b>	<b>Source</b>	<b>Sec Ref</b>
Contingency and Disaster Recovery Plans	CySPP	3.5
Threat and Vulnerability Review Report	CySPP	3.6
Cyber Security Assessment (CySA) Reports Note: CySA reports will be prepared for each life cycle phase as specified in the SMPM	CySPP	3.7
ESBWR Critical Digital Asset list	CySPP	4.1
Vulnerabilities List	CySPP	4.3
Planning Phase concept design documentation	CySPP	4.
	SMPM	5.6 Table 5.6-1

**Cyber Security Materials**

	<b>Source</b>	<b>Sec Ref</b>
Planning Phase V&V reports	SQAPM	5.3.2
Requirements Phase requirements documentation	CySPP	5.
	SMPM	5.7 Table 5.7-1
Requirements Phase V&V reports	SQAPM	5.3.3
Design Phase detailed design documentation	CySPP	6.
	SMPM	5.8 Table 5.8-1
Design Phase V&V reports	SQAPM	5.3.4
Implementation Phase implementation documentation	CySPP	7.
	SMPM	5.9 Table 5.9-1
Implementation Phase V&V reports	SQAPM	5.3.5
Test Phase test documentation	CySPP	8.
	SMPM	5.10 Table 5.10-1 6.11, 6.12
Test Phase V&V reports	SQAPM	5.3.6 7.3
Installation Phase test and installation documentation	CySPP	9.
	SMPM	5.11 Table 5.11-1
Installation Phase V&V reports	SQAPM	5.3.7 7.4, 7.5, 7.6
Operations and Maintenance Phase documentation	CySPP	10.
	SMPM	5.12 Table 5.12-1
Operation and Maintenance Phase V&V reports	SQAPM	5.3.8
Incident Response And Recovery Plan	CySPP	13.

*C.) Additionally, the Cyber Security Program Plan uses related terms Cyber Security*

*Plan, Cyber Security Program, as well as Cyber Security Program Plan in an unclear manner. Confirm that the proper terms are used appropriately and that the material referred to by a specific term is correct. GEH concurs that several references need further clarification.*

The LTR, ESBWR Cyber Security Program Plan, NEDE-33295P, will be revised to use the terms cyber security program and Cyber Security Program Plan.

**DCD Impact**

DCD changes requested in this RAI, related to Tier 2\* marking in the DCD, were completed as part of GEH response to RAI 14.3-402 S01 (MFN 09-206, dated June 3,2009, therefore no further changes are required for this response.

LTR NEDE-33295P, Rev 0 is revised to reflect the changes described above.

**MFN 09-485**

**Enclosure 3**

**Response to Portion of NRC Request for**

**Additional Information Letter No. 289**

**Related to ESBWR Design Certification Application**

**GEH ESBWR Cyber Security Program Plan, NEDO-33295**

**Public Version**