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Proprietary Notice

This letter forwards proprietary information in accordance with 10CFR2.390. Upon the removal of Enclosure 1, the balance of this letter may be considered non-proprietary.

MFN 08-505

Docket No. 52-010

June 24, 2008

U.S. Nuclear Regulatory Commission

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Washington, D.C. 20555-0001

Subject: Response to Portion of NRC Request for Additional Information Letter No. 106 – Related to ESBWR Design Certification Application – RAI Number 21.6-84 Supplement 1

The purpose of this letter is to submit the GE Hitachi Nuclear Energy (GEH) response to the U.S. Nuclear Regulatory Commission (NRC) Request for Additional Information (RAI) sent by the Reference 1 NRC letter. GEH response to RAI Numbers 21.6-84 Supplement 1 is addressed in Enclosures 1, 2 and 3.

Enclosure 1 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 2 is the non-proprietary version, which does not contain proprietary information and is suitable for public disclosure.

The affidavit contained in Enclosure 3 identifies that the information contained in Enclosure 1 has been handled and classified as proprietary to GEH. GEH hereby requests that the information in Enclosure 1 be withheld from public disclosure in accordance with the provisions of 10 CFR 2.390 and 10 CFR 9.17.

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

Sincerely,

James C. Kinsey
Vice President, ESBWR Licensing

D068
NRC

References:

1. MFN 07-497, Letter from U.S. Nuclear Regulatory Commission to Robert E. Brown, GEH, *Request For Additional Information Letter No. 106 Related To ESBWR Design Certification Application*, dated September 6 2007.
2. MFN 07-352, Response to Portion of NRC Request for Additional Information Letter No. 66 – Related to ESBWR Design Certification Application – RAI Numbers 21.6-66 through 21.6-68, 21.6-80, 21.6-82, 21.6-84, dated June 8, 2007.

Enclosures:

1. MFN 08-505 – Response to Portion of NRC Request for Additional Information Letter No. 106 – Related to ESBWR Design Certification Application – RAI Number 21.6-84 S01 – GEH Proprietary Information
2. MFN 08-505 – Response to Portion of NRC Request for Additional Information Letter No. 106 – Related to ESBWR Design Certification Application – RAI Number 21.6-84 S01 – Non-Proprietary Version
3. MFN 08-505 – Response to Portion of NRC Request for Additional Information Letter No. 106 – Related to ESBWR Design Certification Application – RAI Number 21.6-84 S01 – Affidavit

cc: AE Cabbage USNRC (with enclosure)
GB Stramback GEH/San Jose (with enclosure)
RE Brown GEH/Wilmington (with enclosure)
DH Hinds GEH/Wilmington (with enclosure)

eDRF 0000-0085-0768

Enclosure 2

MFN 08-505

**Response to Portion of NRC Request for
Additional Information Letter No. 106
Related to ESBWR Design Certification Application**

RAI Number 21.6-84 S01

Non-Proprietary Version

NRC RAI 21.6-84 S01

The original RAI requested GEH to provide the details about the void coefficient bias and uncertainty used in TRACG. GE stated that the comparison had been updated from PANAC10/TGBLA04 to PANAC11/TGBLA06. Please provide a description of the lattices used in determining the void coefficient bias and uncertainty.

GEH Response

In response to the initial RAI 21.6-84 (MFN 07-352, "Response to Portion of NRC Request for Additional Information Letter No. 66 – Related to ESBWR Design Certification Application – RAI Numbers 21.6-66 through 21.6-68, 21.6-80, 21.6-82, 21.6-84" dated June 7, 2007), a void coefficient reassessment for TRACG04 was indeed performed. This assessment was completed in order to apply the void coefficient correction model in TRACG04. Per request of the NRC, supplemental data that describes the lattices used in determining this void coefficient bias and uncertainty is provided in the Table 1.

TABLE 1. Supplemental Lattice Information for Bias and Uncertainty Calculations

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As shown, the chosen lattices represent a sample range of enrichment options and dimensional geometries that GEH/GNF have in service at the present time. With regard to product line (from a lattice perspective), GE8 is equivalent to GE9, GE11 is equivalent to GE13, and GE12 is equivalent to GE14. Each of these design pairs have 8x8, 9x9, and 10x10 geometries respectively. All lattice physics calculations are produced by the latest version of TGBLA, TGBLA06.

In addition, these lattices do not include the impact of void history and are simply to illustrate the updating of those previously generated with TGBLA04 to TGBLA06 (ultimately affecting TRACG04). This set of lattices has actually been superseded by another set of lattice calculations also based on TGBLA06. This latter set consists of 8 recent GE14 lattices for which 4 are specific GE14E lattices taken from the current ESBWR core design. However, the details for this update will be provided in the

response to ESBWR RAI 21.6-111 and the lattices currently presented are sufficient for determining the void coefficient bias and uncertainty as requested.

DCD Impact

No DCD changes will be made in response to this RAI.

No changes to the subject LTR will be made in response to this RAI.

Enclosure 3

MFN 08-505

**Response to Portion of NRC Request for
Additional Information Letter No. 106
Related to ESBWR Design Certification Application
RAI Number 21.6-84 S01
Affidavit**

GE Hitachi Nuclear Energy

AFFIDAVIT

I, **David H. Hinds**, state as follows:

- (1) I am General Manager, New Units 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 1 of GEH's letter, MFN 08-505, Mr. James C. Kinsey to U.S. Nuclear Energy Commission, entitled "*Response to Portion of NRC Request for Additional Information Letter No. 106 Related to ESBWR Design Certification Application – RAI Number 21.6-84 Supplement 1*," dated June 24, 2008. The proprietary information in enclosure 1, which is entitled "*Response to Portion of NRC Request for Additional Information Letter No. 106 Related to ESBWR Design Certification Application – RAI Number 21.6-84 S01 – GEH Proprietary Information*," is delineated by a [[dotted underline inside double square brackets.^{3}]] Figures and large equation objects are identified with double square brackets before and after the object. In each case, the superscript notation ^{3} 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 evaluation methodology.

The development of the evaluation process along with the interpretation and application of the analytical results is derived from the extensive experience database that constitutes a major GEH asset.

- (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 24th day of June 2008.



David H. Hinds
GE Hitachi Nuclear Energy