



GE Energy

*Proprietary Information Notice*  
*This letter forwards proprietary information in accordance with 10CFR2.390. The balance of this letter may be considered non-proprietary upon the removal of Enclosure 1.*

James C. Kinsey  
Project Manager, ESBWR Licensing

PO Box 780 M/C J-70  
Wilmington, NC 28402-0780  
USA

T 910 675 5057  
F 910 362 5057  
jim.kinsey@ge.com

MFN 07-282

Docket No. 52-010

May 17, 2007

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

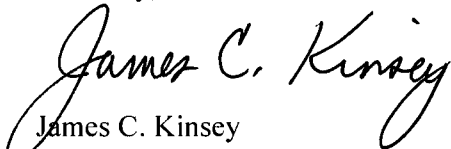
Subject: **Response to Portion of NRC Request for Additional Information Letter No. 68 - Engineered Safety Features - RAI Number 6.3-50**

Enclosures 1 and 2 contain GE's response to the subject NRC RAI transmitted via the Reference 1 letter.

Enclosure 1 contains proprietary information as defined in 10CFR2.390. The affidavit contained in Enclosure 3 identifies that the information contained in Enclosure 1 has been handled and classified as proprietary to GE. GE hereby requests that the proprietary information in Enclosure 1 be withheld from public disclosure in accordance with the provisions of 10 CFR 2.390 and 9.17.

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

Sincerely,

  
James C. Kinsey  
Project Manager, ESBWR Licensing

*DOB8*

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Reference:

1. MFN 06-379, Letter from U.S. Nuclear Regulatory Commission to David Hinds, *Request for Additional Information Letter No. 68 Related to ESBWR Design Certification Application*, October 10, 2006

Enclosures:

1. MFN 07-282 - Response to Portion of NRC Request for Additional Information Letter No. 68 - Related to ESBWR Design Certification Application - Engineered Safety Features - RAI Number 6.3-50 - GE Proprietary Information
2. MFN 07-282 - Response to Portion of NRC Request for Additional Information Letter No. 68 - Related to ESBWR Design Certification Application - Engineered Safety Features - RAI Number 6.3-50 - Non Proprietary Version
3. Affidavit - James C. Kinsey - dated May 17, 2007

cc: AE Cabbage USNRC (with enclosures)  
BE Brown GE/Wilmington (with enclosures)  
GB Stramback GE/San Jose (with enclosures)  
eDRF 0000-0064-1965

**Enclosure 2**

**MFN 07-282**

**Response to Portion of NRC Request for**

**Additional Information Letter No. 68**

**Related to ESBWR Design Certification Application**

**Engineered Safety Features**

**RAI Number 6.3-50**

**Non Proprietary Version**

**NRC RAI 6.3-50:**

*Provide the axial power shape used to perform the nominal and bounding LOCA analysis.  
Provide a discussion on how this shape was selected.*

**GE Response:**

The axial power shape used for the nominal loss-of-coolant accident (LOCA) analysis is the same shape used for the bounding LOCA analysis. In NEDC-33083P-A, "TRACG Application for ESBWR," the axial power shape was not considered important with respect to its influence on the critical safety parameters. Therefore, nominal representation of the axial power shape is acceptable. The power shape used in the analysis is not important unless the fuel uncovers and the cladding temperature begins to increase, and because none of the analyses results in the uncovering of the fuel, the power shape used is not important in showing successful core cooling performance.

The plot below shows the shape for the three different TRACG fuel channels.

[[

]]

The peaking factor used in the analyses was set conservatively relative to the peak linear heat generation rate limit and to the bounding minimum critical power ratio that are documented in DCD Tier 2, Table 6.3-1.

**DCD Impact:**

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

**ENCLOSURE 3**

**MFN 07-282**

**AFFIDAVIT**

## General Electric Company

### AFFIDAVIT

I, **James C. Kinsey**, state as follows:

- (1) I am Project Manager, ESBWR Licensing, General Electric Company ("GE") 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 GE letter MFN 07-282, Mr. James C. Kinsey to U.S. Nuclear Regulatory Commission, *MFN 07-282 - Response to Portion of NRC Request for Additional Information Letter No. 68 - Engineered Safety Features - RAI Number 6.3-50* dated May 17, 2007. The proprietary information is a figure in Enclosure 1, *MFN 07 282 - Response to Portion of NRC Request for Additional Information Letter No. 68 - Related to ESBWR Design Certification Application - Engineered Safety Features - RAI Number 6.3-50 - GE Proprietary Information*, and is identified with double square brackets in a dark red font before and after the object (i.e., [[ object <sup>{3}</sup>]]). 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, GE 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 2.790(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 General Electric's competitors without license from General Electric 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 General Electric customer-funded development plans and programs, resulting in potential products to General Electric;
- 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 GE, 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 GE, 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. Access to such documents within GE 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, 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 GE 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 identifies the models and methodologies GE will use in evaluating the dose consequences of design basis accidents (DBAs) for the ESBWR. GE and its partners performed significant additional research and evaluation to develop a basis for these revised methodologies to be used in evaluating the ESBWR over a period of several years at a cost of over one million dollars.

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 GE asset.

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

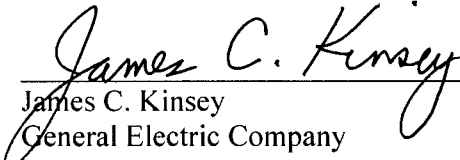
The precise value of the expertise to devise an evaluation process and apply the correct analytical methodology is difficult to quantify, but it clearly is substantial.

GE's competitive advantage will be lost if its competitors are able to use the results of the GE 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 GE 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 GE of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing 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 17<sup>th</sup> day of May 2007.

  
James C. Kinsey  
General Electric Company