GE Energy

Steven A. Hucik
General Manager, Nuclear Plant Projects
GE Nuclear Energy

P. O. Box 780 - M/C A45
Wilmington, NC 28401
USA

T 910-675-6838
F 910-362-6838
Steven.Hucik@ge.com

MFN 05-084
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Project 717

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

Attention: William D. Beckner, Director
New, Research and Test Reactors Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Subject: **General Electric Company Application for Final Design Approval and Design Certification of ESBWR Standard Plant Design**

General Electric Company (GE) is pleased to submit its application for Final Design Approval pursuant to Appendix O of 10 CFR 52 and a Standard Design Certification pursuant to 10 CFR 52 for the ESBWR Standard Plant Design. The Enclosures provide the prescribed information pursuant to 10 CFR 52.

A pre-application review of significant aspects of the ESBWR design bases and applicable methodologies has been underway between GE and the NRC since April 2002. The information reviewed by the NRC had the substantial benefit of previous reviews of the Simplified Boiling Water Reactor (SBWR) design. This pre-application review has resulted in NRC approval of some significant ESBWR design aspects with others still under review. The staff cooperation and interaction during the pre-application review process has provided the NRC with a strong basis for review of this complete ESBWR application. Some of the pre-application review topics completed or underway are:

- Use of TRACG Methodology for loss-of-coolant accident & Containment Evaluations
- Use of TRACG Methodology for Anticipated Operational Occurrence Evaluations
- Use of TRACG Methodology for Natural Circulation and Instability Evaluations
- Event Classification and Acceptance Criteria

Pre-application review of the ESBWR is identified under NRC Project No. 717.

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The three Enclosure CDs contain the electronic files of the application.

- Enclosure 1 contains the Tier 1 (GE No. 26A6641) document and the Tier 2 (GE No. 26A6642) document with "Sensitive Unclassified" information (protected under 10 CFR 2.390) included.
- Enclosure 2 contains the Tier 1 document and Tier 2 document with the "Sensitive Unclassified" information redacted.
- Enclosure 3 contains the Probabilistic Risk Assessment (NEDC-33201P) details, which is GE Proprietary Information.

The electronic files in the enclosure CDs should meet NRC document control system requirements of size and legibility, as discussed with the NRC staff in advance of this submittal.

The Safeguards submittal information will be provided to the NRC under separate cover pursuant to 10 CFR 73.

The enclosures are provided in full compliance with GE's Quality Assurance (QA) Program (NEDO-11209-04A, *GE Nuclear Energy Quality Assurance Program Description*, March 31, 1989), which is NRC approved.

Consistent with this QA program the Tier 1, Tier 2 and PRA documents herein are identified as "Conditional Release – pending closure of design verifications." While GE has completed review of the technical accuracy and completeness of all the Tier 1, Tier 2 and PRA documents content, has conducted independent third party reviews of the documents, and believes that the documents are accurate, compete and ready for NRC review, some internal GE documentation remains to be closed. Accordingly, the conditional release status is identified on the documents until closure of the internal documentation, which is scheduled for the end of October 2005.

Pursuant to 10 CFR 50.30(b), this application is submitted under the enclosed oath of affirmation (Enclosure 4).

This application contains GE proprietary information, in Enclosure 3, which GE customarily maintains in confidence and withholds from public disclosure.

The attached affidavit (Enclosure 5) identifies that the designated information (Enclosure 3) has been handled and classified as proprietary to GE. Along with the affidavit this information is suitable for review by the NRC. GE hereby requests that the designated information be withheld from public disclosure in accordance with the provisions of 10 CFR 2.390 and 9.17.

If you have any questions about the ESBWR final design approval and design certification application and submittal, please contact David H. Hinds at 910-675-6363.

Sincerely,

Steven A. Hucik
General Manager, Nuclear Plant Projects

Enclosures:

1. CD - Tier 1 & Tier 2 w/Sensitive Unclassified Information
2. CD - Tier 1 & Tier 2 w/o Sensitive Unclassified Information
3. CD - NEDC-33201P, *ESBWR Certification Probabilistic Risk Assessment*, August 2005 – GE Proprietary Information
4. Oath of Affirmation, Steven A. Hucik, dated August 24, 2005
5. Affidavit, George B. Stramback, dated August 23, 2005

cc:

AE Cubbage	USNRC (with enclosures)
LA Dudes	USNRC (w/o enclosures)
RE Gamble	GE/San Jose (w/o enclosures)
DH Hinds	GE/Wilmington (w/o enclosures)
JF Klapproth	GE/ Wilmington (w/o enclosures)
LM Quintana	GE/ Wilmington (w/o enclosures)
AC White	GE/ Wilmington (w/o enclosures)

eDRF 0000-0040-5151

ENCLOSURE 1

MFN 05-084

Compact Disk

ESBWR

Design Control Document
Tier 1 and Tier 2

Includes Sensitive Unclassified Information

26A6641 and 26A6642

ENCLOSURE 2

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Compact Disk

ESBWR

Design Control Document
Tier 1 and Tier 2

Does Not Include Sensitive Unclassified Information

26A6641 and 26A6642

ENCLOSURE 3

MFN 05-084

Compact Disk

ESBWR

Probabilistic Risk Assessment
NEDC-33021P

GE Proprietary Information

PROPRIETARY INFORMATION NOTICE

This enclosure contains proprietary information of the General Electric Company (GE) and is furnished in confidence solely for the purpose(s) stated in the transmittal letter. No other use, direct or indirect, of the document or the information it contains is authorized. Furnishing this enclosure does not convey any license, express or implied, to use any patented invention or, except as specified above, any proprietary information of GE disclosed herein or any right to publish or make copies of the enclosure without prior written permission of GE.

The entirety of the enclosed compact disk is proprietary. Therefore, the disk in this enclosure carries the notation "GE Proprietary Information." Paragraph (3) of the affidavit provided in Enclosure 5 documents the basis for the proprietary determination.

ENCLOSURE 4

MFN 05-084

OATH OF AFFIRMATION

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

In the matter of:	)
General Electric Company	)
ESBWR Standard Plant Design	)
Final Design Approval and	)
Design Certification Application	)

Application for Review of
"ESBWR Design Control Document"
For Final Design Approval and Design Certification

Steven A. Hucik, being duly sworn, states that he is General Manager of Nuclear Plant Projects for General Electric Company; that he is authorized on the part of said company to sign and file with the Nuclear Regulatory Commission this document; that all statements made and matters set forth therein are true and correct to the best of his knowledge, information and belief.

Steven A. Hucik
General Manager, Nuclear Plant Projects
General Electric Company

Subscribed and sworn to
Before me the 24th day
of August 2005.

Notary Public

ENCLOSURE 5

MFN 05-084

AFFIDAVIT

General Electric Company

AFFIDAVIT

I, George B. Stramback, state as follows:

(1) I am Manager, Regulatory Services, 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 the GE proprietary report NEDC-33201P, *ESBWR Certification Probabilistic Risk Assessment,* Class III (GE Proprietary Information), dated August 2005. The proprietary information is the entire document with *GE Proprietary Information* identified in the header of each page and Paragraph (3) of this affidavit 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 2.390(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 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 contains the detailed probabilistic model that GE developed to estimate the core damage frequency of the Economic Simplified Boiling Water Reactor. This model is based on previous European SBWR information developed over several years at a significant cost to GE.

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 23rd day of August 2005.

George B. Stramback

George B. Stramback
General Electric Company