



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.

David H. Hinds
Manager, ESBWR

PO Box 780 M/C L60
Wilmington, NC 28402-0780
USA

T 910 675 6363
F 910 362 6363
david.hinds@ge.com

MFN 06-221

Docket No. 52-010

July 12, 2006

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

Subject: Benchmark Files for ESBWR Main Steamline Analyses

Enclosure 1 contains the subject benchmark files for review and comment by BNL as requested during the NRC Piping Audit. This advance information is being provided to establish computer modeling format compatibility. GE will provide the final model input after compatibility is confirmed with BNL.

Enclosure 1 contains proprietary information as defined in 10CFR2.390. The affidavit contained in Enclosure 2 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. Due to the nature of these files, Enclosure 1 is entirely proprietary. The Enclosure 1 cover sheet that lists the titles and descriptions of the benchmark files, represents the extent of available non-proprietary information.

If you have any questions about the information provided here, please let me know.

Sincerely,

David H. Hinds
Manager, ESBWR

Enclosures:

1. MFN 06-221 - Benchmark Files for ESBWR Main Steamline Analyses – GE
Proprietary Information
2. Affidavit – Louis M. Quintana – dated July 12, 2006

cc: WD Beckner USNRC (w/o enclosures)
AE Cubbage USNRC (with enclosures)
LA Dudes USNRC (w/o enclosures)
GB Stramback GE/San Jose (with enclosures)
eDRF 0000-0056-0499

ENCLOSURE 1

MFN 06-221

Benchmark Files for ESBWR Main Steamline Analyses

Contains GE Proprietary Information

PROPRIETARY INFORMATION NOTICE

This enclosure (CD) 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 CD label contains the designation, "GE Proprietary Information".

File Descriptions for ESBWR Main Steamline Analyses for BNL Benchmark

File Descriptions

The files provided are described below.

pisys-esbwr-23.pyi

This is the PISYS input file for all the loads requested by BNL for ESBWR main steam lines 2 and 3, including all the safety relief discharging piping. The input coordinates are offset system, input the changes of coordinates for each global directions. The program uses the offset system converted to nodal coordinates in the output.

PISYS input nodes does not need to be in sequence. However, PISYS generated sequential node numbers to be used in the stiffness matrix formation. PISYS assigns the user input node as a name, not a number. The comparison of the user input node and the SAP node numbers are shown in each PISYS output.

The next file, Model-data-notes.pdf, shows a typical output example.

Based on previous ABWR benchmark, it indicates that BNL uses SAP program and the input nodes requires in sequence. Therefore, the PISYS generated nodes are the nodes for BNL program.

The file, Table 1 BNL-pisys-node.pdf, listed the node number comparisons.

The file, Table 2 PISYS-BNL-Support-ID.pdf, listed the support identifications from both programs

pisys-esbwr-23.f06

This file is the output from pisys-esbwr-23.pyi

model-data-notes.pdf

This file is from one of the output to add notes for reference.

SAP-esbwr-23-eig.sap

This file is converted to SAP input file for eigenvalue analysis.

SAP-esbwr-23-eig.f06

This file is the output from SAP input file, SAP-esbwr-23-eig.sap.

Table 3, Table 3 PIS-SAP-fn-comparisons.pdf, tabulated the frequencies output from PISYS model and the SAP model. The comparisons show that the maximum difference for all the modes is less

MFN 06-221

Enclosure 1

than 0.5%. This indicates the SAP model, including coordinates, properties, boundary elements and piping elements are correct.

SAP-esbwr-23-rv1.sap

This file is the converted file for safety relief valve time history analysis. The file has not been run and the results are not compared yet.

SAP-esbwr-23-tsv.sap

This file is the converted file for turbine stop valve time history analysis. The file has not been run and the results are not compared yet.

SAP-esbwr-23-sse.sap

This file is for SSE multiple response spectrum analysis. The file has not been run and the results are not compared yet.

ENCLOSURE 2

MFN 06-221

Affidavit

General Electric Company

AFFIDAVIT

I, **Louis M. Quintana**, state as follows:

- (1) I am Manager, Licensing, General Electric Company ("GE"), 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 06-221, David H. Hinds to USNRC, *Benchmark Files for ESBWR Main Steamline Analyses*, dated July 12, 2006. The proprietary information in Enclosure 1 (CD), *Benchmark Files for ESBWR Main Steamline Analyses*, is identified by the designation "GE Proprietary Information" on the CD label.
- (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 contains detailed ESBWR design information developed by GE over a period of several years at a cost of over one million dollars. This information, 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.
- (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 12th day of July 2006.



Louis M. Quintana
General Electric Company