



HITACHI

GE Hitachi Nuclear Energy

Proprietary Information Notice

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

James C. Kinsey
Vice President, ESBWR Licensing

PO Box 780 M/C A-55
Wilmington, NC 28402-0780
USA

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

MFN 07-372, Supplement 1

Docket No. 52-010

February 27, 2008

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

Subject: **Replacement Submittal for Computational Fluid Dynamics (CFD) Model Documentation**

The purpose of this letter is for GE Hitachi Nuclear Energy (GEH) to provide the U.S. Nuclear Regulatory Commission (NRC) with information that replaces a previous submittal (MFN 07-372) transmitted to the NRC on August 8, 2007 (Reference 1).

During a June 26, 2007, discussion with NRC Staff on the GEH CFD model at the GEH Washington, D.C., offices, GEH presented unverified results of work in progress on a CFD analysis to respond to Requests for Additional Information (RAIs) on boron mixing. During the discussions, the NRC asked for additional detailed transient boundary conditions applied in our CFD analysis code. The boundary conditions were transmitted in the previous transmittal, but the transmittal also included GEH unverified results, which were not properly marked as unverified. Therefore, this transmittal replaces the previous transmittal in its entirety and provides the verified boundary conditions (note that the boundary conditions have not changed) but it does not provide the verified results. The verified results will be provided in the response to RAIs 21.6-44 S01 and 21.6-90.

Please note that the information in Enclosure 1 is entirely GEH Proprietary and Export Controlled. The header of each page is marked "GEH Proprietary Information." The information has been handled and classified as proprietary to GEH as indicated in the enclosed (Enclosure 2) affidavit required by 10 CFR 2.390(b)(1).

DO68

WRO

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 9.17. A non-proprietary version is not enclosed because it would be blank pages.

If you have any questions or require additional information regarding the information provided here, please contact me.

Sincerely,


James C. Kinsey
Vice President, ESBWR Licensing

Reference:

1. MFN 07-372, Letter from James C. Kinsey to U.S. Nuclear Regulatory Commission, "Computational Fluid Dynamics (CFD) Model Documentation," dated August 8, 2007

Enclosures:

1. Computational Fluid Dynamics (CFD) Model Documentation Files:
 - CCL_Excerpts_InletAndExitBoundaryConditions_Version01.pdf
 - CCL_Excerpts_WallBoundaryConditions_Version01.pdf
 - GE_CFD_questions_June20-07_WithGEResponses.pdf
(GEH Proprietary and Export Controlled)
2. Affidavit – David H. Hinds – February 27, 2008

cc: AE Cubbage USNRC (with enclosures)
GB Stramback GEH /San Jose (with enclosures)
RE Brown GEH /Wilmington (with enclosures)
DH Hinds GEH /Wilmington (with enclosures)
DRF Section 0000-0061-7655

MFN 07-372, Supplement 1

Enclosure 2

Affidavit

GE Hitachi Nuclear Energy

AFFIDAVIT

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

- (1) I am the General Manager, New Units Engineering, GE Hitachi Nuclear Energy (“GEH”), 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 MFN 07-372, Supplement 1, James C. Kinsey to U.S. Nuclear Regulatory Commission, “*Replacement Submittal for Computational Fluid Dynamics (CFD) Model Documentation*,” dated February 27, 2008. The information in Enclosure 1, which is entitled “*Computational Fluid Dynamics (CFD) Model Documentation Files*:
CCL_Excerpts_InletAndExitBoundaryConditions_Version01.pdf
CCL_Excerpts_WallBoundaryConditions_Version01.pdf
GE_CFD_questions_June20-07_WithGEResponses.pdf”
is entirely GEH Proprietary and Export Controlled. The header of each page is marked “GEH Proprietary Information.” 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 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 identifies detailed GEH ESBWR methods, techniques, information, procedures and assumptions related to the Computational Fluid Dynamics (CFD) Model. Development of these methods, techniques, information, procedures and assumptions and their application for the design, modification, and analyses methodologies and processes for the Computational Fluid Dynamics (CFD) Model was achieved at a significant cost to GEH and would result in a significant economic and competitive advantage to a competitor.

The development of the Computational Fluid Dynamics (CFD) Model 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 27th day of February 2008.



David H. Hinds
GE Hitachi Nuclear Energy