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June 17, 2009

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C. 20555

NA3-09-023  
Docket No. 52-017  
COL/MWH

**DOMINION VIRGINIA POWER**  
**NORTH ANNA POWER STATION UNIT 3**  
**COMBINED LICENSE APPLICATION**  
**ESBWR REACTOR PRESSURE VESSEL PRESSURE-TEMPERATURE CURVES**  
**REPORT**

This letter forwards the Reactor Coolant System pressure and temperature limits information referenced in Technical Specification 5.6.4.b of the North Anna Combined License Application (COLA) for NRC staff review.

The ESBWR Reactor Pressure Vessel Pressure-Temperature Curves Report was developed by GE Hitachi Nuclear Energy (GEH). The information provided in this report is generic and is expected to apply to all Combined Operating License (COL) applicants referencing the ESBWR Design Control Document. Therefore, NRC is requested to review the report on a generic basis such that the resulting safety evaluation can be referenced by all ESBWR COLAs.

Attachment 1 is a CD containing the ESBWR Reactor Pressure Vessel Pressure-Temperature Curves Report, which is proprietary to GEH. Therefore, this information is supported by an affidavit signed by GEH, the owner of the information. The affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of 10 CFR 2.390 of the Commission's regulations. Accordingly, it is respectfully requested that the information, which is proprietary to GEH, be withheld from public disclosure in accordance with 10 CFR 2.390 of the Commission's regulations. The affidavit is provided in Attachment 3. Correspondence with respect to the copyright or proprietary aspects of the GEH information noted above or the supporting GEH affidavit should be addressed to: David Hinds, Manager, New Units Engineering, GE Hitachi Nuclear Energy, 3901 Castle Hayne Road, Wilmington, NC 28401.

Attachment 2 is a CD containing a redacted, non-proprietary version of the GEH ESBWR Reactor Pressure Vessel Pressure-Temperature Curves Report.

Dominion has successfully performed the preflight checks and examined the PDF files contained on the CDs to ensure conformance with NRC guidelines related to electronic

**ATTACHMENT CONTAINS PROPRIETARY INFORMATION**

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NRC

submittals, Guidance for Electronic Submissions to the NRC, Revision 4, October 2008. The PDF files meet NRC criteria.

Questions or requests for additional information related to the content and preparation of this report should be directed to Dominion. Please send copies of such questions or requests to the prospective applicants for combined licenses referencing the ESBWR Design Control Document and to GEH. A representative for each applicant and for GEH is indicated by an asterisk (\*) on the "cc: list" of this letter.

If you have any questions or require additional information, please contact Gina Borsh at 804-273-2247.

Very truly yours,

Eugene S. Grecheck

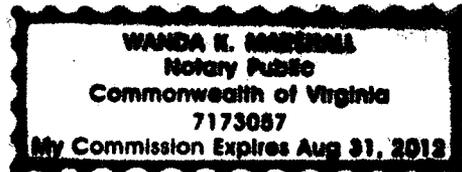
COMMONWEALTH OF VIRGINIA

COUNTY OF HENRICO

The foregoing document submitting supplemental information to the COL application was acknowledged before me, in and for the County and Commonwealth aforesaid, today by Eugene S. Grecheck who is Vice President-Nuclear Development of Virginia Electric and Power Company (Dominion Virginia Power). He has affirmed before me that he is duly authorized to execute and file the foregoing document on behalf of the company, and that the supplemental information provided is true to the best of his knowledge and belief.

Acknowledged before me this 17<sup>th</sup> day of June, 2009  
My registration number is 7173057 and my  
Commission expires: August 31, 2012

Notary Public



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Attachments:

1. GEH Licensing Topical Report NEDC-33441P, Revision 2, June 2009, "GE Hitachi Nuclear Energy Methodology for the Development of ESBWR Reactor Pressure Vessel Pressure-Temperature Curves," PROPRIETARY (CD)
2. GEH Licensing Topical Report NEDC-33441, Revision 2, June 2009, "GE Hitachi Nuclear Energy Methodology for the Development of ESBWR Reactor Pressure Vessel Pressure-Temperature Curves," NON-PROPRIETARY (CD)
3. Affidavit for GEH Licensing Topical Report NEDC-33441P, Revision 2, "GE Hitachi Nuclear Energy Methodology for the Development of ESBWR Reactor Pressure Vessel Pressure-Temperature Curves"

Commitments made in this letter: None

cc with Attachments:

U. S. Nuclear Regulatory Commission, Region II  
T. A. Kevern, NRC  
J. T. Reece, NRC  
A. R. Williamson, NRC

cc with Attachments 2 and 3 only:

J. J. Debiec, ODEC  
G. Zinke, Entergy\*  
P. Smith, DTE\*  
R. Kingston, GEH\*  
T. Hicks, NuStart

The attached CDs (Optical Storage Media) contain the following files:

OSM#1:

001 ESBWR P-T Curves Report R2 - Proprietary.pdf, 33,650,484 bytes, Proprietary

OSM#2:

001 ESBWR P-T Curves Report R2 - Public.pdf, 770,034 bytes

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**Attachment 1**

**One CD labeled:**

**GEH Licensing Topical Report NEDC-33441P (PROPRIETARY)**

**GE Hitachi Nuclear Energy Methodology for the Development of ESBWR Reactor  
Pressure Vessel Pressure-Temperature Curves, Revision 2**

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**Attachment 2**

**One CD labeled:**

**GEH Licensing Topical Report NEDC-33441 (NON-PROPRIETARY)**

**GE Hitachi Nuclear Energy Methodology for the Development of ESBWR Reactor  
Pressure Vessel Pressure-Temperature Curves, Revision 2**

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**Attachment 3**

**Affidavit for GEH Licensing Topical Report NEDC-33441P, Revision 2, "GE Hitachi Nuclear Energy Methodology for the Development of ESBWR Reactor Pressure Vessel Pressure-Temperature Curves"**

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**Affidavit for**

**Licensing Topical Report**

**GE Hitachi Nuclear Energy Methodology for the Development  
of ESBWR Reactor Pressure Vessel Pressure-Temperature  
Curves**

**NEDC-33441P Rev 2**

**Related to ESBWR R-COLA**

# GE-Hitachi Nuclear Energy Americas LLC

## AFFIDAVIT

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

- (1) I am 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 NEDC-33441P Revision 2 provided to Dominion by Mr. Stephen Atherton in GEH's letter, GEDO-WG3-2009-0067, dated June 16, 2009. The proprietary information in NEDC-33441P Revision 2, which is entitled "GEH Proprietary Information - Licensing Topical Report - GE Hitachi Nuclear Energy Methodology for the Development of ESBWR Reactor Pressure Vessel Pressure-Temperature Curves," is delineated by a [[dotted underline inside double square brackets<sup>(3)</sup>]]. Figures and large equation objects are identified with double square brackets before and after the object. In each case, 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 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) is classified as proprietary because it contains details of GEH's design and licensing methodology. The development of the methods used in these analyses, along with the testing, development and approval of the supporting methodology was achieved at a significant cost to GEH.
- (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, and analytical 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 16 day of June 2009.



David H. Hinds  
GE-Hitachi Nuclear Energy Americas LLC