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

MFN 09-499, Rev. 1

Docket No. 52-010

July 28, 2009

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

Subject: **Revised Response to Portion of NRC Request for Additional Information Letter No. 304 Related to Design Control Document (DCD) Revision 5 – Spent Fuel Storage Racks - RAI Number 9.1-81 S01**

The purpose of this letter is to submit the GE Hitachi Nuclear Energy (GEH) revised response to the U.S. Nuclear Regulatory Commission (NRC) Request for Additional Information (RAI) 9.1-81 S01 sent by NRC Letter 304, Reference 1. The response to RAI Number 9.1-81 was previously submitted to the NRC via Reference 2 in response to Reference 3.

This revised response to RAI 9.1-81 S01 replaces the response previously provided via Reference 4 in its entirety.

The GEH revised response to RAI Number 9.1-81 S01 is addressed in Enclosures 1 and 2. Enclosure 1 contains GEH proprietary information as defined by 10 CFR 2.390. GEH customarily maintains this information in confidence and withholds it from public disclosure. Enclosure 2 is a non-proprietary version that is suitable for public disclosure.

The affidavit contained in Enclosure 3 identifies that the information contained in Enclosure 1 has been handled and classified as proprietary to GEH. 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.

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

Sincerely,

Richard E. Kingston

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Vice President, ESBWR Licensing

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

Sincerely,

Richard E. Kingston
Vice President, ESBWR Licensing

References:

1. MFN 09-227, Letter from U.S. Nuclear Regulatory Commission to Jerald G. Head, *Request for Additional Information Letter No. 304 Related to Design Control Document (DCD) Revision 5*, March 31, 2009.
2. MFN 08-912, Response to Portion of NRC Request for Additional Information Letter Number No. 217 Related to Licensing Topical Report NEDC-33374P, Revision 0, "Safety Analysis Report for Fuel Storage Racks Criticality Analysis for ESBWR Plants" - RAI Numbers 9.1-77 through 9.1-95, November 24, 2008.
3. MFN 08-551, Letter from U.S. Nuclear Regulatory Commission to Robert E. Brown, *Request for Additional Information Letter No. 217 Licensing Topical Report NEDC-33374P, "Safety Analysis Report for Fuel Storage Racks Criticality Analysis for ESBWR Plants"*, June 25, 2008.
4. MFN 09-499, Response to Portion of NRC Request for Additional Information Letter No. 304 Related to Design Control Document (DCD) Revision 5 – Spent Fuel Storage Racks - RAI Number 9.1-81 S01, July 22, 2009

Enclosures:

1. Revised response to Portion of NRC Request for Additional Information Letter No. 304 Related to Design Control Document (DCD) Revision 5 - Spent Fuel Storage Racks - RAI Number 9.1-81 S01 – GEH Proprietary Information.
2. Revised response to Portion of NRC Request for Additional Information Letter No. 304 Related to Design Control Document (DCD) Revision 5 - Spent Fuel Storage Racks - RAI Number 9.1-81 S01 – Public Version.
3. Revised response to Portion of NRC Request for Additional Information Letter No. 304 Related to Design Control Document (DCD) Revision 5 - Spent Fuel Storage Racks - RAI Number 9.1-81 S01 – Affidavit.

cc: AE Cubbage USNRC (with enclosures)
JG Head GEH/Wilmington (with enclosures)
DH Hinds GEH/Wilmington (with enclosures)
eDRF Section 0000-0104-2750

Enclosure 2

MFN 09-499, Rev. 1

Revised Response to Portion of NRC Request for Additional Information Letter No. 304 Related to Design Control Document (DCD) Revision 5

Spent Fuel Storage Racks

RAI Number 9.1-81 S01

Public Version

NRC RAI 9.1-81 S01

The revised Section 4.0 represents significant improvement over the original content of NEDC-33374P. However, some additional important information is needed to complete the review. Consequently the response is not sufficient.

The required information includes:

- *Fuel description information. Dimensions, materials, and tolerances.*
- *Fuel depletion information. Geometry and depletion environment.*
- *Storage rack materials and dimensions and design/manufacturing tolerances. This information is needed for fresh and spent fuel racks in the buffer pool and for spent fuel racks in the spent fuel pool.*
- *Storage rack installation dimensions (spacing between rack modules and between rack modules and nearby structures, and layout of rack locations within the spent fuel pool) and tolerances. This information is needed for fresh and spent fuel racks in the buffer pool and for the spent fuel racks in the spent fuel pool.*

[[

]].

GEH Response

Items 1 and 2, the fuel description dimensions, materials, and tolerances and fuel depletion geometry and depletion environment information, will be provided in LTR NEDC-33374P, Rev. 2, and will not be included in this response.

Item 3, the new fuel and spent fuel storage rack materials, dimensions, and design/manufacturing tolerances are discussed below.

New Fuel Storage Racks

Materials

The materials used in the fabrication of the new fuel storage racks will be detailed in LTR NEDC-33374P, Rev. 2, and will not be included in this response.

Dimensions

Rectangular Area Dimensions	[[ ]]
Rack Height	[[ ]]

LTR NEDC-33374P, Rev. 2 will provide detailed dimensions of the fuel assembly modeled within a storage cell of the new fuel storage rack.

Design/Manufacturing Tolerances

The following table represents tolerance data for linear dimensions taken from the fabrication drawings for the new fuel storage racks.

Allowable Drawing Tolerance Data		
From (mm)	Up To (mm)	Deviation Allowed (mm)
[[		
		]]

Spent Fuel Storage Racks – Buffer Pool

Materials

The materials used in the fabrication of the spent fuel storage racks in the buffer pool will be detailed in LTR NEDC-33374P, Rev. 2, and will not be included in this response.

Dimensions

Rectangular Area Dimensions	[[ ]]
Rack Height	[[ ]]

LTR NEDC-33374P, Rev. 2 will provide detailed dimensions of the fuel assembly modeled within a storage cell of the spent fuel storage rack.

Design/Manufacturing Tolerances

Design/Manufacturing tolerances for linear dimensions are the same as those presented for the new fuel storage racks.

Spent Fuel Storage Racks – Fuel Building Spent Fuel Pool

Materials

The materials used in the fabrication of the spent fuel storage racks in the fuel building spent fuel pool will be detailed in LTR NEDC-33374P, Rev. 2, and will not be included in this response.

Dimensions

Rectangular Area Dimensions (15 x 12)	[[ ]]
Rectangular Area Dimensions (14 x 12)	[[ ]]
Rack Height (Both rack sizes)	[[ ]]

LTR NEDC-33374P, Rev. 2 will provide detailed dimensions of the fuel assembly modeled within a storage cell of the spent fuel storage rack.

Design/Manufacturing Tolerances

Design/Manufacturing tolerances for linear dimensions are the same as those presented for the new fuel storage racks.

Item 4, the storage rack installation dimensions, tolerances, and layout of the rack locations within the spent fuel pool are discussed below.

New Fuel Storage Racks

Installation Dimensions (Layout/Spacing)

LTR NEDC-33374P, Rev. 2 will provide the modeled new fuel storage rack layout in the buffer pool. This layout also provides spacing between racks and from rack-to-wall.

Installation Tolerances

LTR NEDC-33374P, Rev. 2 will provide tolerances for installation of the new fuel storage racks within the buffer pool and placement of fuel in the modeled area within the rack.

Spent Fuel Storage Racks – Buffer Pool

Installation Dimensions (Layout/Spacing)

The drawing on the next page provides both the layout and spacing information for spent fuel storage racks in the reactor building buffer pool. The units for this layout are in millimeters (mm). Because a three-dimensional, infinite model using a 15 x 12 rack assembly has been used to describe the spent fuel storage systems in MCNP (Monte Carlo N-Particle Code), this layout is not used in the criticality analysis of these racks.

Installation Tolerances

LTR NEDC-33374P, Rev. 2 will provide tolerances for placement of fuel in the modeled area within the rack.

[[ ]]

Spent Fuel Storage Racks – Fuel Building Spent Fuel Pool

Installation Dimensions (Layout/Spacing)

The drawing on the next page provides both the layout and spacing information for spent fuel storage racks in the fuel building spent fuel pool. The drawing units are in millimeters (mm) and the nominal spacing between racks is [[ ]]. Because a three-dimensional, infinite model using a 15 x 12 rack assembly has been used to describe the spent fuel storage systems in MCNP, this layout is not used in the criticality analysis of these racks.

Installation Tolerances

LTR NEDC-33374P, Rev. 2 will provide tolerances for placement of fuel in the modeled area within the rack.

[[

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DCD/LTR Impact

LTR NEDC-33374P, Rev 2 will include the relevant information described above. No DCD changes will be made in response to this RAI.

Enclosure 3

MFN 09-499, Rev. 1

Revised Response to Portion of NRC Request for Additional Information Letter No. 304 Related to Design Control Document (DCD) Revision 5

Spent Fuel Storage Racks

RAI Number 9.1-81 S01

Affidavit

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 enclosure 1 of GEH's letter, MFN 09-499, Rev. 1, Mr. Richard E. Kingston to U.S. Nuclear Energy Commission, entitled "*Revised Response to Portion of NRC Request for Additional Information Letter No. 304 Related to Design Control Document (DCD) Revision 5 – Spent Fuel Storage Racks - RAI Number 9.1-81 S01*," dated July 28, 2009. The proprietary information in enclosure 1, which is entitled "*Response to Portion of NRC Request for Additional Information Letter No. 304 Related to Design Control Document (DCD) Revision 5 – Spent Fuel Storage Racks - RAI Number 9.1-81 S01 – GEH Proprietary Information,*" is delineated by a [[dotted underline inside double square brackets{3}]]. Figures and large equation objects are identified with double square brackets before and after the object. In each case, the superscript notation {3} 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, analytical and NRC review costs comprise a substantial investment of time and money by GEH.

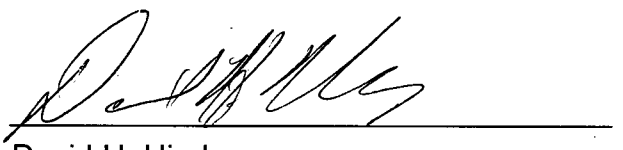
The precise value of the expertise to devise an evaluation process and apply the correct analytical methodology is difficult to quantify, but it clearly is substantial.

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 28th day of July 2009.



David H. Hinds
GE Hitachi Nuclear Energy Americas LLC