

August 8, 2003

NG-03-0590
10 CFR 50.90

Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
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DUANE ARNOLD ENERGY CENTER
DOCKET 50-331
LICENSE No. DPR-49

SUBJECT: Final Response to the Staff's Request for Additional Information (RAI) on
License Amendment Request TSCR-059A (TAC No MB8750)

REFERENCE: 1) Letter, M. Peifer (NMC) to USNRC, "Partial Response to the Staff's
Request for Additional Information (RAI) on License Amendment
Request TSCR-059A (TAC No MB8750)," NG-03-0552, dated
July 30, 2003.

2) Letter, M. Peifer (NMC) to USNRC, "Revision of Technical Specification
Change Request (TSCR-059A): 'Update to Reactor Coolant System
Pressure and Temperature Limit Curves'," NG-03-0304, dated
May 2, 2003.

In the Reference 1 letter, Nuclear Management Company, LLC (NMC) submitted a partial
response to the Staff's request for additional information (RAI) on our Reference 2
application. The attachments to this letter contain the response to the remaining question
from the Reference 1 letter.

During the preparation of this response, it was discovered that an error had been made in
the calculation of the stresses in the vessel bottom head provided in the General Electric
(GE) Report (GE-NE-A22-00100-08-01-R1) submitted with the original application (Ref. 2).
As part of the response to the Staff's RAI, GE has corrected that error and provided a
replacement paragraph for this section of the report (Section 4.3.2.1.2). The bottom head
curve provided in the GE report submitted with the original application remains valid.

The enclosed RAI responses contain proprietary information as defined by 10 CFR 2.790.
GE, as the owner of the proprietary information, has executed the enclosed affidavit
(Attachment 3), which identifies that the enclosed proprietary information has been
handled and classified as proprietary, is customarily held in confidence, and has been
withheld from public disclosure. The proprietary information was provided to NMC in a GE
transmittal that is referenced by the affidavit. The proprietary information has been
faithfully reproduced in the enclosed RAI response (Attachment 1) such that the affidavit
remains applicable. GE hereby requests that the enclosed proprietary information be
withheld from public disclosure in accordance with the provisions of 10 CFR 2.790 and
§9.17. Attachment 2 is the redacted version of Attachment 1, with the GE proprietary
material removed, suitable for public disclosure.

APDI

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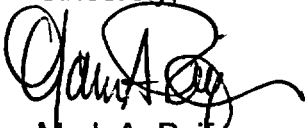
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This letter contains no new commitments.

Please contact this office if you have any further questions regarding this matter.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge. Executed on August 8, 2003.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mark A. Peifer', written over a horizontal line.

Mark A. Peifer

DAEC Site Vice President

Attachments

- 1) NMC's Final Response to NRC Request for Additional Information (RAI) – General Electric Proprietary Version
- 2) NMC's Final Response to NRC Request for Additional Information (RAI) – General Electric Non-Proprietary (Redacted) Version
- 3) General Electric Co. Affidavit of Proprietary Information and Request for Withholding from Public Disclosure

cc: Regional Administrator, USNRC, Region III
NRC-NRR Project Manager - DAEC
NRC Resident Inspector - DAEC

NMC's Final Response to NRC
Request for Additional Information (RAI) –
General Electric Non-Proprietary (Redacted) Version

NRC Question 2.3

In Reference 1, Section 4.3.2.1.2, "Core Not Critical Heatup/Cooldown - Non-Beltline Curve B (Using Bottom Head)," presents (on page 28) a comparison between the stresses, which result in the vessel bottom head from two transient conditions versus those generated for the CRD curve. Provide additional information regarding your analysis of the identified transient conditions, which demonstrates that the results summarized in Section 4.3.2.1.2 are directly comparable when all vessel and penetration geometry correction factors have been applied equivalently.

NMC Response

The original assumption for the CRD (Bottom Head) Curve B (core not critical heat-up/cool-down) was that the [[

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As a result of the NRC question, the stress report was further reviewed and K_I values for the limiting normal and upset transients were determined. [[

]] Further finite-element evaluation would be required to confirm that the assumption is correct.

Therefore, the following statements in the DAEC PT Report cannot be confirmed at this time:

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NMC Response (cont.)

However, when using the limiting normal and upset thermal transient with plant specific geometry, the CRD Curve B in the report is bounding.

An evaluation was also performed to include the plant specific geometry and the appropriate limiting bottom head RT_{NDT} . The revised analysis demonstrates that the existing Core Not Critical Bottom Head Curve (Curve B) is conservative.

Therefore, the statements in the DAEC PT Report have been revised as discussed below.

PROPOSED REVISION TO THE REPORT:

Replace the paragraph:

“[[

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With the paragraph:

“[[

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Figures 4-2a and 4-2b are replaced with the following diagram of the appropriate transient, because the analysis to develop the P-T curves was revised to consider only normal and upset conditions and not the emergency and faulted conditions as originally defined.

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**General Electric Co. Affidavit of Proprietary Information
and
Request for Withholding from Public Disclosure**

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 Enclosure 1 to the GE letter KHN-PT-069, Kris Narayan to Tony Browning, *Pressure-Temperature Curves for Duane Arnold Energy Center, Response to RAI 2.3*, dated August 7, 2003. The proprietary information in Enclosure 1, *Response to NRC RAI 2.3*, is delineated by a double underline inside double square brackets. 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, 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 2.790 (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 methods and processes, which GE has developed and applied to pressure-temperature curves for the BWR over a number of years. The development of the BWR pressure-temperature curves was achieved at a significant cost, on the order of ¾ million dollars, 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.

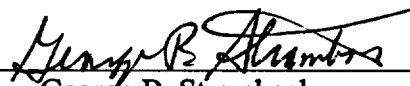
The precise value of the expertise to devise an evaluation process and apply the correct analytical methodology is difficult to quantify, but it clearly is substantial.

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 29th day of August 2003.


George B. Stramback
General Electric Company