



General Electric Company
175 Gartner Avenue, San Jose, CA 95125

February 23, 1994
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Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: **GE Fuel Technology Update - February 1, 1994**

On February 1, 1994, GE met with the NRC Reactor Systems Branch to provide an update on GE fuel technology. The presentation slides for this meeting are provided in the enclosure.

The following is our understanding of the agreements and actions items resulting from this information exchange:

1. Rotated Bundle Event

Expedited NRC approval to eliminate the rotated bundle event is requested. The current licensing basis requires this localized, infrequent event to be analyzed as a core wide anticipated operational occurrence. This overly conservative licensing basis results in increased operating limit MCPRs, increased reload licensing analysis costs and lost bundle nuclear efficiency. It is our understanding that all NRC requests for additional information have been satisfied.

2. Time Varying Axial Power Shape for Pressurization Transients

The staff agreed that a time varying axial power shape (TVAPS) does not have to be used in the pressurization transient analysis for 8x8 fuel designs when analyzed with GE methods which have been previously approved for this purpose by the NRC. However, since the licensing basis methodology for pressurization transient analyses does not always result in conservative delta CPRs for 9x9 fuel arrays and greater, GE has committed to assume TVAPS in the GE11/12/13 hot channel analysis for pressurization transient analyses of cores containing at least one reload of GE11/12/13 fuel.

3. Inadvertent HPCI Injection Event

GE will submit an information letter to the NRC in March 1994 which states our intention of only analyzing the limiting cold water injection event (typically the Loss of Feedwater Event (LFWH)). Currently for plants which may be limited by cold water injection events, GE analyzes both the LFWH event and the inadvertent HPCI injection event which are both relatively slow events with similar plant responses. Recent evaluations by GE have confirmed that the limiting event can be determined by a comparison of the core inlet subcooling impact (i.e., the event with the largest change in inlet enthalpy is limiting). GE believes that NRC review of this submittal is not required since the GESTAR-II commitment to analyze the limiting event remains satisfied.

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4. Utility Licensing of Vendor Methods

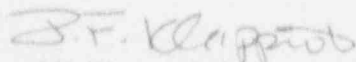
Several utilities are working with GE to develop a new approach to utility licensing of vendor methods for reload analyses. An approach similar to the GESTAR-II Amendment 22 process for new fuel designs is being proposed. A submittal will be made by June 1994 which requests NRC approval of the licensing process and the proposed acceptance criteria.

5. TRACG Review

GE will submit a request to the NRC Controller for a cost estimate for review of the three Licensing Topical Reports submitted in February 1993.

Information contained in the enclosure is of the type which General Electric maintains in confidence and withholds from public disclosure. It has been handled and classified as proprietary by General Electric as indicated in the attached affidavit. We hereby request that it be withheld from public disclosure in accordance with the provisions of 10CFR2.790.

Sincerely,



J.F. Klapproth, Manager

Fuel Licensing

(408) 925-5434/Mail Code 188

cc: J.S. Armijo
L.S. Gifford
R.C. Jones, Jr. (NRC)
J.E. Wood

General Electric Company

AFFIDAVIT

I, **James F. Klapproth**, being duly sworn, depose and state as follows:

- (1) I am Fuel Licensing Manager, 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 the attachment entitled: GE Fuel Technology Update, February 1, 1994.
- (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), 2.790(a)(4), and 2.790(d)(1) for "trade secrets and commercial or financial information obtained from a person and privileged or confidential" (Exemption 4). The material for which exemption from disclosure is here sought is all "confidential commercial information", and some portions 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 cost or price information, production capacities, budget levels, or commercial strategies of General Electric, its customers, or its suppliers;

- d. Information which reveals aspects of past present, or future General Electric customer-funded development plans and programs, of potential commercial value to General Electric;
- e. 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 both paragraphs 4.b and 4.d, above.

- (5) 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 would provide other parties, including competitors, with information related to General Electric fuel designs, analysis results and potential commercial offerings which were developed at a considerable expense to General Electric.
- (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 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.

The research, development, engineering, and analytical 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.

STATE OF CALIFORNIA)
) ss:
COUNTY OF SANTA CLARA)

James F. Klapproth, being duly sworn, deposes and says:

That he has read the foregoing affidavit and the matters stated therein are true and correct to the best of his knowledge, information, and belief.

Executed at San Jose, California, this 23rd day of February, 1994.

James F. Klapproth
James F. Klapproth
General Electric Company

Subscribed and sworn before me this 23rd day of February 1994.

Mary L. Kendall
Notary Public, State of California

