



52-001

GE Nuclear Energy

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

July 20, 1992
JFK92-020
MFN142-92

Dial Cover

Director of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D.C. 20555

ATTENTION: R. C. Jones Jr., Chief
Reactor Systems Branch.

SUBJECT: ROTATED BUNDLE EVALUATION

REFERENCE: Letter, D.G. Eisenhower to R. Engel, May 8, 1978 (NRC Safety
Evaluation of Fuel Bundle Loading Error Calculational Procedures).

Enclosed is the material presented at the June 26, 1992 meeting concerning the rotated bundle evaluation. We are encouraged by the Staff's initial response to this presentation.

GE and the utilities are proposing a change to the licensing basis for the rotated bundle event. This basis currently requires that the calculated CPR for the limiting rotated bundle be added to the core wide MCFR Safety Limit (Reference). GE requests that the Staff reconsider this basis such that the acceptance criteria for accidents (e.g., offsite release limits) apply.

GE believes this change in the acceptance criteria is appropriate because of the following developments since the issuance of the Reference:

1. Core verification procedures have been enhanced by adding a second core scan and at least a second verification step.
2. The resulting probability of operating with a rotated bundle is $\sim 10^{-5}$ per year (assuming two verification steps).
3. Operating experience has demonstrated that coolable geometry is maintained and no failure propagation occurs if a fuel pin operates in boiling transition.
4. Fuel failures have been shown to be readily detectable by offgas monitoring.

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As agreed at the meeting, GE will provide the following additional information to support the Staff review of this request:

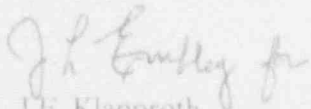
1. Generic evaluation of the probability of a rotated bundle being missed with the enhanced core verification procedures (i.e., SIL 347 recommendations).
2. Economic impact of a penalty imposed on the BWR/6 MCPR operating limit to accommodate the rotated bundle event (with the current licensing basis).
3. Consequences of operation with a rotated bundle.

This information will be provided to the Staff by September 30, 1992. It is also understood that final resolution of this issue will be contingent upon utility confirmation that the SIL 347 recommendations have been implemented.

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.

Please contact me or Gary Jones of my staff on (408)925-1516 if you have any questions on this issue.

Sincerely,



J.F. Klapproth
Fuel Licensing Manager
(408)925-5434

cc: L.S. Gifford
G.G. Jones
P.W. Marriott
J.E. Wood

General Electric Company

AFFIDAVIT

I, Robert C. Mitchell, being duly sworn, depose and state as follows:

1. I am Manager, Safety, Environmental and Quality Assurance, Electric Company, and have been delegated the function of reviewing the information described in paragraph 2 which is sought to be withheld from public disclosure and have been authorized to apply for its withholding.
2. The information sought to be withheld is the material presented to the Reactor Systems Branch of the Nuclear Regulatory Commission at the June 26, 1992 meeting concerning the rotated fuel bundle evaluation.
3. In designating material as proprietary, General Electric utilizes the definition of proprietary information and trade secrets set forth in the American Law Institute's Restatement of Torts, Section, 757. This definition provides:

"A trade secret may consist of any formula, pattern, device or compilation of information which is used in one's business and which gives him an opportunity to obtain an advantage over competitors who do not know or use it.... A substantial element of secrecy must exist, so that, except by the use of improper means, there would be difficulty in acquiring information.... Some factors to be considered in determining whether given information is one's trade secret are: (1) the extent to which the information is known outside of his business; (2) the extent to which it is known by employees and others involved in his business; (3) the extent of measures taken by him to guard the secrecy of the information; (4) the value of the information to him and to his competitors; (5) the amount of effort or money expended by him in developing the information; (6) the ease or difficulty with which the information could be properly acquired or duplicated by others."

4. Some examples of categories of information which fit into the definition of proprietary information are:
 - a. Information that disclosed a process, method or apparatus 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 consisting of supporting data and analyses, including test data, relative to a process, method or apparatus, the application of which provide a competitive economic advantage, e.g., by optimization or improved marketability;
 - c. 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;
 - d. Information which reveals cost or price information, production capacities, budget levels or commercial strategies of General Electric, its customers or suppliers;

Affidavit

- e. Information which reveals aspects of past, present or future General Electric customer-funded development plans and programs of potential commercial value to General Electric;
 - f. Information which discloses patentable subject matter for which it may be desirable to obtain patent protection;
 - g. Information which General Electric must treat as proprietary according to agreements with other parties.
5. Initial approval of proprietary treatment of a document is typically made by the Subsection manager of the originating component, who is most likely to be acquainted with the value and sensitivity of the information in relation to industry knowledge. Access to such documents within the Company is limited on a "need to know" basis and such documents are clearly identified as proprietary.
 6. The procedure for approval of external release of such documentation typically requires review by the Subsection Manager, Project manager, Principal Scientist or other equivalent authority, by the Subsection Manager of the cognizant Marketing function (or delegate) and by the Legal Operation for technical content, competitive effect and determination of the accuracy of the proprietary designation in accordance with the standards enumerated above. Disclosures outside General Electric are generally limited to regulatory bodies, customers and potential customers and their agents, suppliers and licensees, and then only with appropriate protection by applicable regulatory provisions or proprietary agreements.
 7. The documentation mentioned in paragraph 2 above has been evaluated in accordance with the above criteria and procedures and has been found to contain information which is proprietary and which is customarily held in confidence by General Electric.
 8. The information to the best of my knowledge and belief has consistently been held in confidence by the General Electric Company, no public disclosure has been made, and it is not available in public sources. All disclosures to third parties have been made pursuant to regulatory provisions or proprietary agreements which provide for maintenance of the information in confidence.
 9. Public disclosure of the information sought to be withheld is likely to cause substantial harm to the competitive position of the General Electric Company and deprive or reduce the availability of profit making opportunities because it would provide other parties, including competitors, with valuable information regarding current General Electric fuel designs which were obtained at considerable cost to the General Electric Company.

Affidavit

STATE OF CALIFORNIA)
COUNTY OF SANTA CLARA } ss:

Robert C. Mitchell, 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 JULY 1992.

Robert C. Mitchell
Robert C. Mitchell
General Electric Company

Subscribed and sworn before me this 23rd day of July 1992.



Paula F. Hussey
Notary Public - California
Santa Clara County