



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

**ACTION**

MAY 24 1990

MEMORANDUM FOR: Edward L. Jordan, Chairman  
Committee to Review Generic Requirements

FROM: Frank J. Miraglia, Deputy Director  
Office of Nuclear Reactor Regulation

SUBJECT: AMENDMENT 22 TO GESTAR II

*DR*  
*JE*  
*general approach*

Enclosed is a Safety Evaluation Report prepared by NRR that accepts for reference Amendment 22 to the General Electric Topical Report NEDE-24011-P-A, GESTAR II, in which GE proposed a set of licensing acceptance criteria applicable to all new and modifications to existing GE fuel designs. With the approval of Amendment 22 and these acceptance criteria, future GE fuel designs will not receive NRC explicit review as long as these criteria are met.

In accordance with the CRGR Charter and consistent with the memorandum dated September 29, 1989, NRR is forwarding the "Response to Requirements for Content of Package Submitted for CRGR Review" (Enclosure 1) and the enclosed Safety Evaluation Report (Enclosure 2) for CRGR review. The staff approval and the enclosed Safety Evaluation Report do not present either new staff positions or new interpretations of existing staff positions. All of the acceptance criteria addressed in Amendment 22 are consistent with existing SRP guidelines as well as applicable General Design Criteria and regulatory requirements. However, the approach proposed within Amendment 22 to NEDE-24011-P-A, GESTAR II and its approval does represent a change in the procedure by which new fuel designs or modifications will be approved by the staff. With issuance of this safety evaluation future GE fuel designs which meet all of these acceptance criteria will be considered acceptable by the staff. GE will ensure that any new fuel design or modification meets each of these necessary criteria, or, if any criteria are not met, GE will submit documentation for staff review and approval which will address each deviation. This new approach will save staff resources by focusing only on identified deviations from these established and approved acceptance criteria. This will enable staff resources to be more effectively applied to addressing more safety significant issues rather than on the review of routine fuel improvements or new fuel designs. However, it does place more reliance on the fuel designer to correctly interpret and objectively conform to the acceptance criteria without the benefit of NRC review and oversight. This could result in some erosion in the design margins which would not be brought to the attention of the staff. However, the staff intends to periodically audit the implementation of this approach.

GE has already used the process described in the report to support near-term plant reload implementation of its new GE-11 fuel design. GE has requested staff approval as soon as practicable to avoid the resource expenditure needed to prepare plant specific submittals for these near-term reloads. Accordingly, it is requested that CRGR review the enclosed acceptance letter and safety evaluation and schedule a meeting to discuss this issue within the next 2 to 4 weeks.

Contact: S.L. Wu, SRXB/DST  
Ext. 21065

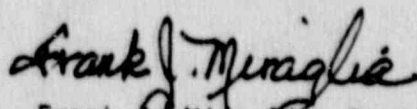
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Edward L. Jordan

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This request is sponsored by Ashok Thadani, Director, Division of Systems Technology.



Frank J. Miraglia, Deputy Director  
Office of Nuclear Reactor Regulation

Enclosures:  
As stated

ENCLOSURE 1



ENCLOSURE

RESPONSE TO REQUIREMENTS FOR CONTENT OF PACKAGE  
SUBMITTED FOR CRGR REVIEW

- (i) The proposed generic requirement or staff position as it is proposed to be sent out to licensees.
- \* Staff position is provided in the proposed acceptance letter that will be sent to General Electric Company. It informs GE that the Amendment 22 to GESTAR presents a set of licensing acceptance criteria applicable to GE fuel designs and future fuel designs meeting these criteria will not require NRC explicit review.
- (ii) Draft staff papers or other underlying staff documents supporting the requirements or staff positions.
- \* A memorandum from A. C. Thadani through L. Shao to R. W. Starostecki, entitled "Development and Approval of Criteria for New Fuel Designs," dated November 3, 1987, has stated the new staff approach to fuel licensing criteria.
- (iii) Each proposed requirement or staff position shall contain the sponsoring office's position as to whether the proposal would increase requirements or staff positions, implement existing requirements or staff positions, or would relax or reduce existing requirements or staff positions.
- \* The proposed acceptance criteria do not increase requirements or relax existing requirements because they are entirely consistent with the guidelines of the Standard Review Plan Sections 4.2, 4.3, and 4.4.
- (iv) The proposed method of implementation with the concurrence (and any comments) of OGC on the method proposed.
- \* OGC comments have been considered. OGC has no legal objections.
- (v) Regulatory analyses conforming to the directives and guidance of NUREG/BR-0058 and NUREG/CR-3568.
- \* A formal regulatory analysis is not required because the proposed acceptance criteria do not impose any new positions or requirements.
- (vi) Identification of the category of reactor plants to which the generic requirement or staff position is to apply.
- \* This applies only to General Electric BWR fuel designs.
- (vii) For each such category of reactor plants, an evaluation which demonstrates how the action should be prioritized and scheduled in light of other ongoing regulatory activities. The evaluation shall document for consideration information available concerning any of

the following factors as may be appropriate and any other information relevant and material to the proposed action:

- (a) Statement of the specific objectives that the proposed action is designed to achieve;

\* The objectives of the proposed acceptance criteria are to expedite the review process and reduce the staff resources needed for review of new fuel designs.

- (b) General description of the activity that would be required by the licensee or applicant in order to complete the action;

\* GE will implement the proposed acceptance criteria into its fuel design process to ensure that all criteria are met; if any criteria are not met, those parts will be submitted for the staff review.

- (c) Potential change in the risk to the public from the accidental release of radioactive material;

\* There will not be any change in the risk to the public from the accidental release of radioactive material, if GE correctly addresses the proposed acceptance criteria, because these criteria are consistent with existing SRP guidelines as well as applicable General Design Criteria and regulatory requirements.

- (d) Potential impact on radiological exposure of facility employees and other onsite workers;

\* None, because the proposed acceptance criteria are consistent with existing fuel design criteria.

- (e) Installation and continuing costs associated with the action, including the cost of facility downtime or the cost of construction delay;

\* None, because the proposed acceptance criteria are consistent with existing fuel design criteria.

- (f) The potential safety impact of changes in plant or operational complexity, including the relationship of proposed and existing regulatory requirements and staff positions;

\* None, because the proposed acceptance criteria do not involve any safety impact, backfitting, or new requirements.

- (g) The estimated resource burden on the NRC associated with the proposed action and the availability of resources;

\* There is no additional burden on the staff resources; instead, use of the proposed acceptance criteria will save some staff resources from routine fuel design reviews.

- (h) The potential impact of differences in facility type, design, or age on the relevancy and practicality of the proposed action;

\* None, because the proposed acceptance criteria only affect fuel designs.

- (i) Whether the proposed action is interim or final and, if interim, the justification for imposing the proposed action on an interim basis.

\* This is the final staff position and no other changes are under consideration.

- (viii) For each evaluation conducted pursuant to 10 CFR 50.109, the proposing Office Director's determination, together with the rationale for the determination based on the consideration of paragraphs (i) and (vii) above, that:

- (a) There is reasonable increase in the overall protection of public health and safety or the common defense and security to be derived from the proposal; and

- (b) The direct and indirect costs of implementation, for the facilities affected, are justified in view of this increased protection.

\* The proposed acceptance criteria do not affect the overall protection of public health and safety. There are no implementation costs associated with the proposed action since it does not impose any backfit requirements.

- (ix) For each evaluation conducted for proposed relaxations or decreases in current requirements or staff positions, the proposing Office Director's determination, together with the rationale for the determination based on the considerations of paragraphs (i) through (vii) above, that:

- (a) The public health and safety and the common defense and security would be adequately protected if the proposed reduction in requirements or positions were implemented; and

- (b) The cost savings attributed to the action would be substantial enough to justify taking the action.



\* The proposed acceptance criteria do not relax or decrease current requirements or staff positions. The cost savings due to this action is in the range of 30K to 60K per topical report review according to the past five year review experience.

ENCLOSURE 2





UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

Ms. J. S. Charnley, Manager  
Fuel Licensing  
General Electric Company  
175 Curtner Avenue  
San Jose, California 95125

Dear Ms. Charnley:

SUBJECT: ACCEPTANCE FOR REFERENCING OF AMENDMENT 22 TO GENERAL ELECTRIC  
LICENSING TOPICAL REPORT NEDE-24011-P-A, "GENERAL ELECTRIC  
STANDARD APPLICATION FOR REACTOR FUEL" (TAC NO. 71444)

The staff has completed its review of the subject amendment submitted by the General Electric Company by letter dated July 26, 1989. This Amendment 22 presents a set of licensing acceptance criteria applicable to GE fuel designs. Future fuel designs meeting these criteria and methods will not require prior NRC approval.

We find the Amendment 22 to be acceptable for referencing in license applications. The safety evaluation defines the basis for acceptance of the amendment.

We do not intend to repeat our review of the matters described in Amendment 22 and found acceptable when the report appears as a reference in license applications, except to ensure that the material presented is applicable to the specific plant involved. Our acceptance applies only to the matters described in the Amendment 22.

In accordance with procedures established in NUREG-0390, it is requested that GE publish accepted versions of this amendment, proprietary and non-proprietary, within three months of receipt of this letter. The accepted version shall incorporate this letter and the enclosed evaluation between the title page and the abstract. The accepted versions shall include an -A (designating accepted) following the report identification symbol.

Should our criteria or regulations change so that our conclusions as to the acceptability of the report are invalidated, GE and/or the applicants referencing the topical report will be expected to revise and resubmit their respective documentation, or submit justification for the continued effective

J. S. Charnley

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applicability of the topical report without revision of their respective documentation.

Sincerely,

Ashok C. Thadani, Director  
Division of Systems Technology  
Office of Nuclear Reactor Regulation

Enclosure:  
Safety Evaluation