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Secretary of the Commission  
 U. S. Nuclear Regulatory Commission  
 Washington, D. C. 20555

Attn: Docketing and Service Branch

Subject: Draft Regulatory Guide and Value/Impact Statement-  
 Task SC 521-4 "LWR Core Reloads; Guidance on  
 Applications for Amendments to Operating Licenses  
 and on Refueling and Startup Tests"

Dear Sir:

The Atomic Industrial Forum's Committee on Reactor Licensing and Safety has reviewed the subject Draft Regulatory Guide. Comments generated by various industry organizations represented on this committee are contained in Attachment 1.

Many industry organizations providing comments on this draft guide are concerned that, as presently written, the draft guide requires that all reload safety analyses conform in scope and format to the latest revision of Regulatory Guide 1.70. It is considered that such a requirement would have an unwarranted major impact on the reload licensing process as discussed in the attached comments.

We thank you for the opportunity to comment on this Draft Regulatory Guide, and we would be pleased to answer any questions you may have on the enclosed comments.

Sincerely,

John E. Ward, Chairman  
 Committee on Reactor Licensing and  
 Safety

JEW:hkh

Attachment

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Acknowledged by card *dh...*

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Part B - Discussion - Page 3

The purpose of, and the submittal schedule for the "Refueling Information Request" (Appendix B to the guide) is not clearly discussed. This information should be explained in more detail.

It is not clear what is meant in the last sentence of the description of Section 4 by "this procedure should be followed for all refuelings". The previous part of the paragraph mentions a program, a set of recommended tests and requested information, but does not mention a "procedure". This sentence should be clarified or deleted.

Part C - "Regulatory Position"

Section 1.1.2

This section, as written, requires the safety analysis for the refueled core to "satisfy all aspects of review and documentation as described in the latest revision of Regulatory Guide 1.70". Such a requirement would constitute unwarranted backfitting as discussed in the comments under Sections 3.1.1 and 3.5.1.

Section 1.2.2a

The regulatory guide properly recognizes that when an unreviewed safety question (USQ) or Technical Specification (TS) change is involved, only those portions of Section 3 relative to the USQ or Technical Specification change have to be provided in an NRC submittal. However, the RG as presently written would require submittal of all information in Section 2, whether or not it is related to the USQ or TS change. It should be sufficient to submit only that information in Section 2 which concerns the USQ or the TS change because the unchanged aspects have been previously reviewed and approved.

Section 1.2.2b

The conditions under which a startup report is required and the schedule for submittal of the startup report may be specified in plant Technical Specifications. It is recommended that the NRC take this fact into consideration when preparing subsequent versions of this RG.

Section 1.2.3

The information requested in the draft Guide's Sections 2.1.1, 2.1.2.a, 2.3.1, 2.3.3 is much more detailed than that previously required to be submitted pursuant to paragraph 50.59 (b) of 10 CFR Part 50. The information requested goes far beyond the requirements of 10 CFR 50.59 (b) to provide a brief description and a summary of the safety evaluation of the facility modification. Such detail in the required report is not necessary because it is the responsibility of the licensee to determine whether the reload involves an unreviewed safety question or a Technical Specification change. The adequate fulfillment of this responsibility may be

audited at any time by the NRC.

Section 2.2.1

The initial fill gas pressure may be vendor proprietary. The NRC should take this fact into consideration when preparing subsequent versions of this RG.

Section 2.2.5

Section 2.2.5 requires presentation of seismic parameters for the reload core. Seismic parameters do not change purely as a result of a reload unless there are changes in the fuel design. This section should be modified to read, "Changes in input parameters for seismic analysis should be presented..." This will then be consistent with the requirements of Section 2.2.4.

Section 2.5

The first sentence should be changed to "A table of relevant input parameters applicable to the transients and accidents re-analyzed should be provided." Such information should not be required for all transients and accidents.

Section 3.1.1

This section requires that the safety analysis summary include "the bases for assurance that both the reload fuel and refueled core satisfy all aspects of a review and documentation described in the latest version of Regulatory Guide 1.70". This description of the desired information requires clarification. Depending upon the interpretation, the requirement to supply this information could constitute unjustified backfitting at each reload of both the contents and the procedures for safety evaluations to comply with the latest version of the requirements of Regulatory Guide 1.70. This would seem to be applicable even to reloads with no unreviewed safety question or Technical Specification change.

We are not aware that the NRC has justified any finding of the need for this implied backfit mechanism. In addition, no particular sections of Regulatory Guide 1.70 are specified, so that this requirement is not clearly limited to fuel-related aspects. We recommend that the intent of Item 3.1.1 (1) be clarified, and that the request be stated in such a way that it can be complied with without imposing a backfit.

Sections 3.2.2 and 3.2.3

Some of the information required in these Sections is vendor proprietary and as such may not readily be available to licensees. It is recommended that the NRC take this fact into consideration when preparing subsequent versions of this RG.

Section 3.3.3

First sentence - eliminate "a detailed calculation of". The submittal should not need to present the detailed calculation, but only the results.

Section 3.3.4

The term "PWRs" is apparently a typographical error. The information described seems relevant to BWRs, not PWRs.

Section 3.3.5

The term "BWRs" is apparently a typographical error. The information described seems relevant to PWRs, not BWRs.

Section 3.5.1

For reloads involving an Unreviewed Safety Question or Technical Specification change, this Section apparently requires the analysis of those postulated transients and accidents required by the latest version of Regulatory Guide 1.70 but not previously analyzed in the FSAR (or subsequent submittals). Such a requirement would constitute unjustified backfitting of the scope, contents and procedures for transient and accident analysis to comply with the latest version of the requirements of Regulatory Guide 1.70. By 10 CFR 50.109, the NRC may require backfitting if it finds that the backfit "will provide substantial, additional protection which is required for the public health and safety or the common defense and security". We are not aware that the NRC has justified any such finding regarding the performance of the analyses for the additional Regulatory Guide 1.70 transients and accidents not analyzed in the FSAR or subsequent submittals. In addition, such backfit analyses, if imposed, should not be tied to reload licensing but instead should be handled separately because such a requirement is not intrinsically reload-related.

Section 3.5.3

After "analyzed conditions", insert "the results of". Again, only results should be presented.

Section 3.5.5

Section 3.5.5, last sentence, appears to require the presentation of analyses demonstrating the applicability of the evaluation model(s) to all fuel in a reload core. Such a "demonstration" could lead to unnecessary analysis and is inconsistent with past licensing actions which allow for fuel design compatibility assessments to confirm the applicability of analyses already performed. The sentence should be re-worded to state that the overall evaluation method and analyses supporting the reload must provide a conservative assessment of fuel behavior for all the fuel in the refueled core.

Section 4.2.a (for PWRs)

The term "Control Rod Drive Tests" should be clarified. If control assembly position indication testing is meant, then it should be stated as such. The control assembly position indication and drop time tests may be required by plant Technical Specifications. It is recommended that the NRC take this fact into consideration when preparing subsequent versions of this RG.

Section 4.2.b (for PWRs)

This item asks for a comparison of predicted and measured values of "local power" at a detector location. Since detectors measure neutron flux in a water-hole (thimble) location, this should be clarified to read "assembly power".

Also, change "at the actual detector locations" to "at the actual detector locations for quasi-equilibrium conditions". During startup and power ascension testing, the core is often in non-equilibrium conditions, due to either xenon, samarium, rod configuration, or changing temperature and boron distributions. Any comparisons between measured and design power distributions should only be made after an equilibrium situation is achieved, where the above effects can be properly accounted for and compared with predictions on a common bases.

In addition, the moderator temperature coefficient is not directly measured. It is determined from the measured isothermal temperature coefficient and the calculated Doppler coefficient.

Section 4.2.c (for PWRs)

This paragraph recommends that PWR core symmetry checks include comparisons of symmetric detector readings and comparisons of symmetric rod worths. Current procedures employed in the industry specify the use of one of the above methods and provide sufficient information for verifying core symmetry. The proposed requirement should specify the use of either method, not both methods.

Section 4.3.b

Operational surveillance of fuel integrity may be provided for in plant Technical Specifications. It is recommended that the NRC take this fact into consideration in subsequent versions of this RG.

Appendix A

Item III

Delete second paragraph.

1761 355

If the differences between the measured and predicted values fall within the acceptance criteria for the test, further discussion provides no additional information.

Items IV through VII

Delete items IV through VII.

These items are normally covered by other reporting mechanisms such as pre-operational test, Licensee Event Reports, QA requirements, and as such, are outside the scope of refueling and startup testing. These items provide no additional information and it is therefore inappropriate to include them in Appendix A.

In addition, with regard to Item IV, sipping tests are normally unnecessary absent a clear indication of excessive activity. Performance of these tests without necessary indications is considered inappropriate and if required, may unnecessarily impact reload schedules.