



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

October 25, 1999

Dr. Dana A. Powers, Chairman
Advisory Committee on Reactor Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: PROPOSED FINAL RULE ON USE OF ALTERNATIVE SOURCE TERM AT
OPERATING REACTORS, DRAFT REGULATORY GUIDE, AND STANDARD
REVIEW PLAN

Dear Dr. Powers:

Thank you for your letter of September 17, 1999, on the proposed final rule on the use of alternative source term (AST) at operating reactors, the draft regulatory guide, and the standard review plan. The staff appreciates the positive comments made by the Advisory Committee on Reactor Safeguards (ACRS) on the proposed final rule and the draft supporting guidance and has given serious consideration to the recommendations provided in your letter. The staff's responses to the recommendations follow:

1. ACRS Recommendation:

The staff should modify the proposed redefinition of the source term to eliminate the connotation that the release is necessarily to the containment but should retain the wording "...release from the RCS..."

Response:

As indicated in your letter, the purpose of the proposed redefinition was to ensure that the AST could be used for the entire range of design basis accidents (DBAs). The proposed final § 50.67 includes the phrase *source term*, as defined in the proposed final § 50.2. A public comment submitted on the proposed rule language raised a concern that the proposed definition would restrict the applicability of the proposed § 50.67 to full implementations addressing a loss-of-coolant accident (LOCA), thereby precluding desirable selective implementations. This was not the staff's intent, and the definition was revised to address the other DBAs. The staff believes that the wording recommended by the ACRS would exclude fuel-handling accidents, thereby continuing the deficiency.

In the basis for this recommendation, the ACRS stated that the proposed change would misrepresent the NUREG-1465 basis for the alternative source term. The staff agrees that the NUREG-1465 source terms for a LOCA are based on releases from the reactor coolant system to the containment. However, it was not the staff's intent that this proposed final definition refer specifically to LOCAs or NUREG-1465. The intent of defining *source term*, as used in 10 CFR 50.67(a), was to ensure that the source term characteristics of magnitude and mix, chemical and physical form, and timing were

considered by licensees using § 50.67. The proposed final rule does not explicitly or implicitly identify the basis for an AST, nor does it reference NUREG-1465. This action is left to the draft regulatory guide. Also, the phrase *source term* is used in the proposed final § 50.67 rule as *current accident source term*, a general reference to the Technical Information Document (TID)-14844 source term originally used by license applicants.

The staff does not believe the recommended change to the definition in the rule is necessary. However, the staff will review the proposed draft guide during the public comment period to ensure that our description of the alternative source term for the LOCA does not misrepresent its NUREG-1465 basis.

2. ACRS Recommendation:

The staff should reassess the requirement for evaluating the effects of changes on core damage frequency (CDF) and large early release frequency (LERF) and determine if this requirement could be relegated to the § 50.59 change process.

Response:

It was not the staff's intent to require a risk analysis for all proposed modifications as suggested in the basis for this recommendation. The staff reviewed the draft regulatory guide and the draft SRP section and concluded that neither document required a risk analysis for all proposed modifications. However, Position C.1.4 of the draft guide provides guidance for when a risk analysis may be warranted for a particular modification.

The ACRS highlighted two phrases from paragraphs in the draft SRP that provide guidance to the NRC staff for screening license amendment requests related to AST implementations. Since these reviews are performed on license amendment requests, the change process in § 50.59 is not applicable. The first provision directs the staff reviewer to identify whether or not the application is risk-informed. Subsequent review by risk analysts is indicated only if the applicant has identified risk insights in support of the proposed modification. The second provision directs the staff reviewer to request a review by risk analysts if the reviewer believes that the proposed modification may impact CDF or LERF. The licensee would be requested to provide risk analysis data if there is a reason to question adequate protection of the public health and safety. This is provided for in Position C.1.4 of the draft regulatory guide.

3. ACRS Recommendation:

The requirement to have prior NRC approval for "changes...that result in a reduction in safety margins" should be reevaluated for removal in light of both the analytical assessments performed by RES and the results of the pilot applications of the alternative source term.

Response:

The staff will reevaluate this section of the draft regulatory guide during the public comment period. The staff will consider the content of the § 50.59 guidance, as it is available at that time, in this reevaluation.

Sincerely,



William D. Travers
Executive Director
for Operations

cc: Chairman Dicus
Commissioner Diaz
Commissioner McGaffigan
Commissioner Merrifield
SECY