

February 6, 2001

Dr. Thomas P. McLaughlin
Los Alamos National Laboratory
Nuclear Criticality Safety (ESH-6)
P.O. Box 1663, Mail Stop F691
Los Alamos, NM 87545

SUBJECT: NUREG-1609, "STANDARD REVIEW PLAN FOR TRANSPORTATION
PACKAGES FOR RADIOACTIVE MATERIALS"

Dear Dr. McLaughlin:

As a result of your discussions with members of my staff in November and December, 2000, we are providing a response to your letter of April 24, 1998, regarding draft NUREG-1609, "Standard Review Plan for Transportation Packages for Radioactive Materials." We want to thank you for your comments on the NUREG.

In response to your question on the wording in NUREG/CR-5661 (which you inadvertently identified as NUREG/CR-6551), the administrative subcritical margin of 0.05 is neither a requirement nor mandatory. Although NUREG/CR-5661 was prepared in consultation with the U.S. Nuclear Regulatory Commission (NRC) staff, it is a contractor report and not an NRC policy statement nor a regulation. As you noted, the document contains only recommendations.

In many areas, NRC issues guidance in the form of Standard Review Plans (SRP) which are not regulatory requirements. However, the SRPs do identify acceptable approaches to meeting the regulations. Applicants have the option to meet the regulations by other means than identified in the SRP. However, if an applicant elects to deviate from the SRP, the applicant has the responsibility for justifying its methods. In this instance, the staff finds a calculated $k_{\text{eff}} \leq 0.95$ as an acceptable criterion given the normal analytic practices used by the industry. That is not to imply that an applicant cannot justify a larger k_{eff} number. However, justifying a larger number would require more extensive validation of the computer programs, methods, quantification of uncertainties (not only in the methods but geometry, material properties, under all postulated conditions, QA, etc.), qualification of the analysts, and other controls. As a related note, NRC fuel cycle licensees do not universally rely on ANSI/ANS-8.1 but may use other acceptable means of assuring safe operations.

Your letter also addresses risk and implies that the NRC does not consider risk in its regulatory activities. Be assured that the NRC will and does consider a graded approach to, and consider risk in, the implementation of the regulations. The NRC will consider smaller subcriticality margins for very low probability accident conditions with consequences resulting in a very low risk (probabilistic risk-informed decision-making process). This is a long-standing NRC position. However, it is up to the applicant to justify that the analyses address all uncertainty issues.

T. McLaughlin

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I trust that this letter adequately responds to the issues raised in your letter.

Sincerely,
/RA/ original signed by /s/
E. William Brach, Director
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

T. McLaughlin

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