



NUCLEAR ENERGY INSTITUTE

Ralph E. Beedle

SENIOR VICE PRESIDENT AND
CHIEF NUCLEAR OFFICER
NUCLEAR GENERATION

October 28, 1996

Mr. Frank J. Miraglia, Jr.
Acting Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

SUBJECT: Implementation of the Revised Source Term at
Operating Power Plants – Project No. 689

Dear Mr. Miraglia:

On October 2, 1996, NEI met with the NRC to discuss the use of the revised source term at operating power plants. The NRC concluded that rulemaking will be required prior to permitting implementation of the revised source term. NEI respectfully requests that the NRC consider using the alternate implementation process discussed in this letter rather than proceeding with rulemaking. The alternate process addresses the technical concerns identified by the NRC and demonstrates full compliance with existing regulations.

NRC stated that it is necessary for radiation exposures, using the revised source term, to be calculated with the Total Effective Dose Equivalent (TEDE) method, and that the maximum site boundary dose in "any" two-hour period is to be calculated. The staff further stated that rulemaking is necessary because: (1) the TEDE exposure units are different from the whole body and thyroid exposure calculations required by the current 10 CFR Part 100 regulation, and (2) that the maximum dose calculation for "any" two-hour period does not comply with the 10 CFR Part 100 requirement to determine the maximum release for the "two-hour period immediately following onset of the postulated fission product release."

NEI agrees that both TEDE and the maximum release in "any" two-hour period differ from the current Part 100 requirements. But if licensees perform parallel calculations, then compliance with current regulations can be demonstrated and the technical concerns identified by the NRC can be addressed without initiating rulemaking. Compliance with current regulations can be demonstrated by using

9611180215 961028
PDR PROJ
689

PDR

1776 I STREET, NW

SUITE 400

WASHINGTON, DC 20006-3708

PHONE 202 739 8088

FAX 202 785 1898

Proj-689

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the revised source term and current Part 100 whole body and thyroid exposures and the maximum release in the "two-hour period immediately following onset of the postulated fission product release." NRC technical concerns can be addressed if licensees perform these revised source term calculations to determine TEDE and the maximum release in "any" two-hour period. Industry is considering changes to the NEI/EPRI framework document currently being reviewed by the NRC staff. These changes also will reflect the fact that a GDC 19 rule change is not needed prior to applying the revised source term, since TEDE is an allowable dose calculation method to demonstrate compliance with its criteria of "5 rem whole body, or its equivalent to any part of the whole body."

NEI believes that a precedent exists for use of the alternate process. A similar process was used when the System 80+ Advanced Light Water Reactor project demonstrated Part 100 compliance with whole body/thyroid calculations, accompanied by informational TEDE calculations.

During the October 2 meeting, NRC staff discussed their plans to gain greater understanding of the revised source term impact at operating plants through the performance of two integrated baseline assessments. NRC stated that these baseline studies will be performed in conjunction with the evaluation of a few pilot plant applications. Further, NRC stated that the pilot plant applications would be accepted using the 10 CFR 50.12 exemption process, since the pilot plants using TEDE and the maximum release in any two-hour period would not comply with current Part 100 regulation. The alternate process proposed above would demonstrate compliance with existing regulations; hence, exemptions would neither be required for the pilot plants nor for subsequent applications submitted by other licensees. NEI believes a process which avoids the need to grant exemptions is preferable.

Licensees have expressed concern with the lengthy revised source term implementation schedule. NEI encourages the NRC to take all allowable steps to permit use of the revised source term on an expedited schedule. Should rulemaking proceed and licensees not be afforded a timely opportunity to use a more technically correct source term, safety enhancements which require application of the revised source term will be delayed. Licensee economic enhancements based on the revised source term also will be deferred. Using the alternate process will benefit both NRC and industry. If a rule change is determined to be appropriate at a later date, one could be developed to enhance and streamline the revised source term implementation process.

• Mr. Frank J. Miraglia, Jr.

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If you have questions concerning our request or would like meet with NEI, please call me or Dave Modeen ((202) 739-8084).

Sincerely,



Ralph E. Beedle

c: David L. Morrison, NRC/RES/OD
Charles L. Miller, NRC/NRR
Richard L. Emch, NRC/NRR