



PJ-710

GE Nuclear Energy

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MFN 01-039

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US Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Attention: Chief, Information Management Branch
Program Management
Policy Development and Analysis Staff

Subject: **Proprietary Information Review of Draft NRC Safety Evaluation:
SAFETY EVALUATION FOR NEDC-32983P: "GENERAL ELECTRIC
METHODOLOGY FOR REACTOR PRESSURE VESSEL FAST
NEUTRON FLUX EVALUATION" (TAC NO. MA9891)**

This letter responds to the NRC Staff request for a "proprietary information review" of the draft safety evaluation (SE) for the subject report. Mr. S. Dembek made the NRC Staff request verbally and by subsequent email on August 6, 2001.

Although the draft SE does not contain any information proprietary to GE Nuclear Energy or to the General Electric Corporation, it does contain some information that GE believes is incorrect and some information that needs clarification. GE offers for staff consideration some comments, which are divided into two groups. The first relates to typographical and editorial comments and the second relates to issues and concerns. The comments are listed in the two attachments, respectively.

D065

GE requests a conference call to amplify the concerns listed in Attachment 2 because compliance with the "limitations and requirements," as stated in the draft SE, may not be possible within the schedule constraints required by the SE. In the case of the requirement for additional dosimetry analysis directly related to the shroud, the action suggested may not be possible or within the control of GE.

Sincerely,



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Attachments: 1) Typographical and Editorial Comments (3 pages) and
2) Issues and Concerns (4 pages)

cc:

R. M. Pulsifer	(NRC)	w/ attachments
M. A. Mitchell	(NRC)	w/o attachments
L. Lois	(NRC)	w/o attachments
C. E. Carpenter	(NRC)	w/o attachments
K. E. Wichman	(NRC)	w/o attachments
R. S. Drury	(GE)	w/ attachments



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Attachment 1 to MFN 01-039

Typographical and Editorial Comments

Comment 1

Section 2.1 (third paragraph): "The eighty-group MATXS (Ref.-8) cross section library is the basic nuclear data set. This library is used in performing the energy and spatial self-shielding and removal calculations. The scattering cross sections are represented using a P_3 Legendre expansion. The calculations are performed in (r, θ), (r, z) and (r) geometries. A synthesis technique is used to determine the three-dimensional fluence distribution and to some extent account for the effect of axial leakage between the core and the cavity."

Revision

The underlined sentence should read as follows: "The calculations are performed in (r, θ) and (r, z) geometries."

Comment 2

Section 2.3 (first paragraph): "In order to provide a measurement benchmark for qualifying the DORT and MCNP calculational methodology, GE has performed an in-reactor dosimetry benchmark experiment (Ref. 4 and 5). The experiment included the irradiation of a set of passive dosimeters for one cycle in an operating (non US) BWR. The measurements included Fe-54 and Nb-93 threshold dosimeters as well as U-238, Th-232 and Np-237 fission dosimeters. The dosimeters were located in the downcomer at three axial elevations, three azimuths and three radial locations. The dosimeter activation counting and related measurements were performed at the GE Vallecitos Nuclear Center."

Revision

The underlined sentence should read as follows: "The measurements included Fe-54, Nb-93, and Ni-58 threshold dosimeters as well as U-238, Th-232 and Np-237 fission dosimeters."

Comment 3

Section 3.4 (last paragraph): "While the uncertainty analysis based on the surveillance dosimetry C/M comparisons is generally consistent with the analytic uncertainty, it is noted that several substantial adjustments are required to account for approximations made in the calculations of the surveillance data. In addition the uncertainty in the fluence adjustment is substantially larger than the adjustment itself. Therefore, in order to provide additional confidence in the benchmarking of the proposed fluence methodology, within three years GE is required to perform predictive calculations of at least four additional BWR capsule dosimetry activity measurements. These calculations should be submitted to the NRC staff prior to the completion of the measurements. After the measurements are completed, comparisons of the measurements and calculations should also be submitted to the NRC. If the C/M comparisons are not consistent with the proposed NEDC-32983P fluence methodology and supporting benchmark uncertainty analysis, the necessary revisions to the uncertainty analysis and methodology should be provided in the submittal. This requirement was discussed and agreed upon with GE in a NRC/GE/BNL conference call on June 25, 2001."

Revision

The underlined sentence would make more sense if it should read as follows: "In addition the uncertainty in the fluence adjustment is not substantially smaller than the adjustment itself."

Comment 4

The acronym in the first sentence of the second paragraph in Section 2.2 is a "typo" (LTR instead of LTP).