71-9217

SIEMENS

June 15, 2000
PCR:00:019

U.S. Nuclear Regulatory Commission
Attn: Mr. M.D. Waters, Project Manager
Licensing Section, NMSS/SFPO/SLID
Mail Stop 13 D 13
11545 Rockville Pike
Rockville, Maryland 20852

Dear Mr. Waters:

Subject: **Additional Information for the Re-Certification of the ANF-250 Packaging (Docket 71-9217)**

Ref.: Letter, P.C. Rieke to C.R. Chappell, Renewal of the Certificate for the ANF-250 Packaging, dated January 26, 2000

As per our recent telephone conversations concerning the re-certification of the ANF-250 packaging, I am submitting two copies of two pages that include changes to the consolidated Safety Analysis Report (SAR) as submitted in Reference 1.

The current changes that are attached with this letter concern modifications in references that were made in the criticality section. As a result of our most recent review, we have modified the references noted at the top of page 6-9 and added an appropriate reference in the Reference section on page 9-1. These were the only changes necessary.

If there are any other questions or needs that you have in your review, please feel free to call me at 509-375-8186.

Very truly yours,

Philip C. Rieke

Philip C. Rieke
Transportation and Packaging Engineer
Regulatory Compliance

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Enclosures

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NMSS01 Public

6.3.5 Validation for Homogeneous (Powder) Calculations)

Table 6.4 experiments involve homogeneous uranium oxides. These benchmark experiments include 36 cases of moderated uranium oxides. They are, therefore, similar to the accident conditions evaluated in this CSE. The case numbers referenced below were taken from Reference 5.

Table 6.4 Reference 5 Cases Calculation Results with 27-Group Cross Sections

Case ID	k_{eff}	
	Avg.	Std. Dev.
b-bm01k	0.98692	0.00165
b-bmb02k	0.98884	0.00172
b-bmb03k	0.99144	0.00184
b-bmb04k	0.98744	0.00180
b-bmb05k	0.98923	0.00173
b-bmb06k	0.99066	0.00166
b-bmb07k	0.97997	0.00174
b-bmb08k	0.97807	0.00179
b-bmb09k	0.98459	0.00164
b-bmb10k	0.98508	0.00144
b-bmb11k	0.99483	0.00205
b-bmb12k	0.99376	0.00224
b-bmb13k	0.99885	0.00211
b-bmb14k	0.99882	0.00215
b-bmb15k	1.00076	0.00190
b-bmb16k	0.99117	0.00186
b-bmb017k	0.99516	0.00189
b-bmb18k	0.98864	0.00195
b-bmb19k	0.99137	0.00153
b-bmb20k	0.98407	0.00166
b-bmb21k	1.00545	0.00230
b-bmb22k	1.00369	0.00197
b-bmb23k	1.01063	0.00245
b-bmb24k	1.00429	0.00253

9. References

1) SCALE Standardized Computer Analyses for Licensing Evaluation, NUREG/CR-2000 ORNL/NUREG/CSD-2, Volumes 1, 2, and 3.

2) "Application for Use of the ANF-250 Shipping Container for Transport of Radioactive Materials," Revision 5, March 1990.

3) "Critical Separation Between Subcritical Clusters of 4.29 wt% Enriched UO_2 Rods in Water with Fixed Neutron Poisons", NUREG/CR-0073.

4) Nuclear Criticality Safety Experiments Volume 35", pages 278-279, W. Marshall, T.D. Clemson, and G. Walker, ANS TRANSACTIONS (attached).

5) Siemens Power Corporation EMF-94-175, Validation and Verification of KENO.Va, September 1994.

[1] 10 CFR §71 regulations as of January 1, 1986.

[1] IAEA Regulations for the Safe Transport of Radioactive Materials 1973 Revised Edition (As Amended).

[1] IAEA Regulations for the Safe Transport of Radioactive Materials 1985 Edition with Supplement 1986.

[1] Based upon IAEA 1973 - The requirements may be classified differently in IAEA 1985.

[1] Temperature range is a condition of evaluation in 10 CFR §71.71(c)(1)-38°C and §71(c)(2)-40°C.