



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARY AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

SEP 6 1979

Docket No. 70-1143

Westinghouse Electric Corporation
ATTN: Mr. James S. Moore
General Manager
Nuclear Fuel Division
Nuclear Energy Systems
P. O. Box 355
Pittsburgh, Pennsylvania 15230

Gentlemen:

Subject: Inspection 70-1143/79-05

This refers to your letter dated July 12, 1979, in response to our letter dated June 21, 1979.

In your letter you state that Westinghouse does not agree that Condition 16 of your license has been violated. Your basis for this was your contention that the May 26, 1972, letter referred to in Condition 16 did not specifically prohibit the stacking of subcrits. It is pertinent that License No. SNM-1120 does not authorize the stacking of subcrits, when the amount of fissile material in the square horizontal surface area for the subcrit exceeds the Maximum Permissible Value (MPV). In the situation causing the item of noncompliance, the stacked storage rack and the Gatling gun occupied the same horizontal surface area, and the amount of fissile material allowed in the storage rack and the Gatling gun exceeded the MPV. The concerned license condition as related to your response is discussed further below.

Condition 16 states, "Notwithstanding the requirements imposed by paragraph 7.2, page 66, of the application dated June 13, 1969, spacing of fissile units shall be provided as exemplified in Figure 3 of the May 26, 1972 letter (1) using a square area for each unit and (2) avoiding overlapping of such area." This condition refers primarily to page 66 of the license application, and the only part of the May 26, 1972, letter referred to by the condition is Figure 3. The following is the referenced information given on page 66 of the application.

"Interaction effects will be evaluated using the surface density method for subcrits which have a fraction of critical mass value (f) equal to or less than 0.3. The value of (f) is < 0.3 for each of the applicable MPV's listed in Tables 7.1.1 and 7.1.2. Subcrits will be spaced to assure that the average slab thickness of the contained material, if "smeared" over the allotted surface

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area, would be < 25% of the critical value for a reflected infinite slab of similar material when the Pu density is > 1 g Pu/cc; and would be 50% of the critical value for a reflected slab of similar material when the Pu density is < 1 g Pu/cc. Each subcrit will be allotted and essentially centered in a horizontal area calculated from the applicable value given in Tables 7.2.1 and 7.2.2."

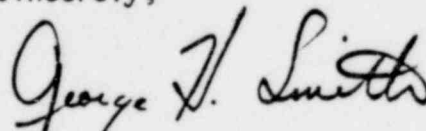
Figure 3 of the May 26, 1972 letter exemplified the spacing of the subcrits showing (1) the use of a square surface area for each subcrit, and (2) the avoidance of overlapping of the areas.

It should be noted that the area for the subcrit referred to in the license application is the horizontal area. Therefore, according to your license application and License Condition 16, when a subcrit is a Maximum Permissible Value (MPV), that subcrit will be allotted a square horizontal surface area and that allotted square horizontal surface area will not overlap the horizontal square surface area of any other subcrit. In the situation causing the item of noncompliance, the horizontal square area for the MPV in the storage rack and the horizontal square area for the fissile material in the Gatling gun overlapped completely.

For the reasons given above, the subject item remains an item of noncompliance. Therefore, as required by Section 2.201 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations, please submit to this office, within 20 days of your receipt of this letter, a written statement or explanation in reply including: (1) corrective steps which have been taken by you and the results achieved; (2) corrective steps which will be taken to avoid further items of noncompliance; and (3) the date when full compliance will be achieved.

Your cooperation with us is appreciated.

Sincerely,



George H. Smith, Chief
Fuel Facility and Materials Safety
Branch

cc:

C. E. Anthony, General Manager, Electro Mechanical Division
J. J. Bastin, Manager, Plutonium Fuels Development Laboratory
R. P. DiPiazza, NES License Administrator

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