

January 5, 2004

Mr. Tom Rodack
Manager of Quality and Licensing
Westinghouse Electric Company
P. O. Box 355
Pittsburgh, PA 15230-0355

SUBJECT: ALTERNATE SOURCE FUEL POWDER/PELLETS USE (TAC NO. MB1365)

Dear Mr. Rodack:

On September 11, 2003, the staff held a meeting with your technical experts to discuss the proposed utilization of uranium dioxide powder and pellets from alternate sources for use in fuel fabrication for Westinghouse-designed pressurized water reactors. Westinghouse proposed to use powder or pellets derived from Ammonium Uranyl Carbonate (AUC) or Integrated Dry Route (IDR) conversion processes produced at locations other than the Columbia, South Carolina site in addition to the existing Ammonium Di-Uranate (ADU) process.

The staff expressed several concerns with regard to mixing source powder from different conversion processes in fuel fabrication. Some of the staff's concerns included pellet quality control and fuel performance associated with densification, swelling, and fission gas release. Moreover, the resulting fuel rod performance could exceed the existing data base for analyses performed using the PAD code. Your experts identified affected licensing topical reports, criteria to demonstrate licensing compliance, and a commitment to ensure consistent quality in the fuel fabrication.

In conclusion, the staff realizes that the proposed program involves complicated fabrication processes from multiple sources and has considered the proposed program to use alternate source fuel powder and pellets. Because the proposed fuel fabrication processes are standard and typical in the nuclear power industry, the staff agrees with the proposed program. However, in order to address potential concerns with regard to quality control in the fuel fabrication process, the staff requests that detailed documentation of this program be complete for future reference and audit purposes to ensure that the resulting products of powder and pellet do not create an adverse impact on fuel performance. The staff recommends that Westinghouse update the affected topical reports to include a description of fuel mixing procedures, performance data variations, and licensing compliance, particularly related to quality control and forward the updated topical reports to the staff for information when completed.

T. Rodack

- 2 -

If you have any questions, please call Brian Benney at (301) 415-3764.

Sincerely,

/RA/

Herbert N. Berkow, Director
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Project No. 700

cc:

Mr. Gordon Bischoff, Manager
Owners Group Program Management Office
Westinghouse Electric Company
P.O. Box 355
Pittsburgh, PA 15230-0355

Mr. John S. Galembush, Acting Manager
Regulatory Compliance and Plant Licensing
Westinghouse Electric Company
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