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December 14, 1992

Mr. Alexander Adams, Jr.
Senior Project Manager
Non-Power Reactors, Decommissioning
and Environmental Project Directorate
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Reply to Request for Additional Information (RAI), regarding TS amendments **pertinent to the Low Enrichment Uranium (LEU) fuel conversion**, from the University of Virginia Reactor Facility [Reactor Docket Nos. 50-62 and 50-396].

Dear Mr. Adams:

Please find in attachment U.Va.'s updated UVAR Technical Specifications (TS) proposed amendments related to the upcoming High Enriched Uranium (HEU) to LEU fuel conversion. You are being provided with a clean copy of these TS, as well as a copy marked with bars in the margins, or red underlines, to highlight areas of change in the current TS. Notes on the margin are provided for guidance. It is requested that these TS changes be approved subject to a future NRC Order to Covert the UVAR to LEU fuel. The timing of this order should take into account the earliest possible LEU fuel shipping date quoted by B&W, the LEU fuel producer, during our most recent contact. This date is now set April 1, 1993.

As you requested in the November 19, 1992 RAI, TS 4.8 (and not "3.8," as mistyped in the RAI) will remain in the TS, although reworded to take into account an interim period following the conversion order when HEU may still be present at the Reactor Facility. For this reason, the reworded TS 4.8 will become part of the conversion order. Because it remains in the TS, the changes to TS 4.9 proposed by us in a previous submittal will not be necessary.

Section 5 of the UVAR TS has been reformatted to match the other TS sections in appearance. The greater detail requested for TS 5.1 (U-235 quantity in each fuel element type, etc...) has been provided. It is noted that TS 5.3 has been revised, and that TS 5.3.(1) now provides for a temporary period during which both LEU and HEU fuel may be possessed and stored on-site at the Reactor Facility, although only LEU would be useable in the UVAR. This

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clause is necessary to cover eventual delays which may occur in the shipping of spent HEU fuel offsite, due to circumstances not subject to our control. It is necessary also because the COC of the fuel cask requires the fuel from the reactor core to cool down for 3 months prior to initiating shipping.

As we have stated on several occasions, we would have liked to ship all HEU fuel offsite before receiving LEU fuel from B&W in nearby Lynchburg, VA.. This will not be possible because of the required cooldown period for fuel from the core prior to cask use. Since more than 5 kilograms of HEU are stored at our facility, at least two spent fuel shipments must be completed before the Order to Convert is issued and the LEU TS can be made effective. The UVAR staff has been active in preparing for fuel shipments. Your name has been put on the list of persons to receive copies of this correspondence. It appears that shipments may be made in February, in view of the NRC need to re-survey the proposed route, and Savannah River's suggested time-window for receipt of the fuel. DOE has informed us that the spent fuel cask will be available to U.VA. after New Year's. Mr. Don Carlson at NRC Headquarters also is being kept informed about our progress with the shipping preparations.

In response to one of your comments in the RAI about the need for the effective neutron multiplication factor for a fuel array having to be limited under all conditions of moderation (although water should be the most limiting condition), we have reworded proposed TS 5.3(2) and (3), using wording suggested in ANS 15.1.

With regard to government funding of UVAR conversion, we have requested DOE to provide us with a letter indicating that funding is available for conversion (specifically, to cover spent fuel shipments and supply of the new reactor fuel, since the safety analysis study by U.VA. which was funded by DOE has been completed). Mr. Keith Brown of DOE has informed me that he contacted you about the type of certification that DOE can provide. A copy of the letter from his office will be mailed to you as soon as we receive it.

At our last phone contact with B&W, we were told that the LEU fuel-plate manufacture is about complete, and an April 1, 1993 shipping date for LEU fuel elements is now being contemplated. This gives us sufficient time to complete the LEU TS review and make two HEU spent fuel shipments prior to the issuance of NRC's order. It appears that NRC route approval for our spent fuel shipments is close at hand, for Ms. Mastick from the NRC recently visited our facility to inspect the local roads.

(Cover letter to LEU related TS amendments, page 3, cont.)

Text for SNM possession limits has been incorporated in TS 5.3 as you requested in the November 19 RAI. It is requested that these fuel conversion related "LEU" TS amendments be made effective at the same time that the non-conversion amendments, submitted under separate cover, are made effective. This is necessary to take into account the extensive updating that has been made in the UVAR Technical Specifications, involving TS reformatting, renumeration and repagination.

I thank you for the helpful remarks that have contributed to the updating and upgrading of the UVAR TS.

Sincerely,

Robert U. Mulder, Director
U.Va. Reactor Facility

City of Albemarle
Commonwealth of Virginia
I hereby certify that the attached document is a true and exact copy of a letter (type of document), presented before me this 14th day of Dec 1992 by Robert Mulder (name of person seeking acknowledgement)

Vicki S. Thomas
Notary Public

My commission expires 2/28 1994

enc: Proposed LEU related TS amendments
Justification for LEU TS amendments
Justification for SNM Limits