



# UNIVERSITY OF FLORIDA

Nuclear Reactor Facility  
Nuclear Engineering Sciences Department

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March 26, 1993

Updated Proposal To Meet  
Requirements of 10 CFR 50.64(c)(2)

Director  
Office of Nuclear Reactor Regulation  
Nuclear Regulatory Commission  
Washington, D.C. 20555

Re: University of Florida Training Reactor(UFTR)  
Facility License: R-56; Docket No. 50-83

Dear Sir:

Enclosed is an updated proposal intended to meet the requirements of 10 CFR 50.64(c)(2). Except for scheduling, this proposal is essentially unchanged from that originally submitted with a cover letter dated March 26, 1987 and later revised as to its schedule pursuant to a request from the NRC Project Manager Theodore Michaels dated April 17, 1987. This revised schedule was submitted with a cover letter dated May 14, 1987. It is also essentially unchanged from the updated proposals submitted with letters dated March 22, 1988, March 27, 1989, March 27, 1990 and March 26, 1991 except for the revised schedule and the presence of substantive information on progress to date including the final fuel bundle design.

The updated written proposal outlines how the R-56 licensee intends to meet the requirements of 10 CFR 50.64 Paragraph(c)(2) to include certification that funding for conversion has been received through the Department of Energy for the first phase of the project and a tentative schedule for conversion based upon availability of replacement fuel acceptable to the Commission and upon consideration of the availability of additional funding, shipping casks, implementation of arrangements for the available financial support and allowing for commitments of reactor usage. The schedule had slipped significantly in previous years due to delays in work to qualify the SPERT fuel and due to delays in safety analysis as we awaited code implementation and availability of graduate students for the work. The delays in work with the SPERT fuel were most significant in 1988 and 1989 as the SPERT fuel had to be moved, under the SNM-1050 license, and then various license changes approved prior to initiation of the qualification work which was lengthy and subject to several equipment(X-ray machine) failures. The non-destructive testing of the SPERT fuel was completed successfully by April, 1989; however, shielding and other structural changes necessitated by use of the SPERT fuel resulted in a decision in August, 1989 to

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utilize plate-type silicide fuel for the conversion. With this decision made, work was then expected to progress more rapidly as the code methodology for safety analyses was being implemented and tested in parallel.

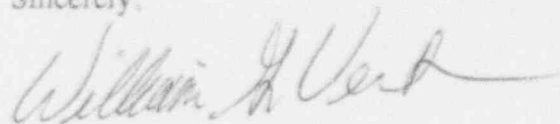
Unfortunately, the decision by the graduate student performing this work to leave the university to pursue his degree elsewhere in August, 1989 necessitated essentially restarting the safety analysis when a student began work on it for his thesis in early 1990. Although he spent a week at Argonne National Laboratory working with the RERTR group to receive training in the use of the codes, it still took time for the student to become proficient in the use of the codes. Unfortunately several flaws in the implemented codes used for the neutronics analysis also slowed progress though these were cleared up in early, 1991.

In April, 1991, a student project concluded the benchmarking neutronics analysis on the existing HEU core demonstrating acceptability of the static neutronics methodology to model the existing core. Similarly a thesis project concluded in May, 1991 produced the static neutronics analysis for the proposed LEU core with the number of fuel plates per bundle now set at 14. DOE-supplied funding support of this work was extended beyond April 30, 1991 but this was not accomplished until March, 1992 resulting in some delays due to administrative problems. Nevertheless, the complementary basic thermal hydraulic analysis and other analysis work required to conclude the HEU to LEU safety analysis was undertaken and has been essentially completed as work is now underway to prepare the safety analysis report package required for the NRC.

We have also been working closely with the Department of Energy in Idaho to assure fuel availability in a timely manner and to make decisions on utilization of the existing fuel boxes. The final design review on the fuel is in progress and some questions about holddown devices have been cleared up with recent calculations supplied by DOE. Only a very small piece of the analysis remains to be completed. After this work is completed, the entire package can be assembled for submission to NRC by June, 1993 with the project progressing as predicted in the attached updated proposal.

If further information is needed, please advise. Thank you for your consideration.

Sincerely,

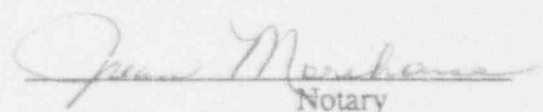


William G. Vernetson  
Director of Nuclear Facilities

WGV/p

Encl.

cc: D. Simpkins  
Reactor Safety Review Subcommittee

  
Notary

James M. Morrison, State of Idaho  
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