



# UNIVERSITY OF FLORIDA

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March 27, 1996

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

Director  
Office of Nuclear Reactor Regulation  
Nuclear Regulatory Commission  
Washington, DC 20555

Dear Sir/Madam:

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

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 in March of subsequent years 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 had 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

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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 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 nearly completed as work had been underway in the 1993-1994 year to prepare the safety analysis report package required for the NRC. Delays have been involved since then because of the inability to get the existing grant support extended to allow project completion up to SAR submittal. The grant support was finally extended in late November, 1994 but little work was accomplished as the funding remaining in the grant is for support of a non-permanent employee (student) who has not been identified. In early April, 1995 DOE advised they would extend the grant with its remaining support through March 31, 1996. We are in the process of getting the support funding category changed to allow completion of work through submittal of SAR changes. This change will require several months as we again extend the grant.

We have also been working 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 questions about holddown devices were cleared up by DOE in early 1995. Only a very small piece of the neutronics analysis remains to be completed. After this work is completed, the entire package can be assembled for submission to NRC by October, 1996 but with the project progressing as predicted in the enclosed updated proposal. Currently, as noted in the proposal, DOE has

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indicated there is no money for conversion in fiscal year 1996 (Phase II), so there is plenty of time this year to prepare the submittal to NRC in hopes that DOE will provide the conversion money in fiscal year 1997. As explained in the enclosed proposal, we are also in the process of extending the limited funding in the existing grant to assure that the final analysis is completed. As also noted in the proposal, this will also involve a change in the category of the remaining funding so the work can be completed by current permanent UFTR personnel.

Another area involved considerable time commitments during 1994. This was the effort to renew the SNM-1050 spent fuel license. Since DOE cannot accept this fuel for return, we have followed through on assuring it meets storage licensing requirements and maintaining it in safe storage.

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

Sincerely,

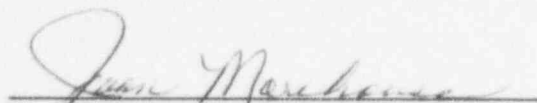


William G. Vernetson  
Director of Nuclear Facilities

WGV/dms  
Enclosure

Copies: D. Simpkins  
Reactor Safety Review Subcommittee

Sworn and subscribed this 27<sup>th</sup> day of March, 1996.

  
Notary Public

JOAN MOREHOUSE  
MY COMMISSION # CC302416 EXPIRES  
August 27, 1997  
BONDED THRU TROY FAIR INSURANCE, INC.