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U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Amendment 23
UFTR Technical Specifications
Response to Questions

UNIVERSITY OF FLORIDA TRAINING REACTOR
FACILITY LICENSE: R-56, DOCKET NO. 50-83
REQUEST FOR CHANGE IN TECHNICAL SPECIFICATIONS
RESPONSE TO QUESTIONS (TAC NO. MB3358)

A request for UFTR Technical Specification Amendment 23, Tech Spec (TS) 4.2.7 (1) , was requested by letter dated November 8, 2001. Subsequently, two questions were received with NRC letter dated November 27, 2001. This response to the two questions contains the additional information and clarification as requested including a request for one minor additional change in TS 4.2.4 (4).

Per NRC letter dated November 27, 2001 requesting additional information:

Question 1 states:

> Your proposed change to Technical Specification (TS) 4.2.7 (1) impacts TS 4.2.2 (4). Changing the fuel inspection requirement in TS 4.2.7 (1) from biennially to every five years in effect eliminates the inspection of the mechanical integrity of the control blades and drive system in TS 4.2.2 (4) that occurred during fuel inspections under the two year fuel inspection interval. The control blades and drive system will continue to be subject to the requirement in TS 4.2.2 (4) to be fully checked at least once every five years. Please describe the difference between conducting an inspection and a full check of the control blades and drive system. Please give a justification for dropping the inspection requirement and only needing to perform a full check every five years on the system.

Response to Question 1:

It is acknowledged that "Changing the fuel inspection requirement in TS 4.2.7 (1) from biennially to every five years in effect eliminates the inspection of the mechanical integrity of the control blades and drive system in TS 4.2.2 (4) that occurred during fuel inspections under the two year fuel inspection interval." As noted in the question, the control blades and drive system will continue to be subject to the requirement in TS 4.2.2 (4) to be fully checked at least once every five years. The difference between conducting an inspection and a full check of the control blades and drive system requires clarification. First, the inspection for mechanical integrity of the control blades and drive system that occurs with each incore fuel inspection is a visual inspection only of the incore parts of the system; however, additional measurements of the control

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blade drop times (S-1 semiannual surveillance), controlled insertion times (S-5 semiannual surveillance), withdrawal times (weekly surveillance) are also conducted to assure the core and shielding have been returned to proper operability. These latter surveillances are also performed at their respective required intervals but are considered necessary here to assure that entry to the core area has not affected system operability. On the other hand, a full check of the control blades and drive system includes the same checks as above to include a visual only incore check, the S-1, S-5 and weekly checks plus partial disassembly of the drive train components/gear boxes external to the reactor biological shielding to inspect for buildup of hardened grease, oil level, foreign matter and basic wear. This series of checks is the only difference between the incore inspection for mechanical integrity and the full check performed every five years. The reason or basis for requiring the full check at least once every five years is simply to perform these checks outside the biological shielding which does provide useful information and prevent buildup of hardened grease and oil deposits.

The justification for dropping the inspection requirement and only needing to perform a so-called full check every five years is twofold. First, the incore inspection is only visual and this is all that is done on any of the incore inspections. Second, these incore visual inspections have never provided any indications of a problem. Again, as for the fuel inspections, nothing is learned by the more frequent incore inspection. Therefore, in the interest of dose commitment (ALARA), physical safety and facility availability, the elimination of the inspection of the mechanical integrity of the control blades and drive system in TS 4.2.2 (4) that occurs during fuel inspections under the two year fuel inspection interval is supported for removal.

Question 2 states:

> Your proposed change to TS 4.2.7 (1) contains a surveillance frequency of every five years at intervals not to exceed six years. One of the advantages of your proposed TS change was the ability to perform a full check of the control blades and drive system required by TS 4.2.2 (4) at the same time as the fuel inspection. Please consider changing the wording on the interval of surveillance for TS 4.2.2 (4) to match that proposed for TS 4.2.7 (1) by adding "at intervals not to exceed six years" to TS 4.2.2 (4).

Response to Question 2:

The failure to make this change was an oversight. The desired intent is of course to have the same wording on the interval of surveillance for TS 4.2.2 (4) to match that proposed for TS 4.2.7 (1). This six year limit is in fact the interval currently in use. This change is on page 19 in Tech Spec Section 4.2.2, "Reactor Control and Safety System Surveillance," in Paragraph (4) which currently reads as follows:

> (4) The mechanical integrity of the control blades and drive system shall be inspected during each incore inspection but shall be fully checked at least once every 5 years.

The request is that this paragraph be changed to read as follows to match the previously requested change for Tech Spec Section 4.2.7 (1):

> (4) The mechanical integrity of the control blades and drive system shall be inspected during each incore inspection but shall be fully checked at least once every five (5) years at intervals not to exceed six (6) years.

This wording will then match the changed surveillance interval wording for TS 4.2.7 (1) per the November 8, 2001 submittal.

As with the original change requested with the submittal dated November 8, 2001, this submittal with the minor change in Tech Spec 4.2.4 (4) is considered to have minor safety significance but large significance for protecting fuel integrity and consistency with ALARA considerations. This entire submittal has been reviewed by UFTR management and by the Reactor Safety Review Subcommittee who concur on this evaluation.

This entire submittal consists of one signed original and thirteen copies of this letter of transmittal with the one additional page proposed as a change to the UFTR Technical Specifications.

We appreciate your consideration of this amendment. Please let us know if you need additional information.

Sincerely,

William G. Vernetson
Director of Nuclear Facilities

WGV/dms
Enclosures (13 sets)

Copies: A. Adams, NRC Project Manager
Stephen Holmes, NRC Inspector
Reactor Safety Review Subcommittee
UFTR Reactor Manager

Sworn and subscribed this 13th day of December 2001.

Daniel J. Sanetz
MY COMMISSION # DD061176 EXPIRES
September 30, 2005
BONDED THRU TROY FAIN INSURANCE, INC.

Notary Public

Table 4.1 Control Blade Withdrawal Inhibit Interlocks Operability Tests

Inhibit	Limit	Frequency
Reactor period	≤10 sec	Daily checkout
Safety channels and wide range drawer not in OPERATE position	—	Daily checkout
Multiple blade withdrawal	Any 2 or more blades simultaneously in Manual	Daily checkout
	Any 2 safety blades in Automatic	Daily checkout
Source count rate	<2 cps	Verification only when count rate <2 cps during daily checkout

(4) The mechanical integrity of the control blades and drive system shall be inspected during each incore inspection but shall be fully checked at least once every five (5) years at intervals not to exceed six (6) years.

(5) Following maintenance or modification to the control blade system, an operability test and calibration of the affected portion of the system, including verification of control blade drive speed, shall be performed before the system is to be considered operable.

(6) The reactor shall not be started unless (a) the weekly checkout has been satisfactorily completed within 7 days prior to startup, (b) a daily checkout is satisfactorily completed within 8 hours prior to startup, <u>and</u> (c) no known condition exists that would prevent successful completion of a weekly or daily check.

(7) The limitations established under Paragraph 4.2.2(6)(a) and (b) can be deleted if a reactor startup is made within 6 hours of a normal reactor shutdown on any one calendar day.

(8) The following channels shall be calibrated annually, at intervals not to exceed 13 months, and any time a significant change in channel performance is noted:

(a) log N – period channel
(b) power level safety channels (2)
(c) linear power level channel