UNIVERSITY OF FLORIDA

Nuclear Reactor Facility
Department of Nuclear and Radiological Engineering

202 Nuclear Sciences Center
P.O. Box 118300
Gainesville, Florida 32611-8300
Tel: (352) 392-1429
Fax: (352) 392-3380
E-mail: vernet@ufl.edu

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

Amendment 23
UFTR Technical Specifications

UNIVERSITY OF FLORIDA TRAINING REACTOR
FACILITY LICENSE: R-56, DOCKET NO. 50-83
REQUEST FOR CHANGE IN TECHNICAL SPECIFICATIONS

A proposed amendment to the UFTR Technical Specifications (R-56 License) affecting page 21 of the approved Tech Specs is attached. The proposed changes are considered to be minor and will constitute Amendment 23 to the UFTR R-56 License as noted on the text page. The changes are marked with the usual vertical line in the right-hand margin.

The change is on page 21 in Tech Spec Section 4.2.7, "Surveillances Pertaining to Fuel," Paragraph (1), which currently reads as follows:

> (1) The incore reactor fuel elements shall be inspected biennially at intervals not to exceed 30 months, in a randomly chosen pattern, as deemed necessary. At least two elements will be inspected.

The request is that this paragraph be changed to read as follows:

> (1) The incore reactor fuel elements shall be inspected every five (5) years at intervals not to exceed six (6) years, in a randomly chosen pattern, as deemed necessary. At least four (4) elements will be inspected.

Though not specifically stated in the Technical Specifications, the basis for the existing surveillance would be to avoid operation with failed fuel. Tech Specs already require continuous monitoring of our primary coolant resistivity which would indicate fuel failure if such were to occur and weekly checks for radioactivity which would also provide more specific evidence of fuel failure. The existing surveillance requirement every two years is considered at least partially redundant. This is especially applicable since the UFTR is not allowed to operate with leaking fuel per Tech Spec 3.7(4) which states the reactor shall not be operated if there is evidence of fuel element failure, as well as Tech Spec 3.7(3) which requires that failed fuel shall be removed from the reactor.

Based on these Tech Spec requirements, the requirement of fuel inspection every two years is considered to involve unnecessary redundancy in that little new information is obtained despite the large effort required to inspect fuel. This fuel inspection surveillance activity typically commits at least two weeks of facility effort to allow cooling time for activity reduction, unstacking of core shielding, movement of fuel for inspection, replacement of fuel back in the core where close tolerances represent a significant challenge to

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avoid mechanical fuel damage and restacking of shielding and control of contamination. In addition, Section 4.2.2, "Reactor Control and Safety System Surveillance," Paragraph (4) requires that 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 years. There is no reason to require more frequent surveillance of the fuel than the control system.

In terms of history of the fuel, the 30 years of fuel inspections have only uncovered one potential issue which upon further review was found not to be safety significant. In addition, the inspection is a visual inspection which is unlikely to reveal a likely pin hole leak anyway.

By making the requested change to allow a five-year surveillance interval on the fuel, the required interval for the surveillance on the fuel per Tech Spec 4.2.7(1) will match the required interval for the surveillance on the reactor control and safety system per Tech Spec 4.4.2(4). As a further benefit to reducing dose commitment, this change will mean these two surveillances can be performed together, further reducing the number of times the core region needs to be entered in a typical multi-year period. Therefore, this change is well considered to reduce fuel handling and attendant hazards, to reduce the potential for mechanical damage in returning fuel to the core, and to minimize dose commitment for ALARA considerations—all while optimizing facility utilization and availability.

This change as requested is considered to have minor safety significance but large significance for protecting fuel integrity and consistency with ALARA considerations. This change 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-page proposed 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 8th day of November 2001.

Notary Public

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

4.2.6 Reactor Building Evacuation Alarm Surveillance

(1) The coincidence automatic actuation of the two area monitors and the manual actuation of the evacuation alarm shall be tested as part of the weekly checkout.

(2) The automatic shutoff of the air conditioning system and the reactor vent system shall be tested as pat of the weekly checkout.

(3) Evacuation drills for facility personnel shall be conducted quarterly, at intervals not to exceed 4 months, to ensure that facility personnel are familiar with the emergency plan.

4.2.7 Surveillance Pertaining to Fuel

(1) The incore reactor fuel elements shall be inspected every five (5) years at intervals not to exceed six (6) years, in a randomly chosen pattern, as deemed necessary. At least four (4) elements will be inspected.

(2) Fuel-handling tools and procedures shall be reviewed for adequacy before fuel loading operations. The assignment of responsibilities and training of the fuel-handling crew shall be performed according to written procedures.

4.2.8 Primary and Secondary Water Quality Surveillance

(1) The primary water resistivity shall be determined as follows:

(a) Primary water resistivity shall be measured during the weekly checkout by a portable Solu Bridge using approved procedures. The measured value shall be larger than 0.4 megohm-cm.

(b) Primary water resistivity shall be measured during the daily checkout at both the inlet and outlet of the demineralizers (DM). The measured value, determined by an online Solu Bridge alarming in the control room, shall be larger than 0.5 megohm-cm at the outlet of the DM.

(2) The primary water radioactivity shall be measured during the weekly checkout for gross β–γ and gross α activity.

(a) The measured α activity shall not exceed 50 dpm above background level.

(b) The measured β–γ activity shall not exceed 25% above mean normal activity level.

(3) The secondary water system shall be tested for radioactive contamination during the weekly checkout according to written procedures.