

University of Florida Training Reactor

CONTENTS OF APPLICATION FOR
LICENSE RENEWAL

The following information and documents, submitted in accordance with the License Renewal Review Items requested by the NRC staff, are to be incorporated into the license application.

1. General Information (10 CFR 50.33)

Applicable items under 10 CFR 50.33 are summarized below:

- (a) Name of Applicant: University of Florida
- (b) Address of Applicant: Gainesville, Florida 32611
- Location of Reactor: Campus, University of Florida
Gainesville, Florida 32611
- (c) Description of business or occupation of applicant: Non-profit educational institution
- (d) (1) and (2) Not applicable
- (3) (i) State where organized: Florida
- Principal location of business: Gainesville, Florida
- (ii) Names, addresses and citizenship of directors and principal officers:

Robert Q. Marston, President
University of Florida

Wayne H. Chen, Dean of the College of Engineering,
University of Florida

Alan M. Jacobs, Chairman of the Nuclear Engineering Sciences
Department, University of Florida

Nils J. Diaz, Professor and Director of Nuclear Facilities,
University of Florida

All the principal officers and directors are U.S. citizens.

- (e) Class of License applied for: Class 104 License

Uses of the Facility: The reactor and its supporting laboratories are used for the education of undergraduate and graduate students in nuclear engineering and related sciences. In addition to formal courses and demonstrations, the reactor is used to support research at the M.S. and Ph.D. levels, as well as in the conduction of nuclear energy, medical and radiological sciences academic and industrial research projects. The reactor is also used in the training of reactor operators for nuclear power plants.

Period of time for which license is requested: The license is requested for a period of 22 years, to expire at midnight on December 31, 1999.

Other licenses applied for in connection with this facility:

Special Nuclear Material: 4.82 Kg of contained U-235

1 Ci Plutonium-Beryllium sealed source

Neutron Source: Up to 25 Ci of Antimony-Beryllium sealed source

- (f) Financial qualifications of the applicant: The documents containing the Financial Qualifications were submitted to the Commission on December 8, 1980.

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- (g) Deleted
- (h) Not applicable
- (i) Not applicable
- (j) No restricted data or defense information is contained in this application or in any material offered in support of this application.

2. Filing of Applications (10 CFR 50.30)

Pursuant to 10 CFR 50.30, the following applicable information is submitted:

- (e) Exempt
- (f) Environmental Considerations: The environmental considerations for the University of Florida Training Reactor are embodied in the enclosed Safety Analysis Report, primarily in Chapter 2 of the SAR.

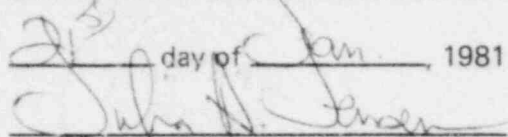
3. Technical Information (10 CFR 50.34)

- (a) FSAR: Applicable portions of 10 CFR 50.34 (b) are submitted in the enclosed Final Safety Analysis Report for the UFTR. The FSAR is presented in a Reg. Guide 1.70 type-form at, containing the information pertinent to the requirements for a research reactor, using updated analysis and information when appropriate. All systems described in the SAR are the currently existing, updated systems. No structural weakness or vulnerability to earthquakes have been identified at the UFTR. The biological shielding was augmented in 1964 when the reactor power was increased to 100 KWth, and additional improvements made in 1976. The original aluminum primary coolant lines, embedded in concrete beneath the reactor core and shield, were replaced by new and larger lines in 1970 because of corrosion problems. A new design and arrangement was used to minimize the corrosion problems and increase the flow capacity of the system. A new primary coolant pump, purification loop and secondary coolant system were installed in 1973-1974, as well as flow and temperature measurement devices. The entire UFTR console was replaced by a solid-state Reactor Control, Safety and Radiation Monitoring System Console and Instrumentation in 1970. The reactor facilities have been renovated and improved recently. The UFTR is presently much better equipped and instrumented than on its original startup. No deterioration of any system or component important to safety is known to exist; surveillance requirements will insure that the facility will be able to continue operating safely.
- (b) 10 CFR 50.34 (b) (6) - Applicable portions
 - (v) Emergency Planning: The Emergency Plan for the UFTR which was completed in October, 1980, is being revised to comply with the new Upgraded Emergency Preparedness Regulations (amendments to Part 50, Part 70 and Appendix E to Part 50). The Emergency Plan will be submitted under separate cover no later than March 31, 1981.
 - (vi) Proposed Technical Specifications: The new proposed technical specifications, in accordance with 10 CFR 50.36, are included in this submittal as Chapter 16 of the SAR. The new TS have been made as standard as physical and operational constraints permit, and include ALARA considerations and provisions for handling explosives and hazardous materials.
- (c) Operator License and Regualification Program: The technical qualifications of personnel and the Facility organization to conduct reactor operations including operator licenses and Regualification Program (pursuant to 10 CFR Part 55 and Appendix A to Part 55) are included in Chapter 13 of the FSAR.
- (d) Physical Security Plan (10 CFR 50.34 (c)): The Physical Security Plan for the UFTR was submitted to the Commission on August 4, 1980 and is to be withheld from public disclosure pursuant to 10 CFR 2.790 (d).

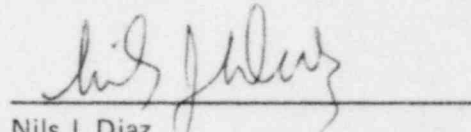
CERTIFICATE

The officials executing this certificate on behalf of the University of Florida certify that these applications are prepared in conformity with applicable portions of Title 10 Code of Federal Regulations, and solemnly swear (or affirm) that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.

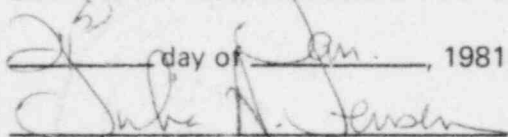
Sworn to and subscribed before me this

21st day of Jan., 1981


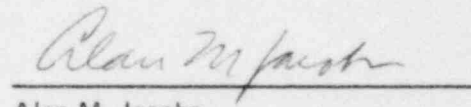
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My Commission Expires Nov. 26, 1983
Bonded By American Fire & Casualty Company


Nils J. Diaz
Professor and Director of
Nuclear Facilities

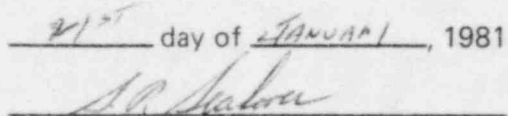
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21st day of Jan., 1981


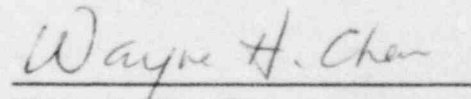
Notary Public, State of Florida at Large
My Commission Expires Nov. 26, 1983
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Alan M. Jacobs
Chairman, Department of Nuclear
Engineering Sciences

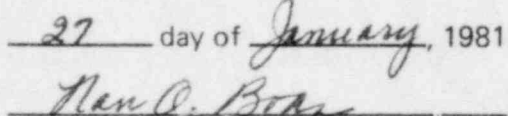
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21st day of JANUARY, 1981


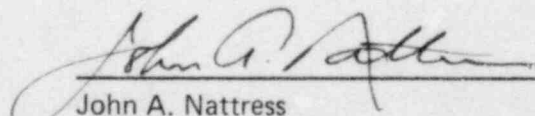
Notary Public, State of Florida at Large
My Commission Expires Nov. 27, 1984
Bonded By American Fire & Casualty Company


Wayne H. Chen, Dean
College of Engineering

Sworn to and subscribed before me this

27 day of January, 1981


Notary Public
Notary Public, State of Florida at Large
My Commission Expires Nov. 2, 1983
Bonded By American Fire & Casualty Company


John A. Nattress
Executive Vice-President