Docket No.: 50-83

DEC 24 1980

MEMORANDUM FOR: J. D. Saltzman, Chief, Utility Finance Branch
Division of Engineering

FROM: J. R. Miller, Chief, Standardization & Special Projects Branch
Division of Licensing

SUBJECT: TECHNICAL ASSISTANCE REQUEST

Licensee:	University of Florida
Docket No.:	50-83
Responsible Branch:	Standardization & Special Projects Branch (SSPB)
Project Manager:	J. H. Wilson, x28356
Target Date:	January 16, 1981
TAC Number:	Use Docket Number and R-44 Activity Code

By letter dated December 8, 1980, the University of Florida (the licensee) submitted a fiscal statement as part of the licensee's renewal package for their Argonaut-type reactor. You are requested to review the licensee's fiscal statement (enclosure 1) to determine whether they are financially qualified to operate their reactor for the twenty-year renewal period.

Your evaluation should include a description of how the licensee's submittal meets the applicable requirements in 10 CFR Part 50.

/S/ By H. Denton for

James R. Miller, Chief
Standardization and Special
Projects Branch
Division of Licensing

Enclosure:
As stated

cc: R. Tedesco
J. Wilson

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FINANCIAL QUALIFICATIONS OF THE UNIVERSITY OF FLORIDA

CONTENTS

1.0 GENERAL DESCRIPTION

The University of Florida is a combined state University and land-grant college located in the northern center of the State. The University is located in Gainesville, a city of 83,000, situated in north central Florida, midway between the Atlantic Ocean and Gulf of Mexico. The city is known as an agricultural and small industrial center.

Direct supervision over the University of Florida, its policies and affairs, is vested in the Board of Regents, a body composed of nine citizens from different regions of the state who are appointed by the Governor for nine-year terms. University affairs are administered by the President with the advice and assistance of the Administrative Council. The legislative body of the University is the University Senate.

The Vice-President for Administrative Affairs is the chief business officer of the University. He is responsible for establishing policy relating to university business matters; coordinating the preparation of and control of the operating budget; collecting and disbursing funds in accordance with state statutes; managing campus security, auxiliary services and the maintenance of the physical plant and grounds; directing purchasing, the administrative computer, staff personnel and property control, and environmental health and safety.

1.1 Financial Support and Responsibility

The University of Florida is financially supported by:

(a) Appropriations from the Florida State Legislature
(b) Contracts, grants and private gifts
(c) Fees

To the extent that the Florida Legislature supports the State University System (SUS), these funds are distributed to the various universities and colleges, and the portion received by the UF is further distributed to the various Colleges, Schools and Departments. Direct support of the University of Florida Training Reactor is derived principally from the operating budget of the College of Engineering and its unit, the Engineering Industrial and Experiment Station (EIES). The UF provides indirect support in administrative, surveillance, maintenance and separate safety and radiation control functions. It is difficult to estimate the cost of these functions; certainly the Department of Nuclear Engineering Sciences, the University Police, the Radiation Control Office and the Physical Plant Maintenance Division have significant and continuous involvement in the UFTR. <u>All these indirect costs are not included in the UFTR estimated cost of operations</u>.

1.2 Budgetary Unit Supporting the UFTR

The University of Florida College of Engineering - Engineering Industrial and Experiment Station supports, from its annual state funded operating budget, a broad range of academic programs in pursuit of the University's teaching and research mission. The University of Florida Training Reactor is one such program. In addition to the EIES appropriated support, the UFTR derives funds from contracts and grants, and from fees charged

for irradiation services. The major source of contract funds is presently from training programs for the nuclear utilities.

1.3 Financial Report for the University of Florida

A Financial Report for the 1978-1979 University of Florida fiscal year is included as Attachment A. It represents a fiscal reflection of programs accomplished, loans granted, equipment purchased, buildings constructed and the resources utilized to carry out these objectives.

1.4 Litigation Against the University of Florida

A review of the litigation pending against the University of Florida[1] shows that there is only one case where the amount claimed in relief is substantial. It involves a number of former students, who attended the UF under a specially designed Institute, demanding the award of a degree and monetary damages amounting to 6.3 million dollars. This matter is in the early stages of litigation and is deemed by the University to be without merit.

[1] Private communication with R.J. Denson, Associate University Attorney to N.J. Diaz (December 2, 1980).

2.0 ESTIMATED ANNUAL COST OF OPERATIONS

2.1 Cost of Operations

The estimated annual cost of operating the UFTR is given in the following table. These costs are for Fiscal Year 1980.

SALARIES

1. Charged to EIES

Director (one-fourth time)	$ 11,900
Reactor Manager (full-time)*	$ 26,000
Senior Reactor Operator (full-time)	$ 17,873
Reactor Operator (full-time)	$ 16,662
Reactor Operators (2 @ one-third time)	$ 9,600
Chairman, Safety Review Subcommittee (one-tenth time)	$ 3,590
Total EIES Salaries	$ 85,625

2. Not Charged to EIES

Radiation Safety Officers**	$ 18,000
Secretary (one-third time)+	$ 2,800
Technical Support (one-third time)+	$ 12,000
Total non-EIES Salaries	$ 32,800

3. Fringe Benefits on Salaries

Fringe @ 16.0 plus insurance	$ 21,468
Total Salaries and Fringe Benefits	$ 139,893
EXPENSES++	$ 5,000
CAPITAL INVESTMENTS ++	$ 8,000
Total Annual Cost of Operation	$ 152,893

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* Position not presently occupied but budgeted.

** Paid through Radiation Control, Environmental Health and Safety Office. One full-time equivalent considered for financial accounting.

\+ Paid by contract funds. Technical support consists of faculty and graduate assistant(s) and varies considerably from year to year.

++ Estimated from last five years of operation

2.2 Sources of Income for the UFTR

Summarized below are the budgeted sources of funds for the cost of operations detailed in 2.1 above for the 1980-1981 year.

	College of Engineering	Env. Health	UFTR Contracts
Salaries	64,294	18,000	36,131
Fringe & Insurance	11,799	3,384	5,286
Expenses	3,000	-	2,000
Capital Outlays	6,000	-	2,000
Totals	85,093	21,384	46,416

It should be noted that a special allocation of over $15,000 has been made this year to upgrade the Physical Security, Safeguards, Fire and Radiological Protection Systems of the UFTR, in accordance with 10 CFR 73 and other federal requirements.

3.0 DECOMMISSIONING COSTS

The estimates below are based upon the following major assumptions.

1. The moth-balling option will be chosen initially.

2. Moth-balling will include fuel removal and disposition, removal or decontamination of piping and process equipment external to the core, leveling the shield tank to the top of the reactor, providing cover for same, general decontamination, and decontamination or removal of ancillary facilities such as the rabbit system and the exhaust ventilation system.

3. That moth-balling can be accomplished in 18 months with a 6-man UFTR labor force including health physics surveillance.

4. The core contents of the reactor will remain undisturbed (except for fuel removal) for another 18 months (minimum). The reactor room will remain a controlled radiation area under a possession-only license, and the health physics surveillance, security maintenance, and demolition planning will continue through this 18 month interval with a 2-man labor force.

5. Core removal and demolition will commence no sooner than 3 years after the last reactor run. The cost of this last phase has been estimated by Rockwell International Corporation for the UCLA reactor (refer to UCLA application for class 104 license dated February 1980) and are detailed below. The UFTR is essentially identical to the UCLA reactor.

None of the foregoing should be regarded as a scheduling commitment by the UFTR. The plan is partially designed to retain a force of experienced radiation workers for a period plausible for fuel removal and shipment. Other arrangements are possible and might be employed. In particular, the high demolition cost versus the low annual maintenance cost suggests that the room could be used indefinitely as a controlled radiation area housing instructional or experimental facilities appropriate to such an area (sigma piles and subcritical assemblies).

The costs associated with each phase of the hypothetical shutdown are as follows:

Mothballing

Shipment of 24 irradiated fuel bundles at $1000 per bundle	$ 24,000
Other shipping costs	$ 20,000
6 man years $25,600/man-year	$ 153,600
Miscellaneous supplies and expenses	$ 5,000
Coordination and administration @ 15% of the direct cost	$ 30,400
TOTAL Mothballing Cost.....	$ 233,300

Ultimate Demolition

As estimated by Rockwell International for the UCLA reactor, and as used in the February 1980 UCLA Application.....		$ 308,000
Add:	Demolition planning, supervision, and health physics surveillance 3.0 man years.....	$ 106,000
	TOTAL Demolition Cost.....	$ 414,000

4.0 ANNUAL MAINTENANCE OF MOTH-BALL STATE

One man-year equivalent per year for maintenance of controlled area (radiation monitoring, key control, lock maintenance)

Per Year	$ 30,000

All of the forecast figures are in 1980 dollars (current salary cost, etc.) and no attempt has been made to introduce adjustments for future inflation.

FINANCIAL

REPORT

1978-79

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