

UNIVERSITY OF FLORIDA TRAINING REACTOR  
OPERATOR REQUALIFICATION AND RECERTIFICATION PROGRAM PLAN  
(July 1983 through June 1985)

O. GENERAL

A training program for the periodic requalification of UFTR operators shall be conducted in accordance with the requirements established by this document. The requalification training for UFTR personnel meets or exceeds the requirements established by 10 CFR 55 Appendix A and draft ANSI/ANS-15.4 standard dated June, 1977 entitled, "Standards for Selection and Training of Personnel for Research Reactors."

Responsibility for the administration of the program shall rest with the Director of Nuclear Facilities of the Department of Nuclear Engineering Sciences and his/her duly designated representative.

All licensed operators are required to participate in all phases of this program except where specifically exempted. Persons in training for an operator's license also participate in the requalification program. An operator receiving a license during a requalification period is required to complete only those portions occurring after the effective date of the license received.

The requalification training program in force at the UFTR shall consist of eight (8) component areas described in the following sections and listed in Table 1. The requirements that must be met in order to complete the requalification program successfully are delineated in these sections.

Table 1  
Operator Requalification and Recertification Program  
Requirement Areas

1. Requalification Schedule
2. Lectures, Reviews and Examinations
3. Operations and Checkouts
4. Emergency Drills
5. Absence from Authorized Activities
6. Evaluation of Operators
7. Requalification Records
8. Requalification Document Review

## I. REQUALIFICATION SCHEDULE

The UFTR requalification program shall be conducted over a period not to exceed two years and shall be followed by successive two-year programs. To assure that the program is effective, the various requirements shall be executed according to the time schedules outlined in this program guide. The current two-year Requalification Training Schedule (July, 1983-June, 1985) is contained in Appendix A of this program plan.

## II. LECTURES, REVIEWS AND EXAMINATIONS

### A. Lectures

The requalification program shall be divided into the group of topics listed below on Table 2, for which preplanned training or preparation is scheduled. The schedule shall be set up so that the entire program covering the topics listed in Table 2 is completed over the two year period.

Table 2  
Requalification Training Lecture Program Topics

1. Nuclear Theory and Principles of Operation
2. Design and Operating Characteristics
3. Instrumentation and Control Systems
4. Reactor Protection System
5. Normal, Abnormal and Emergency Procedures (one per year minimum, independent of emergency drills)
6. Radiation Control and Safety
7. Technical Specifications and Applicable Portions of Title 10, Code of Federal Regulations

### B. Examinations

An examination shall be administered at the end of each lecture session listed in Table 2, no later than two weeks after the lecture or review session. For designated cases, a final examination covering all topics may be substituted for individual examinations. Results of the certified individual's evaluation from the examinations and from the on-the-job training described under Section VI, Paragraph A, "Annual On-the-Job Training," are used to determine the operator's proficiency, weakness or deficiency.

Examination is encouraged but not required for training sessions given but not required by this program.

C. Fuel Handling

Prior to any refueling operation and/or fuel handling operation, a special training session shall be held discussing/practicing the required operations and reviewing procedures to assure proficiency of all personnel involved, including emergency actions.

D. Procedure/Technical Specifications Changes

Any changes in procedures, technical specifications, regulations, as well as any change with safety significance to the facility shall be reviewed by every licensed operator. Furthermore, a written monthly report summarizing the activities in the reactor, including modification, maintenance, results of calibrations and tests, as well as any procedural changes will be distributed to all licensed reactor operators and discussed, as needed.

E. Required Reading List

Documents, letters and memos pertinent to operational safety shall be maintained in the Required Reading List prior to permanent filing. Each operator is responsible for reviewing the list periodically and in a timely manner to remain current with the information contained in the Required Reading List. This reading list will be indexed with a master listing with spaces provided for initials of all required readers. This list should be reviewed at intervals not to exceed one month; when an item has been reviewed, the proper initials should be affixed to acknowledge completion of review.

F. Yearly Review

A yearly review of facility operations, maintenance, modifications, etc. is conducted with the operating staff by the Director of Nuclear Facilities or the Reactor Manager using the UFTR Annual Report as a base for the review.

III. REQUALIFICATION OPERATIONS AND CHECKOUTS

A. Reactivity Control Manipulations

Over the two year requalification period, each certified individual shall perform at least ten reactivity control manipulations in any combination of reactor startups, shutdowns, or significant reactivity changes.

To insure operator proficiency over a range of ordinary operations, the following schedule of operations and checkouts shall be maintained by all licensed operators when the reactor is operable.

B. Schedule of Operations and Checkouts

1. Each licensed operator shall perform at least one reactor startup quarterly at intervals not to exceed four months.
2. Each licensed operator shall perform at least one daily checkout quarterly at intervals not to exceed four months.

3. Each licensed operator shall perform at least one weekly checkout semi-annually at intervals not to exceed eight months.

C. Credit for Reactivity Control Manipulations

For the purpose of meeting requalification requirements, each licensed operator and senior operator may take credit only for reactivity control manipulations which they perform themselves.

D. Records

It is the responsibility of each operator to insure that these requirements are met and logged in the operator's Requalification folder. Each operator shall also log monthly operating hours in the same folder.

IV. EMERGENCY DRILLS

Emergency drills shall be held quarterly. At least once per year these drills shall involve the participation of the University Police Department, the Gainesville Fire Department and other emergency assistance teams as appropriate for the drill in question. Each operator is required to participate in two emergency drills per year at intervals not to exceed eight months. A review of the drill and applicable emergency procedures shall be performed with all certified individuals within seven days after completion of the drill.

V. ABSENCE FROM AUTHORIZED ACTIVITIES

An operator who has not been actively performing certified functions for a period in excess of four months shall be required to demonstrate to the Reactor Manager or duly authorized representative that his/her knowledge and understanding of the operation and administration of the facility are satisfactory before returning to certified duties. This shall be accomplished through an interview and evaluation or a written, oral or operational examination or a suitable combination thereof. Any deficiencies uncovered must be corrected before the individual resumes authorized functions.

VI. EVALUATION OF OPERATORS

A. Biennial Evaluations

An in-depth evaluation of the operating performance of each licensed operator shall be performed and documented biennially and/or prior to their re-certification anniversary to insure that they have the knowledge, competence and dexterity to operate the reactor safely and to take appropriate actions in response to abnormal situations that may arise.

The evaluation shall include results from the examinations, the annual on-the-job evaluation of operational proficiency (as delineated under Paragraph B of this Section), and any other available indications of the operator's capability to discharge his/her duties in a safe and competent manner.



B. Annual On-the-Job Training

Each licensed Reactor Operator and Senior Reactor Operator shall demonstrate satisfactory understanding of the operation of the facility systems, operating procedures and facility procedure license changes during an annual walk-through examination administered by a designated Senior Reactor Operator.

C. Grade Requirements

All operators are required to complete each examination satisfactorily according to the following requirements:

1. A grade higher than 80% requires no additional training.
2. A grade in the range of 65%-79% requires additional training in those areas or topics where weaknesses or deficiencies are indicated. This training shall be completed within 60 days from the date the examination was administered.
3. With a grade of less than 65%, the individual shall be placed in an accelerated retraining program in those areas where weaknesses or deficiencies are indicated.

Additional appropriate training requirements in the form of formal lectures, tutoring, self-study or on-the-job training shall be based on the results of examinations conducted.

D. Accelerated Training

Accelerated training programs shall be completed within four months following the grading of the examination. Furthermore, within one month after the grading of the examination, there shall be an evaluation by the Reactor Manager or a designated representative to determine if the deficiencies uncovered warrant withdrawal of the individual's certification pending completion of the accelerated training program. The evaluation shall consider the individual's past performance record, the supervisor's evaluation and past test scores as well as current deficiencies. An oral exam may also be given to aid in the evaluation. Regardless of the score, if the individual's test indicates a deficiency in a critical area that affects safety, a training program shall be administered to promptly correct the deficiency.

E. Additional Training Requirements

Additional training shall be provided whenever needed to correct weaknesses or deficiencies uncovered. Such additional training shall be completed prior to the conclusion of the specific requalification program or application for renewal of operator's license, whichever occurs first.

#### F. Additional Evaluations

An evaluation shall be made of an operator at any time his/her physical or mental condition appears impaired in a manner that his/her performance of duties as an operator appears to be affected. Any exemplary performances or additional duties performed by an operator shall be noted in his/her Requalification folder to aid later evaluations.

### VII. REQUALIFICATION RECORDS

#### A. Operator Requalification Records

Operator requalification records shall be kept to assure that all the requirements of the UFTR "Operator Requalification and Recertification Program Plan" are met.

Each operator shall have an individual folder containing signature blocks for lectures attended, prepared or assigned self-study sessions, reactivity manipulations performed, weekly and daily checkouts performed, and quarterly drills participated in by the operator. The folder shall also contain copies of written examinations administered, the answers given by the operator, results of any evaluations and documentation of any additional training administered in areas in which an operator has exhibited deficiencies. The performance of, or participation in, special activities such as fuel handling by the individual operator, shall also be logged in the applicable Requalification folder.

#### B. Requalification Training Manual

A Master Requalification Training Manual will be used to organize training requirements; this manual shall contain a schedule of all required lectures, reviews, emergency drills, and other exercises. The date the item is performed shall be indicated on this schedule. A section of this manual shall be designated to contain completed training items, attendance sheets, master copies of tests given and lecture outlines if available.

#### C. Facility Records

Pertinent documents and records pertaining to the Requalification Program shall be maintained at the UFTR as part of the facility records for a period of five years.

### VIII. REQUALIFICATION DOCUMENT REVIEW

The individual Requalification folders shall be reviewed on a semi-annual basis by a designated Senior Reactor Operator and shall be noted by the inclusion of the SROs dated signature. Any deficiencies noted during the review shall be brought to the attention of the Director of Nuclear Facilities or the Reactor Manager who will then insure that appropriate corrective action is taken.

#### References:

10 CFR 55

American National Standard ANSI/ANS-15.4 - 1977 (N380)

## APPENDIX A

REQUALIFICATION TRAINING SCHEDULE

19 83 to 19 84

JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
	(L) Design & Op. Characteristics			(L) Nuc. Theory & Principles of Operations	
		DRILL		(S) Annual Report Review	*DRILL
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
	(L) Normal and Abnormal Procedures		(L) Reactor Protection System	(I) Operator Walk-throughs	
		DRILL			DRILL

\* = INVOLVES POLICE, FIRE DEPARTMENT, ETC.    (I) = INDIVIDUAL TRAINING    (L) = LECTURE  
(P) = PRACTICAL TRAINING    (S) = STAFF TRAINING



# REQUALIFICATION TRAINING SCHEDULE

19 84 to 19 85

JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
(L) Instrumentation & Control	(L) Radiation Con. and Safety		(L) Tech Specs	(S) Annual Report Review	
		DRILL			*DRILL
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
	(I) Operator Walk-throughs		(L) Normal & Abnormal Procedures		
		DRILL			DRILL

\* = INVOLVES POLICE, FIRE DEPARTMENT, ETC. (I) = INDIVIDUAL TRAINING (L) = LECTURE  
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