

REQUALIFICATION PROGRAM
FOR
LICENSED REACTOR OPERATORS
AND
LICENSED SENIOR REACTOR OPERATORS

LICENSE NO. R-125

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1. INTRODUCTION

The Operator Requalification Program for the University of Lowell Reactor includes all licensed reactor operators and senior reactor operators. The requalification program entails written examinations, performance evaluations, lectures, on-the-job training, and re-training. The criteria and frequencies are listed below.

2. REQUALIFICATION PROGRAM

2.1 Biennial Written Requalification Examination

A comprehensive biennial written requalification examination is administered to all licensed reactor operators. This examination includes questions on subjects as specified in 10CFR55.21 for operators and in 10CFR55.22 for senior operators. The examination is of equal scope and difficulty to the license examination administered by examiners from the Operator Licensing Branch of the NRC. At the discretion of the Reactor Supervisor, this examination may be administered in whole or in parts. If administered in parts, all topics will be examined on a biennial cycle.

2.2 Operator Performance Evaluation

Annually, the performance and competence of licensed operators is observed and evaluated during a reactor reactivity manipulation. The evaluation includes oral examination on normal and emergency operating procedures and understanding of the operation of apparatus and mechanisms pertaining to the operation of the reactor.

2.3 Examination and Performance Standards

- 2.3.1 A licensed operator or senior operator who scores 70% or higher in all areas of the biennial written requalification examination and demonstrates the ability to operate the reactor safely in the operator performance evaluation is thereby requalified.
- 2.3.2 A licensed operator who scores lower than 70% in any area of the biennial written requalification examination will require immediate retraining in the deficient areas.
- 2.3.3 An overall grade of less than 70% on the biennial written examination will require participation in an accelerated retraining program. An individual in an accelerated retraining program must be removed from other licensed duties until he is re-examined and certified by the Reactor Supervisor.
- 2.3.4 A licensed operator who is unable to demonstrate the ability to safely operate the reactor during the operator performance evaluation is removed from licensed duties and placed in an accelerated retraining program.

2.4 Retraining Program

The licensed operator retraining program consists of:

- A. Self-study; and
- B. Preplanned lectures or tutoring session; followed by
- C. Written or oral examination,

in the areas of deficiency from the requalification examinations.

Retraining is scheduled by the Reactor Supervisor or the Chief Reactor Operator. An operator must score 70% or higher on an examination in each area of deficiency in order to satisfactorily complete retraining.

2.5 Accelerated Retraining Program

The accelerated retraining program for licensed operators consists of:

- A. Self-study; and
- B. Preplanned lectures or tutoring sessions; followed by
- C. Written examination,

in areas of deficiency from the requalification examination and operator performance evaluation. The accelerated retraining program is scheduled by the Reactor Supervisor or the Chief Reactor Operator to be conducted within 90 days following determination of the deficient areas.

A licensed operator who has been removed from licensed duties is permitted to resume licensed duties upon achieving an overall examination score of 70% or higher and passing an Operator Performance Evaluation.

2.6 On-The-Job Training

- a. Each licensed operator will manipulate the plant controls and each licensed senior operator will either manipulate the controls or direct the activities of individuals during plant control manipulations during the terms of their licenses. The manipulations will consist of at least 10 reactivity control manipulations in any combination of reactor start-ups, changes in reactor power level, reactor shutdowns, and critical experiments or other core fuel loading changes. The reactivity manipulations dealing with power level changes should be substantial, that is, ones resulting in reactor power level changes of $> 10\%$ and will be carried out in manual operation. Efforts will be made to achieve

- a combination of the various kinds of reactivity manipulations.
- b. Periodic lectures will be held when the requalification examination identifies general weaknesses, to explain major facility design changes, procedure changes and facility license changes, or to cover topical material. These lectures will be scheduled by the Reactor Supervisor or the Chief Reactor Operator.
 - c. Each licensed operator and senior operator must be cognizant of all facility design changes, procedure changes, facility license changes, and standing orders.
 - d. Each licensed operator and senior operator will review the contents of all emergency operating procedures on a regularly scheduled basis. Over the course of the year, all emergency procedures will be covered. Periodic drills for implementing these procedures will be held.

3. SPECIAL CONDITIONS

3.1 NRC License Examination

Successful completion of the initial NRC licensing examination satisfies the licensee's biennial requalification requirements. Such an individual's retraining program is started with the next comprehensive examination scheduled at least 6 months after the licensee's initial licensing date.

3.2 NRC License Renewal

An operator whose license is due for renewal while he is in a requalification program is provided with a letter of certification indicating that he is currently enrolled in the requalification program. The letter of certification indicates the anticipated date when that requalification program will be completed for the individual.

3.3 Extended Absence from Operation

An operator who has not performed licensed duties as a Reactor Operator or as a Senior Reactor Operator for four or more months is given an oral examination on facility and procedure changes and performs a reactivity manipulation before being reassigned regular operational duties at the facility, provided the operator is up to date on the biennial requalification examination. The results of the oral and performance examination provide the basis for recertification of competence to the NRC as required by 10CFR55.31(e).

3.4 Requalification Exemptions

The Reactor Supervisor and the Chief Reactor Operator are responsible for the preparation, grading and evaluation of the results of the requalification examination, operator performance evaluation, and any subsequent retraining effort. They are thereby considered as having satisfactorily completed the examination and performance evaluations.

4. RECORDS

The following records are retained at the facility for a period of five years.

4.1 Examinations. Written examinations taken by licensed operators during each requalification period including the requalification examination, retraining examination, and accelerated retraining examinations.

4.2 Operator Performance Evaluation Record. Observational records completed when observing the licensed operator's operational performance including a description of the reactor reactivity manipulation performed and the areas covered in the oral examination

on emergency procedures.

- 4.3 Reactivity Manipulation Summary. Summaries of the reactivity manipulations for licensed operators are maintained.
- 4.4 Lectures. Records are maintained of lectures presented, indicating the topic and those attending.
- 4.5 Procedure and Facility Changes. Operator review of procedure and facility changes is assured by maintenance of appropriate review sign-off forms.