

NRL OPERATING PROCEDURES

Administrative Procedures

AP-09

RO/SRO Requalification

I. SCOPE:

This instruction outlines the requirements for requalifying reactor operators and senior reactor operators at the OSU-NRL.

II. DISCUSSION:

The RO/SRO requalification program is designed to demonstrate RO/SRO competence and to satisfy the requirements of 10CFR55.53 and 10CFR55.59. For the purpose of this procedure, RO shall refer to any licensed Reactor Operator, SRO shall refer to any licensed Senior Reactor Operator, and Operator shall refer to any licensed operator, reactor, or senior reactor.

III. REFERENCES:

- A. 10CFR55.53
- B. 10CFR55.59
- C. AP-07 Review of Procedures
- D. AP-10 OSURR Console Operating Experience
- E. Non-Power Reactor Operator Licensing Examiner Standards - NUREG 1478, June 1994.

IV. PRECAUTIONS:

To maintain an active Operator's License at the OSU-NRL one shall:

- A. Be the console operator at least once every three months and operate a total of at least 4 hours or complete SRO duties for at least 4 hours. (10CFR 55.53e)
- B. Complete the OSU-NRL Annual Requal Exam successfully and in a timely manner. Annual means during each calendar year. Timely means 365+30 days.
- C. Renew one's NRC License every six years in a timely manner.
- D. Review changes to the Facility License, Technical Specifications, Procedures, Emergency Plan, Security Plan, Facility Design Changes, NRC Notices, and other important Reactor related material in a timely manner. The review of these changes and documents shall be

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accomplished and verified by following NRL Procedure AP-07 "Review of Procedures."

E. Successfully complete a biennial medical evaluation.

V. PROCEDURES:

A. INTRODUCTION

The Operator Regualification Program is designed to demonstrate Operator and Senior Operator competence, and to satisfy the requirements of 10CFR55.59 for license renewal. The Program embodies the substance of 10CFR55.59, including provisions for an annual written examination, a structured lecture and study program when necessary to correct deficiencies, on the job training and evaluation of licensees, and a records maintenance system.

During each calendar year, a comprehensive operational and written examination shall be administered to all licensed personnel having regular operational responsibility at The Ohio State University Nuclear Reactor Laboratory (NRL).

Subsequent to determining any deficiencies indicated by the comprehensive examination, a retraining program will be initiated which consists of a combination of lectures, self-study by the licensee, tutoring of the licensee, and appropriate examination on the material covered. The final selection of the combination of retraining sessions, will depend upon the performance of the licensee on the written examination.

All study materials used in the Program shall be reviewed to assure they remain current. Study materials shall be collected and made available to all licensees throughout the year.

B. PROGRAM ADMINISTRATION AND REVIEW

The Associate Director of the NRL shall serve as the Training Coordinator, and shall be responsible for the implementation, coordination, and operation of the Operator Regualification Program. The duties of the Training Coordinator shall be designated to another SRO on alternate years. The Training Coordinator or his designee will prepare, administer, grade, and review all examinations and quizzes required by the Program. In this capacity, and since he is a licensed Senior Operator, he will be considered as having completed the examination and retraining program requirements for that year.

C. COMPREHENSIVE ANNUAL WRITTEN EXAMINATION

1. The comprehensive annual written examination (Exam) given to all licensed personnel, will include questions taken from:

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- A. Reactor Theory, Thermodynamics, and Facility Operating Characteristics.
 - B. Normal and Emergency Operating Procedures and Radiological Controls.
 - C. Facility and Radiation Monitoring Systems.
2. The exam should contain at least 10 objective questions from each section.
 3. The Exams will be graded, reviewed and retained at the NRL. For each licensee, a review form will be prepared indicating his grade in each Exam category. The areas of deficiency and the retraining to be followed in improving the licensee's competence in that area will then be determined. A grade below 70% in a single category shall require retraining for that licensee in that area of deficiency. An overall score below 70% on the Exam shall require that:
 - A. The licensee shall be immediately enrolled in a retraining program.
 - B. Prior to continuing his/her responsibilities of operation of the OSURR, the licensee shall be given an oral exam to verify competence as a console operator.

D. RETRAINING PROGRAM

1. The Retraining Program shall consist of an appropriate combination of:
 - a. Lectures
 - b. Self-study of reference materials
 - c. Tutoring sessions
 - d. Examination
2. Retraining shall be completed within 90 days and require passing of a written exam on appropriate sections.

E. REACTOR OPERATIONAL EXAM

One reactor operation of each year for each licensee shall be devoted to operator requalification. The Training Coordinator shall be present in the control room during all reactivity control manipulations associated with the operation, and shall evaluate the Operator's performance, competence, knowledge of the reactor system, and knowledge of operating and emergency procedures. If deficiencies are noted, a retraining program will be organized, implemented and

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conducted within a period of 90 days. The performance evaluation should include:

1. Administrative Topics
2. Control Room Systems
3. Facility Walkthrough
4. Reactor Operation

F. REQUALIFICATION PROGRAM STUDY MATERIALS

A complete set of study and reference materials shall be provided for use by the licensees. It shall be the responsibility of the Training Coordinator to perform a review of the contents of these reference materials to ensure they are adequate and accurately reflect operations, conditions, and design characteristics of the facility. As a minimum, these materials shall include:

1. A suitable general reference text on reactor physics
2. Copies of the operating procedures for the NRL
3. Copies of the Technical Specifications for the OSURR
4. Copies of emergency procedures for the facility
5. Copies of the Reactor Description and Hazards Summary Report
6. Copies of 10CFR19, 20, 50, 55, and 70.
7. Reference material on Health Physics principles and techniques.

G. SPECIAL CONDITIONS

1. Operating Frequency
 - a. A monthly review shall be performed to assure that each licensee has participated in at least one reactor operation during each three month period for at least four (4) hours or supervised licensed activities for at least four (4) hours or a combination totaling four (4) hours.
 - b. A licensee who does not participate in reactor operation for three or more months shall be given an oral examination on facility and procedure changes, and shall perform a minimum of six (6) hours of supervised reactor operations before being reassigned regular operational duties at the facility, provided he is up to date on the comprehensive annual written examination. These actions are required to meet 10CFR55.53(f)

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recertification requirements. Results of these examinations shall be retained in the licensee's file.

2. A licensee who does not complete the annual exam shall not be allowed to operate until the exam is successfully completed and graded.
3. Serious deficiencies in either the written exam (< 55% overall) or the operational exam may result in removal of certification until retraining is successfully completed.

H. RECORDS

These records shall be retained at the NRL for the period until the individual's license is renewed:

1. All exams and required re-examinations, which were taken by the licensee during each of the requalification periods.
2. The examination review sheets filled out at the conclusion of the Exam and after any indicated re-exams. There should also be an evaluation sheet completed for each operational exam.
3. Summaries of control manipulations for licensees involved in the requalification program (See AP-10)
4. Certification that each licensee has reviewed changes in the facility license, design, and procedures. (See AP-07)

VI. ATTACHMENTS:

- A. Exam Cover Sheet

THE OHIO STATE UNIVERSITY RESEARCH REACTOR

OPERATOR REQUALIFICATION EXAMINATION

Name: _____

License Number: _____

Date Administered: _____

Instructions:

Answers are to be written on the examination page itself. A grade of 70% is required to pass the examination. Three hours are permitted to complete the examination.

Candidate's Declaration:

All work done on this examination is my own. I have neither given nor received aid.

Candidate's Signature

Examination Results:

SECTION	SECTION POINTS	SECTION SCORE	PERCENT OF SECTION
A. Reactor Theory, Thermodynamics, Facility Characteristics	10	_____	_____
B. Normal & Emergency Procedures, Radiological Controls	10	_____	_____
C. Facility and Radiation Monitoring Systems	10	_____	_____

TOTAL	30	_____	_____

Evaluation:

_____ Satisfactory (>70%)

_____ Unsatisfactory

Examiner's Signature: _____

Date: _____

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