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ES-102  
REGULATIONS AND PUBLICATIONS APPLICABLE  
TO OPERATOR LICENSING

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A. PURPOSE

This standard lists the U.S. statutes and the regulations of the U.S. Nuclear Regulatory Commission (NRC) that establish the requirements for conducting operator licensing examinations. It also identifies the regulatory guides and NUREG reports that establish the procedures for implementing the regulations and administering the examinations, as well as standards of the American National Standards Institute/American Nuclear Society (ANSI/ANS) that may provide additional guidance.

Regulatory Guides (RGs), NUREG reports, and industry standards are not requirements, except as specified in Commission orders or as committed to by the facility licensee. The appropriate revisions should be consulted as referenced in the facility's final safety analysis report (FSAR) or approved training program. The following paragraphs summarize the latest revisions of these documents.

B. STATUTES

1. *Atomic Energy Act of 1954*

Section 107 of the *Atomic Energy Act of 1954* (42 U.S.C. 2137), as amended, requires that the NRC prescribe uniform conditions for licensing individuals as operators of production and utilization facilities, determining the qualifications of these individuals, and issuing licenses to such individuals.

2. *Nuclear Waste Policy Act of 1982*

Section 306 of the *Nuclear Waste Policy Act of 1982* (42 U.S.C. 10226, 96 Stat. 2201 at 2262 - 2263) directs the NRC to establish requirements governing (1) simulator training for applicants for operator licenses and for operator requalification training programs, (2) NRC administration of requalification examinations, and (3) operating tests at civilian nuclear power plant simulators.

C. REGULATIONS

1. 10 CFR Part 2, Rules of Practice

The regulations in 10 CFR Part 2 govern the conduct of all proceedings under the *Atomic Energy Act of 1954*, as amended, and the *Energy Reorganization Act of 1974* with regard to (a) granting, suspending, revoking, amending, or taking other action with respect to any license; (b) imposing civil penalties; and (c) public rulemaking.

10 CFR 2.103(b)(2) establishes the applicant's right to demand a review of a proposed license denial, and defines the applicant's appeal and hearing rights.

Subpart G, "Rules of General Applicability," governs all adjudications initiated by the issuance of an order to show cause, an order designating the time and place of a hearing requested by a person charged with a violation, and a notice of hearing.

Subpart L, "Informal Hearing Procedures for Adjudications in Materials and Operator Licensing Proceedings," governs proceedings for the issuance, renewal, or licensee-initiated amendment of an operator or senior operator license.

2. 10 CFR Part 9, Public Records

The regulations in 10 CFR Part 9 prescribe the rules governing the NRC's public records that relate to any proceeding subject to 10 CFR Part 2.

Subparts A and B describe and implement the requirements for balancing the public's rights to information under the *Freedom of Information Act* and the NRC's responsibility to protect personal information under the *Privacy Act*.

Subparts C and D implement the provisions of the *Sunshine Act*, concerning the opening of Commission meetings to public observation. They also describe the procedures governing the production of agency records, information, or testimony in response to subpoenas or demands of courts or other judicial authorities in State and Federal proceedings.

3. 10 CFR Part 20, Standards for Protection Against Radiation

The regulations in 10 CFR Part 20 establish standards for protection against radiation hazards arising from licensed activities. Some of the material is appropriate for inclusion in the examinations administered to candidates for RO or SRO licenses.

4. 10 CFR Part 50, Licensing of Production and Utilization Facilities

10 CFR 50.34(b)(8) requires that the FSAR include a description of the operator requalification program. That description forms the basis for the inspection, audit, and approval of requalification programs.

10 CFR 50.54(l-1) requires facility licensees to implement an operator requalification program that meets the requirements of 10 CFR 55.59(c) within 3 months after receiving a facility operating license. Notwithstanding the provisions of 10 CFR 50.59, the licensee may not decrease the scope of its approved requalification program without authorization from the Commission.

10 CFR 50.54(k) - (m) contain regulations restricting control manipulations to licensed operators. These regulations are conditions of all facility licenses issued under 10 CFR Part 50.

10 CFR 50.74 requires facility licensees to notify the Commission within 30 days if there is a change in the status of a licensed RO or SRO.

5. 10 CFR Part 55, Operators' Licenses

10 CFR Part 55 is the implementing regulation that establishes the requirements and the regulatory basis for licensing and requalifying ROs and SROs.

D. REGULATORY GUIDES

1. Regulatory Guide 1.8, "Qualification and Training of Personnel for Nuclear Power Plants," *Revision 3, May 2000* ~~Revision 2, April 1987~~

Section C.4 of this RG currently endorses, with *additions, exceptions, and clarifications*, ANSI/ANS 3.1-1984<sup>93</sup>, "American National Standard for Selection, Qualification, and Training of Personnel for Nuclear Power Plants" ~~(effective March 31, 1988). The NRC is currently reviewing, and is expected to endorse, with exception, the 1993 version of ANSI/ANS 3.1. No backfitting is intended or required in connection with the issuance of the revised RG.~~

2. Regulatory Guide 1.33, "Quality Assurance Program Requirements -Operations"

Appendix A to this RG contains a list of typical procedures for pressurized water reactors and boiling water reactors.

3. Regulatory Guide 1.114, "Guidance on Being an Operator at the Controls of a Nuclear Power Plant"

This RG describes a method acceptable to the NRC staff for complying with the Commission's regulations in 10 CFR 50.54(k) - (m), which require the presence of an RO at the controls of a nuclear power unit and an SRO in the control room from which the nuclear power unit is being operated.

4. Regulatory Guide 1.134, "Medical Evaluation of Licensed Personnel for Nuclear Power Plants," *Revision 3, March 1998*

This RG currently endorses ANSI/ANS 3.4-1996, "Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants," with exceptions. However, facility licensees may continue to use the 1983 version of ANSI/ANS 3.4, which was previously endorsed in its entirety by Revision 2 of RG 1.134, dated April 1987.

5. Regulatory Guide 1.149, "Nuclear Power Plant Simulation Facilities for Use in Operator License Examinations," *Revision 2, April 1996*

This RG currently endorses, with exception, ANSI/ANS 3.5-1993, "Nuclear Power Plant Simulators for Use in Operator Training and Examination." It is expected that Revision 3 will endorse ANSI/ANS 3.5-1998. However, facility licensees may continue to use the 1985 version of ANSI/ANS 3.5, which was previously endorsed, with exceptions, by Revision 1 of the RG dated April 1987.

## E. NUREG REPORTS

1. NUREG-0660, Vol. 1, "NRC Action Plan Developed as a Result of the TMI-2 Accident," May 1980

Item I.A.4.2 of this document describes the guidelines for long-term simulator upgrades.

2. NUREG-0737, "Clarification of TMI Action Plan Requirements," November 1980

This document clarifies the following action plan items which are intended to upgrade the training, licensing, education, and experience of operators on the basis of experience gained from the accident at Three Mile Island, Unit 2:

- Item I.A.2.1, "Immediate Upgrading of RO and SRO Training and Qualifications"
- Item 1.A.2.3, "Administration of Training Programs"
- Item 1.A.3.1, "Revised Scope and Criteria for Licensing Exams"
- Item 11.B.4, "Training for Mitigating Core Damage"

3. NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants, LWR Edition," July 1981

Section 13.2, "Reactor Operator Training," describes the training and licensing of operators and identifies information to be submitted by applicants for construction permits and operating licenses.

4. NUREG-1122, "Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Pressurized Water Reactors," Revision 2

This document provides the basis for developing content-valid licensing examinations for operators at pressurized water reactors (PWRs). It contains knowledge and ability (K/A) statements that have been rated for their importance to ensuring that the plant is operated in a manner consistent with the health and safety of plant personnel and the public.

5. NUREG-1123, "Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Boiling Water Reactors," Revision 2

This document provides the basis for developing content-valid licensing examinations for operators at boiling water reactors (BWRs). It contains K/A statements that have been rated for their importance to ensuring that the plant is operated in a manner consistent with the health and safety of plant personnel and the public.

6. NUREG-1291, "BWR and PWR Off-Normal Event Descriptions," November 1987

The reactor event descriptions in this document provide a reliable, performance-based source of information that examiners may use to design simulator scenarios that will be a valid test of an applicant's ability to safely and competently perform all licensed duties and responsibilities.

7. NUREG-1560, "Individual Plant Examination Program: Perspectives on Reactor Safety and Plant Performance"

This report provides perspectives gained by reviewing 75 individual plant examination (IPE) submittals pertaining to 108 nuclear power plant units. Chapter 13, "Operational Perspectives," is of particular interest because it identifies a number of important human actions that should be considered for evaluation on BWR and PWR licensing and requalification examinations.

8. NUREG-1600, "General Statement of Policy and Procedure for NRC Enforcement Actions"

This report addresses the NRC's expectations regarding compliance with 10 CFR 55.49, "Integrity of Examinations and Tests," and possible enforcement actions against parties subject to that regulation (i.e., Part 55 license holders and applicants and Part 50 licensees).

9. NUREG/BR-0122, "Examiners' Handbook for Developing Operator Licensing Written Examinations," Revision 5, March 1990

This document, which presented a procedure for systematically constructing content-valid licensing examinations for nuclear power plant operators, has been incorporated into the examination standards in NUREG-1021, Revision 8. It may be used for historical perspective, but is no longer used for developing examinations.

F. INDUSTRY STANDARDS

1. ANSI/ANS 3.1, "American National Standard for Selection, Qualification and Training of Personnel for Nuclear Power Plants"

This standard provides criteria for selecting and training nuclear power plant employees performing a variety of functions at various levels of responsibility (e.g., managers, supervisors, operators, and technicians). RG 1.8, Revision 3 (May 2000) endorses, with additions, exceptions, and clarifications, the 1993 version of the standard. 2, endorsed, with exceptions, the 1981 version of the standard; the 1987 version was never endorsed by the NRC; the 1993 version is currently under review by the NRC.

2. ANS 3.2 (ANSI N18.7-1976), "Administrative Controls and QA for the Operational Phase of Nuclear Power Plants"

This standard provides guidance and recommendations for administrative rules of practice and related subjects and for preparing procedures and audit programs. See RG 1.33.

3. ANSI/ANS 3.4-1996, "Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants"

This standard is the basic document covering the general health and disqualifying conditions applicable to license applicants and licensed personnel. Revision 3 of RG 1.134 currently endorses this standard with exceptions, but facility licensees may continue to use the 1983 version, which was previously endorsed in its entirety by Revision 2 of the RG.

4. ANSI/ANS 3.5-1993, "Nuclear Power Plant Simulators for Use in Operator Training"

This standard establishes the minimum functional requirements and capabilities for nuclear power plant simulators for use in operator training. Revision 2 of RG 1.149 endorses this standard, with exceptions, and it is expected that Revision 3 of RG 1.149 will endorse the 1998 version of this standard. However, facility licensees may continue to use the 1985 version, which was previously endorsed, with exceptions, by Revision 1 of the RG.

Interim  
Use.