

RULEMAKING ISSUE AFFIRMATION

July 10, 2001

SECY-01-0125

FOR: The Commissioners

FROM: William D. Travers
Executive Director for Operations

SUBJECT: FINAL RULEMAKING TO AMEND 10 CFR PART 55, "OPERATORS' LICENSES," REGARDING OPERATOR LICENSE ELIGIBILITY AND THE USE OF SIMULATION FACILITIES IN OPERATOR LICENSING; AND, REVISION 3 OF REGULATORY GUIDE 1.149, "NUCLEAR POWER PLANT SIMULATION FACILITIES FOR USE IN OPERATOR TRAINING AND LICENSE EXAMINATIONS"

PURPOSE:

To obtain the Commission's approval to publish the attached final rule (Attachment 1) to amend 10 CFR Part 55, "Operators' Licenses" regarding operator license eligibility and the use of simulation facilities in operator licensing, and to inform the Commission of the staff's intent to issue Revision 3 of Regulatory Guide 1.149, "Nuclear Power Plant Simulation Facilities for Use in Operator Training and License Examinations" (RG 1.149). The final rule permits applicants for operator and senior operator licenses to fulfill a portion of the required experience prerequisites by manipulating a plant-referenced simulator as an alternative to manipulation of the controls of the actual plant. In addition, this final rule also removes requirements for: (1) utilities to certify their simulation facilities (i.e., to state in formal communication, on NRC Form 474, "Simulation Facility Certification," to the Commission that the simulation facility meets the Commission's regulations); (2) routine submittal of reports to the NRC for review that identify any uncorrected performance test failures; and (3) if applicable, submission of a schedule for test failure correction.

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BACKGROUND:

At the proposed rulemaking stage, the subject amendment was provided to the Commission in SECY-00-0083, dated April 12, 2000. The Commission approved the proposed rule in a staff requirements memorandum (SRM) issued on May 15, 2000. The proposed rule was published in the *Federal Register* on July 3, 2000 (65 FR 41021), for a 90-day comment period that expired on September 18, 2000. Fifteen comment letters were received that represented comments from 3 individuals, 9 nuclear power plant licensees (utilities), 1 utility organization (Nuclear Energy Institute), 1 licensed operator organization (the Professional Reactor Operators Society), and 1 national consensus standards committee working group. Twelve of the 15 commenters expressed support for amending the rule. Two commenters did not support performance on the simulator of the reactivity control manipulations associated with operator license eligibility. One commenter implied the need to continue to perform control manipulations on the plant and believed that more explicit requirements for these control manipulations on the actual plant were necessary. Attachment 1 includes the analysis of the public comments on the proposed rule in the *Federal Register* notice.

In conjunction with this final rulemaking, the staff intends to issue Revision 3 of RG 1.149 (Attachment 2), which describes methods acceptable to the NRC staff for complying with those portions of 10 CFR Part 55 that relate to the use of simulation facilities in the licensing of reactor operators and senior reactor operators. RG 1.149, Revision 3 endorses American National Standards Institute/American Nuclear Society (ANSI/ANS) standard ANSI/ANS-3.5-1998, "Nuclear Power Plant Simulators for Use in Operator Training and Examination," with minor clarifications and without exceptions. The proposed Revision 3 of the regulatory guide was published in the *Federal Register* on August 23, 1999 (64 FR 45985), for public comment as Draft Regulatory Guide DG-1080. Comments were received from 6 facility licensees and 1 facility training organization. All commenters expressed support for RG 1.149 and its endorsement of the revised ANSI/ANS-3.5-1998. Attachment 2 includes the staff's responses to the public comments on the draft regulatory guide.

DISCUSSION:

The final rule, that is provided in the attached *Federal Register* notice, amends 10 CFR Part 55 to take advantage of improvements in simulator technology and to reduce unnecessary regulatory burden on licensees by:

- (1) Allowing applicants for operator and senior operator licenses to fulfill a portion of the required experience prerequisites by manipulating a plant-referenced simulator as an alternative to manipulation of the controls of the actual nuclear power plant,
- (2) Removing current requirements for facility licensee certification of their simulation facilities, and
- (3) Eliminating the necessity for routine submittal of reports to the NRC for review that identify any uncorrected performance test failures and a schedule for correction.

In conjunction with supporting these objectives, the final rule also revises two definitions in 10 CFR Part 55 and adds clarity to the regulations by relocating language relating to the use of a simulation facility to a new Section 55.46 dedicated to "Simulation Facilities."

Continued assurance of simulator fidelity is provided since a facility licensee must: (1) conduct performance testing and retain the results for four years; (2) correct modeling and hardware discrepancies and discrepancies identified from scenario validation and from performance testing; (3) make the results of any uncorrected performance test failures available on site; and (4) maintain the provisions for license application, examination, and test integrity consistent with Section 55.49. In addition, NRC reviews or inspections at simulation facilities to ensure compliance with final rule requirements will maintain safety without the unnecessary burden of certification and submittal of simulator performance test reports. If NRC reviews associated with operating tests for operator license applicants or inspections completed using the Requalification Inspection Procedure as part of the oversight process find that a plant-referenced simulator is unsuitable because it does not demonstrate expected plant response or meet the requirements specified in items (1) and (4) above, the simulator may not be used to conduct operating tests for operator license applicants, requalification training, or control manipulations until the simulator is made suitable. In any case, simulation facilities, including plant-referenced simulators, must additionally meet (2) and (3) of the requirements of §55.46(d) for continued assurance of simulator fidelity. Further, NUREG-1021, Revision 8, "Operator Licensing Examination Standards for Power Reactors," provides detailed policies, procedures, and practices for examining applicants for reactor operator and senior reactor operator licenses. NUREG-1021 essentially ensures that simulator scenarios for examinations are completed without procedure exceptions or simulator performance exceptions.

New technologies, involving multi-module facilities, in which there are multiple identical reactors (e.g. pebble bed reactors) may influence how a simulation facility is referenced to a specific nuclear power plant. The Commission did not consider these new technologies during preparation of this final rulemaking and believes it is best to defer regulatory decisions until it is clear whether the regulations will be affected.

The staff prepared a draft regulatory analysis for the proposed rule to examine the costs and benefits of the alternatives considered. Public comments on this analysis were requested in connection with the proposed rule. No significant comments were received. Minor changes have been made to the draft regulatory analysis, including, prorating the cost and benefit of the final rule over the average remaining years of operating life of the facility. The final regulatory analysis for the rule is provided as Attachment 3.

RELATED ACTIVITIES:

To implement this rule, the NRC staff is developing revisions to the process for initial licensing, requalification, and examination of reactor and senior operators, including updating NUREG-1021, Revision 8, and the "Licensed Operator Requalification Program Inspection Procedure," (IP-71111.11) of the reactor oversight process. Training of examiners will be conducted as appropriate. The NRC staff expects that these revisions will be completed within 1 year from the date the final rule is published. Since the proposed rulemaking notice, the staff has

determined that it is not necessary to revise and update NUREG-1262, "Answers to Questions at Public Meetings Regarding Implementation of Title 10, Code of Federal Regulations, Part 55 on Operator's Licenses" and NUREG-1258, "Evaluation Procedure for Simulation Facilities Certified Under 10CFR 55." Instead of revising NUREG-1262, the staff will post on the Operator Licensing Program web page answers to any questions that may be generated from a public meeting/workshop concerning this final rulemaking. NUREG-1258 has become obsolete and will no longer be used or updated.

RESOURCES:

Resources to implement this final rule (1.0 full-time equivalent (FTE) position) are included in the Fiscal Year 2001 budget. It is expected that minimal savings to the NRC will occur under the revised reporting requirements.

COORDINATION:

The Office of the General Counsel has reviewed this Commission paper and the final rule and has no legal objections to their content. The Office of the Chief Financial Officer has reviewed this paper for resource implications and has no objections. The Committee To Review Generic Requirements (CRGR) was briefed on the final rule on May 21, 2001, and believes the final rule change and regulatory guide do not impose a backfit and should be approved (Letter dated May 25, 2001, Attachment 4). On May 15, 2001, the Advisory Committee on Reactor Safeguards (ACRS) issued a letter (Attachment 5) stating that it decided not to review these documents and has no objection to issuing the final rule and associated RG 1.149, Revision 3.

RECOMMENDATIONS:

That the Commission:

- (1) Approve the publication of the *Federal Register* notice that promulgates the final rule, Attachment 1.
- (2) Certify that this rule, if issued, would not have a significant economic impact on a substantial number of small entities to satisfy the requirements of the Regulatory Flexibility Act, 5 U.S.C. 605(b).
- (3) Note that
 - (a) This final rule eliminates all information collection requirements for the Office of Management and Budget (OMB) approval number 3150-0138.
 - (b) Regulatory Guide 1.149, Revision 3 (Attachment 2), will be published concurrently with publication of the final rule. The *Federal Register* notice that publishes the final rule will provide notice of the availability of the regulatory guidance. The staff's responses to the public comments will be made available in the NRC's Public Document Room (PDR).

- (c) The Regulatory Analysis (Attachment 3) will be made available in the NRC's PDR.
- (d) The Chief Counsel for Advocacy of the Small Business Administration will be informed of the certification regarding economic impact on small entities and the reasons for it as required by the Regulatory Flexibility Act.
- (e) A press release will be issued.
- (f) The appropriate congressional committees will be informed.
- (g) The NRC has determined that this action is not a major rule under the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA) and has confirmed this determination with OMB (Attachment 6).
- (h) Copies of the final rule will be distributed to all affected facility licensees and interested stakeholders.

/RA/

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- Attachments:
- 1. *Federal Register* notice
 - 2. Regulatory Guide 1.149, Revision 3, with the staff's response to the public comments
 - 3. Regulatory Analysis
 - 4. CRGR memorandum
 - 5. ACRS memorandum
 - 6. SBREFA forms

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