

DOCKET NUMBER 55
(58 FR 29366)

DOCKETED
USNRC

[7590-01-P]

'93 MAY 14 PM 4:48

NUCLEAR REGULATORY COMMISSION

10 CFR Part 55

RIN 3150-AE39

Operators' Licenses

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is proposing to amend its regulations to delete the requirement that each licensed operator at power, test and research reactors pass a comprehensive requalification written examination and an operating test conducted by the NRC during the term of the operator's 6-year license as a prerequisite for license renewal. The proposed amendment will require facility licensees to submit copies of each annual operating test or comprehensive written examination used for operator requalification for review by the Commission at least 30 days prior to conducting the examination or the test. In addition, the proposed rule will amend the "Scope" provisions of the regulations pertaining to operators' licenses to include facility licensees.

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Pub. on 5/20/93
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7/19/93

DATES: The comment period expires (60 days from date of publication).

Comments received after this date will be considered if it is practical to do so, but the Commission is able to assure consideration only for comments received on or before this date.

ADDRESSES: Mail written comments to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch.

Deliver comments to: One White Flint North, 11555 Rockville Pike, Rockville, Maryland, between 7:30 am and 4:15 pm on Federal workdays. Copies of the draft regulatory analysis, as well as copies of the comments received on the proposed rule, may be examined at the NRC Public Document Room, 2120 L Street, NW. (Lower Level), Washington, DC.

FOR FURTHER INFORMATION CONTACT: Dr. Rajender Auluck, P.E., Office of Nuclear Regulatory Research, telephone: (301) 492-3794, or David Lange, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 504-3171.

SUPPLEMENTARY INFORMATION:

Background

Section 306 of the Nuclear Waste Policy Act (NWPA) of 1982 authorized and directed the NRC "to promulgate regulations, or other appropriate Commission regulatory guidance, for the training and qualifications of civilian nuclear power plant operators, supervisors, technicians and other

appropriate operating personnel." The regulations or guidance were to "establish simulator training requirements for applicants for civilian nuclear power plant operator licenses and for operator requalification programs; requirements governing NRC administration of requalification examinations; requirements for operating tests at civilian nuclear power plant simulators, and instructional requirements for civilian nuclear power plant licensee personnel training programs." On March 25, 1987 (52 FR 9453), the Commission accomplished the objectives of the NWPA that were related to licensed operators by publishing a final rule in the Federal Register that amended 10 CFR Part 55, effective May 26, 1987. The amendment revised the licensed operator requalification program by establishing (1) simulator training requirements, (2) requirements for operating tests at simulators, and (3) instructional requirements for the program (formerly Appendix A to 10 CFR Part 55). The final rule also stipulated that in lieu of the Commission accepting certification by the facility licensee that the licensee has passed written examinations and operating tests given by the facility licensee within its Commission approved program developed by using a systems approach to training (SAT), the Commission may give a comprehensive requalification written examination and an annual operating test. In addition, the amended regulations required each licensed operator to pass a comprehensive requalification written examination and an operating test conducted by the NRC during the term of the operator's 6-year license as a prerequisite for license renewal.

Following the 1987 amendment to Part 55, the NRC began conducting operator requalification examinations for the purpose of license renewal. As a result of conducting these examinations, the NRC determined that nearly all

facility requalification programs met the Commission's expectations and that the NRC examiners were largely duplicating tasks that were already required of, and routinely performed by, the facility licensees.

The NRC revised its requalification examination procedures in 1988 to focus on performance-based evaluation criteria that closely paralleled the training and evaluation process used for a SAT based training program. This revision to the NRC requalification examination process enabled the NRC to conduct comprehensive examinations for the purpose of renewing an individual's license and, at the same time, use the results of the examinations to determine the adequacy of the facility licensee's requalification training program.

Since the NRC began conducting operator requalification examinations, the facility program and individual pass rates have improved from 81 to 90 percent and from 83 to 91 percent, respectively, through fiscal year 1991. The NRC has also observed a general improvement in the quality of the facility licensees' testing materials and in the performance of their operating test evaluators. Of the first 79 program evaluations conducted, ten (10) programs were evaluated as unsatisfactory. The NRC issued Information Notice No. 90-54, "Summary of Requalification Program Deficiencies," dated August 28, 1990, to describe the technical deficiencies that contributed to the first 10 program failures. Since that time only six programs, of 120 subsequent program evaluations, have been evaluated as unsatisfactory.

Pilot requalification examinations were conducted in August through December of 1991. The pilot test procedure directed the NRC examiners to focus on the evaluation of crews, rather than individuals, in the simulator portion of the operating test. In conducting the pilot examinations, the NRC

examiners and the facility evaluators independently evaluated the crews and compared their results. The results were found to be in total agreement. Furthermore, the NRC examiners noted that the facility evaluators were competent at evaluating crews and individuals and were aggressive in finding deficiencies and recommending remediation for operators who exhibited weaknesses. The performance of the facilities' evaluators during the pilot examinations further confirmed that the facility licensees can find deficiencies, and remediate and retest their licensed operators' appropriately.

Discussion

In accordance with § 55.57(b)(2)(iii), licensed operators are required to pass facility requalification examinations and annual operating tests. In § 55.57(b)(2)(iv), licensed operators are also required to pass a comprehensive requalification written examination and operating test conducted by the NRC during the term of a 6-year license. These regulations establish requirements which impose a dual responsibility on both the facility licensee which assists in developing and conducting its own as well as NRC requalification examinations, and the NRC which supervises both the facility licensee requalification program as well as conducting a comprehensive requalification examination during the term of an operator's 6-year license.

The NRC believes operational safety at each facility will continue to be ensured, and, in fact, will be improved, if NRC resources are directed towards inspecting and overseeing the facility requalification programs rather than continuing to conduct individual operator requalification examinations. The

NRC's experience since the beginning of the requalification program indicates that weaknesses in the implementation of the facility program are generally the root cause of deficiencies in the performance of operators. The NRC could more effectively allocate its resources to perform on-site inspections of facility requalification examination and training programs in accordance with indicated programmatic performance rather than scheduling examiners in accordance with the number of individuals requiring license renewal. The NRC expects to find and correct programmatic weaknesses more rapidly and improve operational safety by redirecting the examiner resources to inspect programs.

As of October 9, 1992, the NRC had conducted requalification examinations at 11 research and test reactor facilities for a total of 34 operators being examined. No failures were identified. For research and test reactors, this sample provides the NRC with little data to support the same rationale that is discussed above with respect to power reactors. However, the NRC believes that the flexibility to allocate resources based on indicated programmatic performance rather than on the number of individuals requiring license renewal would also improve operational safety at research and test reactors. In addition, the proposed rule does not prevent the NRC from conducting requalification examinations at research and test reactor facilities.

Currently, facility licensees assist in the development and conduct of the NRC requalification examinations. The assistance includes providing to the NRC (1) the training material used for development of the written and operating examinations and (2) facility personnel to work with the NRC during the development and conduct of the examinations. The proposed amendments would reduce the regulatory burden on the facility licensees by reducing the

effort expended by the facility to assist the NRC in developing and conducting NRC requalification examinations for licensed operators.

As part of the proposed rule change, the facility licensees would be required to submit to the NRC each annual operating test or comprehensive written examination used for operator requalification at least 30 days prior to giving the test or examination. The NRC would review these examinations on an audit basis for conformance with 10 CFR 55.59(a)(2)(i&ii). The NRC would also review other information already available to the staff to determine the scope of an on-site inspection of the facility requalification program. The NRC would continue to expect each facility to meet all of the conditions required for conducting a requalification program in accordance with 10 CFR 55.59(c).

Licensed operators would not have to take any additional actions. Each operator would continue to meet all the conditions of his or her license described in 10 CFR 55.53, which includes passing the facility-conducted requalification examinations for license renewal. Each licensed operator would be expected to continue to meet the requirements of the facility requalification training program. However, the licensed operator would no longer be required to pass a requalification examination conducted by the NRC during the term of his or her license as a condition of license renewal.

The "Scope" of Part 55, § 55.2, will be revised to include facility licensees. This is an addition to the regulation. It eliminates currently existing ambiguities between the regulations of Parts 50 and 55. Part 50, in § 50.54(i) through (m), already imposes Part 55 requirements on facility licensees, and Part 55 already specifies requirements for facility licensees.

The proposed amendments would meet the requirements of Section 306 of the NWPA without the requirement that each licensed individual pass a requalification examination conducted by the NRC during the 6-year term of the individual's license. The requirements of the NWPA would be met as follows: 1) the regulations would continue to require facilities to have requalification programs and conduct requalification examinations; 2) the NRC would provide oversight (i.e., administration) for these programs and examinations through inspections; and 3) § 55.59(a)(2)(iii) provides that the NRC may conduct requalification examinations in lieu of accepting the facility licensee's certification that a licensed individual has passed the facility requalification examination. The NRC will use this option if warranted after an on-site inspection of the facility's requalification program. The proposed amendments would not affect the regulatory or other appropriate guidance required by Section 306 of the NWPA and established in § 55.59(a)(2)(iii) for the NRC to conduct requalification examinations in lieu of an examination given by the facility.

Invitation To Comment

Comments concerning the scope, content, and implementation of the proposed amendments are encouraged. Comments are solicited on the burden created by the requirement that each facility licensee submit and the NRC review all annual operating tests or comprehensive written examinations at least thirty days prior to conducting such tests or exams. In addition, comments on the applicability of the proposed amendments to research and test

reactor facilities are especially solicited, as are suggestions for alternatives to those rulemaking methods described in this notice.

Commissioner Rogers' separate views.

Commissioner Rogers believes that the staff should be allowed the discretion to administer exams as they feel necessary, i.e., other than for cause, without receiving prior Commission approval. Reasons for allowing the staff to administer discretionary exams include:

1. Providing an additional incentive to licensees to maintain the quality of their operator training programs.
2. Providing a benchmark with good performing plants by which to judge the adequacy of the licensees' operator training programs.
3. Providing a basis to determine whether or not licensee examiner standards need to be revised.
4. Providing an independent check of the quality of the licensees' operator training programs.
5. Providing the NRC staff the opportunity to maintain its examination expertise.

6. Ensuring that the latest, state-of-the-art testing and assessment techniques are being used.

Commissioner Curtiss' separate views.

The staff has proposed that they be allowed to administer requalification examinations in two situations: (i) where cause exists for administering such examinations; and (ii) on a periodic basis, at a specified frequency of once every six years at each facility. There is no disagreement within the Commission over allowing the staff to administer "for cause" examinations. The dispute arises over whether the staff should be afforded the discretion to administer examinations in situations other than where "cause" exists, without first coming to the Commission for advance approval. The staff has recommended that they be allowed the flexibility to administer such examinations at their discretion and, with one minor exception, I agree with the staff's recommendation. [I do not believe it wise or essential to specify a set periodicity for such examinations of once every six years, and, on this point, I concur in the majority view].

The majority, as I understand it, would limit the staff to administering examinations solely "for cause", and would not allow the staff to administer examinations in any other situation absent formal approval by the Commission (i.e., where, in the staff's discretion, the staff deems it appropriate to do so). There are compelling reasons, in my judgment, for allowing the staff the flexibility to administer such "discretionary" examinations on its own accord. In this regard, Commissioner Rogers has set forth the reasons for allowing the

staff to administer such examinations, and I concur in the reasons that he has articulated so persuasively.

Given the significant changes in the agency's operator requalification program that the staff has proposed in SECY-92-430 (and in which I generally concur), I would have preferred a more cautious transition, wherein the effectiveness of the new regulatory approach could be confirmed through such discretionary examinations, before placing reliance on "for cause" examinations and an unproven inspection regime. This is particularly important given the continuing identification of weaknesses in licensee training programs uncovered by our current examination process. Accordingly, I believe that it would be a prudent step to allow the staff this flexibility. In my judgment, the majority's insistence upon requiring the staff to come to the Commission for advance approval in every such instance is, as a practical matter, likely to discourage the staff from administering such examinations where they may indeed be warranted.

For the foregoing reasons, I disagree with the decision of the majority to foreclose the staff from administering examinations in such circumstances, absent formal approval of the Commission. I also associate myself with Commissioner Rogers' comments.

Additional comments of the Chairman, and Commissioners Remick and de Planque.

The Chairman and Commissioners Remick and de Planque believe that all of the objectives listed by Commissioner Rogers and endorsed by Commissioner Curtiss can be met, and are being met, through various alternatives to administering requalification tests and exams periodically. For example, the staff will continue to administer an estimated 700-800 initial operator license examinations per year; it will conduct examinations for cause using the flexible authority already provided by the regulations, and as otherwise approved by the Commission; it will observe the administration of examinations by the licensees as part of both the NRC's inspection program activities and INPO's and the National Academy of Nuclear Training's accreditation and assessment activities, permitted by the NRC/INPO MOU; and the staff will have the benefit of continuous observation by Resident Inspectors.

These existing alternatives provide considerable opportunity for the staff to assess the effectiveness of licensee training programs. Indeed, the proposed Statement of Considerations says that the agency "expects to find and correct programmatic weaknesses more rapidly and improve operational safety by redirecting the examiner resources to inspect programs," (p. 6, our emphasis.) If the staff identifies weaknesses in licensee training programs, the staff may then exercise the flexible authority of 10 CFR 55.59 (a)(2)(iii) to administer requalification tests and exams for cause.

Staff expertise needed to administer requalification tests and examinations can also be maintained by participation in training courses, just as staff

expertise such as that needed by IIT members is maintained. Innovative concepts like administering examinations and tests to instructors and appropriate operator licensing personnel on the simulators at the Technical Training Center is another way of maintaining this kind of staff expertise.

If the staff finds that with experience there is, in fact, a basis for administering periodic exams or any other alternatives, they are at liberty to provide the rationale and plan for Commission consideration. However, the information the staff has presented does not convince us of any necessity for administering periodic exams.

Finding of No Significant Environmental Impact: Availability

The NRC has determined that the proposed amendments, if adopted, are the type of action described in categorical exclusion 10 CFR 51.22(c)(1). Therefore, neither an environmental impact statement nor an environmental assessment has been prepared for this rule.

Paperwork Reduction Act Statement

This proposed rule amends information collection requirements that are subject to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). This rule has been submitted to the Office of Management and Budget for review and approval of the paperwork requirements.

The public reporting burden for this collection of information is estimated to average 4 hours per response, including the time for reviewing

instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Information and Records Management Branch (MNBB-7714), U.S. Nuclear Regulatory Commission, Washington, DC 20555; and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-3019, (3150-0018 and 3150-0101), Office of Management and Budget, Washington, DC 20503.

Regulatory Analysis

The Commission has prepared a draft regulatory analysis on this proposed regulation. The analysis examines the values (benefits) and impacts (costs) of implementing the proposed regulation for licensed operator requalification. The draft analysis is available for inspection in the NRC Public Document Room, 2120 L Street, NW. (Lower Level), Washington, DC. Single copies of the analysis may be obtained from Rajender Auluck (see ADDRESSES heading).

Regulatory Flexibility Certification

As required by the Regulatory Flexibility Act of 1989, 5 U.S.C. 605(b), the Commission certifies that this rule will not have a significant economic impact upon a substantial number of small entities. This rule primarily affects the companies that own and operate light-water nuclear power reactors. The companies that own and operate these reactors do not fall within the scope of the definition of "small entity" set forth in the Regulatory Flexibility

Act or the Small Business Size Standards set out in regulations issued by the Small Business Administration in 13 CFR Part 121. Since these companies are dominant in their service areas, this rule does not fall within the purview of its Act.

Backfit Analysis

Currently, facility licensees assist in developing and coordinating the NRC-conducted requalification examinations. The assistance includes providing to the NRC the training material used for development of the written examinations and operating tests and providing facility personnel to work with the NRC during the development and conduct of the examinations. The Commission has concluded on the basis of the documented evaluation required by 10 CFR Part 50.109(a)(4), that complying with the requirement of this proposed rule would: (1) reduce the regulatory burden on the facility licensees by reducing the effort expended by the facility licensees to assist the NRC in developing and conducting NRC requalification examinations for licensed operators, and (2) increase the regulatory burden on the facility licensees by requiring them to submit all requalification examinations at least 30 days prior to conducting the examinations.

As part of the proposed amendments, the facility licensees would be required to submit to the appropriate Regional Administrator each annual requalification operating test or comprehensive written requalification examination at least 30 days prior to conducting such test or examination. The NRC would review these examinations on an audit basis for conformance with 10 CFR 55.59(a)(2)(i&ii). The NRC would conduct this review and review other

information already available to the NRC to determine the scope of an on-site inspection of the facility requalification program. The NRC would continue to expect each facility to meet all of the conditions required of a requalification program in accordance with 10 CFR 55.59(c).

Licensed operators would not have to take any additional actions. Each operator would be expected to continue to meet all the conditions of his or her license described in 10 CFR 55.53, which includes passing the facility requalification examinations for license renewal. Each licensed operator would be expected to continue to meet the requirements of the facility requalification training program. However, the licensed operator would no longer be required to pass a requalification examination conducted by the NRC during the term of his or her license, in addition to passing the facility licensee's requalification examinations, as a condition of license renewal.

The "Scope" of Part 55, 10 CFR 55.2, would be revised to include facility licensees. This is an addition to the regulation. It eliminates currently existing ambiguities between the regulations of Parts 50 and 55. Part 50, in sections 50.54(i) through (m), already imposes Part 55 requirements on facility licensees, and Part 55 already specifies requirements for facility licensees.

The Commission believes that licensed operators are one of the main components and possibly the most critical component of continued safe reactor operation, especially with respect to mitigating the consequences of emergency conditions. Two-thirds of the requalification programs that have been evaluated as "unsatisfactory" had significant problems in the quality or implementation of the plant's emergency operating procedures (EOPs). In some of these cases, the facility licensees did not train their operators on

challenging simulator scenarios or did not retrain their operators after the EOPs were revised. The Commission believes that it could have identified these problems sooner by reviewing facility requalification examinations and operating tests and inspecting facility requalification training and examination programs. Facility licensees could have then corrected these problems and improved overall operator job performance sooner.

This proposed rule is intended to improve operational safety by providing the means to find and correct weaknesses in facility licensee requalification programs more rapidly than provided for under the current regulations. The experience gained from conducting NRC requalification examinations indicates that the NRC is largely duplicating the efforts of the facility licensees. The NRC could more effectively use its resources to oversee facility licensee requalification programs rather than conducting individual operator requalification examinations for all licensed operators. During fiscal year (FY) 1991, the NRC expended approximately 15 full-time staff equivalents (FTE) and \$1.8 million in contractor assistance funds (which equates to almost 10 additional FTE), for a total of 25 FTE, to conduct requalification examinations. However, the staff expects to conduct about 20 percent fewer requalification examinations during FY 1993 through FY 1997 because the staff's examination efforts to date have greatly reduced the number of operators who require an NRC conducted examination for license renewal during this 4-year period. Consequently, if the NRC continues conducting requalification examinations for all licensed operators, the staff estimates that it would require approximately 20 FTE each year. Therefore, implementing the proposed requalification inspection program would save the

equivalent of about 7 FTE (or \$1.3 million) each year over conducting requalification examinations at the reduced rate for the long term.

Each facility licensee would continue in its present manner of conducting its licensed operator requalification program. However, this proposed rule would reduce the burden on the facility licensees because each facility licensee would have its administrative and technical staff expend fewer hours than are now needed to assist in developing and conducting the NRC requalification examinations. Facility licensees are expected to realize a combined annual operational cost savings of approximately \$820K.

In summary, the proposed rule is expected to result in improved operational safety by providing more timely identification of weaknesses in facility licensees' requalification programs. In addition, the proposed rule would also reduce the resources expended by both the NRC and the licensees. The Commission has, therefore, concluded that the proposed rule meets the requirements of 10 CFR 50.109, that there would be a substantial increase in the overall protection of public health and safety and the cost of implementation are justified.

List of Subjects 10 CFR Part 55

Criminal penalty, Manpower training programs, Nuclear power plants and reactors, Reporting and recordkeeping requirements.

Text of Final Regulation

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, the Nuclear Waste Policy Act of 1982, and 5 U.S.C. 553, the NRC is proposing to adopt the following amendments to 10 CFR Part 55 as follows:

PART 55 - OPERATORS' LICENSES

1. The authority citation for 10 CFR Part 55 continues to read as follows:

AUTHORITY: Secs. 107, 161, 182, 68 Stat. 939, 948, 953, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2137, 2201, 2232, 2282); secs. 201, as amended, 202, 88 Stat. 1242, as amended, 1244 (42 U.S.C. 5841, 5842).

Sections 55.41, 55.43, 55.45, and 55.59 also issued under sec. 306, Pub. L. 97-425, 96 Stat. 2262 (42 U.S.C. 10226). Section 55.61 also issued under secs. 186, 187, 68 Stat. 955 (42 U.S.C. 2236, 2237).

2. In § 55.2, paragraph (c) is added to read as follows:

§ 55.2 Scope

* * * * *

(c) Any facility licensee.

§ 55.57 [Amended]

3. Section 55.57(b)(2)(iv) is amended by removing paragraph (b)(2)(iv).

4. In § 55.59 the introductory text of paragraph (c) is revised to read as follows:

§ 55.59 Requalification

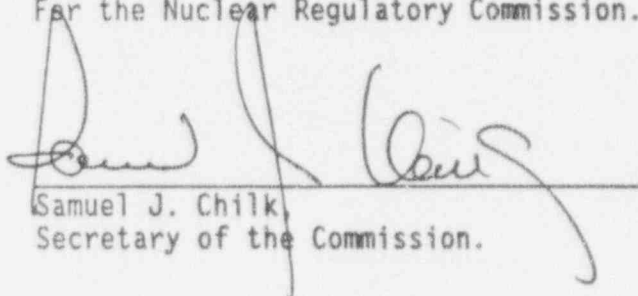
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(c) *Requalification program requirements.* A facility licensee shall have a requalification program reviewed and approved by the Commission and shall submit a copy of each comprehensive requalification written examination or annual operating test to the appropriate Regional Administrator at least 30 days prior to conducting such examination or test. The requalification program must meet the requirements of paragraphs (c)(1) through (7) of this section. In lieu of paragraphs (c)(2), (3), and (4) of this section, the Commission may approve a program developed by using a systems approach to training.

* * * * *

Dated at Rockville, Maryland, this 13th day of May, 1993.

For the Nuclear Regulatory Commission.


Samuel J. Chilk,
Secretary of the Commission.